

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 1.00: ADJUDICATORY PROCEEDINGS

Section

- 1.01: Adjudicatory Proceeding Rules for the Department of Environmental Protection
- 1.02: (Not Applicable to Proceedings Before the Department of Environmental Protection Pursuant to 310 CMR 1.01(1))
- 1.03: Miscellaneous Provisions Applicable to All Adjudicatory Proceedings

1.01: Adjudicatory Proceeding Rules for the Department of Environmental Protection

(1) Authority, Scope, Construction and Definitions.

(a) Authority and Scope. 310 CMR 1.01 is promulgated under the authority of M.G.L. c. 30A, § 9. 310 CMR 1.01 governs the conduct of adjudicatory appeals and adjudicatory hearings of the Department of Environmental Protection under M.G.L. c. 30A. 310 CMR 1.03 is also applicable to adjudicatory proceedings before the Department. The Commissioner of the Department has the authority to issue final decisions and may designate as Presiding Officers other persons or agencies to conduct adjudicatory hearings. The Commissioner shall designate qualified, impartial attorneys to serve as Presiding Officers. The Commissioner may take any action that a Presiding Officer is authorized to take under 310 CMR 1.01. To further effectuate 310 CMR 1.01, the Commissioner may issue directives including, without limitation, case handling timelines and quantitative limits on submissions and presentations by the parties. Directives or standing orders may be obtained from the Department.

(b) Construction. 310 CMR 1.01 shall be construed to secure a just and speedy determination of every appeal. Issues not addressed in 310 CMR 1.01 or for which a party seeks clarity are to be considered in light of the entire M.G.L. c. 30A.

(c) Definitions.

Adjudicatory Appeal or Appeal means the portion of an adjudicatory proceeding initiated by filing a notice of claim with the Department and concluded by a final decision.

Adjudicatory Hearing or Hearing means a hearing under M.G.L. c. 30A, where parties may present evidence on issues of fact, and argument on issues of law and fact prior to the Commissioner's issuance of a final decision.

Adjudicatory Proceeding means a proceeding under M.G.L. c. 30A that may culminate in an adjudicatory hearing and the Commissioner's issuance of a final decision. It is a proceeding before the Department in which the legal rights, duties or privileges of specifically named persons are required by constitutional right, by provision of M.G.L. c. 30A, or by any other provision of the General Laws to be determined, after opportunity for a Department hearing, but does not include the types of proceedings described in M.G.L. c. 30A, § 1(a) through (f).

Authorized Representative means an attorney, legal guardian or other person authorized to represent a party in an adjudicatory appeal.

Alternative Dispute Resolution means any of several processes intended to resolve disputes other than by traditional trial-type proceedings. These processes include, without limitation, mediation and case evaluation.

Commissioner means the Commissioner of the Department of Environmental Protection.

Department means the Massachusetts Department of Environmental Protection.

Deposition means testimony of a witness taken outside the presence of the Presiding Officer, under oath, with opportunity for cross-examination and making objections, in the form of a transcript signed by the witness.

Directive means a public document issued by the Commissioner requiring Department employees and parties to take specific actions or follow specific procedures, to further effectuate the provisions of 310 CMR 1.01.

Electronic Medium means any device used to preserve or transmit written information electronically, including but not limited to facsimile and email.

File means to deliver by authorized means in accordance with 310 CMR 1.01(3)(a).

Final Decision means the decision issued by the Commissioner, consistent with the requirements of 310 CMR 1.01(14)(b), from which any party may seek judicial review pursuant to M.G.L. c. 30A, § 14(1).

Law means statutes, regulations, and common law of the Commonwealth of Massachusetts.

Motion means a request for relief which may be granted or denied by a ruling or an order.

1.01: continued

Notice of Appearance means a paper signed by an individual stating that the signer is the authorized representative of a party in a particular adjudicatory appeal.

Notice of Claim for an Adjudicatory Appeal or Notice of Claim means the first pleading in an adjudicatory proceeding; it is filed by the petitioner.

Notice of Department Action means a document notifying the recipient of a Department action, including, without limitation, enforcement orders, penalty assessment notices under 310 CMR 5.00, and permit or license decisions.

Offer of Proof means a statement of those facts a party would expect to prove through a response of a witness to a question asked at the hearing and excluded by the Presiding Officer.

Papers means all written communications filed in an adjudicatory appeal, including motions, pleadings, and other documents.

Party means a specifically named person whose legal rights, duties or privileges are being determined in an adjudicatory proceeding; another person who as a matter of constitutional right or by any provision of the General Laws is entitled to participate fully in the proceeding; any person or group of persons allowed to intervene; any person or group identified as a party in Department regulations, and the Department.

Person means an individual or legal entity.

Petitioner means the party who initiates an adjudicatory appeal.

Presiding Officer means the individual(s) authorized by law or designated by the Commissioner to conduct, in whole or in part, an adjudicatory appeal.

Respondent means a party other than the petitioner who may answer or otherwise respond to allegations and arguments of the petitioner.

Settlement means a paper signed by all parties, or by the parties who move to have a settlement adopted, resolving all the issues in an appeal, consistent with 310 CMR 1.01(8)(c)2.

Simplified Hearing means a hearing described in 310 CMR 1.01(8)(a).

Standing Order means a public document issued by the Department ordering specific action by parties in all or in some categories of appeals.

Stipulation means an agreement between two or more parties to an adjudicatory appeal, concerning one or more issues of fact or law which are the subject of the appeal.

Subpoena means a legal document that requires a person to appear at a hearing or a deposition to testify or to bring documents or physical objects.

(2) Representation.

(a) Appearance. Parties may appear on their own behalf. A duly authorized officer or employee may represent a corporation, an authorized member may represent a partnership or joint venture, and an authorized trustee may represent a trust. A party in an adjudicatory appeal shall have the right to be accompanied, represented and advised by an authorized representative.

(b) Notice of Appearance. The filing of a notice of claim for an adjudicatory appeal, a motion, an opposition to a motion, or other paper in an adjudicatory appeal shall constitute an appearance by the person signing the paper as the filing party's authorized representative, unless the paper states otherwise. An appearance by an authorized representative for a party in an adjudicatory appeal may also be made by filing and serving upon the other parties a notice of appearance stating the authorized representative's full name, mailing address, telephone number, facsimile number, and email address. An appearance by an authorized representative who is not an attorney shall include a signed affirmation by the party, or by each member of a ten person or residents group, that the representative is duly authorized to represent the party in an adjudicatory appeal.

(c) Changes of Name, Address and Representation. Parties or their authorized representatives shall file and serve a written notice of any change of their name or address, of the name or address of their authorized representative or the withdrawal of the authorized representative, immediately following such change. Parties shall bear the consequences of a failure to file and serve the notice or of any delay on their part in doing so.

1.01: continued

(3) Time.

(a) Timely Filing. Papers required or permitted to be filed under 310 CMR 1.01, or any provision of the applicable law, must be filed with the Presiding Officer and served on the parties within the time limits for such filing, as set by Department regulation or other provision of law. Papers shall be considered filed as set forth in 310 CMR 1.01(3)(a)1. through 5.:

1. Hand-delivery During Business Hours. Hand-delivery to the Office of Administrative Appeals between 9 A.M. and 5 P.M. during regular business days shall be considered filed on the day delivered.

2. Hand-delivery During Nonbusiness Hours. Hand-delivery at times other than between 9 A.M. and 5 P.M. during regular business days shall be considered filed on the next regular business day.

3. Mailing. Unless otherwise provided by law,¹ placing in United States mail shall be considered filed on the date postmarked.

4. Date Received. All papers filed with the Department shall show the date received by the Department, and the Department shall upon request give date receipts to persons filing papers by hand-delivery.

5. Where papers may be filed by electronic medium and are received during regular business hours, they shall be deemed filed on the date received. Papers received after regular business hours shall be deemed filed on the following business day.

(b) Notice of Department Actions. Notice of actions and other communications from the Department hand-delivered or mailed to the person's last known address shall be presumed received upon the day of hand-delivery or, if mailed, three days after the date postmarked.

(c) Computation of Time. Unless otherwise specifically provided by law², computation of any time period referred to in 310 CMR 1.01 shall begin with the first day following the act which initiates the running of the time period. The last day of the time period is to be included unless it is a Saturday, Sunday, or legal holiday in which event the period shall run until the end of the next business day. When the time period is seven days or less, intervening Saturdays, Sundays, or legal holidays shall be excluded in the computation. When a time period is greater than seven days each intervening calendar day shall be included in the computation.

(d) Extension of Time. Except as otherwise provided in 310 CMR 1.01(13)(d), the Presiding Officer shall have the discretion, for good cause shown and in accordance with any directive or standing order, to extend any time limit contained in 310 CMR 1.01. All requests for extensions of time shall be made by motion before the expiration of the original or previously extended time period. The filing of the motion shall toll the time period sought to be extended until the Presiding Officer acts on the motion. 310 CMR 1.01(3)(d) shall not apply to a limitation of time otherwise prescribed by law.

(e) Timelines. The parties and the Presiding Officer shall conform to the timelines for adjudicatory hearings as established in a directive. Parties who do not conform to time limits or schedules established by the Presiding Officer shall, absent good cause shown, summarily be dismissed for failure to prosecute the case.

(4) Filings.

(a) Title. Papers filed shall state the docket number, if any, the title of the appeal, the name of the person on whose behalf the filing is made and the name of the Department. Papers which do not contain all of this information shall be accepted for filing if they contain sufficient identifying information so they can be placed in the appropriate file.

¹ E.g. 310 CMR 5.35 provides that an appeal of a penalty assessment notice is filed when the Department receives it.

² Department regulations may specify different time periods or prescribe that the time periods be calculated differently. E.g. 310 CMR 10.05(1) requires an appeal to be filed within ten business days.

1.01: continued

(b) Signatures. Papers filed shall be signed and dated by the party on whose behalf the filing is made or by the party's authorized representative and shall state the address, telephone number, and facsimile number of the party or authorized representative. This signature shall constitute a certification that the signer has read the document and believes the content of the document is true and accurate, and that the document is not interposed for delay. Signature by an authorized representative also certifies the full power and authority to represent the party.

(c) Designation of Agency. The Department or any other local, state or federal agency shall be designated by its name and not by the name of a particular individual.

(d) Form.

1. All papers, except those exhibits and other documents which are kept in a larger format in the ordinary course of business, shall be handprinted or typewritten on paper eight to 8½ inches wide by ten to eleven inches long, with margins not less than one inch wide. The writing may be on one or both sides of the page, and shall be double-spaced except that quotations in excess of three lines shall be single-spaced and indented. Font size shall not be smaller than 12 point. Mimeographed, multigraphed, photo-duplicated papers will be accepted as handprinted or typewritten. All filings shall be clear and legible.

2. The Department may provide forms to be used by the parties. Where provided, forms shall be used.

(e) Copies. The original of all papers shall be filed with the Presiding Officer together with any additional copies as the Presiding Officer or law may require.

(f) Service. Simultaneously with the filing of papers with the Department, the party filing shall send a copy to all other parties to the appeal, by delivery in hand or by United States mail, postage prepaid, properly addressed or by electronic medium where available. All papers filed and served shall be accompanied by a statement that copies have been sent to all parties. The statement shall include the following information: the mode of service, the date of service, and name and address of the parties to whom it was sent. Papers served by electronic medium shall indicate the date transmitted and the telephone number or electronic address used for transmittal. Failure to comply with 310 CMR 1.01(4)(f) may be grounds for refusal to accept papers for filing. Failure to serve the applicant with a request for an adjudicatory hearing when required by 310 CMR 10.05(7), absent good cause shown, shall be grounds for dismissal of the appeal.

(g) Where to File. A notice of claim shall be filed as specified in the document being appealed or with the Department. Subsequent papers shall be filed as directed by the Department or Presiding Officer.

(5) Powers of the Presiding Officer; Rights of the Parties.

(a) Powers of the Presiding Officer. The Presiding Officer shall have the power to take any action authorized by M.G.L. c. 30A to conduct a just, efficient and speedy adjudicatory appeal, and to write a fair and impartial recommended decision for consideration by the Commissioner. The Presiding Officer may, on the Presiding Officer's own initiative or on a party's motion where appropriate, without limitation:

1. conduct adjudicatory hearings;
2. dismiss appeals for lack of standing, lack of jurisdiction, mootness, untimeliness or where the record discloses that the proposed project, activity has been denied by a local, state or federal agency or authority pursuant to law other than that relied on by the Department in the decision appealed from, and such denial has become final.
3. stay appeals where the failure to previously obtain a final decision required under another law would result in an unnecessary expenditure of the Department's administrative resources, or for other good cause;
4. conduct evidentiary hearings where necessary to resolve an issue in dispute;
5. issue orders to show cause;
6. impose sanctions under 310 CMR 1.01(10);
7. request from the parties a statement of the issues in dispute and then define the issues to be adjudicated;
8. order attendance at an alternative dispute resolution information session;
9. use other neutral persons to facilitate resolution of some or all of the issues;

1.01: continued

10. impose limits on the presentation of evidence in accordance with 310 CMR 1.01(13)(d), (e) and (f);
11. issue, vacate or modify subpoenas;
12. administer an oath or affirmation to anyone who will testify at the hearing; and
13. manage the presentation of the evidence and participation of the parties so as to develop an adequate and comprehensible record of the adjudicatory appeal.
14. conduct views;
15. prescreen appeals and determine their potential amenability to settlement through alternative dispute resolution and early resolution through motions to dismiss.

Prescreening may include, without limitation:

- a. conducting a prescreening conference;
- b. identification of the parties;
- c. identification of the issues;
- d. issuing orders to parties, including without limitation, ordering parties to show cause, ordering parties to prosecute their appeal by attending prescreening conferences and ordering parties to provide more definite statements in support of their positions;
- e. conducting simplified hearings under 310 CMR 1.01(8)(a); and
- f. issuing recommended final decisions for the dismissals of appeals, including, but not limited to, where there is
 - i. the filing of a stipulation of dismissal voluntarily dismissing the notice of claim under 310 CMR 1.01(11)(d)1.;
 - ii. the withdrawal of the notice of claim;
 - iii. mootness of the underlying claim;
 - iv. a lack of jurisdiction over the subject matter of the appeal,
 - v. a lack of jurisdiction due to untimeliness, lack of standing, failure to state a claim on which relief can be granted, or because the notice of claim purports to appeal an unappealable document; and
 - vi. lack of prosecution for failure to attend a prescreening or otherwise comply with an order.

(b) Rights of the Parties. Consistent with the right to a just and speedy resolution of the adjudicatory appeal, parties at their option may present their case or may be assisted by an authorized representative. The parties, or their authorized representatives shall have a right, subject to the powers of the Presiding Officer at 310 CMR 1.01(5)(a) to:

1. present witnesses;
2. present and establish relevant facts by oral or written testimony and documentary evidence;
3. advance pertinent arguments;
4. refute testimony including an opportunity to cross-examine adverse witnesses; and
5. examine and introduce pertinent documents.

(6) Initiation of Adjudicatory Appeal.

(a) Claim for Adjudicatory Appeal. Any person having a right to initiate an adjudicatory appeal shall file a written notice of claim for an adjudicatory appeal. The notice shall be filed within the time prescribed by any applicable provision of law³, or in the absence of a prescribed time period, within 21 days from the date that the notice of Department action was sent to a person.

³ Department regulations may specify different time periods or prescribe that the time periods be calculated differently. E.g. 310 CMR 10.05(1) requires an appeal to be filed within ten business days.

1.01: continued

- (b) Form and Content. The notice of claim for adjudicatory appeal shall state specifically, clearly and concisely the facts which are grounds for the appeal, the relief sought, and any additional information required by applicable law or regulation. The Department may provide forms to be used for a notice of a claim for an adjudicatory appeal, and where provided, the form shall be used. A person filing a notice of claim shall include a copy of the document being appealed. A person filing a notice of claim shall include sufficient written facts to demonstrate status as a person aggrieved, an abutter, or a ten person or residents group, and documentation to demonstrate previous participation where required. When the contents of a notice of claim do not meet the requirements of 310 CMR 1.01 and any other applicable regulations, the Presiding Officer shall dismiss the appeal or require a more definite statement. If the person filing the notice of claim fails to file a more definite statement within the period specified, the appeal shall be dismissed.
- (c) Notice of Department Action. Whenever an appeal may result from an action taken or intended to be taken by the Department, a notice of Department action must be sent which shall specify any facts relied upon as the basis for the action, cite any statute or regulation which authorizes the Department to take the action, and inform the person of any right to request an adjudicatory appeal.
- (d) Orders to Show Cause. The Department may initiate an action against a person by issuing an order to show cause containing a statement of the basis for the Department commencing the adjudicatory proceeding, the nature of the relief sought, and the legal basis authorizing the Department to conduct the proceeding and grant the relief it requests. Orders to show cause may also be issued by an Presiding Officer requiring a person to explain or defend an act or failure to act in accordance with 310 CMR 1.01.
- (e) Orders to File, Amendments and Withdrawal of Notices of Claim. Upon a Presiding Officer's own initiative or by motion of any party, the Presiding Officer may order any party to file any pleading, reply to any pleading, or permit any party to amend or withdraw its notice of claim or other pleading upon conditions just to all parties.
- (f) Substitution of Parties. The Presiding Officer may permit the substitution of parties as justice or convenience may require at any time in the course of an adjudicatory appeal.
- (g) Consolidation of Hearings. A party may notify the Department when multiple adjudicatory appeals involve common issues, stating with particularity the common issues. The Presiding Officer may consolidate the appeals.
- (h) Stays. Upon notice or a motion by any party, the Department or the Presiding Officer shall stay administratively any appeal of a superseding determination or order of conditions issued under M.G.L. c. 131, § 40 when the determination or order is denied under a local wetlands bylaw and the denial is appealed to court. Upon notice or motion by any party, the Department or the Presiding Officer shall stay administratively any appeal of a Surface Water Discharge Permit when the NPDES permit issued by the Environmental Protection Agency for the same discharge has been appealed under the federal Clean Water Act. Upon notice or a motion by any party, the Department or the Presiding Officer shall stay administratively an appeal when an applicant is required to comply with the Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61 through 62H. Upon a motion to proceed, the Department will proceed with the adjudicatory hearing upon proof of the approval under the relevant local, state or federal law or other ruling providing a basis for lifting the stay, or a certification by the Department or another public agency that immediate resolution of the appeal may be necessary to protect public health and safety.
- (i) Expedited Appeals. Requests to expedite appeals must be submitted to, and may be granted by, the Commissioner according to Department policy.
- (j) Prescreening. The Department may establish a process, conducted by a Presiding Officer, to encourage parties to consider alternatives to formal adjudication under 310 CMR 1.01(8), to make initial determinations on dismissal of cases, and any other action as designated by the Commissioner.
- (k) The Presiding Officer shall, absent good cause shown, limit the issues for adjudication to the issues identified in the notice of claim, more definite statement, and any motions to participate or intervene, or as identified at the prescreening conference.

1.01: continued

(7) Intervention and Participation.

(a) Initiation. Any person not initially a party, who with good cause wishes to intervene in, or participate in, an adjudicatory proceeding shall file a motion for permission to intervene or participate in the adjudicatory proceeding.

(b) Form and Content. The motion shall state the name and address of the person making the motion. If the motion is filed by a group of persons seeking to intervene collectively as a group pursuant to M.G.L. c. 30A, § 10A, or other applicable statute, the motion shall state the name and address of each person who will be the group's authorized representative. The representative shall have the sole authority to sign papers and accept service for the group. Any paper served on the representative of the group shall be deemed served on the entire group. If no representative is specifically stated in the motion, the first person mentioned in the motion as a member of the group shall be deemed the representative of the group. All motions for permission to intervene or participate shall state:

1. why intervention or participation should be allowed;
2. the relief sought;
3. the law in support of intervention and of the relief sought; and
4. the effect of the adjudicatory proceeding on whomever is making the motion.

(c) Filing the Motion. Unless an applicable law requires otherwise, the motion may be filed at any time following commencement of the adjudicatory proceeding but not later than the close of the prehearing conference, unless a different time is established by the Presiding Officer in the interest of justice. Subject to 310 CMR 1.01(11)(a), the granting of such motions shall be within the discretion of the Presiding Officer.

(d) Intervenors. Intervenors shall be persons substantially and specifically affected by the adjudicatory proceeding, or persons who have the constitutional or statutory right to intervene without showing that they are substantially and specifically affected. A motion to intervene shall be filed prior to the prehearing conference, absent good cause shown for a later filing. A group that intervenes shall be collectively deemed one party as defined in 310 CMR 1.01(1)(c). Every person permitted to intervene as a party, whether individually or collectively, shall have all the rights of and be subject to all limitations imposed upon a party. The Presiding Officer may exclude repetitive or irrelevant material. Every motion to intervene shall be treated in the alternative as a motion to participate.

(e) Participants. A person affected by an adjudicatory proceeding shall be permitted to participate. A motion to participate shall be filed prior to the prehearing conference, absent good cause shown for a later filing. Permission to participate shall be limited to the right to argue orally at the close of the hearing and the right to file a brief. Permission to participate, unless otherwise stated, shall not be deemed to constitute an expression that the person allowed to participate is a party in interest who may be aggrieved by any final decision. Persons who moved to intervene and who were allowed only to participate may participate without waiving their right to judicial review of the denial of the motion to intervene.

(f) Intervention to Protect the Environment. Pursuant to M.G.L. c. 30A, § 10A, any group of ten or more persons may intervene collectively as a party in any adjudicatory proceeding in which damage to the environment as defined in M.G.L. c. 214, § 2A is or might be at issue; provided, however, that such intervention shall be limited to the issue of damage to the environment and the elimination or reduction thereof in order that any decision in such adjudicatory proceeding shall include the disposition of such issue. Such motion to intervene shall be filed prior to the prehearing conference, absent good cause shown for a later filing. The intervention shall clearly and specifically state the facts and grounds for intervening and the relief sought, and each intervening person shall file an affidavit stating the intent to be part of the group and to be represented by its authorized representative. Intervenors under M.G.L. c.30A, § 10A shall specifically describe the damage to the environment as defined in M.G.L. c. 214, § 7A and the elimination or reduction sought. Such intervention shall be by motion filed in accordance with 310 CMR 1.01(11)(a). In any proceeding pursuant to M.G.L. c. 91, at least five of the ten persons shall reside in the municipality in which the license or permitted activity is located.

(8) Alternatives to Formal Adjudication.(a) Simplified Hearing.

1. Upon notice or motion by any party, the Presiding Officer may provide an opportunity for a simplified hearing as an alternative to a formal adjudicatory hearing.

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2. Any party may request a simplified hearing. The Presiding Officer also may decide, without consent of the parties, to conduct a simplified hearing when the issues in a permit appeal are limited in number and scope. A simplified hearing normally shall not include the filing of motions and prefiled direct testimony, unless required by the Presiding Officer for good cause.
3. Each party shall have an opportunity to present its view of the disputed issues. Each party and any witnesses shall appear at the simplified hearing to present its case and may offer evidence including statements, documents and papers. Following a party's presentation, each other party shall have an opportunity to cross-examine witnesses and to refute the case presented. All statements shall be provided under oath or affirmation.
4. Evidence may be admitted and given probative effect only if it is the kind of evidence on which reasonable persons are accustomed to rely in the conduct of serious affairs. The weight to be attached to any evidence will rest within the discretion of the Presiding Officer. The simplified hearing shall be recorded electronically or otherwise.
5. The Presiding Officer may make any ruling to help ensure brevity, simplicity, informality and fairness. The Presiding Officer shall conform to any timeline established by Directive.
6. The Presiding Officer shall prepare a decision, which may be recommended or final as designated by the Commissioner, in writing or stated in the record, containing a statement of reasons determining every issue of fact or law necessary to the decision. A person aggrieved by a final decision resulting from a simplified hearing shall be entitled to judicial review under M.G.L. c. 30A, § 14. The record shall include the recording of the simplified hearing, any documents submitted, and the recommended and final decision.

(b) Mediation and Other Assisted Negotiation.

1. The Presiding Officer may order attendance at an alternative dispute resolution information session. Upon agreement of the parties, a neutral person may facilitate resolution of some or all of the outstanding issues.
2. Where parties have agreed to mediation, all parties shall make available a person who has the authority to bind the party to a mediated settlement.
3. All parties must agree in writing not to use any information gained solely from the mediation in any subsequent proceeding; not to disclose any information gained solely from the mediation to persons not involved in the mediation; not to subpoena the mediator for any subsequent proceeding; not to disclose to any subsequently assigned presiding officer the content of the prior mediation discussion; and to mediate in good faith.
4. Any agreement of the parties derived from the mediation shall be binding on the parties and, once reduced to writing and signed by all parties, will have the effect of a contract in subsequent proceedings.
5. The confidentiality provision in M.G.L. c. 233, § 23c shall also apply to the person serving as mediator.
6. If a party fails to appear at the mediation, the mediator shall return the matter to the Presiding Officer. The mediator may at any time return the matter to the Presiding Officer.
7. No particular form of mediation is required. The structure of the mediation shall be tailored to the needs of the particular dispute. Where helpful, parties may be permitted to present documents, exhibits, testimony or other evidence which would aid in the attainment of a mediated settlement.
8. If mediation results in agreement, mediation shall be concluded by a settlement agreement. If mediation does not result in agreement resolving the entire matter, the matter shall be returned to the Presiding Officer for scheduling subsequent proceedings at the earliest possible time.

1.01: continued

(c) Settlements. Whenever all parties to the adjudicatory appeal agree to dispose of it by stipulation, settlement, or consent order, the parties shall put such agreement in writing and submit it to the Department, with a copy to the Presiding Officer. Each agreement shall include a provision that if the agreement is approved, the parties waive whatever rights they have to further administrative review before the Department as well as an appeal to court. If the Commissioner approves the proposed agreement, the Commissioner shall issue in writing a final decision incorporating the agreement of the parties. The final decision incorporating the settlement agreement shall not be subject to 310 CMR 1.01(14)(b). If the Commissioner disapproves the proposed agreement, the parties shall be notified. If a party will not sign a stipulation, settlement or consent order that the Department agrees to sign, the burden of going forward to establish why the agreement is inconsistent with law may be placed upon that party by the Presiding Officer or designee of the Commissioner.

(d) Wetlands Permit Appeals. Appeals of Reviewable Decisions, as defined in 310 CMR 10.04, will be conducted in accordance with the provisions set forth in 310 CMR 10.05(7)(j).

(9) Prehearing Conference.(a) Purpose.

1. The Presiding Officer may order the parties to appear for a conference prior to the adjudicatory hearing to:

- a. discuss settlement;
- b. define contested issues on which evidence will be offered, if not otherwise determined under 310 CMR 1.01(6)(k);
- c. consider the possibility of obtaining stipulations, admissions and agreements that will avoid unnecessary evidence;
- d. establish limits on presentations of the parties;
- e. establish a schedule for continuing the appeal, including a date for the adjudicatory hearing; and
- f. consider any other matters that may aid in the disposition of the adjudicatory appeal.

2. Parties shall appear at the prehearing conference with full authority to make binding agreements, including commitments as to scheduling, or shall come to the conference with the name of the person from whom authority is required and be able to communicate directly with the person at the time of the conference. The parties shall be prepared to advise the Presiding Officer as to the prospects of settlement.

3. The Presiding Officer may order the parties to meet or confer prior to the date of the conference to discuss settlement or other matters.

(b) Prehearing Memorandum by Parties.

1. The Presiding Officer may order the parties to file a prehearing memorandum prior to the conference. The memorandum may include:

- a. a concise summary of the evidence that will be offered by the parties;
- b. the facts agreed upon by the parties;
- c. contested issues of fact and law, consistent with 310 CMR 1.01(6)(k);
- d. the amount of time necessary for a party to conduct its case, consistent with 310 CMR 1.01(13)(d) relating to time limits;
- e. a list of witnesses to be called, including the designation of those who will be offered as expert witnesses, and a brief summary of the testimony of each witness;
- f. statements of Department policy or guidance that a party intends to cite or introduce into evidence;
- g. a statement of need to substitute parties or consolidate proceedings, where the need was not previously identified; and
- h. any additional matters likely to facilitate the disposition of the adjudicatory appeal.

2. The Presiding Officer may advise the parties at the conference:

- a. of the availability of alternative dispute resolution that may assist in resolving the adjudicatory appeal prior to the adjudicatory hearing, including without limitation, mediation and nonbinding case evaluation;
- b. of their right to elect a simplified hearing under 310 CMR 1.01(8)(a);
- c. of their right to waive their right to a hearing, and request that their case be decided on the written record only, pursuant to 310 CMR 1.01(13)(g); and
- d. where appropriate, of the perceived merits of the case, based on the filings and representations of the parties at the conference.

1.01: continued

(c) Prehearing Conference Order.

1. At the time of or following the conference the Presiding Officer may issue an order in writing including:
 - a. a statement of the issues to be tried;
 - b. a list of witnesses who will offer testimony;
 - c. limitations in accordance with 310 CMR 1.01(13)(d), (e), and (f);
 - d. whether any disputed issues will be referred to a factfinder, consistent with 310 CMR 1.01(13)(i);
 - e. rulings on motions;
 - f. a schedule for filing motions, prefiled testimony and exhibits, setting the date of the hearing, and deciding motions;
 - g. attendance at an alternative dispute resolution information session when the Presiding Officer determines it could aid in the just and speedy resolution of the appeal without a hearing; and
 - h. incorporation of any matters agreed to by the parties.
2. Failure of parties to comply with any rule or order issued by the Presiding Officer under 310 CMR 1.01(9) may result in the imposition of sanctions in accordance with 310 CMR 1.01(10).

(10) Sanctions. When a party fails to file documents as required, respond to notices, correspondence or motions, comply with orders issued and schedules established in orders or otherwise fails to prosecute the adjudicatory appeal; demonstrates an intention not to proceed; demonstrates an intention to delay the proceeding or resolution of the proceedings; or fails to comply with any of the requirements set forth in 310 CMR 1.01; the Presiding Officer may impose appropriate sanctions on that party. Sanctions include, without limitation:

- (a) taking designated facts or issues as established against the party being sanctioned;
- (b) prohibiting the party being sanctioned from supporting or opposing designated claims or defenses, or introducing designated matters into evidence;
- (c) denying summarily late-filed motions or motions failing to comply with 310 CMR 1.01(4);
- (d) striking pleadings in whole or in part;
- (e) dismissing the adjudicatory appeal as to some or all of the disputed issues;
- (f) dismissing the party being sanctioned from the appeal; and
- (g) issuing a final decision against the party being sanctioned.

(11) Motions.(a) General Requirements.

1. Presentation and Objection to Motions. A person may request of the Presiding Officer any order or action consistent with law and 310 CMR 1.01 that will assist in resolving issues expeditiously by filing a motion. Each motion shall set forth the grounds for the desired order or action. Motions may be made in writing at any time after commencement of an adjudicatory proceeding or orally in the presence of all parties, including during a prehearing conference or hearing, unless the Presiding Officer issues a scheduling order stating otherwise. Any time within seven days after a written motion is filed with the Presiding Officer, any party may file a written objection to the motion, except that objections to a motion for summary decision shall be filed within 14 days as specified in 310 CMR 1.01(11)(f). A failure to file a timely response may result in a grant of the relief requested by the moving party. Moving parties should obtain the assent of other parties, and non-moving parties should assent to motions, wherever reasonable.
2. Summary Ruling. The Presiding Officer may summarily, and without awaiting a response or objection to the motion, act on a motion, with or without prejudice, in appropriate circumstances, which may include:
 - a. non-adversarial or routine motions;
 - b. motions having the assent of non-moving parties;
 - c. motions the Presiding Officer determines were not served in accordance with 310 CMR 1.01(4)(f) or are otherwise deficient as to form;
 - d. motions the Presiding Officer determines would consume time without resolving material issues;

1.01: continued

- e. motions the Presiding Officer determines to be frivolous in view of the established law or facts of the appeal; or
 - f. motions to dismiss for failure to prosecute the case. When a party demonstrates a failure to prosecute the case or an intention not to proceed such as failing to respond to an order, the Presiding Officer may summarily dismiss a case *sua sponte*, without awaiting a motion by another party.
- (b) Motion for More Definite Statement. Where a notice of claim for adjudicatory appeal is so vague or ambiguous that it does not provide adequate notice of the issues to be addressed and the relief sought, any party may move for, or the Presiding Officer may order, a more definite statement. The motion or order shall set forth the defects complained of and the details desired. A motion or order for a more definite statement also may seek or require the Petitioner to file sufficient evidence to meet the burden of going forward by producing at least some credible evidence from a competent source in support of the position taken. The more definite statement shall be filed within ten days of the Presiding Officer's order being sent or within another time as may be ordered. If the more definite statement is not filed within the prescribed deadline, the Presiding Officer may either dismiss the adjudicatory appeal, grant the relief sought, or make another order as may be appropriate.
- (c) Motion to Strike. A party may move to strike, or the Presiding Officer may strike from a pleading any insufficient allegation or defense or any redundant, irrelevant, immaterial, impertinent or scandalous matter; and from any testimony material which is unduly repetitious, irrelevant or otherwise inadmissible pursuant to 310 CMR 1.01(13)(h).
- (d) Motion to Dismiss.
1. General Grounds. A party may move to dismiss where another party fails to file documents as required, respond to notices, correspondence or motions, comply with orders issued and schedules established in orders, otherwise fails to prosecute the case or demonstrates an intention not to proceed; for lack of standing, lack of jurisdiction, mootness, untimeliness, or where the record discloses that the proposed project or activity has been denied by a local, state or federal agency or authority pursuant to law other than that relied on by the Department in the decision appealed from, and such denial has become final. Parties may voluntarily dismiss the appeal by filing a stipulation of dismissal signed by all parties.
 2. Motion to Dismiss for Failure to State a Claim on Which Relief Can be Granted. A party may move that the notice of claim for adjudicatory hearing be dismissed for failure to state a claim upon which relief can be granted. In deciding the motion, the Presiding Officer shall assume all the facts alleged in the notice of claim to be true. Such assumption shall not apply to any conclusions of law. Dismissal of an adjudicatory appeal for failure to state a claim upon which relief can be granted, if issued as a final decision, shall be subject to 310 CMR 1.01(14).
- (e) Motion to Dismiss for Failure to Sustain Case. Upon the petitioner's submission of prefiled testimony, or at the close of its live direct testimony if not prefiled, any opposing party may move for the dismissal of any or all of the petitioner's claims, on the ground that upon the facts or the law the petitioner has failed to sustain its case; or the Presiding Officer may, on the Presiding Officer's own initiative, order the petitioner to show cause why such a dismissal of claims should not issue. Decision on the motion or order to show cause may be reserved until the close of all the evidence. The granting of a full dismissal of the petitioner's claims shall be subject to 310 CMR 1.01(14).
- (f) Motion for Summary Decision. Any party may move with or without supporting affidavits for a summary decision in the moving party's favor upon all or any of the issues that are the subject of the adjudicatory appeal. The Presiding Officer shall not act on any motion for summary decision until at least 14 days after filing. During this time, parties opposed to the motion may file opposing affidavits. The decision sought shall be made if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a final decision in its favor as a matter of law. A summary decision interlocutory in character may be made on any issue although there is a genuine controversy as to other issues. Summary decision, when appropriate, may be made against the moving party. The granting of summary decision upon the whole case or for all the relief asked shall be subject to 310 CMR 1.01(14).

1.01: continued

Supporting and opposing affidavits shall be made on personal knowledge, shall set forth such facts as would be admissible in evidence in Massachusetts courts, and shall show affirmatively that the affiant is competent to testify to the matters stated in the affidavit.

Sworn or certified copies of all papers or parts of papers referred to in an affidavit shall be attached to or served with the affidavit. The Presiding Officer may permit affidavits to be supplemented or opposed by depositions, answers to interrogatories, or further affidavits, provided that motions made pursuant to 310 CMR 1.01(11)(e) shall be granted or denied solely on the basis of evidence admissible in Massachusetts courts. When a motion for summary decision is made and supported as provided in 310 CMR 1.01(11)(e), a party opposing the motion may not rest upon the mere allegations or denials of said party's pleading, but must respond, by affidavits or as otherwise provided in 310 CMR 1.01, setting forth specific facts showing that there is a genuine issue for hearing on the merits. If a party does not respond, summary decision, if appropriate, shall be entered against the party. Should it appear from the affidavits of a party opposing the motion that the party cannot for reasons stated present by affidavit facts essential to justify opposition to the motion, the Presiding Officer may deny the motion for summary decision or may order a continuance to permit affidavits to be obtained or depositions to be taken or discovery to be had or may make such other orders as is just.

(12) Discovery, Prefiled Testimony and Subpoenas.(a) Cooperative Discovery.

1. Where necessary to supplement available information, parties to an adjudicatory appeal shall engage in the examination or exchange by agreement of relevant, not privileged documents or tangible things in a party's possession or control.
2. Upon notice and at an agreed time, papers filed in an adjudicatory appeal and part of the record are available for inspection and copying. Subject to provisions of law regarding public records, including fee provisions for providing public records, the Department shall make its public records concerning the matter under appeal available for inspection and copying.
3. A party should also allow entry onto designated land or examination of other property in the possession and control of that party, by agreement at a reasonable place and time, for the purpose of inspection and performing incidental procedures relevant to the issues to be decided in the adjudicatory appeal by measures including, without limitation, surveying, sampling and photographing the property or any designated object or operation thereon.

(b) By Permission of the Presiding Officer. Written interrogatories may be served and testimony taken by deposition only after the filing of a notice of claim and with prior approval of the Presiding Officer. Where such approval has not been sought and granted, a party shall have no obligation to respond or appear.

1. A motion to serve interrogatories on a party may be granted only to obtain relevant, not privileged information not previously provided. The Presiding Officer may establish the scope of discovery including limits on the number of interrogatories served and a schedule for serving and responding to them. Answers to interrogatories shall be signed under the pains and penalties of perjury.
2. A motion to take a deposition may be granted only upon a showing that the parties have agreed to submit the deposition in lieu of testimony or the witness cannot appear before the Presiding Officer without substantial hardship; and the testimony sought is relevant, not privileged and not discoverable by alternative means. The Presiding Officer may establish the timing, scope and conduct of the deposition and its use as evidence in the administrative appeal.

(c) Resolution of Discovery Disputes. Prior to seeking an order to compel under 310 CMR 1.01(12)(d) or a protective order under 310 CMR 1.01(12)(e), parties must demonstrate through written documentation that they have in good faith attempted to resolve discovery disputes without the intervention of the Presiding Officer.

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(d) Compelling Discovery. Parties may move to compel discovery where it is alleged that another party has not cooperated in good faith following attempts to conduct discovery that is not overly broad, unduly burdensome, and is reasonably calculated to lead to the discovery of relevant, admissible evidence. A motion to compel entry onto land or other property shall describe with reasonable particularity the land, other property, or portions thereof, to be inspected, shall identify with reasonable particularity the procedures incidental to the inspection which are to be performed, and shall specify a reasonable time, place and manner of making the inspection.

(e) Objections and Protective Orders. Within ten days of service of a discovery request, parties upon whom the request is served may file objections or seek a protective order when the material is privileged or discovery is overly broad, unduly burdensome, or not reasonably calculated to lead to the discovery of relevant, admissible evidence.

(f) Prefiled Testimony. The Presiding Officer may order all parties to file within a reasonable time in advance of the hearing the full written text of the testimony of their witnesses on direct examination, including all exhibits to be offered in evidence. Failure to file prefiled direct testimony within the established time, without good cause shown, shall result in summary dismissal of the party and the appeal if the party being summarily dismissed is the petitioner. The Presiding Officer may exclude direct testimony offered at the hearing that was not included in the prefiled direct testimony but was reasonably available at the time it was filed. The Presiding Officer may also require the filing of written rebuttal testimony within a reasonable time after the filing of the direct testimony. All prefiled testimony shall be subject to the penalties of perjury. All witnesses whose testimony is prefiled shall appear at the hearing and be available for cross-examination. If a witness is not available for cross-examination at the hearing, the written testimony of the witness shall be excluded from the record unless the parties agree otherwise.

(g) Subpoenas. In conducting adjudicatory appeals, the Presiding Officer may issue, vacate, modify and enforce subpoenas requiring the attendance and testimony of witnesses and the production of documents or other evidence in accordance with 310 CMR 1.01(12)(g)1. through 3.:

1. Issuance. A party may have a subpoena issued by a Notary Public or Justice of the Peace in the name of the Department or make written application to the Presiding Officer, who may issue the subpoena requested in the name of the Department. However issued, every subpoena shall show on its face the name and address of the requesting party. Notice shall not be required for issuance of a subpoena. The Department may prescribe the form of subpoena but, as far as practicable, the form shall adhere to the form used in civil cases before the courts.

2. Motion to Vacate or Modify. The Presiding Officer may order, or any person to whom a subpoena is directed may, within a reasonable period, file in writing a motion that the subpoena be vacated or modified. The Presiding Officer shall give prompt notice to the party who requested issuance of the subpoena. The Presiding Officer may grant the motion in whole or in part upon a finding that the testimony or the evidence whose production is requested does not relate with reasonable directness to the issues identified for the hearing or upon a finding that a subpoena is unreasonable or oppressive, or has not been issued a reasonable period in advance of the time when the evidence is requested.

3. Costs. Witnesses summoned by the Presiding Officer shall be paid the same fees for attendance and travel as in civil cases before the courts. The requesting party shall pay all costs associated with the subpoena, including fees for attendance and travel.

(13) Hearings.

(a) When and Where Held. Hearings will be held at a location specified by the Presiding Officer. A party may, by motion, request that a hearing be held at some place other than that designated, where convenience, justice and equity would best be served. Upon motion of a party and upon good cause shown, the Presiding Officer or other designee of the Commissioner may advance an appeal for hearing. Directives, standing orders or policies may establish procedures for advancing appeals.

(b) Conduct of Hearings.

1. General. Hearings shall be as informal as may be reasonable and appropriate under the circumstances.

1.01: continued

2. Decorum. All parties, authorized representatives, witnesses and other persons present at a hearing shall conduct themselves in a manner consistent with the standards of decorum commonly observed in any court. Where such decorum is not observed, the Presiding Officer may take appropriate action, including imposing sanctions as described at 310 CMR 1.01(10).

(c) Order of Presentation.

1. Usual Practice. Except as otherwise required by law or as determined by the Presiding Officer, in hearings initiated by the notice of claim for an adjudicatory appeal on a permit, license or similar decision, it shall be the usual practice for the petitioner to present its evidence first. In hearings resulting from a penalty assessment notice or enforcement order, it shall be the usual practice for the Department to present its evidence first.

2. Discretion of Presiding Officer. In appeals where evidence is peculiarly within the knowledge of a party; multiple appeals have been consolidated; there are multiple parties; or where necessary to ensure fairness, the Presiding Officer may direct who shall open and shall designate the order of presentation.

(d) Time Limits For Adjudicatory Hearing.

1. Absent agreement of the parties to time limits for the hearing acceptable to the Presiding Officer, the Presiding Officer may establish a limit on the amount of time allotted to each party to present its case and examine witnesses. This time shall be allocated equally among opposing parties, unless the Presiding Officer orders otherwise for good cause. In establishing time limits consistent with administrative efficiency, fairness to all parties and adequacy for developing the evidence, the Presiding Officer may consider the number, complexity, and novelty of issues presented; the number of witnesses and substance of their testimony; the length of time allocated for appeals of similar scope and complexity; any applicable directive or standing order; and other factors consistent with a just and speedy determination of the appeal. The Presiding Officer is authorized to monitor and enforce time limits.

2. The Presiding Officer may establish time limits at the prehearing conference and may later modify them, as described in 310 CMR 1.01(13)(d)3..

3. The Presiding Officer may grant a request for modification of time limits only for good cause. In determining whether to grant a request to modify time limits, the Presiding Officer may consider: whether or not the requesting party has used the time since the commencement of the hearing in a reasonable and proper way and has complied with all orders regulating the hearing; the requesting party's explanation as to how the requested added time would be used and why it is necessary to ensure a fair hearing; and any other relevant and material facts the requesting or opposing party may wish to present in support of or opposition to the request.

(e) Limitations On Written Submissions.

1. The Presiding Officer may establish page limits on testimony, motions, and memoranda of law filed in appeals under 310 CMR 1.01. The page limits shall not include the case caption and exhibits. In establishing page limits, the Presiding Officer may consider: the number, complexity, and novelty of issues presented; the number of witnesses and substance of their testimony; any applicable directive or standing order; and other factors consistent with a just and speedy determination of the appeal.

2. The Presiding Officer may establish page limits at the prehearing conference and later modify them for good cause pursuant to 310 CMR 1.01(13)(e)3..

3. The Presiding Officer may modify page limits after considering a party's reason for the request and why additional pages are necessary to ensure a fair hearing.

(f) Number Of Witnesses.

1. The Presiding Officer may establish the number of witnesses that parties may offer and may exclude the testimony of any witness which would be duplicative, irrelevant, or otherwise unnecessary. In establishing the number of witnesses, the Presiding Officer may consider: the number, complexity, and novelty of the issues presented; the summary of each witness's testimony presented by the parties; an applicable directive or standing order and other factors consistent with a just and speedy determination of the appeal.

2. The Presiding Officer may establish the number of witnesses at the prehearing conference and later modify it for good cause shown, pursuant to 310 CMR 1.01(13)(f)3..

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3. Prior to any applicable deadline for providing rebuttal testimony, the Presiding Officer may grant a party's request to offer the rebuttal testimony of an additional witness only where necessary to ensure a fair hearing.
- (g) Submission Without a Hearing. Parties may elect to waive participation in a hearing and to submit their case upon the record. Submission of a case without a hearing does not relieve the parties from the necessity of proving the facts supporting their allegations or defenses.
- (h) Evidence.
1. General. Unless otherwise provided by any law, the Presiding Officer need not observe the rules of evidence observed by courts, but shall observe the rules of privilege recognized by law. Evidence may be admitted and given probative effect only if it is the kind of evidence on which reasonable persons are accustomed to rely in the conduct of serious affairs. The weight to be attached to any evidence in the record will rest within the sound discretion of the Presiding Officer. Unduly repetitious or irrelevant evidence may be excluded.
 2. Evidence Included. All evidence, including any records, investigative reports, documents, and stipulations, which is to be relied upon in a final decision must be offered and made a part of the record.
 3. Testimony. All testimony shall be given under oath or affirmation. Witnesses shall be available for cross-examination. If a witness is not available for cross-examination at the hearing, the written testimony of the witness shall be excluded from the record unless the parties agree otherwise. If redirect examination is allowed by the Presiding Officer, it shall be limited to the scope of cross-examination.
 4. Objections. Parties shall object to evidence offered and give their reasons at the time that a ruling is made or sought, or if a party has no opportunity to object or seek a ruling at that time, within three days of notification of the action taken or refused.
 5. Offer of Proof. An offer of proof may be made immediately following the Presiding Officer's decision to sustain an objection and exclude the question. The offer of proof may be made orally or through documents and shall become part of the record.
 6. Regulations, Statutes and Documentary Evidence. Regulations and statutes may be offered into evidence by reference to the citation. Documentary evidence may be received in the form of copies or excerpts, or by incorporation by reference, at the discretion of the Presiding Officer.
 7. Stipulations. Stipulations of fact or stipulations as to the testimony that would have been given by an absent witness, if agreed upon by the parties, may be used as evidence at the hearing. The parties may, by written stipulation filed with the Presiding Officer at any stage of the appeal or by oral stipulation made at the hearing, agree upon any relevant fact. When making findings, the Presiding Officer need not be bound by any stipulation to which the Department is not a party.
 8. Additional Evidence. The Presiding Officer may require any party, with appropriate notice to other parties, to submit additional evidence on any relevant matter.
- (i) Factfinder.
1. Order of Reference. When there is a factual dispute between the parties, the Presiding Officer may make an order of reference to a designated factfinder to determine the relevant findings of fact in the appeal. The order of reference may specify or limit the factfinder's duties and powers, and may direct the factfinder to report only upon particular issues or to perform particular acts, and fix definite times for the events specified in 310 CMR 1.01(13)(i)3., 4., and 5.. The Presiding Officer may allow the parties to make recommendations to the Presiding Officer to help define the role of the factfinder.
 2. Selection. The factfinder shall be either a qualified Department employee with no prior involvement in the adjudicatory proceeding, or a qualified designated factfinder not employed by the Department. The parties shall be given an opportunity to agree upon the selection of the factfinder. If the parties cannot agree, the Presiding Officer may select a qualified factfinder. The Presiding Officer also may order each party to select a factfinder and require the factfinders to submit a joint report. Any costs incurred in using a factfinder shall be allocated equally among the parties, unless the Presiding Officer determines that fairness dictates otherwise.

1.01: continued

3. Site or Property Inspection. The factfinder may visit or inspect the site, property or other places or things with the parties and their witnesses as appropriate to make observations relevant to the factual issues designated in the order of reference.
 4. Factfinder's Report. The factfinder shall prepare a report containing a summary of the observations at the site or property inspection, if any, a review of the testimony, exhibits, and other information identified in the order of reference, and the proposed findings of fact based thereon. The factfinder shall simultaneously file the report with the Presiding Officer and the parties.
 5. Objections to the Report. The parties may object in writing to all or part of the factfinder's report, and shall provide a basis for the objection. If a party does not object within 14 days of the filing of the report, the party waives its right to object to the factfinder's report. Where no party objects to the report, the Presiding Officer will accept the factfinder's findings of fact, unless the Presiding Officer determines they are clearly erroneous. If the parties object to the factfinder's report, the Presiding Officer may adopt the report, strike it in whole or in part, modify it, receive further evidence, allow cross-examination of the witnesses or recommit the report to the factfinder with further instructions.
- (j) Views. The parties may request and the Presiding Officer may order that a view be taken of a site, property or other places and things that are relevant to an appeal to promote understanding of the evidence that has been or will be presented. Notice and a reasonable opportunity to be present shall be given to all parties. Parties shall not present evidence during the view, but may point out objects or features that may assist the Presiding Officer in understanding evidence. The Presiding Officer may rely on the Presiding Officer's observations during a view as evidence to the same extent permissible as if observed in the hearing room.
- (k) Briefs. At the close of the evidence, the Presiding Officer may order the filing of closing briefs and set a schedule for their submission if the Presiding Officer finds they would be of assistance reaching a decision.
- (l) Administrative Notice. The Presiding Officer may take notice of any fact which may be judicially noticed by the courts, and in addition may take notice of general, technical or scientific facts within the Department's specialized knowledge. Parties shall be notified of the material so noticed, and they shall be afforded an opportunity to contest the facts so noticed. The Presiding Officers may utilize their experience, technical competence and specialized knowledge in the evaluation of the evidence.
- (m) Transcript of Hearings.
1. Recording and Transcripts. Testimony and argument at the hearing shall be either recorded electronically or stenographically. If the Department prepares a transcript of the hearing, a copy of the transcript shall be supplied to a party upon request, at the party's expense. If the Presiding Officer determines in appeals designated major and complex or expedited as those terms may be further defined in Department directives, that a written transcript of the hearing would be useful to the efficient making of a decision, the Presiding Officer may require a party or parties to provide a stenographer to transcribe the hearing, with costs allotted as fairness may require. Where a Party has provided a stenographer to transcribe the hearing, a stenographic record shall be provided to the Presiding Officer at no expense to the Department, and to all other parties upon such other terms as the Presiding Officer shall order.
 2. Correction of Transcript. Corrections in the official transcript may be made only to make it conform to the evidence presented at the hearing. Transcript corrections, agreed to by opposing parties and approved by the Presiding Officer, may be incorporated into the record at any time during the hearing, or within ten days of receipt of the transcript, or another time as shall be allowed by the Presiding Officer.
- (n) Settling the Record.
1. Contents of Record. The record of the hearing may consist of: pleadings, prehearing conference memoranda, prefiled testimony, electronic tapes, orders, briefs, memoranda, answers to interrogatories, depositions, transcripts, exhibits, and other papers or documents which the Presiding Officer has specifically designated be made a part of the record. The record shall at all reasonable times be available for inspection by the parties.

1.01: continued

2. Evidence After Completion. No evidence shall be admitted after completion of a hearing or after a case has been submitted on the record, unless otherwise ordered by the Presiding Officer or the Commissioner. The Presiding Officer may require any party, with appropriate notice to the other parties, to submit additional evidence on any matter relevant to the adjudicatory appeal.

(14) Decisions.

(a) Recommended Decisions and Tentative Decisions. Recommended decisions should include findings of fact, conclusions of law and recommendations on issues necessary to the decision. The recommended decision shall be issued to all parties, and be transmitted with the record to the Commissioner. The Presiding Officer may submit a recommended decision which summarily dismisses a case.

Tentative decisions shall not be issued as a matter of routine, but shall be issued only if a party requests a tentative decision either in writing or orally on the record, prior to the close of the adjudicatory hearing, and there is good cause shown for granting the request; the hearing was conducted by a Presiding Officer other than the one who will write the recommended decision and the recommended decision will be adverse to a party other than the Department; or if the Commissioner, Presiding Officer or other designee of the Commissioner determines that a tentative decision should be issued in the interest of justice. Every tentative decision shall be in writing and shall contain a statement of the reasons, including a determination of every issue of fact or law necessary to the decision. The parties shall have seven days from the receipt of the tentative decision to file objections to the decision and supporting arguments with the Department. The Commissioner shall have the discretion to allow or order the parties to argue orally before the Commissioner.

(b) Final Decisions. Every final decision shall be in writing and shall be signed by the Commissioner or a designee of the Commissioner. With the exception of final decisions approving settlement by agreement of the parties, which shall be subject to the provisions of 310 CMR 1.01(8)(c), every final decision shall contain a statement of reasons, including a determination of every issue of fact or law necessary to the decision. A final decision may adopt, modify, or reject a recommended decision, with a statement of reasons. If a final decision was preceded by a tentative decision, the final decision may incorporate by reference determinations set forth in the tentative decision, subject to such modifications and discussion as the Commissioner may consider appropriate in response to timely filed opposing and concurring views regarding the tentative decision.

(c) Presiding Officer Unavailable. When a Presiding Officer becomes incapacitated or unavailable to make a decision, a tentative decision shall be made by a substitute Presiding Officer upon the record. When the substitute Presiding Officer determines that the credibility of a material witness is an issue necessary to the decision, a new hearing may be held, and may be limited to the examination of that witness.

(d) Motion for Reconsideration. Where a finding of fact or ruling of law on which a final decision is based is clearly erroneous, a party may file a motion for reconsideration setting forth specifically the grounds relied on to sustain the motion. Where the motion repeats matters adequately considered in the final decision, renews claims or arguments that were previously raised, considered and denied, or where it attempts to raise new claims or arguments, it may be summarily denied. The motion shall be filed within seven days from the date the decision is mailed to the parties by the Department. The filing of a motion for reconsideration is not required to exhaust administrative remedies.

(e) Reopening of Hearings. On the motion of any party, or on his or her own initiative, the Presiding Officer may at any time before a final decision is issued reopen the hearing for the purpose of receiving new evidence. A moving party shall show that the evidence to be introduced was not reasonably available for presentation at the hearing. The Commissioner may remand a case to the Presiding Officer for the purpose of receiving new evidence or for additional recommended findings of fact or conclusions of law based upon the record or new evidence.

(f) Further Appeal. After the issuance of a final decision, a person who has the right to seek judicial review of the decision may file with the appropriate Superior Court, pursuant to M.G.L. c. 30A, § 14.

1.01: continued

(g) Withdrawal of Exhibits. After a decision has become final and all appeal periods have lapsed, the Presiding Officer may upon motion permit the withdrawal of original exhibits by the party or person entitled to them.

(15) Effective Date.

(a) Claims Filed after July 3, 1995. This revision of 310 CMR 1.01 takes effect on July 3, 1995 and shall apply to all adjudicatory appeals in which a notice of claim for adjudicatory appeal is filed on or after July 3, 1995.

(b) Certain Claims Filed before July 3, 1995. This revision of 310 CMR 1.01 shall also apply to all adjudicatory appeals where the notice of claim for an adjudicatory appeal is filed prior to July 3, 1995, but the prehearing conference as described in 310 CMR 1.01(9) is scheduled to occur on or after July 3, 1995 or where the Presiding Officer has, after July 3, 1995, lifted an order staying the appeal.

(c) Other Claims Filed before July 3, 1995. All adjudicatory appeals not described in 310 CMR 1.01(15)(a) or (b) shall continue under the prior applicable regulations, 310 CMR 1.01, dated December 31, 1986.

(d) Claims Filed after January 1, 2005. Revisions to 310 CMR 1.01 promulgated in 2004 shall apply to all adjudicatory appeals in which a notice of claim for an adjudicatory hearing is filed on or after January 1, 2005.

1.02: (Not Applicable to Proceedings before the Department of Environmental Protection pursuant to 310 CMR 1.01(1))

1.03: Miscellaneous Provisions Applicable to All Adjudicatory Proceedings

(1) Citation. 310 CMR 1.00 may be cited as 310 CMR 1.00: *Adjudicatory Proceedings*.

(2) Availability of 310 CMR 1.00. Copies of 310 CMR shall be available upon request to any person from the Office of the Secretary of the Commonwealth and the Agency. Fees for copies shall be the cost of public records as determined by the Executive Office for Administration and Finance.

(3) Severability. If any rule contained in 310 CMR 1.00 is found to be unconstitutional or invalid by a Court of competent jurisdiction, the validity of the remaining rules will not be so affected.

(4) Exemptions. 310 CMR 1.00 shall not apply to any Agency within the executive offices for which M.G.L. c. 30A is not applicable. Any other Agency within each of the executive offices shall submit in whole or in part its rules for the conduct of Adjudicatory Proceedings to the Commissioner of Administration who shall approve or disapprove the filing of these proposed substitute rules. Such substitute rules shall be promulgated pursuant to the rulemaking procedures of M.G.L. c. 30A and shall be filed with the Secretary of the Commonwealth within 60 days of the publication of 310 CMR 1.00 and shall take effect at the same time as the standard rules. Thereafter, substitute rules shall be filed subject to the approval of the Commissioner of Administration and in accordance with section six.

Any substitute rules shall follow the headings and to the extent possible the subheadings as set forth in 310 CMR 1.00.

(5) Non-english Speaking Parties.

(a) Communications. All communications which may result in the commencement of an Adjudicatory Proceeding shall contain a notice printed in English, Spanish, Portugese, Italian, Greek, French and Chinese that informs the reader that the document is important and should be translated immediately.

(b) Interpreters. If any Party to a proceeding cannot communicate effectively in English, the Agency, or Presiding Officer shall stay the proceeding until someone can be found who can communicate effectively in both English and the language of the non-English speaking Party.

1.03: continued

(6) Withdrawal and Disqualification of Presiding Officer. A Presiding Officer may at any time withdraw himself/herself from an Adjudicatory Proceeding, in which case another Presiding Officer shall be appointed. If a Party files a timely and sufficient motion and supporting affidavit of bias or other ground for disqualification of a Presiding Officer, and the Presiding Officer does not disqualify himself/herself pursuant to such motion, such motion and all material submitted in support of and opposition to such motion shall be made part of the record, and the Agency may rule on the motion as part of the Decision in the Adjudicatory Proceeding, or at such earlier time as justice may require.

(7) Ex-Parte Communications. No Party or other Person directly or indirectly involved in an adjudicatory appeal shall submit to the Presiding Officer or any Agency employee involved in the Decision-making process, any evidence, argument, analysis or advice, whether written or oral, regarding any matter at issue in an adjudicatory appeal, unless such submission is part of the record or made in the presence of all Parties. This provision does not apply to consultation among Agency members concerning the Agency's internal administrative functions or procedures.

(8) Docket/Decision Index.

(a) Docket. Unless otherwise prescribed by law, each Agency shall maintain on a current basis, a docket of all proceedings which shall list separately in chronological order all Papers filed and actions taken in each Adjudicatory Proceeding.

(b) Decision Index. Unless otherwise prescribed by law, each Agency shall maintain on a current basis, a decision index and compilation of decisions. Said index shall contain an alphabetical listing by name and subject matter of all adjudicatory decisions rendered and shall contain a further crossreference as to the page number in the compilation where the subject Decision may be found. All names and addresses of Parties shall when appropriate be deleted from the Decisions in the compilation in order to protect confidentiality.

(c) Public Inspection. Unless proscribed by law, the docket, Decision index, and compilation of Decisions shall be available for inspection and copying by the public during the office hours of the Agency. The rate for copying shall be rates as set by the Executive Office for Administration and Finance.

REGULATORY AUTHORITY

310 CMR 1.00: M.G.L. c. 30A, § 9.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 2.00: ADOPTING ADMINISTRATIVE REGULATIONS

Section

- 2.01: Definition of Regulation
- 2.02: Petition for Adoption of Regulation
- 2.03: Initial Procedure to Handle Recommended Regulations
- 2.04: Participation at Preliminary Meeting
- 2.05: Procedure for the Adoption, Amendment or Repeal of Regulations Where No Public Hearing Is Required
- 2.06: Procedure for the Adoption or Amendment of Regulations Where a Public Hearing Is Required
- 2.07: Availability of Regulation
- 2.08: Filing of Regulation
- 2.09: Advisory Ruling

2.01: Definition of Regulation

310 CMR 2.00 governs the procedures to be followed by agencies subject to M.G.L. c. 30A §§ 2 and 3 (the State Administrative Procedure Act) when promulgating regulations. The term "regulation" is defined by M.G.L. c. 30A as "the whole or any part of every rule, regulation, standard or other requirement of general application and future effect adopted by an agency to implement or interpret the law enforced or administered by it." [M.G.L. c. 30A s. 1(5).] "Regulation" does not, however, include advisory rulings, rules relating to the internal management of an agency and not directly related to the rights or procedures available to the public, regulations concerning the development and management of property of the Commonwealth or of the agency, or decisions rendered in adjudicatory proceedings, etc. Accordingly, these rules apply to agencies which are acting in a quasi-legislative capacity, *i.e.*, either promulgating substantive regulations consistent with applicable statutes or promulgating rules governing their own procedures. Where these rules apply, no agency may waive or otherwise modify them except to the extent specifically provided herein.

2.02: Petition for Adoption of Regulations

Any interested person or his attorney may at any time petition the department to adopt, amend, or repeal any regulation. The petition shall be addressed to the department and sent to the clerk or secretary by mail or delivered in person during normal business hours. All petitions shall be signed by the petitioner or his attorney, contain his address or the address of his attorney, and set forth clearly and concisely the text of the proposed regulation. The petition may be accompanied by any supporting data, views or arguments.

2.03: Initial Procedure to Handle Recommended Regulations

Upon receipt of a petition for the adoption, amendment or repeal of a regulation submitted pursuant to 310 CMR 2.02 or upon written recommendation by a member of a board or commission of the department that a regulation be adopted, amended or repealed, the department shall consider the petition or recommendation at a meeting and shall, thereupon, determine whether to schedule the petition or recommendation for further proceedings in accordance with 310 CMR 2.05 or 310 CMR 2.06. If the regulation has been presented to the department by petition under 310 CMR 2.02, the department shall within ten days after the meeting notify the petitioner of the department's action.

2.04: Participation at Preliminary Meeting

During the meeting referred to in 310 CMR 2.03, the department may, but shall not be required to, entertain comments or questions from members of the audience. The chairman or other presiding officer may at any time terminate participation by the audience.

2.05: Procedure for the Adoption, Amendment or Repeal of Regulations Where No Public Hearing Is Required

Prior to the adoption or amendment *other* than those subject to 310 CMR 2.06, or the *repeal* of any regulation, the department shall give notice and afford interested persons an opportunity to present data, views or arguments, as follows:

(1) Notice. Notice of the proposed action to adopt regulations shall be given by the agency at least 21 days prior to its proposed action, unless some other time is specified by any applicable law. The agency shall publish the notice in at least two newspapers of general circulation, and where appropriate, in such trade, industry, or professional publications as the agency may select. The agency shall likewise notify in writing any person specified by any law and any person or group which has filed request for notice pursuant to M.G.L. c. 30A, § 3(1)(b).

The notice shall contain the following:

- (a) The agency's statutory authority to adopt the proposed regulation.
- (b) The procedure for submitting data, views or arguments as set forth in 310 CMR 2.05(2).
- (c) The express terms to describe the substance of the proposed action, or state the subjects and issues involved.
- (d) Any additional matter required by any law.

The above notwithstanding, the agency shall also comply with any applicable statute which contains provisions for notice which differ from those contained herein.

(2) Procedure. Within 21 days after the publication and sending of notice regarding the proposed action, any interested person may submit a signed letter, brief or other memorandum stating his views or arguments concerning the proposed action. The letter, brief or memorandum shall be addressed to the department and sent to the clerk or secretary by mail or delivered in person during normal business hours. The agency shall consider the proposed action. Within 30 days after this meeting, the agency shall give written notice of the disposition of the proposed action to all persons required to receive personal notice under 310 CMR 2.05(1) and such other persons submitting a letter, brief, or other memorandum.

(3) Oral Participation. The agency may afford any interested person or his duly authorized representative, or both, an opportunity to present data, views or arguments orally before the agency during a meeting at which the proposed action is to be considered. If the agency finds that such oral presentation is unnecessary or impracticable, it may require written presentation according to 310 CMR 2.05(2).

(4) Waiver of Notice and Participation. If the agency finds that the requirements of notice and opportunity to present views on its proposed action are unnecessary, impracticable or contrary to the public interest, the agency may dispense with such requirements or any part thereof. The agency's finding and a brief statement of the reasons for its finding shall be incorporated in the regulation, amendment or repeal as filed with the Secretary of State under 310 CMR 2.08.

(5) 310 CMR 2.00 does not relieve any agency from compliance with any law requiring that its regulations be approved by designated persons or bodies before they may become effective.

2.06: Procedure for the Adoption or Amendment of Regulations Where a Public Hearing Is Required

Prior to the *adoption* or *amendment* of any regulation as to which a hearing is required by any law, or of any other regulation the violation of which is punishable by fine or imprisonment except a regulation of department practice or procedure, the department shall give notice and hold a public hearing, as follows:

2.06: continued

(1) Notice. Notice of a public hearing shall be given at least 21 days prior to the date of the hearing, unless some other time is specified by any applicable law. The agency shall publish the notice in at least two newspapers of general circulation, and where appropriate, in such trade, industry, or professional publications as the agency may select. The agency shall likewise notify in writing any person specified by any law and any person or group which has filed written request for notice pursuant to M.G.L. c. 30A, § 2(1)(b).

The notice shall contain the following:

- (a) The agency's statutory authority to adopt the proposed regulation.
- (b) The time and place of the public hearing.
- (c) The text of the proposed regulation. (If the proposed regulation is lengthy or if for other reason the text is not available at the time the notice is distributed, it need not be set out verbatim; however, the notice should either describe the substance of the proposed regulation or state the subject matter and issues involved.)
- (d) Any additional matter required by any law.

The above notwithstanding, the agency shall also comply with any applicable statute which contains provisions for notice which differ from those contained herein.

(2) Procedure. On the date and at the time and place designated in the notice referred to in 310 CMR 2.06(1), the agency shall hold a public hearing. The meeting shall be opened, presided over and adjourned by the Commissioner, or other employee authorized to adopt regulations, or a designee. The public hearing shall comply with any requirements imposed by law, but shall not be subject to the provisions of law or regulation governing adjudicatory proceedings. 310 CMR 2.06(2) does not relieve any agency from compliance with any law requiring that its regulations be approved by designated persons or bodies before they become effective. Within ten days after the close of the public hearing, written statements and arguments may be filed with the agency. The agency shall consider all relevant matter presented to it before adopting, amending or repealing any regulation.

(3) Oral Participation. Any interested person or his duly authorized representative, or both, shall be given an opportunity to present orally statements and arguments. In its discretion the agency may limit the length of oral presentation.

(4) Emergency Regulation. If an agency finds that the immediate adoption of a regulation is necessary for the public health, safety or general welfare, and that observance of requirements of notice and public hearing would be contrary to the public interest, the agency may dispense with such requirements and adopt the regulation as an emergency regulation. The agency's finding and a brief statement of the reasons for its finding shall be incorporated in the emergency regulation as filed with the Secretary of State in accordance with 310 CMR 2.08. Any emergency regulation so adopted shall state the date on which it is to be effective and the date upon which it shall expire. If no effective date is stated, the regulation shall be presumed to take effect upon being filed with the Secretary of State under 310 CMR 2.08. An emergency regulation shall not remain in effect for longer than three months unless during the time it is in effect the agency gives notice and holds a public hearing and adopts it as a permanent regulation in accordance with 310 CMR 2.00.

2.07: Availability of Regulation

The clerk or secretary of the agency shall be responsible for keeping a book containing all the agency regulations. In addition the clerk or secretary shall compile and publish the regulations which are currently in effect. All the regulations of an agency shall be available for inspection during normal business hours at the offices of the department. Copies of all regulations shall be available to any person on request. The agency may charge a reasonable fee for each copy.

2.08: Filing of Regulation

Upon the adoption of a regulation, an attested copy shall be filed with the Secretary of State together with a citation of the statutory authority under which the regulation has been promulgated. The regulation shall take effect [upon filing] unless a later date is required by any law or is specified by the agency in the regulation.

2.09: Advisory Ruling

Any interested person or his attorney may at any time request an advisory ruling with respect to the applicability to any person, property or factual situation of any statute or regulation enforced or administered by the agency. The request shall be addressed to the agency and sent to the clerk or secretary by mail or delivered in person during normal business hours. All requests shall be signed by the person making it or his attorney, contain his address or the address of his attorney, and state clearly and concisely the substance or nature of the request. The request may be accompanied by any supporting data, views or arguments. Upon receipt of the request the agency shall consider it at a meeting and shall within ten days thereafter notify the petitioner that the request is denied or that the agency will render an advisory ruling. The agency may at any time rescind a decision to render an advisory ruling. If an advisory ruling is rendered, a copy of the ruling shall be sent to the person requesting it or his attorney.

REGULATORY AUTHORITY

310 CMR 2.00: M.G.L. c. 30A, § 5; M.G.L. c. 30, § 37.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 3.00: ACCESS TO AND CONFIDENTIALITY OF DEPARTMENT RECORDS AND FILES

Section

- 3.01: Purpose, Authority and Applicability
- 3.02: Severability
- 3.03: Effective Date
- 3.04: Computation of Time
- 3.05: Definitions
- 3.10: Availability Of Public Records To The General Public
- 3.11: Processing Requests For Disclosure Of Public Records
- 3.12: Presumption Of Availability
- 3.13: Determinations To Be Made By The Commissioner of Director
- 3.14: Effect Of Requests For Confidentiality
- 3.15: Postponing Denial Of Confidentiality Pending Appeal
- 3.16: Separability Of Records
- 3.20: Protecting The Confidentiality of Trade Secrets
- 3.21: When Trade Secrets May Be Disclosed By The Department
- 3.22: Trade Secrets Subject To Confidentiality
- 3.23: Criteria For Determining A Trade Secret
- 3.24: Requests For Protecting The Confidentiality Of Trade Secrets
- 3.25: Procedure For Acting On Requests For Protecting The Confidentiality of Trade Secrets
- 3.26: Reconsidering Confidentiality Determinations
- 3.27: Notice In Department Orders And Forms
- 3.29: Transition Provisions Governing Trade Secrets
- 3.30: Special Provisions for Trade Secret Claims Pursuant to M.G.L. c. 21I
- 3.31: Purpose, Authority, and Applicability
- 3.32: Definitions
- 3.33: General Provisions for Making Trade Secret Claims
- 3.34: Procedures for Determination of Trade Secret
- 3.35: Procedures to be Followed During Pendency of Trade Secret Claim
- 3.36: Penalties

3.01: Purpose, Authority and Applicability

310 CMR 3.00 are promulgated by the Department pursuant to the authority granted by M.G.L. c. 21A, § 2(28); M.G.L. c. 21, § 27(12); M.G.L. c. 21C, § 4; M.G.L. c. 21E, § 3(c); M.G.L. c. 21I, §§ 3 and 20; and M.G.L. c. 111, §§ 142B and 142D. 310 CMR 3.00 are intended to assure that public access to and, to the extent authorized or required by law, the confidentiality of records and files obtained or made by the Department are in conformity with M.G.L. c. 21, § 27(7); M.G.L. c. 21C, § 12; M.G.L. c. 21E, § 12; M.G.L. c. 66, § 10; M.G.L. c. 111, §§ 142B and 142D, M.G.L. c. 21I; and all other applicable statutes and regulations.

3.02: Severability

It is hereby declared that the provisions of 310 CMR 3.00 are severable, and if any provision hereof or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions hereof or applications thereof which can be given effect without the invalid provision or application.

3.03: Effective Date

310 CMR 3.00 shall take effect on publication by the Secretary of the Commonwealth in the Massachusetts Register.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

3.04: Computation of Time

Unless otherwise specifically provided by law, 310 CMR 3.00, or any determination issued pursuant to 310 CMR 3.00, any time period prescribed or referred to in 310 CMR 3.00 or in any determination issued pursuant to 310 CMR 3.00 shall begin with the first day following the act which initiates the running of the time period, and shall include every calendar day, including the last day of the time period so computed. If the last day is a Saturday, Sunday, legal holiday, or any other day in which the offices of the Department are closed, the deadline shall run until the end of the next business day. If the time period prescribed or referred to is less than seven days, only days when the offices of the Department are open shall be included in the computation.

3.05: Definitions

As used throughout 310 CMR 3.00, the following terms shall have the following meanings, unless the context clearly indicates otherwise:

Commissioner means the Commissioner or Acting Commissioner of the Department.

Department means the Massachusetts Department of Environmental Quality Engineering.

Director means the Director or Deputy Director of the Department's Division of Water Pollution Control.

Person means any agency or political subdivision of the Federal government or the Commonwealth, or any state, public or private corporation or authority, any individual, trust, firm, joint stock company, partnership, association, or other entity, and any officer, employee or agency of said person, and any group of said persons.

Public record means any record made or received by any officer or employee of any agency, executive office, department, board, commission, bureau, division or authority of the Commonwealth, or of any authority established by the General Court to serve a public purpose, and which is a public record pursuant to M.G.L. c. 4, § 7, cl. 26, as may be amended from time to time.

Record means a book, paper, map, photograph, recorded tape, financial statement, statistical tabulation, or any other documentary material or data, regardless of physical form or characteristics.

Trade secret means anything tangible which constitutes, represents, evidences or records a secret scientific, technical, merchandising, production, manufacturing, or management information, design, process, procedure, formula, invention, method or improvement. Without limiting the generality of the foregoing, this definition shall include anything which is a trade secret pursuant to M.G.L. c. 266, § 30(4), as may be amended from time to time. This definition shall not include:

- (1) anything which is "personal data" pursuant to M.G.L. c. 66A, § 1, as may be amended from time to time.
- (2) anything which is "criminal offender record information" pursuant to M.G.L. c. 6, § 167, as may be amended from time to time.
- (3) anything which is "evaluative information" pursuant to M.G.L. c. 6, § 167, as may be amended from time to time.
- (4) anything which is "intelligence information" pursuant to M.G.L. c. 6, § 167, as may be amended from time to time.

3.10: Availability of Public Records to the General Public

All records made or received by any officer or employee of the Department shall be public records and shall be available for disclosure to the general public on request pursuant to 310 CMR 3.10 through 3.19, except the following:

3.10: continued

- (1) all records specifically excluded from the definition of "public record" pursuant to M.G.L. c. 4, § 7, cl. 26.
- (2) all trade secrets the disclosure of which would not be in compliance with M.G.L. c. 21, § 27(7); M.G.L. c. 21C, § 12; M.G.L. c. 21I, § 20; M.G.L. c. 21E, § 12; M.G.L. c. 111, §§ 142B and 142D, M.G.L. c. 21I, § 20; or 310 CMR 3.20 through 3.39.
- (3) all records which are "criminal offender record information", "evaluative information", or "intelligence information" pursuant to M.G.L. c. 6, § 167, as may be amended from time to time, the disclosure of which would not be in compliance with M.G.L. c. 6, §§ 167 through 178, as may be amended from time to time.
- (4) all records which are "personal data" pursuant to M.G.L. c. 66A, § 1, as may be amended from time to time, the disclosure of which would not be in compliance with M.G.L. c. 66A, as may be amended from time to time.
- (5) all records specifically or by necessary implication exempted from disclosure by any other statute.

3.11: Processing Requests for Disclosure of Public Records

In compliance with M.G.L. c. 66, § 10, the Department shall, at reasonable times and without unreasonable delay, permit any person, under the supervision of Department personnel, to inspect and examine any public record which is in the custody of the Department and not described in 310 CMR 3.10(1) through (5); and the Department shall furnish one copy of such record on request and on payment of a reasonable fee. Every person for whom a search of public records is made shall pay the actual expense of such search. Unless more time is reasonably required to properly determine whether the records in question are subject to disclosure as public records or exempt from disclosure, the Department shall comply with a written request to inspect or copy a public record within ten days after the Department actually receives the request. Whenever a cost or fee is established or determined by the Commissioner of Administration, said cost or fee shall be paid to the Department.

3.12: Presumption of Availability

Whenever there is a doubt, question or dispute about whether particular records are subject to disclosure as public records or exempt from disclosure, there shall be a presumption that the records in question are public records. This presumption may be overcome upon a specific showing by the person requesting confidentiality that the records in question are trade secrets, or are otherwise exempt from disclosure.

3.13: Determinations to be Made by the Commissioner or Director

Whenever there is a doubt, question or dispute about whether any particular record is subject to disclosure as a public record or exempt from disclosure, and whenever any person requests that any particular record be deemed a trade secret or otherwise be deemed confidential and exempt from disclosure, the Department shall be deemed to have resolved such doubt, question or dispute, and such request shall be granted or denied, only in accordance with a written determination signed by:

- (1) the Commissioner in the case of a record made by or submitted to the Department pursuant to any Massachusetts statute other than M.G.L. c. 21, §§ 26 through 53; or
- (2) the Director, in the case of a record made by or submitted to the Department pursuant to M.G.L. c. 21, §§ 26 through 53.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

3.14: Effect of Requests for Confidentiality

Whenever any person requests in writing that particular records be deemed trade secrets or otherwise be deemed confidential and exempt from disclosure, such records shall be treated as confidential and shall not be deemed public records until the Department has approved or denied the request pursuant to 310 CMR 3.00.

3.15: Postponing Denial of Confidentiality Pending Appeal

Whenever the Department denies a request to deem records confidential and not public records, such denial shall take effect only ten days after the date thereof so that any person aggrieved by said denial may appeal to another State agency with jurisdiction over the subject matter thereof, or to a court. During this ten-day period, the records in question shall be treated as confidential and shall not be deemed public records. This ten-day period may be extended by the Department in extraordinary situations. Any extension shall be in writing and signed pursuant to 310 CMR 3.13. 310 CMR 3.15 shall not apply to trade secret claims made pursuant to M.G.L. c. 21I and 310 CMR 3.30 through 3.39.

3.16: Separability of Records

Whenever parts of records are trade secrets or otherwise exempt from disclosure, the Department shall make every reasonable effort to separate the parts that are exempt from disclosure from the parts that are public records so that the parts which are public records can be disclosed without prejudicing the confidentiality of the parts which are exempt from disclosure.

3.20: Protecting the Confidentiality of Trade Secrets

Anything which the Department determines to be a trade secret shall not be deemed to be a public record and shall be exempt from disclosure to the general public on request. Such determinations shall be subject to 310 CMR 3.12, 3.13, and 3.20 through 3.39.

3.21: When Trade Secrets May be Disclosed by the Department

Notwithstanding any provision of 310 CMR 3.20 or 3.30 to the contrary, a trade secret shall always be subject to disclosure by the Department

- (1) to the extent necessary to comply with the Federal Solid Waste Disposal Act, as revised by the Resource Conservation and Recovery Act, as may be amended from time to time.
- (2) to the extent necessary to comply with M.G.L. c. 21, § 27(7) and the Federal Clean Water Act, as amended, 33 U.S.C. 1251 *et seq.*
- (3) to the extent necessary to comply with M.G.L. c. 21E, § 12 and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601 *et seq.*
- (4) to the extent necessary to comply with M.G.L. c. 111, §§ 142B and 142D.
- (5) to the extent necessary for any enforcement action, whether criminal or civil, judicial or administrative.

3.22: Trade Secrets Subject to Confidentiality

A trade secret may be treated as confidential and not as a public record only if it was submitted to the Department

- (1) because such submittal was required to
 - (a) comply with a statute, regulation, or order, or
 - (b) to obtain a license, permit, or other required approval, or
 - (c) obtain a government contract, financial aid, or other benefit, or

3.22: continued

(2) for use in developing governmental policy and upon a promise of confidentiality and not for any of the reasons set forth in 310 CMR 3.22(1). No promise of confidentiality shall be deemed to have been made by the Department pursuant to M.G.L. c. 4, § 7, cl. 26(g) or 310 CMR 3.22(2) unless made in writing and signed by the Commissioner pursuant to 310 CMR 3.13(1) or by the Director pursuant to 310 CMR 3.13(2).

3.23: Criteria for Determining a Trade Secret

In determining whether a record is a trade secret, the Department shall apply the following criteria:

- (1) The extent to which the trade secret is known by persons other than the person submitting the record in question.
- (2) The extent to which the trade secret is known by employees of the person submitting the record in question, and others involved in that person's business.
- (3) The extent to which measures are taken by the person submitting the record in question to guard the secrecy of the trade secret.
- (4) The value of the trade secret to the person submitting the record in question and to that person's competitors.
- (5) The amount of effort in developing the trade secret.
- (6) The ease or difficulty with which the information could be properly acquired or duplicated by others.

3.24: Requests for Protecting the Confidentiality of Trade Secrets

No record shall be deemed a trade secret unless a person requests the Department in writing to take such action. The request shall be made and substantiated as follows:

- (1) Each record containing information which is the subject of a confidentiality request shall be clearly marked "CONFIDENTIAL". To assist the Department in complying with 310 CMR 3.16, persons shall separately submit confidential portions of otherwise nonconfidential records. If submitted separately, the record which is the subject of a confidentiality request shall be clearly marked "CONFIDENTIAL".
- (2) The request for confidentiality shall be supported with the following information, which shall be treated as a public record:
 - (a) The time period for which confidential treatment is desired.
 - (b) The reason the record was provided to the Department, and the date of submittal.
 - (c) Everything the person has done to meet the criteria in 310 CMR 3.23.
 - (d) The extent to which the person requesting that the record be kept confidential has disclosed the contents of that record to other persons.
 - (e) A list of all other Federal, State and local agencies to which the same record or contents thereof has been submitted, which of them have been requested to keep that record confidential, the status of the requests, and a copy of the responses by said agencies or the courts to the requests.
 - (f) How making the record a public record would harm the person requesting confidentiality and why such harm should be deemed substantial.
 - (g) If the record was submitted voluntarily and not in compliance with a regulation or order of the Department or a court, whether and if so why making the record a public record would tend to lessen the availability to the Department of similar records in the future.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

3.24: continued

(3) Any toxics user that is required, pursuant to M.G.L. c. 21I or 310 CMR 50.00, to submit to the Department a report, plan summary or other document, who believes that disclosing information in that document will reveal a trade secret, may submit to the Department, in writing, a trade secret claim in accordance with M.G.L. c. 21I and 310 CMR 3.30.

3.25: Procedure for Acting on Requests for Protecting the Confidentiality of Trade Secrets

The Department shall act on a confidentiality request subject to the following provisions:

(1) If the Department has received a request to inspect or copy a record which is the subject of a confidentiality request on which the Department has not made a final decision, the Department shall notify

- (a) the person who made the request to inspect or copy the record that
 - 1. the record in question is the subject of a pending confidentiality request, and therefore not a public record,
 - 2. the request to inspect or copy is initially denied, and
 - 3. a final decision will be made when the Department determines whether the record in question is entitled to confidentiality as a trade secret.
- (b) the person who requested that the record be kept confidential of the request to inspect or copy the record.

(2) The Department shall determine whether the record would be voluntarily submitted within the meaning of 310 CMR 3.22(2) and whether the record, if made public, would divulge a trade secret. The Department shall give notice of its determination(s) to the person who requested confidentiality and all persons who requested to inspect or copy the record.

(3) If the Department determines that a record would, if made public, divulge a trade secret, the record in question shall be deemed confidential and shall not be deemed a public record for such length of time, and subject to such terms, conditions and limitations, as the Department may include in the determination. The Department shall so notify the person who submitted the record to the Department and all persons making a request to inspect or copy the record in question.

(4) All notices given pursuant to 310 CMR 3.25 shall be in writing, shall be delivered either by hand or by certified mail, return receipt requested, and shall include:

- (a) the reasons for the determination,
- (b) notice that the determination constitutes a final decision of the Department,
- (c) notice that the determination may be subject to review by one or more other State agencies or by the courts,
- (d) if the determination is that the record in question, if made public, would not divulge a trade secret, notice that, pursuant to 310 CMR 3.15,
 - 1. the record in question shall become a public record ten days after the date of the Department's determination unless, within that time, another State agency with jurisdiction over the subject matter thereof, or a court, orders otherwise, and
 - 2. this ten-day period may be extended only in extraordinary situations, and that such extensions must be in writing and signed by the Commissioner pursuant to 310 CMR 3.13(1) or by the Director pursuant to 310 CMR 3.13(2).

(5) With respect to trade secret claims made pursuant to M.G.L. c. 21I and 310 CMR 3.30, the procedures set forth in 310 CMR 3.30 shall apply.

3.26: Reconsidering Confidentiality Determinations

If the Department determines that newly discovered information or changed circumstances make it appropriate for the Department to reconsider and possibly modify a prior grant of confidentiality, the Department shall so notify the person who submitted the record to the Department. The notice shall give the person a reasonable period of time to substantiate, pursuant to 310 CMR 3.24, keeping the record in question confidential. The amount of time

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

3.26: continued

originally established in the notice may be reasonably extended by the Department. After this time has passed, or after the Department has received a written response from the person requesting confidentiality, whichever occurs first, the Department shall make a new determination whether the record in question shall be deemed either confidential or a public record. 310 CMR 3.26 shall not apply to trade secret claims made pursuant to M.G.L. c. 21I and 310 CMR 3.30 through 3.39.

3.27: Notice in Department Orders and Forms

(1) Every order and every form issued by the Department pursuant to M.G.L. c. 21C or 310 CMR 30.000, shall include the language set out in 310 CMR 3.27(2). No order or form shall be deemed invalid because it does not include said language. This language need not be included in a manifest filled out pursuant to 310 CMR 30.000 or 314 CMR 8.07(2)(e).

(2) The language referred to in 310 CMR 3.27(1) shall be substantially as follows:

You may request the Department to keep confidential part or all of any documentary material or data submitted to the Department if such material or data, if made public, would divulge a trade secret. If no such request accompanies the material or data at the time they are submitted to the Department, they shall be public records and shall be available for inspection and copying by the public without further notice to you. Information covered by such a request shall be disclosed by the Department to the extent authorized by applicable statutes and 310 CMR 3.00. You are advised to read 310 CMR 3.00 carefully before making such a request because only certain material or data may properly be the subject of such a request.

3.29: Transition Provisions Governing Trade Secrets

(1) Any record received by the Department pursuant to M.G.L. c. 21C on or before December 31, 1982 shall, after that date, be deemed a public record and not confidential, without further notice to any person, unless:

(a) on or before December 31, 1982 the Commissioner has made a formal written determination that a record specifically identified in the determination shall be deemed confidential and not a public record, or

(b) on or before December 31, 1982 the Department has received a written request to keep confidential records specifically identified in the request, and the request is still pending on that date.

(2) Other than records received pursuant to 310 CMR 3.29(1) any record received by the Department on or before December 31, 1983 shall, after that date, be deemed a public record and not confidential, without further notice to any person, unless:

(a) on or before December 31, 1983, a formal written determination has been made, either by the Commissioner pursuant to 310 CMR 3.13(1) or by the Director pursuant to 310 CMR 3.13(2), that a record specifically identified in the determination shall be deemed confidential and not a public record, or

(b) on or before December 31, 1983 the Department has received a written request to keep confidential records specifically identified in the request, and the request is still pending on that date.

3.30: Special Provisions for Trade Secret Claims Pursuant to M.G.L. c. 21I

3.31: Purpose, Authority, and Applicability

310 CMR 3.30 through 3.39, cited collectively as 310 CMR 3.30, are promulgated pursuant to the authority granted to the Department by M.G.L. c. 21I, §§ 3 and 20. The purpose of 310 CMR 3.30 is to ensure that public access to, and the confidentiality of, documents submitted to the Department pursuant to M.G.L. c. 21I or 310 CMR 50.00, are in conformity with M.G.L. c. 21I and 310 CMR 50.00, and all other applicable statutes and regulations.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

3.32: Definitions

As used in 310 CMR 3.30, the following terms shall have the following meanings, unless the context clearly indicates otherwise:

Commissioner means the Commissioner of the Department of Environmental Quality Engineering or his designee.

Toxic means any toxic as defined in M.G.L. c. 21I and 310 CMR 50.10.

Toxic or hazardous substance means any toxic or hazardous substance as defined in M.G.L. c. 21I and 310 CMR 50.10.

Toxics means toxics as defined in M.G.L. c. 21I and 310 CMR 50.10.

Toxics user means any toxics user as defined in M.G.L. c. 21I and 310 CMR 50.10.

Trade secret means any formula, plan, pattern, production data, device, information, or compilation of information which is used in a toxics user's business, and which gives said toxics user an opportunity to obtain an advantage over competitors who do not know or use it.

Trade secret claimant means any toxic user who makes a trade secret claim in accordance with M.G.L. c. 21I and 310 CMR 3.30.

3.33: General Provisions for Making Trade Secret Claims

(1) A toxics user making a trade secret claim shall submit two copies of the required documents to the department, one with the information for which a trade secret claim is being made which conceals that information, and one in an envelope marked "Confidential" containing the information for which a trade secret claim is being made, which the department, during the pendency of the trade secret claim, shall keep in the secured storage area as referenced in 310 CMR 3.35. Any toxics user concealing the specific chemical identity of any toxic or hazardous substance shall, in the place on the nonconfidential copy where the chemical identity would normally be included, include the generic class or category of the toxic or hazardous substance.

(2) No toxics user required to submit information under M.G.L. c. 21I or 310 CMR 50.00 may claim that the information is entitled to protection as a trade secret under 310 CMR 3.30 unless such toxics user shows each of the following:

- (a) such toxics user has not disclosed the information to anyone else, other than a member of a local emergency planning committee as defined by EPCRA, an officer or employee of the United States or a state or local government, an employee of such toxics user, or anyone who is bound by a confidentiality agreement, and such toxics user has taken reasonable measures to protect the confidentiality of such information and intends to continue to take such measures; and
- (b) The information is not required to be disclosed, or otherwise made available to the public under any other federal or state law;
- (c) Disclosure of the information is likely to cause substantial harm to the competitive position of such toxics user; and
- (d) The commissioner determines that the information constitutes a trade secret based on the criteria set forth in 310 CMR 3.23.

(3) A toxics user making a trade secret claim shall, together with the nonconfidential copy of the document submitted pursuant to 310 CMR 3.33(1), submit a written request for confidentiality, and a written explanation of the reasons that the information claimed as a trade secret is a trade secret. The explanation shall contain the following information:

- (a) the information set forth in 310 CMR 3.24(2), and,
- (b) information that demonstrates each of the factors set forth in 310 CMR 3.33(2)(a)(b) and (c).

3.33: continued

(4) Information certified by an appropriate official of the United States as necessarily kept secrets for national defense purposes shall be accorded the full protection against disclosure as specified by such officials in accordance with the Law of the United States.

(5) The provisions of 310 CMR 3.30 shall not apply to the disclosure of emissions data.

3.34: Procedures for Determination of Trade Secret

(1) Any resident of the commonwealth may submit to the commissioner a written petition for the disclosure of any information which is claimed as a trade secret pursuant to M.G.L. c. 21I and 310 CMR 3.30. The petition shall specify the information sought to be disclosed. The Department shall notify the trade secret claimant of the petition.

(2) If the commissioner has reason to believe that the information claimed as a trade secret may not be a trade secret, the commissioner may, in the absence of a petition pursuant to 310 CMR 3.34(1), initiate a determination to be carried out in accordance with 310 CMR 3.34. The Department shall notify the trade secret claimant that the commissioner has initiated a determination as to whether the information claimed as a trade secret is a trade secret.

(3) Within 60 days after the date of receipt of a petition under 310 CMR 3.34(1), or upon the initiative of the commissioner pursuant to 310 CMR 3.34(2), the commissioner shall review the information submitted by the trade secret claimant pursuant to 310 CMR 3.33(3) and determine whether the explanation presents assertions which, if true, are sufficient to support a finding that the information claimed as a trade secret is a trade secret.

(4) If the commissioner determines, pursuant to 310 CMR 3.34(3), that the explanation presents assertions which, if true, are sufficient to support a finding that the information claimed as a trade secret is a trade secret, the commissioner shall, by certified mail, notify the trade secret claimant that he has 30 days from the date of such notification to supplement the explanation with detailed information to support a finding that the information claimed as a trade secret is a trade secret.

(5) If the commissioner determines, after receipt of any supplemental supporting detailed information submitted pursuant to 310 CMR 3.34(4), that the information claimed as a trade secret is a trade secret, the commissioner shall, by certified mail, so notify the trade secret claimant and the petitioner, if any. The petitioner, if any, may, within 30 days of the date of such notification, seek judicial review of the determination in accordance with M.G.L. c. 30A, § 14. The commissioner shall after final adjudication immediately return to the trade secret claimant all supplemental supporting detailed information submitted concerning the validity of the trade secret claim.

(6) All supplemental supporting detailed information submitted pursuant to 310 CMR 3.34(4) shall be kept in the secure storage area established and maintained in accordance with 310 CMR 3.00 while the claim is pending. The petitioner, if any, shall not be permitted to have access, except as approved by the court. In entering any order approving access by the petitioner, the court shall consider the need for the entry of an appropriate protective order restricting the use or further disclosure of the confidential information.

(7) If the commissioner determines, after receipt of any supplemental supporting detailed information submitted pursuant to 310 CMR 3.34(4), that the information claimed as a trade secret is not a trade secret, the commissioner shall, by certified mail, so notify the trade secret claimant. The trade secret claimant may, within 30 days of the date of such notification request an adjudicatory hearing on the commissioner's determination in accordance with M.G.L. c. 30A and 310 CMR 1.00. A timely request for an adjudicatory hearing pursuant to 310 CMR 3.34(7) shall act as an automatic stay of the commissioner's determination pending completion of the adjudicatory hearing. A trade secret claimant aggrieved by the department's final decision upon said adjudicatory hearing may, within 30 days of the date

3.34: continued

of the final decision, seek judicial review pursuant to M.G.L. c. 30A, § 14. During judicial proceedings, if any, the information claimed as a trade secret shall remain confidential. Any court in considering a motion for a temporary restraining order or preliminary injunction to enjoin release of such information shall presume that release would cause irreparable harm to the trade secret claimant.

(8) If the commissioner determines, pursuant to 310 CMR 3.34(3), that the explanation presents insufficient assertions to support a finding that the information concealed is a trade secret, the commissioner shall, by certified mail, notify the trade secret claimant that he shall have 30 days from the date of such notification in which to request an adjudicatory hearing, or, upon a showing of good cause to amend the original explanation by providing supplemental assertions to support the trade secret claim. As used in 310 CMR 3.34(8), "good cause to amend" shall not include a claim that the explanation contains information which constitutes a trade secret pursuant to 310 CMR 3.00 through 310 CMR 3.39.

(9) If the commissioner does not reverse or modify his determination under 310 CMR 3.34(3) after an adjudicatory hearing or an examination of any supplemental assertions allowed under 310 CMR 3.34(8), the commissioner shall, by certified mail, so notify the trade secret claimant and the trade secret claimant shall have 30 days from the date of the decision or date of notification in which to file for judicial review of the determination in accordance with M.G.L. c. 30A, § 14. A trade secret claimant aggrieved by the commissioner's final decision may within 30 days of the date of the decision seek judicial review pursuant to M.G.L. c. 30A, § 14. The information claimed as a trade secret, and any supplemental supporting information submitted pursuant to 310 CMR 3.34(3), shall remain confidential during judicial proceedings, if any. Any court in considering a motion for a temporary restraining order or preliminary injunction to enjoin release of such information shall presume that release would cause irreparable harm to the trade secret claimant.

(10) If the commissioner reverses or modifies his determination under 310 CMR 3.34(3) after an appeal or an examination of any supplemental assertions under 310 CMR 3.34(8), the procedures set forth in 310 CMR 3.34(5) through (7).

3.35: Procedures to be Followed During Pendency of Trade Secret Claim

(1) With respect to concealed information for which a trade secret claim has been made but not finally denied, the Department may:

- (a) use such information, aggregated with other information in such a manner as to maintain the confidentiality of the information claimed as a trade secret, to carry out responsibilities under M.G.L. c. 21I or 310 CMR 50.00. The department may include such aggregated information in the publicly available database required by M.G.L. c. 21I;
- (b) disclose such information when the department is required to do so to comply with federal law or regulation, and so long as the department gives notice of the requirement to the toxics user prior to complying.

(2) The department shall establish and maintain a single secure storage area for confidential materials and information submitted pursuant to M.G.L. c. 21I or 310 CMR 50.00. Materials and information for which trade secret claims have been made and related supporting materials, and information for which such claims have been finally adjudicated in favor of the claimant, shall be kept in the secure storage area and may only be removed in accordance with the provisions of 310 CMR 3.30. Materials and information for which such claims have been finally adjudicated against the claimant may be permanently removed from the secure storage area.

(3) A chief document control officer designated by the commissioner shall be responsible for controlling access to the secure storage area and its contents. The commissioner may designate no more than five department personnel at any one time as document control officers who may have access to the secure storage area. Personnel and authorized agents of the department who require information contained within the secure storage area for the

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

3.35: continued

effective performance of their duties may, upon request to a document control officer, examine documents containing such information within a secure area adjoining the secure storage area. Immediately upon completion of such examination, or at the close of the business day, whichever is first, such personnel shall return the documents to a document control officer for immediate return to the secure storage area. A hearing officer, administrative law judge, or department counsel in an adjudicatory hearing in which such documents or information are at issue, or other department personnel authorized in writing by the commissioner to do so, may remove such documents from the secure storage area when necessary for preparation and conduct of such adjudicatory hearing or effective performance of their duties, provided that the hearing officer, administrative law judge, counsel, or other personnel shall at all times retain control of such documents and information through direct physical observation or deposit in a locked room, file, or other secured area. Immediately upon completion of the hearing or other required use, the documents shall be returned to a document control officer for immediate return to the secure storage area.

(4) No copies of such documents or information may be made except by a document control officer. Copies shall be considered equivalent to original documents for purposes of 310 CMR 3.35. Any notes concerning such information made by department personnel shall be treated as confidential pursuant to 310 CMR 3.30.

(5) Department personnel or authorized agents who violate the procedures required by 310 CMR 3.35 shall be subject to disciplinary action.

3.36: Penalties

(1) Anyone who is not authorized to have access to, or who is not authorized to disclose information submitted to the department under the authority of M.G.L. c. 21I, 310 CMR 50.00, or 310 CMR 3.30, but who knowingly and willfully uses, divulges or discloses to anyone else such information in a manner not authorized by M.G.L. c. 21I, 310 CMR 50.00, or 310 CMR 3.30, shall be in violation of M.G.L.c. 21I and 310,CMR 50.00, and shall be subject to the penalties established in M.G.L. c. 21I, § 21(B).

(2) If the commissioner determines, pursuant to 310 CMR 3.34, the information claimed as a trade secret is not a trade secret, and that the trade secret claim is or was frivolous, then the trade secret claimant shall be subject to a civil penalty not to exceed \$25,000 per trade secret claim. The commissioner may assess the penalty in accordance with M.G.L. c. 21A, § 16 or may request the attorney general to bring an action in any court of competent jurisdiction in the commonwealth to assess and collect the penalty.

REGULATORY AUTHORITY

310 CMR 3.00: M.G.L. c. 21, § 27(12); M.G.L. c. 21A, § 2(28); M.G.L. c. 21C, §§ 4, 6 and 12; M.G.L. c. 21E, § 3C; M.G.L. c. 111, § 142B and 142D.

310 CMR 4.00: TIMELY ACTION SCHEDULE AND FEE PROVISIONS

Section

- 4.01: Purpose, Authority and General Provisions
- 4.02: Definitions
- 4.03: Annual Compliance Assurance Fee
- 4.04: Permit Application Schedules and Fees
- 4.05: Alternative Project-specific Schedules and Fees
- 4.06: Adjudicatory Hearing Filing Fee
- 4.08: Public Record Fees
- 4.09: Targeted Technical Assistance Fees
- 4.10: Appendix: Schedules for Timely Action and Permit Application Fees

4.01: Purpose, Authority, and General Provisions

(1) Purpose. The purpose of 310 CMR 4.00 is to provide for the orderly and efficient administration of the regulatory programs administered by the Department through the establishment of schedules for timely action on permit applications, permit application fees, and annual compliance assurance fees, thereby contributing to the protection of the public health and safety and of the environment; and to otherwise implement the provisions of M.G.L. c. 21A, § 18 and M.G.L. c. 21E, § 3B. Except to the extent specifically provided, nothing in 310 CMR 4.00 shall be construed to affect any rights, duties, or obligations established by any statute or by any regulation promulgated by the Department.

(2) Authority. 310 CMR 4.00 is adopted pursuant to M.G.L. c. 21A, § 18 and M.G.L. c. 21E, § 3B and M.G.L. c. 131, § 40.

(3) Effective Date.

(a) 310 CMR 4.00 shall take effect on November 9, 1990. Pursuant to M.G.L. c. 21A, § 18(m), 310 CMR 4.03, 4.04, 4.05 and 4.10 shall not be in effect in any fiscal year in which appropriations for ordinary maintenance of the Department from state funds other than the environmental challenge fund and the environmental permitting and compliance assurance fund do not exceed the baseline figure set forth in M.G.L. c. 21A, § 18(m).

(b) Notwithstanding 310 CMR 4.01(3)(a), 310 CMR 4.00 as applicable to permits under M.G.L. c. 21E, shall take effect on October 1, 1993, and shall be effective relative to these permits regardless of the level of fiscal year appropriations.

(c) Pursuant to M.G.L. c. 21A, § 18(j), the Department shall review all fees and schedules established pursuant to 310 CMR 4.00 on or before July 1, 1992, and shall by regulation adjust fees and schedules as necessary to reflect changes in regulatory requirements, technologies, the nature and cost of the Department's permitting and compliance activities, and improvements in the Department's practices and procedures.

(d) Notwithstanding 310 CMR 4.01(3)(c) and pursuant to M.G.L. c. 21E, § 3B, on or before July 1, 1994 and on or before July first of every third year thereafter, the Department shall review all fees and schedules established pursuant to 310 CMR 4.00 as applicable to permits for M.G.L. c. 21E sites or vessels (hereinafter referred to as sites) and shall by regulation adjust fees and schedules as necessary to reflect changes in regulatory requirements, technologies, the nature and cost of the Department's permitting and compliance activities, and improvements in the Department's practice and procedure.

(4) Applicability

(a) The annual compliance assurance fees established in 310 CMR 4.03 shall apply to all permittees described therein beginning with July 1, 1990.

(b) The permit application fees and schedules for timely action established in 310 CMR 4.04, 4.05 and 4.10 shall apply to permit applications described therein that are filed on or after January 1, 1991.

(c) The adjudicatory hearing filing fee established in 310 CMR 4.06 shall apply to adjudicatory hearing requests based on actions taken by the Department on or after January 1, 1991.

(d) Notwithstanding 310 CMR 4.01(4)(a), (b), or (c) fees and schedules established pursuant to M.G.L. c. 21E shall apply as follows:

4.01: continued

1. The annual compliance assurance fees for the Bureau of Waste Site Cleanup established in 310 CMR 4.03 shall apply to sites in accordance with 310 CMR 40.0000: *Massachusetts Contingency Plan* as of October 1, 1993.
2. The permit application fees and schedules for timely action established in 310 CMR 4.04, 4.05 and 4.10 shall apply to Bureau of Waste Site Cleanup permit applications that are filed on or after October 1, 1993.

(5) Computation of Time. Unless otherwise specifically provided by statute or 310 CMR 4.00, any time period prescribed or referred to in 310 CMR 4.00 or in any action taken pursuant to 310 CMR 4.00 shall begin with the first day following the act which initiates the running of the time period, and shall include every calendar day, including the last day of the time period so computed. When an action ending a time period has been completed, the next action may begin on the same day with the combined review day being counted as the last day of the completed review period or periods, if more than one review period is completed on the same day. If the last day is a Saturday, Sunday, legal holiday, or any other day on which the Department's offices are closed, the deadline shall run until the end of the next business day. If the time period described or referred to is seven days or less, only days when the offices of the Department are open shall be included in the computation. Where used, the term working days shall refer to any full day on which the Department office is open for public business.

4.02: Definitions

As used in 310 CMR 4.00, the following terms shall have the following meanings, unless the context otherwise clearly requires.

Adjudicatory Hearing. A hearing conducted by the Department pursuant to 310 CMR 1.00: *Adjudicatory Proceedings*, in an adjudicatory proceeding as defined in M.G.L. c. 30A.

Administrative Completeness Review. An administrative review of a permit application to determine whether all required elements of the application have been provided by the applicant, as further described in 310 CMR 4.04(2)(b)1.

Applicant. A person who applies for or who is required to apply for a permit from the Department or any of its Divisions, or on whose behalf a permit application is made or required.

Commissioner. The Commissioner of the Department, or his or her designee.

Department. The Department of Environmental Protection.

Facility. Any site or works at which an activity subject to regulation by the Department occurs, has occurred, or is proposed to occur.

Homeowner. A homeowner is an owner occupant of a residential one to four family structure who has provided a written certification on a Department approved form, and whose structure has been used exclusively as a one to four family residence throughout his or her ownership, where the owner's unit is the owner's principal residence for six or more months of the year and the owner is conducting response actions at the residence in response to a release of oil.

Individual Rule Project. A project within a category which, based on the size, novelty, complexity, or technical difficulty of such projects, has been so classified in 310 CMR 4.10.

Permit. Any permit, license, certificate, formal determination, registration, plan approval, variance, statement, opinion, notification, plan or other approval issued by or required by the Department or any of its divisions, pursuant to any statute or regulation.

Permit Application. Any application, filing, notification, or other submittal of materials in the required form to the Department to initiate a permit.

4.02: continued

Permittee. Any person authorized to conduct any activity or business pursuant to a permit issued by or filed with the Department. For the purpose of implementing 310 CMR 4.03: *Annual Compliance Assurance Fee* and M.G.L. c. 21E, § 3B, paragraph 3, as in effect on July 1, 2004, permittee shall also refer to persons, excluding agencies of the Commonwealth, who are performing response actions at sites or have been issued a final order to perform, or have been assessed a penalty for failure to perform, such response actions. For purposes of M.G.L. c. 21A, § 18, the holder of a permit or a suspended permit is a permittee until the permit expires, is formally relinquished by the holder in accordance with the Department's requirements, or is revoked by the Department.

Person. Any individual, trust, firm, public or private corporation or authority, partnership, association or other entity or any group thereof or any officer, employee, or agent thereof, including the Commonwealth and the federal government and any agency or authority thereof, but not including any city, town, county, or district of the Commonwealth, federally recognized indian tribe housing authority effective, effective January 14, 1994, or any municipal housing authority. Notwithstanding the prior sentence, for purposes of M.G.L. c. 21E and 310 CMR 40.0000: *Massachusetts Contingency Plan* permit fees and timely action schedules, person shall mean any agency or political subdivision of the federal government or the Commonwealth, state, public or private corporation or authority, any interstate body, foreign nation, any individual, trust, firm, joint stock company, partnership, association or other entity, and any officer, employee, or agent of such person, and any group of persons. Effective July 1, 2000, the Massachusetts Bay Transportation Authority shall not pay permit or compliance fees pursuant to M.G.L. c. 161A, § 24.

Presumptive Approval. An approval created when the Department does not, on or before a date specified in the program regulations, issue a written statement of deficiencies or a written decision. In instances of presumptive approval, the Department is not required to issue a written decision.

Project. Any coordinated program of work or activity, whether located at a single contiguous site, or occurring or proposed or planned to occur at a number of sites; including without limitation any facility, or construction, demolition, modification, or operation of buildings or works, or engaging in any other activity for which a permit as defined in 310 CMR 4.02 is required.

Public Comment Review. A review on the merits of the permit application, supporting materials, and any other information provided during the course of public comment on the proposed decision to grant or deny the permit, as further described in 310 CMR 4.04(2)(b)4.

Supplemental Technical Review. A review on the merits of the permit application and supporting materials, as supplemented, modified, or amended by the applicant in response to a statement identifying deficiencies in the application and supporting materials, as further described in 310 CMR 4.04(2)(b)3.

Technical Review. An initial review on the merits of the permit application and supporting materials, as further described in 310 CMR 4.04(2)(b)2.

4.03: Annual Compliance Assurance Fee

(1) General.

(a) Annual compliance assurance fees shall be payable by all permittees in the categories identified in 310 CMR 4.03(2), in the amounts set forth in 310 CMR 4.03(2). Agencies of the Commonwealth shall be exempt from annual compliance assurance fees. For the purpose of M.G.L. c. 21E, § 3B, permittee shall also refer to persons, excluding agencies of the Commonwealth, who are performing response actions at sites, or have been issued a final order to perform, or have been assessed a penalty for failure to perform, such response actions.

4.03: continued

(b) A permittee with more than one permit shall pay the fee indicated for each such permit, except as otherwise provided in 310 CMR 4.03(2). Such fees shall be payable in each commonwealth fiscal year for each such permit. For permits issued after January 1, 1991, other than permit renewals, modifications or amendments, or other changes in permit status or categories, no annual compliance assurance fee shall be assessed for that permit in the fiscal year in which the permit is issued, except as otherwise provided in 310 CMR 4.03(2), or unless the fee is established pursuant to 310 CMR 4.05. For fiscal year 1991, the category to which each permit belongs shall be determined based on the formal status as shown by Department records of the permit as of December 1, 1990, except as provided in 310 CMR 4.03(8)(c). In subsequent fiscal years, the category to which each permit belongs shall be determined based on the formal status in Department records of the permit as of the beginning of that fiscal year on July 1st, except as provided in 310 CMR 4.03(8)(c). Annual compliance fees for permits issued in accordance with 310 CMR 4.05 shall be established as provided.

(c) Notwithstanding 310 CMR 4.03(1)(b), annual compliance assurance fees pursuant to M.G.L. c. 21E shall be assessed on a billable year basis. The billable year ends on the annual status date for a site. The first status date shall be determined as follows:

1. For sites where release notification is submitted to the Department on or after October 1, 1993, the first status date shall be the 12-month anniversary date of the oral or written date of release notification, whichever is earlier, or, effective February 24, 1995, the earliest date computed in accordance with 310 CMR 40.0404(3).

2. For sites identified prior to October 1, 1993 and existing in Department records pursuant to 310 CMR 40.0600: *Transition Provisions*, as formerly in effect, the first status date shall be the 12-month anniversary date of the first required submittal pursuant to said 310 CMR 40.0600: *Transition Provisions*; and effective November 18, 1994, the first status date shall be the date of the first required submittal or as specified in said 310 CMR 40.0600: *Transition Provisions*, whichever is earlier.

3. Notwithstanding 310 CMR 4.03(1)(c)1., effective February 24, 1995, the first status date for each site classified as Tier IB pursuant to 310 CMR 40.0520(2)(d) as formerly in effect shall be February 24, 1995.

(d) Notwithstanding 310 CMR 4.03(1)(b), the classification and category assigned to each M.G.L. c. 21E site shall be determined based on the formal status as shown by Department records of the site as of that site's status date, except as provided in 310 CMR 4.03(8)(c), and effective November 3, 1995, except as provided in 310 CMR 40.0008(4): *Determining Date of Receipt of Document Submitted to the Department*.

(e) Notwithstanding 310 CMR 4.03(1)(b), annual compliance assurance fees pursuant to M.G.L. c. 21E shall be payable for each billable year until and including the year that a Permanent Solution is achieved and a Permanent Solution Statement is filed for the entire site pursuant to 310 CMR 40.1000: *Permanent and Temporary Solutions*, or a Downgradient Property Status submittal is filed pursuant to 310 CMR 40.0180: *Downgradient Property Status*.

(f) Notwithstanding 310 CMR 4.03(1)(b), annual compliance assurance fees shall be assessed pursuant to M.G.L. c. 21E as of the first status date as defined in 310 CMR 4.03(1)(c) or alternative status date established by the Department pursuant to 310 CMR 40.0501(2)(b), 310 CMR 40.0570: *Requirements for Eligible Persons, Eligible Tenants or Other Persons Seeking to Reestablish Response Action Deadlines*, or 310 CMR 40.0601: *Scope and General Provisions*, as formerly in effect, in each billable year, including any year in which a permit application fee is paid.

(g) Notwithstanding 310 CMR 4.03(1)(c), when multiple sites are combined under a single Tier Classification, the status date of all of the sites subject to the Tier Classification shall be the earliest applicable status date, unless the Department establishes an alternative status date. When a Special Project Designation permit includes more than one site, the status date for all the sites shall be the earliest applicable status date, unless the Department establishes an alternative status date.

(h) Notwithstanding 310 CMR 4.03(1)(b), and excluding permits issued pursuant to 310 CMR 7.24(3) and 310 CMR 7.24(6), a facility with one or more air quality permit(s) shall pay the single highest applicable air quality annual compliance assurance fee. Effective May 1, 2020.

(i) Notwithstanding 310 CMR 4.03(1)(b), annual compliance assurance fees shall be payable in the same fiscal year as filing of a required Environmental Results Program self certification. The status date shall be the date required for the filing of that fiscal year's certification.

4.03: continued

(j) Notwithstanding 310 CMR 4.03(1)(b), a surface water discharger with multiple surface water permits shall pay the single highest applicable annual compliance assurance fee.

(k) Notwithstanding 310 CMR 4.03(1)(b), the Mercury-added Lamp Registration: annual registration fee, shall be payable in the same calendar year as the submittal of the annual registration pursuant to 310 CMR 75.05(3)(a).

NON-TEXT PAGE

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

4.03: continued

(2) Fee Amounts by Permit Category. The annual compliance assurance fee for each permit shall be the fee set forth in 310 CMR 4.03(2): *Table 4.03*.

TABLE 4.03

ANNUAL FEE (dollars)	PERMIT CATEGORY
	ENVIRONMENTAL RESULTS PROGRAM
\$305	<u>Dry Cleaner Certifier</u> required pursuant to 310 CMR 70.00: <i>Environmental Results Program Certification</i> , effective August 8, 2013
\$215	<u>Photo Processor Certifier</u> required pursuant to 310 CMR 70.00: <i>Environmental Results Program Certification</i> who discharges to a publicly owned treatment works facility excluding a discharger to the Massachusetts Water Resources Authority, effective August 8, 2013
\$60	<u>Photo Processor Certifier</u> required pursuant to 310 CMR 70.00: <i>Environmental Results Program Certification</i> who discharges to the Massachusetts Water Resources Authority, effective August 8, 2013
\$275	<u>Small Printer Certifier</u> pursuant to 310 CMR 7.26(20): <i>Environmental Results Program: Lithographic, Graphic Arts, and Screen Printing</i>
\$275	<u>Midsize Printer Certifier</u> pursuant to 310 CMR 7.26(20)
\$705	<u>Large Printer Certifier</u> pursuant to 310 CMR 7.26(20)
\$1,440	<u>Large Printer Certifier</u> pursuant to 310 CMR 7.26(20) holding AQ09 permit or an AQ permit qualifying for the minor AQ compliance category

AIR QUALITY

Set by equation

Operating Permit Enrollee
 - Effective June 20, 2014, required for any facility subject to 310 CMR 7.00: *Appendix C*, not holding an Operating Permit. The fee is based upon Department records as of July 1st of the relevant fiscal year. AA is the Adjusted Actual emissions as reported to the Department pursuant to 310 CMR 7.12: *U Source Registration*, of hazardous air pollutants (HAP) and criteria air pollutants excluding carbon monoxide, averaged over the most recent three calendar years of available data. HAP emissions also reported as criteria pollutants shall not be double counted in this fee calculation. The AA of each pollutant shall be capped at 7,500 tons/per pollutant. The fee shall be calculated as follows:

- (1) where AA is greater than or equal to 5,000 tons, by adding the base fee of \$100,000 and \$25 (AA-5000); or
- (2) where AA is greater than or equal to 250 tons but less than 5,000 tons, by adding the base fee of \$7,500 and \$12 (AA-250); or
- (3) where AA is greater than or equal to 100 tons but less than 250 tons, by adding the base fee of \$5,500 and \$8 (AA-100); or
- (4) where AA is less than 100 tons, by adding the base fee of \$3,000 and \$6 (AA-50); or
- (5) where a facility is subject to 310 CMR 7.08(2): *Municipal Waste Combustors*, 310 CMR 7.29: *Emissions Standards for Power Plants*, 310 CMR 7.32: *Massachusetts Clean Air Interstate Rule (Mass CAIR)*, or 310 CMR 7.70: *Massachusetts CO₂ Budget Trading Program* *Massachusetts CO₂ Budget Trading Program*, by adding the base fee of \$7,500 and \$17 (AA-50); or
- (6) Notwithstanding 310 CMR Table 4.03: *Air Quality*(1) through (5), if a facility subject to a Minor Group fee in 310 CMR 4.03(2) has become subject to 310 CMR 7.00: *Appendix C* due to the construction, substantial reconstruction or alteration of an emission unit that has not yet commenced operations, such facility shall continue to be subject to its applicable Minor Group One, Minor Group Two, or Minor Group Three annual compliance fee in 310 CMR 4.03(2). After such emission unit commences operations, the facility shall be subject to the applicable fee in 310 CMR Table 4.03: *Air Quality*(1) through (5).

4.03: continued

(7) Notwithstanding 310 CMR Table 4.03: *Air Quality*(1) through (5), if a facility not subject to a Minor Group fee in 310 CMR 4.03(2) has become subject to 310 CMR 7.00: *Appendix C* and has not commenced operations, such facility shall be subject to an annual compliance fee of \$2,000. After such facility commences operations, such facility shall be subject to the applicable fee in 310 CMR Table 4.03: *Air Quality*(1) through (5). The amount calculated in (1), (2), (3), (4) or (5) shall be rounded down to the nearest \$1,000, but no fee shall be less than the respective base fee. Where a facility is subject to more than one formula, only the largest fee shall be due.

Set by equation

Operating Permittee

Effective June 20, 2014, required for any facility holding an operating permit. The fee is based upon Department records as of July 1st of the relevant fiscal year. AA is the Adjusted Actual emissions as reported to the Department pursuant to 310 CMR 7.12: *U Source Registration*, of hazardous air pollutants (HAP) and criteria air pollutants excluding carbon monoxide, averaged over the most recent three calendar years of available data. HAP emissions also reported as criteria pollutants shall not be double counted in this fee calculation. Emissions of each pollutant are capped at 7,500 tons per pollutant and the fee is calculated:

- (1) where AA is greater than or equal to 5,000 tons, by adding the base fee of \$100,000 and \$25 (AA-5000); or
- (2) where AA is greater than or equal to 250 tons, but less than 5,000 tons, by adding the base fee of \$7,500 and \$12 (AA-250); or
- (3) where AA is greater than or equal to 100 tons, but less than 250 tons, by adding the base fee of \$5,500 and \$8 (AA-100); or
- (4) where AA is less than 100 tons, by adding the base fee of \$3,000 and \$6 (AA-50); or
- (5) where a facility is subject to 310 CMR 7.08(2): *Municipal Waste Combustors*, 310 CMR 7.29: *Emissions Standards for Power Plants*, 310 CMR 7.32: *Massachusetts Clean Air Interstate Rule (Mass CAIR)* or 310 CMR 7.70: *Massachusetts CO2 Budget Trading Program* by adding the base fee of \$7,500 and \$17 (AA-50).

The amount calculated in (1), (2), (3), (4) or (5) is rounded down to the nearest \$1,000, but no fee shall be less than the respective base fee.

Where a facility is subject to more than one formula, only the largest fee is due.

\$1,760

Minor Group One

- a facility with potential emissions equal to or greater than five, but less than ten tons per year of any one Hazardous Air Pollutant (HAP), or equal to or greater than 12.5, but less than 25 tons per year of any combination of HAP, or equal to or greater than 25, but less than 50 tons per year of VOC or NOx, or equal to or greater than 50, but less than 100 tons per year of any other regulated pollutant, or a facility holding a AQ09 (Restricted Emissions Status) permit pursuant to 310 CMR 7.02(9): Restricted Emission Status (RES); and excluding a facility that is not required to submit a Source Registration to the Department pursuant to 310 CMR 7.12: *U Source Registration* and excluding a facility that is a dry cleaner, photo processor, or printer certifier pursuant to 310 CMR 70.00: *Environmental Results Program Certification* that is subject to an ERP annual compliance fee. The fee covers all air pollution inspections and registrations for the facility. Effective May 1, 2020.

\$705

Minor Group Two

- a facility with potential emissions greater than 2.5, but less than five tons per year of any one Hazardous Air Pollutant (HAP), or greater than 6.25, but less than 12.5 tons per year of any combination of HAP, or greater than

4.03: continued

12.5, but less than 25 tons per year of VOC or NO_x, or greater than 25, but less than 50 tons per year of any other regulated pollutant or a facility subject to a New Source Performance Standard (NSPS-40 CFR 60) or a National Emission Standard for Hazardous Air Pollutants (NESHAPs - 40 CFR 61), both delegated to the Department prior to July 1, 1992 with potential emissions less than five tons per year of any one Hazardous Air Pollutant (HAP), or less than 12.5 tons per year of any combination of HAP, or less than 25 tons per year of VOC or NO_x, or less than 50 tons per year of any other regulated pollutant; and excluding a facility that is not required to submit a Source Registration to the Department pursuant to 310 CMR 7.12: *U Source Registration*; and excluding a facility that is a dry cleaner, photo processor, or printer certifier pursuant to 310 CMR 70.00: *Environmental Results Program Certification* that is subject to an ERP annual compliance fee. The fee covers all air pollution inspections and registrations for the facility. Effective May 1, 2020.

NON-TEXT PAGE

4.03: continued

\$315	Minor Group Three - a facility with potential emissions equal to or less than 2.5 tons per year of any one Hazardous Air Pollutant (HAP), or equal to or less than 6.25 tons per year of any combination of HAP, or equal to or less than 12.5 tons per year of VOC or NO _x , or equal to or less than 25 tons per year of any other regulated pollutant, and excluding a facility that is not required to submit a Source Registration to the Department pursuant to 310 CMR 7.12: <i>U Source Registration</i> and excluding a facility that is a dry cleaner, photo processor, or printer certifier pursuant to 310 CMR 70.00: <i>Environmental Results Program Certification</i> that is subject to an ERP annual compliance fee. The fee covers all air pollution inspections and registrations for the facility. Effective May 1, 2020.
\$245	<u>Motor Vehicle Fuel Dispensing Facility</u> subject to 310 CMR 7.24(3): <i>Distribution of Motor Vehicle Fuel</i> and/or 310 CMR 7.24(6): <i>Dispensing of Motor Vehicle Fuel</i> , effective June 20, 2014
HAZARDOUS WASTE	
\$10,365	Treatment, storage or disposal facility, effective August 8, 2013
\$3,880	<u>Large Quantity Generator</u> excluding dry cleaner, photo processor, and printer certifiers pursuant to 310 CMR 70.00: <i>Environmental Results Program Certification</i> , that is subject to an ERP annual compliance fee effective May 1, 2020
\$645	<u>Small Quantity Generator</u> excluding dry cleaner, photo processor, and printer certifiers pursuant to 310 CMR 70.00: <i>Environmental Results Program Certification</i> , that is subject to an ERP annual compliance fee effective May 1, 2020
\$3,880	Level III recycling facility, effective May 1, 2020
Set by Equation	Mercury-added Lamp Manufacturer Registration: annual registration fee. Effective April 5, 2019 through June 30, 2024, required for any mercury-added lamp manufacturer subject to 310 CMR 75.05: <i>Mercury-added Lamps</i> . The fee is based upon mercury-added lamp sales reported on the annual registration form. Where A is the number of mercury-added lamps reported by the manufacturer and B is the sum of all mercury-added lamps reported by all manufacturers and where M is the total number of manufacturers reporting pursuant to 310 CMR 75.05, and the administrative base fee is \$100, the fee shall be calculated in accordance with the following equation: (1) $\$100 + [(A/B) \times (\$300,000 - (\$100 \times M))]$ with a maximum fee of \$10,000, unless; (2) The sum of all individual manufacturers' fees as calculated in (1) is less than \$300,000, the fee will then be recalculated utilizing the formula under (1), but without the \$10,000 maximum.
SOLID WASTE	
\$1,700	<u>Recycling and Organics Management Operation</u> : with RCC Permit pursuant to 310 CMR 16.05: <i>Permit for Recycling, Composting or Conversion (RCC) Operations</i> , excluding an organic material only transfer operation that is permitted to receive no more than two tons per day and to have no more than five tons on-site at any time, effective June 20, 2014

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

4.03: continued

\$400	<u>Recycling and Organics Management Operation</u> : with a SW46 or SW47 permit pursuant to 310 CMR 16.05: <i>Permit for Recycling, Composting or Conversion (RCC) Operations</i> , where said operation is (i) a transfer operation limited to organic material only and (ii) is permitted to receive a maximum of two tons per day and to have no more than five tons on site at any time, effective June 20, 2014
\$1,975	Small Transfer Station or C&D Processing Facility, effective August 8, 2013
\$8,205	Large Transfer Station or C&D Processing Facility, effective August 8, 2013
\$1,485	Small Handling Facility, effective August 8, 2013
\$3,345	Large Handling Facility, effective August 8, 2013
\$17,495	<u>Operating Landfill</u> : with permit SW10 Authorization to Operate until permit SW25 Landfill Closure/Corrective Action Design is issued, excluding permit for woodwaste landfill and landfill permitted to receive less than ten tons per day/3120 tons per year, effective August 8, 2013.
\$17,495	<u>Closing Landfill</u> : with permit SW25 Landfill Closure/Corrective Action Design until permit SW43 Closure Completion is issued, excluding permit for woodwaste landfill and landfill permitted to receive less than ten tons per day/3120 tons per year, effective August 8, 2013
\$2,970	Woodwaste landfill (effective August 8, 2013)
\$1,060	Landfill permitted to receive less than ten tons per day/3120 tons per year, effective August 8, 2013
\$1,400	<u>Closed Landfill</u> holding permit SW43 Closure Completion, or, for landfills closed prior to 1990, an Approved Post Closure Monitoring Plan, effective June 20, 2014
\$8,205	Combustion Facility, effective August 8, 2013

COMPOST FACILITIES

\$1,290	Compost Facility permitted by solid waste or water pollution control pursuant to 310 CMR 19.000: <i>Solid Waste Management</i> , 314 CMR 12.00: <i>Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Dischargers</i> or 310 CMR 32.00: <i>Land Application of Sludge and Septage</i> , effective June 20, 2014
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WATERSHED MANAGEMENT

\$215	Withdrawal permit and/or registration within a single water source considered to be a single river basin as defined by 310 CMR 36.03: <i>Definitions</i> and 313 CMR 4.03: <i>Delineation of River Basins</i> , effective August 8, 2013
\$10,800	Facility with WM05 or IW16 permit for Surface Water Discharge (NPDES), March 24, 2017
\$1,830	Facility with WM06 or IW18 permit for Surface Water Discharge (NPDES), March 24, 2017

WATER POLLUTION CONTROL

\$14,855	Groundwater Discharges <u>Facility</u> with a permit authorizing discharge of treated sewage equal to or greater than 50,000 gallons per day, and approved to commence operations; other discharges not included in the other groundwater discharge compliance assurance categories, March 24, 2017
\$8,320	<u>Facility</u> with a permit authorizing discharge of treated sewage greater than 10,000 gallons per day but less than 50,000 gallons per day, and approved to commence operations, March 24, 2017

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

\$3,565	<u>Facility</u> with a permit authorizing discharge of 10,000 or less gallons per day of sewage, or permit pursuant to 314 CMR 4.10(9)(e), (f), (g) or (h) that only utilizes septic tanks and land disposal for wastewater treatment and approved to commence operations, March 24, 2017
\$7,425	<u>Facility</u> with a permit authorizing discharge of treated sewage equal to or greater than 50,000 gallons per day but not approved to commence operations, March 24, 2017
\$4,160	<u>Facility</u> with a permit authorizing discharge of treated sewage greater than 10,000 gallons per day but less than 50,000 gpd, but not approved to commence operations, March 24, 2017
\$1,780	<u>Facility</u> with a permit authorizing discharge of 10,000 or less gallons per day of sewage or permit pursuant to 314 CMR 5.10(9)(e), (f), (g) or (h) but not approved to commence operations, March 24, 2017
\$1,080	<u>Facility</u> with General Permit WP80 for specified discharges, effective August 8, 2013
\$1,080	<u>Facility</u> with Reclaimed Water Discharge Permit WP84, effective August 8, 2013
\$215	<u>Facility</u> with Discharge Permit WP85, effective August 8, 2013
\$12,420	<u>Type II Facility</u> with IW03 or WP86 permit to discharge industrial wastewater and authorization to construct and operate a type II wastewater treatment system, effective August 8, 2013
\$3,345	<u>Type I Facility</u> with a permit IW05 or WP87 to discharge industrial wastewater and authorization to construct and operate a type I wastewater treatment system, effective March 24, 2017
\$215	<u>Other Facility with Permit IW02</u> to discharge industrial wastewater, effective August 8, 2013
	Residuals management
\$1,290	Residuals landfill, effective August 8, 2013
\$1,290	Pelletizing facilities, effective August 8, 2013

LABORATORY CERTIFICATION

\$260	<u>Certified Microbiology Laboratory</u> , plus the fee for each testing category as certified on July 1 st of each year in the amount as set forth in 310 CMR 4.10(9)(a) (LES01EA), effective August 8, 2013
\$1,140	<u>Certified Chemical Laboratory</u> , plus the fee for each testing category as certified on July 1 st of each year in the amount as set forth in 310 CMR 4.10(9)(b) (LES02EA), effective August 8, 2013

BUREAU OF WASTE SITE CLEANUP

\$1,225	<u>Homeowner Tier I</u> - site classified as Tier I pursuant to 310 CMR 40.0500: <i>Tier Classification and Response Action Deadlines</i> where the person is a Homeowner as defined in 310 CMR 4.02, effective June 20, 2014
\$2,455	<u>Homeowner Tier ID</u> - site classified as Tier ID pursuant to 310 CMR 40.0500: <i>Tier Classification and Response Action Deadlines</i> where the person is a Homeowner as defined in 310 CMR 4.02, effective June 20, 2014
\$1,225	<u>Homeowner Tier II</u> - site classified as Tier II pursuant to 310 CMR 40.0500: <i>Tier Classification and Response Action Deadlines</i> where the person is a Homeowner as defined in 310 CMR 4.02, effective June 20, 2014
\$490	<u>Homeowner Phase V</u> - site at which Phase V response actions consisting of operation, maintenance or monitoring are undertaken pursuant to 310 CMR 40.0890: <i>Operation, Maintenance, and/or Monitoring of Comprehensive Response Actions, including response actions under Remedy Operation Status</i> , where the person is a Homeowner as defined in 310 CMR 4.02, effective June 20, 2014

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

4.03: continued

\$490	<u>Homeowner Temporary Solution</u> - site at which a Temporary Solution pursuant to 310 CMR 40.1000: <i>Permanent and Temporary Solutions</i> is in effect, or a site at which an existing Temporary Solution has been revised to a Permanent Solution during the relevant billable year, where the person is a Homeowner as defined in 310 CMR 4.02, effective June 20, 2014
\$1,000	<u>Homeowner Notice of Activity and Use Limitation</u> - one-time fee for each Notice of Activity and Use Limitation filed pursuant to 310 CMR 40.1074: <i>Notice of Activity and Use Limitation</i> prior to or concurrently with the filing of a Permanent Solution Statement, where the person is a Homeowner as defined in 310 CMR 4.02, effective June 20, 2014
\$735	<u>Homeowner Permanent Solution</u> - one-time fee effective June 20, 2014 for a Permanent Solution Statement filed for the site after 120 days following the earliest date computed in accordance with 310 CMR 40.0404(3)(a) through (d) and prior to Tier Classification, where the person is a Homeowner as defined in 310 CMR 4.02. Also for each Permanent Solution Statement filed for a site classified as Tier ID pursuant to 310 CMR 40.0500: <i>Tier Classification and Response Action Deadlines</i> where the person is a Homeowner as defined in 310 CMR 4.02, provided that such submittal is filed within 90 days following the site's first status date; fee is in lieu of Tier ID fee for the second billable year.
\$490	<u>Homeowner Release Abatement Measure</u> - one-time fee for each Release Abatement Measure Plan submitted prior to Tier Classification, where the person is a Homeowner as defined in 310 CMR 4.02, effective June 20, 2014
\$100	<u>FTLI Status Tier I</u> - site classified as Tier I pursuant to 310 CMR 40.0500: <i>Tier Classification and Response Action Deadlines</i> , where the Department has made a determination of financial, technical, or legal inability pursuant to 310 CMR 40.0172, effective June 20, 2014
\$100	<u>FTLI Status Tier ID</u> - site classified as Tier ID pursuant to 310 CMR 40.0500: <i>Tier Classification and Response Action Deadlines</i> , where the Department has made a determination of financial, technical, or legal inability pursuant to 310 CMR 40.0172: <i>Technical, Financial and Legal Inabilities</i> , effective June 20, 2014
\$100	<u>FTLI Status Tier II</u> - site classified as Tier II pursuant to 310 CMR 40.0500: <i>Tier Classification and Response Action Deadlines</i> , where the Department has made a determination of financial, technical, or legal inability pursuant to 310 CMR 40.0172: <i>Technical, Financial and Legal Inabilities</i> , effective June 20, 2014
\$100	<u>FTLI Status Phase V</u> - site at which Phase V response actions consist-ing of operation, maintenance, or monitoring are undertaken pursuant to 310 CMR 40.0890: <i>Operation, Maintenance, and/or Monitoring of Comprehensive Response Actions</i> , including response actions under Remedy Operation Status, where the Department has made a determination of financial, technical, or legal inability pursuant to 310 CMR 40.0172: <i>Technical, Financial and Legal Inabilities</i> , effective June 20, 2014
\$100	<u>FTLI Status Temporary Solution</u> - site at which a Temporary Solution pursuant to 310 CMR 40.1000: <i>Permanent and Temporary Solutions</i> is in effect, or a site at which an existing Temporary Solution has been revised to a Permanent Solution during the relevant billable year, where the Department has made a determination of financial, technical, or legal inability pursuant to 310 CMR 40.0172: <i>Technical, Financial and Legal Inabilities</i> , effective June 20, 2014
\$4,320	Tier I - site classified as Tier I pursuant to 310 CMR 40.0500: <i>Tier Classification and Response Action Deadlines</i> , effective June 20, 2014
\$4,915	<u>Tier ID</u> - site classified as Tier ID pursuant to 310 CMR 40.0500: <i>Tier Classification and Response Action Deadlines</i> , effective June 20, 2014
\$2,455	<u>Tier II</u> - site classified as Tier II pursuant to 310 CMR 40.0500,: <i>Tier Classification and Response Action Deadlines</i> effective June 20, 2014

4.03: continued

\$980	<u>Phase V</u> - site at which Phase V response actions consisting of operation, maintenance, or monitoring are undertaken pursuant to 310 CMR 40.0890: <i>Operation, Maintenance, and/or Monitoring of Comprehensive Response Actions</i> , including response actions under Remedy Operation Status, effective June 20, 2014
\$980	<u>Temporary Solution</u> - site at which a Temporary Solution pursuant to 310 CMR 40.1000: <i>Permanent and Temporary Solutions</i> is in effect, or a site at which an existing Temporary Solution has been revised to a Permanent Solution during the relevant billable year, effective June 20, 2014
\$2,000	<u>Notice of Activity and Use Limitation</u> - one-time fee for each Notice of Activity and Use Limitation filed pursuant to 310 CMR 40.1074: <i>Notice of Activity and Use Limitation</i> prior to or concurrently with the filing of a Permanent Solution Statement, effective June 20, 2014
\$1,470	<u>Permanent Solution</u> - one-time fee effective June 20, 2014 for a Permanent Solution Statement filed for the site after 120 days following the earliest date computed in accordance with 310 CMR 40.0404(3)(a) through (d) and prior to Tier Classification. Also, for each Permanent Solution Statement filed for a site classified as Tier ID pursuant to 310 CMR 40.0500: <i>Tier Classification and Response Action Deadlines</i> , provided that such statement is filed within 90 days following the site's first status date; fee is in lieu of Tier ID fee for the second billable year.
\$980	<u>Release Abatement Measure</u> - one-time fee for each Release Abatement Measure Plan submitted prior to Tier Classification, effective June 20, 2014
set by formula	<u>Special Project Designation</u> - for the duration of Special Project Designation Permits approved pursuant to 310 CMR 40.0061(1)(a): - For each batch submittal of Permanent Solution Statements the fee is the total based upon the number of individual Permanent Solution Statements in each batch: 1-5 \$1,470 each (capped at \$4,420 for total batch); 6-15 \$860 each (capped at \$9,460 for total batch), 16-49 \$735 each (capped at \$23,590 for total batch); 50 or more \$490 each (capped at \$29,490 for total batch), effective June 20, 2014 - For each batch submittal of Release Abatement Measure Plan submittals the fee is the total based upon the number of individual RAM Plan submittals in each batch: 1-5 \$980 each (capped at \$2,945 for total batch); 6-15 \$550 each (capped at \$6,020 for total batch); 16-49 \$490 each (capped at \$15,725 for total batch); 50 or more \$365 each (capped at \$22,120 for total batch), effective June 20, 2014
\$1,965	<u>Downgradient Property Status Submittal</u> - one time fee for each DPS submittal filed pursuant to 310 CMR 40.0183: <i>General Requirements and Procedures for Asserting Downgradient Property Status</i> prior to Tier Classification effective August 8, 2013

(3) Statement of Fee Amount.

(a) At least 45 days before the date a fee is due, the Department shall provide the permittee a written statement of the amount due. The statement may be provided by mail or personal delivery to the correspondence address listed in the permit or permit application, to the address of the permitted facility or project, or to any other correspondence address used by the permittee; or by any means provided for service of process; or by other means reasonably calculated to assure receipt by the permittee.

(b) The statement of fee amount shall include, without limitation, the following:

1. the permit and permit category for which each fee is due pursuant to 310 CMR 4.03(2);
2. the amount due for each such permit;
3. the date by which payment is due;
4. the manner and form in which payment may be made;
5. notice of the provisions for extension of the time for payment pursuant to 310 CMR 4.03(6);
6. notice of the consequences of failure to make timely payment pursuant to 310 CMR 4.03(7); and
7. notice of the procedure for seeking review of the fee determination pursuant to 310 CMR 4.03(8).

4.03: continued

(c) For M.G.L. c. 21E Tier I and Tier II sites, the Department shall not require a Tier I or Tier II fee to be paid for the first billable year, provided that the complete information required at 310 CMR 40.0500: *Tier Classification and Response Action Deadlines* is received by the Department on or before the first status date.

(d) For M.G.L. c. 21E sites, the Department shall not require an annual compliance assurance fee to be paid by an owner or operator holding a valid Downgradient Property Status for the billable year in which such owner or operator files a DPS submittal, pursuant to 310 CMR 40.0183: *General Requirements and Procedures for Asserting Downgradient Property Status*, provided the DPS submittal adequately documents the source of the release as an upgradient Tier Classified site or site that has achieved a Permanent Solution.

(e) For M.G.L. c. 21E sites, notwithstanding 310 CMR 4.03(2), the Department shall not require Permanent Solution or Release Abatement Measure fees to be paid for response actions by an owner or operator holding a valid Downgradient Property Status relative to those sites.

(4) Payment of Fee. Unless the permittee seeks an extension of the time for making payment pursuant to 310 CMR 4.03(6), the permittee shall make payment in full on or before the date, and in the manner and form, specified in the statement of fee amount. Except to the extent authorized by the Department pursuant to 310 CMR 4.03(6)(c)1., late payment, nonpayment, partial payment, or failure to make payment in the specified manner and form shall constitute a failure by the permittee to pay the fee when due.

(5) Proof. The permittee's cancelled check shall act as proof of payment of the annual compliance assurance fee.

(6) Hardship Requests: extension of time for making payment.

(a) In instances of severe financial hardship, the Commissioner may, at his or her discretion, grant a timely request to extend the time for making payment of the annual compliance assurance fee. The permittee shall bear the burden of persuasion that the request should be granted.

(b) A permittee seeking an extension of time for making payment shall file a written request for extension on or before the date on which the fee is due. Such requests shall be deemed to be filed upon receipt by the Department. Timely filing of a request for extension containing all elements required by 310 CMR 4.03 shall stay suspension of the permit pursuant to 310 CMR 4.03(7)(a). The request shall be filed in the form and manner indicated in the statement of fee, and shall include the following:

1. the permittee's name and address;
2. the category of the permit, the amount of the fee due and due date;
3. the specific circumstances the permittee believes constitute severe financial hardship;
4. a proposed schedule for making payment; and
5. the reasons the permittee believes the proposed schedule is appropriate.

(c) The Commissioner shall promptly notify the permittee making the request of the Department's decision on the request. The Commissioner may request any supplemental information from the applicant to aid in such decision. Notice shall be given to the permittee by any method described in 310 CMR 4.03(3)(a). The Commissioner's decision on such a request shall not be deemed to give rise to any right to an adjudicatory hearing.

(7) Failure to Make Timely Payment.

(a) Suspension of Permit.

1. Suspension. Failure to make complete and timely payment shall result in a suspension of the permit by operation of law pursuant to M.G.L. c. 21A, § 18(a). Pursuant to the provisions of M.G.L. c. 30A, § 13(3), the Department's suspension of a permit due to a permittee's failure to pay an annual compliance assurance fee is not subject to a claim for an adjudicatory hearing.

2. Notwithstanding the first sentence of 310 CMR 4.03(7)(a)1., failure by a permittee to make complete and timely payment of fees owed pursuant to M.G.L. c. 21E by the date due may result in suspension of any or all permits that such person has obtained from the Department. The Department shall give notice of such suspension prior to its effective date. Pursuant to the provisions of M.G.L. c. 30A, § 13(3), the Department's decision to suspend a permit is not subject to a claim for an adjudicatory hearing.

4.03: continued

3. Effects of Permit Suspension. If a permit is suspended pursuant to the provisions of 310 CMR 4.03(7)(a)1. or 2., the Department may deny any other permit application pending before the Department that is made by or on behalf of a permittee who has an overdue and outstanding annual compliance assurance fee.
4. Reinstatement. Upon receipt of payment of the fee due, together with any interest due, the suspended permit shall be reinstated on the date of receipt, providing no revocation of the permit has been issued prior to that date.
- (b) Revocation of Permit. If a permittee's failure to pay an annual compliance assurance fee continues for 60 days or more beyond the date on which the fee was due, the Department may revoke the permit; provided, however, that if a permittee's failure to pay an annual compliance assurance fee owed pursuant to M.G.L. c. 21E continues for 60 days or more beyond the date on which the fee was due, the Department may revoke any or all permits that such person has obtained from the Department. The Department shall notify the permittee of the revocation by certified mail or personal delivery to the address listed in the permit or permit application, or by any means provided for service of process. The revocation shall take effect on the date issued by the Department, or such other date as specified in the Department's notice. Pursuant to the provisions of M.G.L. c. 30A, § 13(3), the Department's revocation of a permit due to a permittee's failure to pay an annual compliance assurance fee is not subject to a claim for an adjudicatory hearing.
- (c) Publication. The Department may publicly release the names of permittees whose permits have been suspended or revoked pursuant to 310 CMR 4.03(7).
- (d) Interest. In the event of untimely payment, interest shall be assessed on the balance due at the rate determined by the commissioner of administration pursuant to M.G.L. c. 29, § 29C.
- (e) Nothing in 310 CMR 4.03(7) shall be construed to limit or bar the Department from assessing any penalty or taking other appropriate enforcement action for violation of any permit condition, order, or other requirement pursuant to any statute or regulation.
- (8) Review of Fee Determination.
- (a) A permittee who believes that the Department has incorrectly designated the category into which its permit falls for purposes of assessing an annual compliance assurance fee may request a review of that determination by filing a written request with the Department on or before the date of payment specified in the statement of fee.
- (b) The request shall be filed in the form and manner indicated in the statement of fee, and shall include the following:
1. the permittee's name and address;
 2. the permit category and amount of the fee due according to the statement of fee, and date due;
 3. the permit category the permittee asserts is appropriate;
 4. payment in full of the amount of the fee due for the category the permittee asserts is appropriate; and
 5. the reasons the permittee believes the other category is appropriate.
- (c) The applicable permit category for each permit shall be the category into which the permit is assigned based on the formal status of the permit at the date specified in 310 CMR 4.03(1), unless the permittee had as of that date filed necessary application(s) to modify the relevant permit and taken other necessary action(s) to request a formal change in permit status. If the permittee had filed such application(s) and taken such action(s), the applicable category shall be determined on the merits of such request. The Department shall review the materials submitted by the applicant and the formal record of the permit, and shall issue a written decision determining the permit category. The Department's determination of the appropriate permit category shall not be deemed to give rise to any right to an adjudicatory hearing; provided, however, that the applicant may seek review of any decision on the merits of a pending request to modify the permit in the manner specified for review of permit decisions in the applicable statute or regulations.
- (d) Effect of Request for Review.
1. Pending the Department's review of a properly filed request for review, the permit shall be deemed in effect. Should the permittee fail to make complete and timely payment of any balance due following the Department's determination, the permit shall be deemed suspended by operation of law.
 2. Notwithstanding 310 CMR 4.03(8)(d)1., should a permittee fail to make complete and timely payment of any balance due pursuant to M.G.L. c. 21E, the permit may be suspended in accordance with 310 CMR 4.03(7)(a)2.

4.03: continued

3. In the event that the Department determines that the original statement of fee was correct, or that the permittee has not paid at least the full amount of the fee due for the appropriate category, the Department shall assess interest on any unpaid balance. Such interest shall be deemed to have begun to accrue as of the original date on which payment was due.

4.04: Permit Application Schedules and Fee

(1) General. Schedules for timely action on permit applications shall be applicable to, and fees pertaining to such applications shall be payable by, all permit applicants for permits identified in 310 CMR 4.10(Appendix), as set forth in 310 CMR 4.10(Appendix). Except as otherwise provided in 310 CMR 4.04(2)(b) through (g), 4.04(3)(c) and (d), and 4.05, the applicable schedule for timely action and permit application fee for each permit and category of permit shall be as set forth in 310 CMR 4.10(Appendix). Such fees shall be payable for each such permit application. Permit applicants with applications pending before the Department as of January 1, 1991 may elect to pay the permit application fee; the schedule for timely action shall be applicable to such permit applications only upon payment of the permit application fee. The category to which each permit application belongs shall be determined based on the proposed activity defined in the permit application. An applicant seeking more than one permit shall pay the fee indicated for each such permit. A permit application or notification shall not be deemed valid, unless payment of the applicable fee is made or an extension is requested pursuant to 310 CMR 4.04(3)(c). If the full permit fee, or a hardship extension request has not been received within 180 days of submittal of the permit application, and the applicant fails to respond to Departmental notification of the pending administrative action to withdraw the permit, the application shall be deemed withdrawn. No refund of any portion of the application fee shall be due.

(2) Operation of Provisions for Schedules for Timely Action. Schedules for timely action set forth in 310 CMR 4.10(Appendix), or established pursuant to 310 CMR 4.05, shall be applied in accordance with 310 CMR 4.04.

(a) Commencement of Schedule. Computation of time periods that begin when a document is received and a permit application fee has been paid shall begin on the day following the day on which the later of those events occurs.

(b) Operation of Defined Schedule Periods. 310 CMR 4.04 defines the operation of review periods for administrative completeness, technical, supplemental technical, and public comment review periods.

1. Administrative Completeness Review.

a. General. An initial administrative completeness review shall result in a determination of administrative completeness or a statement of administrative deficiencies. The Department may request additional information during the course of such review.

b. Unless the number of days to respond to the Department's statement of administrative deficiencies is specified in 310 CMR 4.10, an M.G.L. c. 21E applicant may, within 15 days, and all other applicants may, within 180 days, respond to the Department's statement of administrative deficiencies by submitting any additional material to support the application. Failure by the applicant to submit such material within the specified time shall be deemed to be a withdrawal of the application; provided, that in such circumstances the applicant shall not be entitled to any refund of the permit application fee, notwithstanding the provisions of 310 CMR 4.04(3)(d).

c. Second Administrative Completeness Review. If the Department has issued a statement of administrative deficiencies, a second administrative completeness review shall be conducted within the same number of days specified for the initial administrative completeness review, beginning with receipt of materials submitted by the applicant in response to the statement of administrative deficiencies. The Department may request additional information during the course of review. A second administrative completeness review shall result in a determination of administrative completeness or a denial of the permit application. A denial of the permit application shall be subject to appeal in the manner specified in applicable statute or regulations, provided that in any adjudicatory hearing the issues shall be

4.03: continued

limited to the question of whether or not the information submitted was administratively complete. If the applicant prevails in such a proceeding, the Department shall begin the next step of its review pursuant to the schedule for timely action for that permit.

d. Effect of Determination. A determination of administrative completeness shall not constitute any finding with respect to the technical suitability, adequacy or accuracy of the materials provided, and shall be no bar to a request to amend, revise, replace, or supplement such materials based on technical suitability, adequacy or accuracy.

2. Technical Review.

a. A technical review shall result:

i. in a decision to grant or deny the permit; or

ii. where public comment is provided, in a proposed decision to grant or deny the permit; or

iii. where the Department would on the basis of the information in the record either deny the permit or impose conditions significantly modifying or restricting operation of the project or activity as proposed, in a statement identifying deficiencies in the application and supporting materials. The Department's decision to issue a statement identifying deficiencies shall not be deemed to give rise to any right to an adjudicatory hearing.

b. The Department may request additional information during the course of a technical review.

c. If the Department has issued a statement identifying deficiencies, a M.G.L. c. 21E applicant may within 30 days and all other applicants may within 45 days of issuance elect to proceed on the record as it stands at that time, by so notifying the Department in writing. An applicant so electing to proceed on the record may not in any manner amend, revise, replace, or supplement the application or supporting materials. If the applicant so elects, the Department shall issue a decision to grant or deny the permit, or a proposed decision to grant or deny the permit for public comment, within 45 days of receipt of the applicant's notice, subject to any adjustment in the schedule pursuant to 310 CMR 4.04(2)(d)2. or 3.a.

d. A decision to grant or deny a permit following technical review shall be subject to appeal in the manner specified in applicable statute or regulations.

e. A provision for presumptive approval or equivalent term set forth in a program regulation underlying a fee permit category listed in 310 CMR 4.10 shall result in approval of the permit application in the absence of a written deficiency statement or decision within the time frame established for presumptive approval.

3. Supplemental Technical Review.

a. A supplemental technical review shall result in a decision to grant or deny the permit, or, where public comment is provided, in a proposed decision to grant or deny the permit.

b. The Department may request additional information during the course of a supplemental technical review.

c. A decision to grant or deny a permit following supplemental technical review shall be subject to appeal in the manner specified in applicable statute or regulations.

4. Public Comment Review.

a. A public comment review shall result in a decision to grant or deny the permit.

b. The Department may request additional information during the course of such review.

c. A decision to grant or deny a permit following public comment review shall be subject to appeal in the manner specified in applicable statute or regulations.

d. For applications filed pursuant to M.G.L. c. 21E, and 310 CMR 40.0000: *Massachusetts Contingency Plan*, a public comment period shall, if applicable, occur concurrently with the technical review. A second public comment period shall, if applicable, occur at either the end of the technical review or the supplemental technical review. The applicant shall have an additional 30 days beyond the second public comment period to respond, if significant comments are received.

4.04: continued

- (c) Additional Information Submitted by Applicants.
1. Submittals During Departmental Review Periods. The Department may request additional information from the applicant during any Departmental review period without extending or reducing the time provided in the schedule for the Department to complete such review. The Department may make such requests either orally or in writing. In making any such written request, the Department shall specify a reasonable time within which the applicant may provide such additional information, considering the time required to produce the information and the time required to review it within the applicable period for the Department to take action. Such specification of time shall not be deemed to give rise to any right to an adjudicatory hearing. The Department shall not be required to consider in any decision or action, including any adjudication, any additional information submitted by the applicant beyond the limit of time so specified by the Department, unless that additional information is timely submitted in response to a statement identifying deficiencies or another written request from the Department pursuant to 310 CMR 4.04(2)(c).
 2. Change in Project.
 - a. Determination of Change. The Department may determine that the applicant has filed a new application whenever additional information provided by the applicant during any Departmental review period, in response to any statement identifying deficiencies in the application or supporting materials, or during any period allowed for public comment, either
 - i. results in a change in the category in which the permit application is classified, or
 - ii. significantly increases or changes the nature of the potential effects of the proposed project or activity on public health and safety or the environment.
 Upon making a determination that the applicant has filed a new application, the Department shall promptly notify the applicant in writing. The notice shall indicate the basis for the determination and summarize the provisions of 310 CMR 4.04(2)(c)2. relative to such determinations. The determination that a project has changed shall not be grounds for a request for adjudicatory hearing; however, an applicant aggrieved by such a determination may seek review of the determination as an issue in any appeal of the permit decision.
 - b. Effects of Determination on Schedule.
 - i. Immediately upon issuance of the notification, the schedule for timely action shall be suspended.
 - ii. If the determination resulted from a proposed change in design or operation of the proposed project or activity, the applicant may within 45 days withdraw the change and return to its previous proposal by so notifying the Department in writing. If the applicant so notifies the Department, the schedule for timely action shall resume at the point at which it was suspended.
 - iii. If the determination resulted from any other cause, or if the applicant does not elect to withdraw the change, the Department shall begin a review of the new application pursuant to the relevant schedule for timely action.
 - c. Effects of Determination on Fee. Unless the applicant elects to proceed with the previous application in accordance with 310 CMR 4.04(2)(c)2.b.ii., the original application shall be deemed withdrawn, and the fee shall be disposed as provided in 310 CMR 4.04(3)(d); provided, that the Department shall credit any amount to be refunded toward the permit application fee payable for the new permit application unless the applicant requests a refund.
- (d) Application of Schedule Periods.
1. For the purposes of 310 CMR 4.04(2), an "interim review period" shall mean the period allowed for any administrative completeness review, technical review, or supplemental technical review which may result in an identification of deficiencies or a proposed decision for public comment, or any other period for action by the Department that may not or does not require a final decision to grant or deny the permit. A "final review period" shall mean the period allowed for a technical or public comment review

4.04: continued

or other period for action by the Department, which must result in a decision to grant or deny the permit. The schedules for timely action established in 310 CMR 4.04 create no right to any remedy except that specifically provided in 310 CMR 4.04 and in M.G.L. c. 21A § 18 or in M.G.L. c. 21E, § 3B.

2. Accelerated Action by Department. Should the Department complete the required action for any interim review period in less time than is allowed pursuant to the applicable schedule, one day shall be added to the number of days allowed for the Department's next action, if any, in the applicable schedule for each day that the Department's action precedes the date by which such action was required.

3. Tardy Action by Department.

a. Should the Department fail to take timely action on a permit application within any interim review period, subject to any adjustment required by 310 CMR 4.04(2)(d)2., one day shall be subtracted from the number of days allowed for the Department's next action in the appropriate schedule for each day that the Department's action is tardy, unless the schedule for taking such action has been extended pursuant to 310 CMR 4.04(2)(e) or (f).

b. Should the Department fail to take timely action on a permit application within any final review period, subject to any adjustment required by 310 CMR 4.04(2)(d)2. and 4.04(2)(d)3.a., the Department shall refund the permit application fee paid by the applicant, unless the schedule for taking such action has been extended pursuant to 310 CMR 4.04(2)(e) or (f). The Department shall continue to process the permit application following a refund. The applicant may agree to accept an extended review schedule in *lieu* of receiving a refund.

c. Notwithstanding 310 CMR 4.04(2)(d)3.b., the Department shall continue to process a permit application pursuant to M.G.L. c. 21E and 310 CMR 40.0000: *Massachusetts Contingency Plan* on a high priority basis.

4. Tardy Action by Applicant. Should the applicant fail to respond to the Department's statement of deficiencies within the period provided for doing so, the application may be deemed withdrawn, unless the schedule for doing so has been extended pursuant to 310 CMR 4.04(2)(e)3. or (f). The Department shall issue a final decision to deny or approve in a technical review period.

(e) Extension of Schedule by Other Actions.

1. Failure of Payment. Whenever a check or other form of payment of a permit application fee is returned for insufficient funds, or if payment in full is in any other manner prevented, the schedule for timely action shall be suspended. The Department shall notify the applicant of such suspension in writing. When the Department has verified receipt of payment in full, the Department shall so notify the applicant in writing. The time period for the Department to complete the next relevant action shall be that period specified in the schedule for timely action, subject to any modification in accordance with 310 CMR 4.04(2)(d)2., 4.04(2)(d)3., or (2)(f), beginning on the day after such notice is issued

2. Extension of Periods for Departmental Action.

a. The time periods for the Department to take any action shall be extended whenever the Department determines that action by another federal, state, or municipal governmental agency is required before the Department may act, or that judicial proceedings affect the ability of the Department or the applicant to proceed with the application, or when the Department has commenced enforcement proceedings which could result in revocation of an existing permit for that facility or activity and denial of the application. The applicant shall promptly notify the Department in writing whenever it believes that action by another governmental agency is required, or that judicial proceedings affect the ability of the Department or the applicant to proceed with the application.

b. The Department shall provide written notice of such determination to the permit applicant as promptly as practicable, but in no event later than the date by which the Department or the applicant was next to have completed an action. Such notice shall contain a statement of the reasons for which the schedule must be extended. Such a determination shall not be deemed to give rise to any right to an adjudicatory hearing. The applicant may pursue any available judicial remedy.

c. When the Department determines that the reason for such extension is no longer applicable, the Department shall so notify the applicant in writing. The time period for the Department to complete the next relevant action shall be that period specified in the schedule for timely action, beginning on the day after such notice is issued.

4.04: continued

3. Extension of Periods for Action by Applicant.

a. The time periods for the applicant to take any action shall be extended whenever the Department determines that judicial proceedings affect the ability of the Department or the applicant to proceed with the application. The applicant shall promptly notify the Department in writing whenever it believes that judicial proceedings affect the ability of the Department or the applicant to proceed with the application.

b. The Department shall provide written notice of such determination to the permit applicant as promptly as practicable, but in no event later than the date by which the Department or the applicant was next to have completed an action. Such notice shall contain a statement of the reasons for which the schedule must be extended. No determination by the Department concerning the applicant's ability to proceed with the application shall be deemed to give rise to any right to an adjudicatory hearing. The applicant may pursue any available judicial remedy.

c. When the Department determines that the reason for such extension is no longer applicable, the Department shall so notify the applicant in writing. The time period for the applicant to complete the next relevant action shall be that period specified in the schedule for timely action, subject to any modification in accordance with 310 CMR 4.04(2)(f), beginning on the day after such notice is given.

d. In no event shall the period allowed for action by the applicant exceed two years, except in accordance with an agreement executed pursuant to 310 CMR 4.04(2)(f), or a schedule established pursuant to 310 CMR 4.05.

(f) Extension of Schedule by Agreement. The applicant and the Department may, by written agreement, extend any schedule for timely action or any individual portion thereof.

(g) Schedules for Projects Requiring more than One Permit. In order to ensure efficient and coordinated review of all relevant issues, whenever more than one type of permit from the Department is required for any project, the Department may, upon written notice to the applicant adjust the schedules for timely action for all such permits to coincide with that schedule providing for the latest review period at each step of the review process. The Department shall consult with the applicant prior to issuing any such notice.

(3) Provisions for Payment of Permit Application Fee.

(a) The Commissioner may specify through the establishment of payment invoices, permit application forms, or other standardized instructions the form and manner of payment of all permit application fees. Payment in other forms or manners shall not be deemed payment for purposes of any schedule for timely action, unless and until the Department verifies payment and so notifies the applicant in writing.

(b) The Department may require that persons applying for permits as a result of enforcement action by the Department or another agency of the Commonwealth or its subdivisions shall pay double the otherwise applicable fee.

(c) Hardship Requests: extension of time for making payment.

1. In instances of severe financial hardship, the Commissioner may, at his or her discretion, grant a timely request to extend the time for making payment. The permittee shall bear the burden of persuasion that the request should be granted.

2. An applicant seeking an extension of time for making payment shall file a written request for extension with the permit application. The request shall be filed in the form and manner specified by the Commissioner, and shall include the following:

- a. the applicant's name and address;
- b. the amount of the fee due;
- c. the circumstances the applicant believes constitute severe financial hardship;
- d. a proposed schedule for making payment; and
- e. the reasons the applicant believes the proposed schedule is appropriate.

3. Within 30 days of receipt of a request for extension, the Commissioner shall notify the applicant making the request of the Department's decision on the request. Notice shall be given to the permittee by any method described in 310 CMR 4.03(3)(a). The Commissioner may request any supplemental information from the applicant to aid in such decision. No schedule for timely action shall begin until the Department makes a decision on the request for extension. The Commissioner's decision on such a request shall not be deemed to give rise to any right to an adjudicatory hearing.

4.04: continued

4. If the request is granted, the decision shall set forth a schedule for making payment. The Department may adopt or modify the schedule proposed by the applicant, or may develop its own schedule as appropriate. Failure by the applicant to make payments when due pursuant to the schedule established by the Department shall suspend the schedule for timely action until payment is made.
 5. If the request is denied, the schedule for timely action shall begin in accordance with 310 CMR 4.04(2)(a).
- (d) Withdrawal of Application.
1. If the applicant withdraws the permit application before the period for technical review has begun, the Department shall retain 50% of the permit application fee and shall refund the balance to the applicant.
 2. If the applicant withdraws the permit application during or after the period for technical review, the Department shall retain the entire permit application fee.
- (e) Refund and Credit.
1. For permit categories allowing fees calculated by the applicant, a Department determination during the administrative completeness review that an incorrect fee amount was paid, shall result in a refund or additional amount due, as applicable. A determination of an incorrect fee calculation during the technical review period shall result in a 50% refund if overpayment was made or the requirement for the additional fee amount if underpaid.
 2. A Department determination during the administrative completeness review that no permit is required of the applicant shall result in a refund of 100% of the application fee paid. The determination made during the technical review period shall result in a 50% refund.
 3. A Department determination during administrative completeness review that an application is for an incorrect permit category shall result in:
 - a. a credit of 100% of the paid fee toward the correct permit category fee and a refund of the balance, if any; or
 - b. a refund of 50% of the balance where information in addition to the original application was required for the determination; or
 - c. requirement for additional payment of the balance for the correct category's higher fee.
 4. A Department determination of incorrect application category during technical review shall result a 100% credit of the paid fee amount toward the correct permit category fee, a 50% refund of the balance, if any, or requirement for payment for a higher fee.

4.05: Alternative Project-specific Schedules and Fees

- (1) Applicability. The provisions of 310 CMR 4.05 shall apply:
- (a) to permit applications and projects within categories designated in 310 CMR 4.10 (Appendix) as individual rule projects; or
 - (b) to permit applications and projects, except those pursuant to M.G.L. c. 21E, and 310 CMR 40.0000: *Massachusetts Contingency Plan* and except Notices of Intent pursuant to M.G.L. c. 131, § 40, and 310 CMR 4.10(8)(n), for which the Department finds that due to the size, novelty, complexity, or technical difficulty of the project
 1. the amount of work required by the Department in processing the permit application will exceed by a factor of two or more the amount of work assumed as the basis in establishing the permit application fee for such permits set forth in 310 CMR 4.10(Appendix), and
 2. the work required of the Department can not be completed within the schedule for timely action set forth for such permits in 310 CMR 4.10(Appendix). The Department shall provide written notice of such finding to the applicant within 30 days of receiving the permit application and payment of the application fee. The notice shall contain a statement of the basis for the Department's determination and a summary of the provisions of 310 CMR 4.05.

4.05: continued

(2) Establishment of Alternative Schedule for Timely Action and Permit Application Fee.

(a) The Department shall negotiate with the applicant concerning the establishment of the schedule for timely action and permit application fee.

If agreed to by the Department, the applicant may pay the published permit application fee and the Department may begin review of the application under the published timely action schedule until the proposed alternative fee amount and timely action schedule have been submitted to the applicant by the Department. The final decision shall not be issued to the applicant until the alternative fee has been paid in full. Permit categories identified as Individual Rule Projects require a signed agreement and fee payment before the Department may begin review of the application.

(b) Within 45 days of receipt of the permit application for an individual rule project, or within 45 days of making the determination set forth in 310 CMR 4.05(1)(b), or within such other period as the Department and the applicant agree in writing, the Department shall establish both an alternative schedule for timely action and a permit application fee, based on the costs and time of the extraordinary work required to process such permit application. The Department may establish the alternative permit application fee in the form of actual costs billed at the average rates set forth in 310 CMR 4.05, subject to a stated maximum billing amount.

(c) In establishing any permit application fee under 310 CMR 4.05, the Department and the applicant shall use as a basis the following average daily and hourly costs:

1. Loaded Daily Rate. The Loaded Daily Rate per 7.5 hour day shall be based upon the average fully loaded rate for a Full Time Equivalent Department employee as calculated in the current Fiscal Year in effect at the time of the permit application.

The applicable daily overtime charge rate may be used following a positive Department determination for a public interest expedited review and agreement by the applicant. Effective May 1, 2020

2. Loaded Hourly Rate. The Loaded Hourly Rate shall be based upon the average hourly fully loaded rate for a Full Time Equivalent Department employee as calculated in the current Fiscal Year in effect at the time of the permit application.

The applicable hourly overtime charge rate may be used following a positive Department determination for a public interest expedited review and agreement by the applicant. For purposes of 310 CMR 4.05, "technical staff" shall be deemed to include staff in all professional categories, including without limitation engineers, environmental analysts, chemists, biologists, geologist, hydrogeologists, attorneys, and planners. Effective May 1, 2020

(d) Limits on Alternative Schedule and Fee. In no case shall the fee established pursuant to 310 CMR 4.05 be lower than fees established in 310 CMR 4.10(Appendix) for that class of permit, if any, nor shall the schedule for timely action require action more rapid than the time for comparable action allowed in the schedule established in 310 CMR 4.10(Appendix), for that class of permit, if any.

(3) Review of Alternative Schedule for Timely Action or Permit Application Fee.

(a) General. An applicant aggrieved by the Department's action in establishing a schedule for timely action or a permit application fee pursuant to 310 CMR 4.05 may within ten days of receipt of the alternative schedule for timely action and permit application fee established by the Department notify the Department that it seeks review. Failure to so notify the Department within ten days shall be deemed a waiver of the right to review. The applicant may seek review pursuant to either or both of 310 CMR 4.05(3)(c) and (d).

(b) Filing of Notice. An applicant seeking review under 310 CMR 4.05 shall file a written notice in the form and manner specified by the Commissioner. The notice shall include the following:

1. the applicant's name and address;
2. the fee amount and schedule established by the Department;
3. a statement indicating whether the applicant elects to proceed on a true cost basis pursuant to 310 CMR 4.05(3)(c), to request an adjudicatory hearing pursuant to 310 CMR 4.05(3)(d), or to do both; and
4. materials satisfying the additional filing requirements of 310 CMR 4.05(3)(c) or (d), as applicable.

4.05: continued

(c) True Cost Procedure.

1. General. An aggrieved applicant may elect to proceed with the application on a true cost basis. The Department shall diligently and in good faith process the permit application, taking all reasonable measures to achieve compliance with the alternative schedule for timely action established pursuant to 310 CMR 4.05(2); provided, that the provisions of 310 CMR 4.04(2)(d)3.b. shall not apply.

2. Additional Filing Requirement. The applicant shall include with the notice required by 310 CMR 4.05(3)(b) a payment of at least ½ of the alternative permit application fee established pursuant to 310 CMR 4.05(2) as a deposit.

3. The Department shall provide a monthly cost statement to the applicant based on the average rates specified in 310 CMR 4.05(2)(c) and the days or hours of work performed by technical staff. Whenever the Department's costs as reflected in the cost statement exceed the balance already paid by the applicant, the applicant shall within 30 days pay all outstanding amounts. Failure by applicant to make such payments shall be grounds for the Department to discontinue work on the application.

NON-TEXT PAGE

4.05: continued

4. The Department shall withhold its final decision on the permit application until the applicant has made full payment.
 5. Nothing in 310 CMR 4.05 shall prevent the Department from denying a permit request where it finds the application and supporting materials inadequate.
- (d) Adjudicatory Hearing Procedure.
1. General. An aggrieved applicant may elect to request an adjudicatory hearing, pursuant to M.G.L. c. 30A. 310 CMR 1.00: *Adjudicatory Proceedings* shall govern such proceedings.
 2. Additional Filing Requirement. The applicant shall include with the notice required by 310 CMR 4.05(3)(b) the adjudicatory hearing fee required by 310 CMR 4.06 and a clear and concise statement of
 - a. the facts which are grounds for the proceeding; and
 - b. the relief sought, including an identification of all desired changes in the alternative schedule for timely action and permit application fee set by the Department.
 3. Except as provided by 310 CMR 4.05(3)(c) when the applicant has elected both to proceed on a true cost basis and to request an adjudicatory hearing, no permit application fee shall be due and no schedule for timely action shall be in effect, pending resolution of the request for adjudicatory hearing.
 4. Standards. In any hearing pursuant to 310 CMR 4.05(3)(d), the average rates established in 310 CMR 4.05(2)(c) shall be used as the basis of the fee determination, and the alternative schedule for timely action and permit application fee established by the Department shall be revised only where the applicant demonstrates by a preponderance of the evidence that the Department's position was unreasonable, arbitrary, or capricious.
- (4) Alternative Annual Compliance Assurance Fee.
- (a) The Department shall establish an annual compliance assurance fee as a condition of a permit issued for a project subject to 310 CMR 4.05(4), based on the costs of the Department reasonably necessary to ensure compliance with the permit. The provisions of 310 CMR 4.05(2)(d) shall apply to such fees. In the absence of a specific single project annual assurance compliance fee set by the Department with or before the issuance of the final project permit decision, annual fees then existing or later promulgated in 310 CMR 4.03(2): *Table* shall apply as applicable to permits held by the applicant.
 - (b) An applicant aggrieved by the establishment of such fee may seek review of the fee in accordance with applicable procedures for appealing other permit terms or conditions established by the permit decision, provided that:
 1. in any hearing concerning such fee, the average daily and hourly rates set forth in 310 CMR 4.05(2)(c) shall be used as the basis of the fee; and
 2. in any such hearing, the fee established by the Department shall be revised only where the applicant demonstrates by a preponderance of the evidence that the Department's position was unreasonable, arbitrary, or capricious.
 - (c) Future request for adjustment of fee. The permittee may request the Department to adjust an annual compliance assurance fee established pursuant to 310 CMR 4.05(4) by regulation or established pursuant to 310 CMR 4.05(4) by:
 1. filing an application to modify or amend the permit in which the fee is established; or
 2. requesting revision in the fee during any review of 310 CMR 4.00 and revision of fees established herein.
- (5) Special Project. Permits for projects determined by the commissioner to have significant environmental interest, or consistency with sustainable development principles, or projects which meet the criteria in M.G.L. c. 21A, § 18(d) clauses (1) and (2) but do not otherwise conform with the requirements of M.G.L. c. 21A, § 18(d) clauses (1) through (4), effective October 7, 2005.

4.06: Adjudicatory Hearing Filing Fee

(1) Filing Fee.

(a) Any person filing a notice of claim for an adjudicatory appeal before the Department shall pay a filing fee of \$100.00. Exemptions from the filing fee are defined in the first sentence of Person at 310 CMR 4.02.

(b) The filing fee for a simplified hearing as described in 310 CMR 1.01(8)(a)2. is \$25.00 on or after November 3, 1995. Where a filing fee of \$100.00 has been received and the Department conducts a simplified hearing, the Department will refund \$75.00.

(c) The required form and manner of payment shall be specified by the Department as an element of notice of any right to request an adjudicatory hearing.

(d) Failure to pay the filing fee shall be a ground for dismissal of the request for hearing.

(e) The Department shall refund the filing fee for appeals of enforcement orders or administrative penalties when the Department withdraws the order or penalty or renders a final decision wholly in favor of the person requesting the appeal. The Department shall not refund the filing fee for appeals of permits or for appeals of enforcement orders or administrative penalties where the terms of an order are revised or the amount of a penalty is reduced.

(2) Waiver of Filing Fee.

(a) Upon a showing of undue financial hardship, the Department may waive the filing fee set forth in 310 CMR 4.06(1). A person who believes that payment of the fee would be an undue financial hardship shall file with the request for adjudicatory hearing a request for waiver of the fee together with an affidavit setting forth the facts the appellant believes constitute the undue financial hardship. The Department may request additional information from the appellant to assist in making a determination of undue financial hardship.

(b) The Department shall render a written determination waiving or denying waiver of the filing fee. If the Department denies the request for waiver, the appellant shall pay the filing fee within ten days of the date of the Department's decision. Failure to make such payment shall void the request for hearing.

4.08: Public Record Fees

Fees for providing public records shall be determined in accordance with 950 CMR 32.00: *Public Records Access*.

4.09: Targeted Technical Assistance Fees

(1) General. The provisions of 310 CMR 4.09 shall apply to specifically targeted seminars, training sessions, and written materials, or other forms of technical assistance in which participation is voluntary. The Department may charge fees for attendance at, participation in, or receipt of such specifically targeted technical assistance in accordance with the provisions of 310 CMR 4.09. The Department may waive a portion of the fee to enable public officials or students to attend training sessions or seminars or receive materials at reduced cost.

(2) Determination of Fee.

(a) Costs. In establishing a fee for any specifically targeted technical assistance event or written material, the Department may consider its actual costs for developing, producing, or making such assistance available, including without limitation.

1. costs for development, preparation, testing and evaluation, and presentation, in the form of staff time or incurred expense;
2. design, printing, copying, and mailing costs;
3. reasonable costs associated with obtaining necessary facilities or equipment; and
4. reasonable costs associated with providing meals or refreshments for seminar or training session participants, where appropriate.

(b) The Department shall prepare a statement of the manner in which any fee to be charged for targeted technical assistance was determined, including the costs considered in establishing the fee and the expected number of participants or recipients assumed. The Department shall make such statement available to any person upon request.

4.09: continued

(3) Notice of Fee.

(a) For any training session, seminar, or similar form of technical assistance for which a fee is to be charged, the Department shall provide notice of the fee amount to all potential participants at or before the time of registration.

(b) For any written materials prepared for distribution for which a fee is to be charged pursuant to 310 CMR 4.09, the Department shall provide notice of the fee amount on the cover or cover page of such materials. This requirement shall not apply to materials used in a training session, seminar, or similar form of technical assistance where the fee, if any, for such materials is included in the cost identified pursuant to 310 CMR 4.09(3)(a).

4.10: Appendix: Schedules for Timely Action and Permit Application Fees

(1) General.

(a) Unless otherwise specifically provided in 310 CMR 4.10, timely action schedules and application fees in effect on the day the application is filed, shall apply to that application.

(b) The following permit category sets as established in 310 CMR 4.10 effective January 1, 1991 are consolidated effective July 1, 1992: WP 06 and 07, WP 08 and 09, WP 21 and 22, WP 23 and 24, WP 35 and 36; IW 03 and 04, IW 05, 06 and 07, IW 08 and 09, IW 10 and 11, IW 13 and 14, IW 12 and 15, IW 16 and 17, IW 18 and 19, IW 21 and 22.

For reviews pending on July 1, 1992 in categories WP 06, 08, 21, 23, 35, IW 03, 05, 06, 08, 10, 12, 14, 16, 18, 21, the applicant may upon issuance of that permit, file an application in the consolidated category. The consolidated category timely action schedule and permit application fee amount for such application shall be that which would have been applicable prior to July 1, 1992 for the remaining permits of the set.

Permit categories WS13 and 14 and WS15 and 16 are consolidated effective July 1, 1993. For reviews pending on July 1, 1993 in WS 13 or 15, the applicant may upon issuance of that permit, file an application in the consolidated category. The schedule and fee amount for such application shall be that which would have been applicable prior to July 1, 1993 for the remaining permit of the set.

(c) State Agency Applicants. For state agency applicants, any permit application fee of \$100 or less shall be waived as representing an administrative expense associated with transfer of funds between state agencies that is a substantial portion of the fee. Notwithstanding the prior sentence, fees pursuant to M.G.L. c. 21E shall be required of state agency applicants.

(d) Refund. The Department shall notify applicants and allow submission of an application for a refund within 30 days for those permit applications filed on January 1, 1992 through June 30, 1992 with a review pending on July 1, 1992, and for which a reduced fee may have been available if the application had been filed on or after July 1, 1992. The amount of the refund, if any, shall be the difference between the old and new fee. 310 CMR 4.10(1)(d) shall not apply to individual rule and alternative schedule projects.

(e) Index and Key

BUREAU OF AIR AND WASTE

- (2) AIR QUALITY CONTROL - AQ
- (3) HAZARDOUS WASTE - HW
- (4) SOLID WASTE - SW
- (5) INDUSTRIAL WASTE WATER - IW
- (11) ENVIRONMENTAL RESULTS PROGRAM - ERP

BUREAU OF WATER RESOURCES

- (6) WATER SUPPLY - WS
- WATERSHED MANAGEMENT - WM
- (7) WATER POLLUTION CONTROL - WP
- (8) WETLANDS AND WATERWAYS - WW

BUREAU OF PLANNING AND EVALUATION

- (9) LABORATORY CERTIFICATION - LES

BUREAU OF WASTE SITE CLEANUP

- (10) WASTE SITE CLEANUP - WSC

i.e.: (AQ01) refers to: Air Quality permit, ref. number 01. Please note: this is for reference only.

4.10: continued

(2) Air Quality Control.Plan Approvals.

- (a) (AQ01) Permits for air quality, plan approvals.
1. Category: limited plan approvals.
 2. Description: permit to construct, substantially reconstruct or alter any facility required to obtain a limited plan approval pursuant to 310 CMR 7.02(4): *Limited Plan Application (LPA)*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$645.
- (b) (AQ02) Permits for air quality, plan approvals.
1. Category: non-major comprehensive plan approval.
 2. Description: effective March 24, 2017 Permit to construct, substantially reconstruct or alter a facility pursuant to 310 CMR 7.02(5): *Comprehensive Plan Application (CPA)* that is not listed in 310 CMR 4.10(2)(c).
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 72 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$2,370.
- (c) (AQ03) Permits for air quality, plan approvals.
1. Category: major comprehensive plan approval.
 2. Description:
 - a. Effective March 24, 2017 Permit to construct, substantially reconstruct or alter a facility pursuant to 310 CMR 7.02(5): *Comprehensive Plan Application (CPA)* where the construction, substantial reconstruction or alteration has potential emissions greater than or equal to 100 tons per year of any criteria air contaminant, excluding products of combustion, or;
 - b. (Reserved);
 - c. Permit subject to 310 CMR 7.02(5): *Comprehensive Plan Application (CPA)* and 310 CMR 7.00: *Appendix A* (Non-attainment Review) or;
 - d. (Reserved)
 - e. Permit to construct, substantially reconstruct or alter a fuel utilization facility where the portion being constructed, substantially reconstructed or altered has an energy input capacity equal to or greater than the threshold requirements of 310 CMR 7.02(5)(a)2.: *Fuel Utilization Emission Units*, and will result in increased potential emissions greater than or equal to 100 tons per year of any criteria air contaminant; or
 - f. Permit subject to 310 CMR 7.02(5): *Comprehensive Plan Application (CPA)* and 40 CFR 52.21 (Prevention of Significant Deterioration); or
 - g. A permit to construct an incinerator having a waste capacity greater than 2000 pounds per hour of waste.

4.10: continued

3. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 128 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 128 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 72 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$24,305.
- (c)(1) (AQ33) Permits for Air Quality: Consolidated Plan Approval.
1. Category: consolidated plan approval.
 2. Description: consolidated plan for a facility's applicable requirements pursuant to 310 CMR 7.02(12): *U Consolidation of Applicable Requirements*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 90 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 60 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$1,500 plus \$150 per requirement consolidated for each emission unit up to a maximum total fee of \$5,000.

Emission Control Plans.

- (d) (AQ08) Permits for Emission Control Plans.
1. Category: emission control plans.
 2. Description: emission control plan required pursuant to 310 CMR 7.18: *U Volatile and Halogenated Organic Compounds* or 310 CMR 7.19: *U Reasonably Available Control Technology (RACT) for Sources of Oxides of Nitrogen (NO_x)*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. where compliance can be achieved by meeting emission limitations specifically articulated in 310 CMR 7.00: *Air Pollution Control*, including through the use of emissions averaging or trading as described in 310 CMR 7.00: *Appendix B*
 - (i) Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - (ii) Within 63 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - (iii) The permit applicant may remedy identified deficiencies within 45 days of the Department's statement identifying deficiencies, if any.
 - (iv) Within 63 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - (v) Within 30 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.

4.10: continued

- b. Where approval is required by the US Environmental Protection Agency as a single source SIP (State Implementation Plan) revision to demonstrate compliance with federally mandated RACT because compliance cannot be achieved by meeting emission limitations specifically articulated in 310 CMR 7.00: *Air Pollution Control*, or to satisfy 310 CMR 7.18(17): *Reasonable Technology* or 7.19(12): *Miscellaneous RACT*,
- (i) Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - (ii) Within 128 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - (iii) The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - (iv) Within 128 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - (v) Within 72 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
4. Permit application fee:
- a. Permits meeting the description of 310 CMR 4.10(2)(d)3.a.: \$1,880.
 - b. Permits meeting the description of 310 CMR 4.10(2)(d)3.b.: \$22,310.
- (d)(1) (AQ22) - Permits for Emission Control Plan for Municipal Waste Combustors.
1. Category: Municipal Waste Combustor emission control plan.
 2. Description: Emission Control Plan required pursuant to 310 CMR 7.08(2): *Municipal Waste Combustors* for sources constructed prior to 1994.
 3. Schedule for timely action: for projects for which application is filed and fee received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy any identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental review.
 - e. Within 24 days of the close of the period for public comment, the Department will issue or deny the permit.
 4. Permit application fee: \$8,820.

Restrictions on Potential Emissions.

- (e) (AQ09) Permit to restrict potential emissions.
1. Category: permit restrictions or Restricted Emission Status (RES).
 2. Description: permit restriction issued to any facility pursuant to 310 CMR 7.02(9): *Restricted Emission Status (RES)* to restrict potential emissions in order to:
 - a. allow redesignation for purposes of annual compliance fee for permittees for regulated air contaminants; or
 - b. lower potential emissions below the Reasonably Available Control Technology (RACT) applicability thresholds for halogenated organic compounds (HOC) (310 CMR 7.18: *U Volatile and Halogenated Organic Compounds*); or
 - c. lower federal potential emissions below the Reasonably Available Control Technology (RACT) applicability thresholds for volatile organic compounds (310 CMR 7.18: *U Volatile and Halogenated Organic Compounds* and 310 CMR 7.00: *Appendix C* where applicable); or
 - d. lower federal potential emissions below the Reasonably Available Control Technology (RACT) applicability thresholds for oxides of nitrogen (NO_x) (310 CMR 7.19: *U Reasonable Available Control Technology (RACT) for Sources of Oxides of Nitrogen (NO_x)* and 310 CMR 7.00: *Appendix C* where applicable); or

4.10: continued

- e. restrict federal potential emissions of regulated pollutants to eliminate applicability to an otherwise applicable requirement, including but not limited to, 310 CMR 7.00 *Appendix C*.
3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review
 - e. Within ten days of the close of the period for public comment, including public hearing, if applicable, the Department will complete a public comment review.
4. Permit application fee: \$1,900.

NON-TEXT PAGE

4.10: continued

Asbestos and Construction Notifications

- (f) (AQ04) Permits for Asbestos.
1. Category: asbestos removal notification.
 2. Description: notification submitted to satisfy the requirements of 310 CMR 7.15(6): *Notification Requirements* for asbestos abatement activity at industrial, commercial and institutional sites and residential property, excluding owner-occupied residential property with four or fewer units.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within ten working days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review. The notification form shall be deemed accepted by the Department, unless the applicant is notified in writing of deficiencies.
 - b. The permit applicant may remedy identified deficiencies within 30 days of the Department's statement identifying deficiencies, if any.
 - c. Within ten working days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a final review.
 4. Permit application fee: \$100.
- (g) (AQ05) Permits for Asbestos.
1. Category: asbestos blanket notification.
 2. Description: notification submitted of plan for multiple demolition or renovation jobs within a single facility during a period not to exceed one year, where permitted by the Department pursuant to 310 CMR 7.15(6)(j): *Facility Blanket Notification*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within 20 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review and notify the applicant of any deficiencies.
 - b. The permit applicant may remedy identified deficiencies within 30 days of the Department's statement identifying deficiencies, if any.
 - c. Within 20 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee:
 - a. Asbestos blanket notification application: \$200.
 - b. Asbestos removal notification submitted under an approved asbestos blanket notification: \$100.
- (h) (AQ06) Construction and Demolition Notification.
1. Category: notification prior to construction or demolition of an industrial, commercial, or institutional building or residential building with 20 or more units, pursuant to 310 CMR 7.09(2).
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within ten working days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review and indicate deficiencies, if any, to the applicant.
 - b. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any. Submission of amended information, except as provided in 310 CMR 4.10, within the 60-day period shall not constitute a new notification.
 - c. Within ten working days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a final review.
 3. Permit application fee: \$100.

4.10: continued

(h)(1) (AQ35) Permits for Asbestos.

1. Category: revised asbestos removal notification.
2. Description: the revision of an asbestos removal notification, or an asbestos removal notification submitted under an approved blanket notification, to satisfy the requirements of 310 CMR 7.15(6): *Notification Requirements*; or a construction and demolition notification submitted to satisfy the requirements of 310 CMR 7.09(2).
3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within ten working days of receipt of an application and payment of the permit application fee, the Department will complete an administrative completeness review. The revised notification form shall be deemed accepted by the Department unless the applicant is notified in writing of deficiencies.
 - b. The permit applicant may remedy identified deficiencies within 30 days of the Department's statement identifying deficiencies, if any.
 - c. Within ten working days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a final review.
4. Permit application fee: \$35.

(h)(2) (AQ36) Permits for Asbestos.

1. Category: non-traditional asbestos abatement work practice approval.
2. Description: non-traditional asbestos abatement work practice approvals for sites where traditional practices cannot be implemented due to specific circumstances as specified in 310 CMR 7.15(14): *Non-traditional Asbestos Abatement Work Practice Approvals*.
3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within ten working days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. The permit applicant may remedy identified deficiencies within 30 days of the Department's statement identifying deficiencies, if any.
 - c. Within ten working days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a final review.
4. Permit application fee: \$600.

Operating Permits

(j)(4) (AQ14) Permits for Air Quality Control.

1. Category: initial operating permit application for a facility subject to 310 CMR 7.00: *Appendix C*.
2. Description: operating permit for a facility subject to 310 CMR 7.00: *Appendix C*.
3. Schedule for timely action: for applications which are filed and fees received on or after March 24, 2017,
 - a. Within 60 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 180 days of a determination of administrative completeness, the Department shall conduct a technical review.
 - c. The permit applicant may remedy identified deficiencies within 30 days of the Department's statement identifying deficiencies, if any.
 - d. Within 180 days of receipt of materials from the applicant, in response to the Department's statement identifying deficiencies, the Department shall conduct a supplemental technical review.
 - e. Within 45 days of the completion of a public comment period including public hearing, if applicable, the Department shall complete a proposed decision for submission to EPA.

4.10: continued

- f. Within 45 days of the receipt of EPA final comment on the proposed decision, the Department shall complete a final review.
4. Permit application fee: the amount shall be calculated, in accordance with definitions in 310 CMR 7.00: *Air Pollution Control*, by adding (AA x \$ 9) plus (EC x \$ 549) plus (EU x \$ 405), but the amount shall not be less than \$ 2312; where AA is the Adjusted Actual Emissions tons per year of criteria pollutants for the calendar year prior to the submittal of an application for an operating permit, excluding carbon monoxide, capped at 4000 tons/year per pollutant; and EC is an Emissions Unit with Air Pollution Control Equipment; and EU is an Emissions Unit with no Air Pollution Control Equipment.

Emission Reduction Certification

- (1) (AQ18) Permits for Air Quality; Emission Reduction Certification.
1. Category: certification of emission reductions for emission banking and trading pursuant to 310 CMR 7.00: *Appendix B*.
 2. Description: certification of emission reductions which exceed state and federal requirements as Emission Reduction Credits (ERCs).
 3. Schedule for timely action: for projects for which applications are filled and fees received on or after March 24, 2017,
 - a. Within 48 days of receipt of an application and payment of the permit application fee the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, if any, the Department shall complete a supplemental technical review.
 - e. Within 36 days of the close of the period for public comment, including any public hearing, the Department shall complete public comment review and issue final decision.
 4. Permit application fee:
 - \$1,225 greater than or equal to five, but less than ten tons or tpy ERC;
 - \$6,140 greater than or equal to ten, but less than 50 tons or tpy ERC;
 - \$9,215 greater than or equal to 50, but less than 100 tons or tpy ERC;
 - \$15,360 greater than or equal to 100, but less than 500 tons or tpy ERC;
 - \$18,430 greater than or equal to 500 tons or tpy ERC.

(3) Hazardous Waste.Hazardous Waste Recycling

- (a)(1) (HW21) Hazardous waste recycling permits.
1. Category: Class A recycling presumptive approval permit/renewal.
 2. Description: Class A recycling permit and permit renewals for Class A regulated recyclable material pursuant to 310 CMR 30.221(2) for recycling activities described in 310 CMR 30.221: *Table 1* and designated by an "N".
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within ten days the Department shall complete an administrative completeness review.
 - b. Within 21 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 21 days of the Department's statement identifying deficiencies, if any.
 - d. Within 21 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a final review.
 4. Permit application fee: \$155.

4.10: continued

- (b)(1) (HW22) Hazardous waste recycling permits.
1. Category: Level I recycling permits and permit renewals.
 2. Description:
 - a. Applications pursuant to 310 CMR 30.261: *Applications for Class B(3) Permits for Generators to Market Off-specification Used Oil Fuel* or 310 CMR 30.264: *Class B(3) Permits to Market Specification Used Oil Fuel* for a permit or permit renewal to market Class B(3) regulated recyclable materials described in 310 CMR 30.213(3), except those proposing to burn such materials for energy recovery;
 - b. Applications pursuant to 310 CMR 30.232: *Class B(1) Permits and Permit Applications* for a permit or permit renewal to recycle regulated materials described in 310 CMR 30.213(1): *Class B(1)*;
 - c. Applications pursuant to 310 CMR 30.280: *Requirements for Recycling Class B(5) Regulated Recyclable Materials* for a permit or permit renewal to recycle regulated recyclable materials described in 310 CMR 30.213(5): *Class B(5)*;
 - d. Applications pursuant to 310 CMR 30.273: *Generator Permits and Permit Applications* for a permit or permit renewal to recycle regulated recyclable materials described in 310 CMR 30.213(4): *Class B(4)*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within ten days of receipt of an application and payment of the permit application fee the Department shall complete an administrative completeness review.
 - b. Within 24 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$245.
- (c)(1) (HW23) Hazardous waste recycling permits.
1. Category: Level II recycling permits.
 2. Description:
 - a. applications pursuant to 310 CMR 30.247: *Permits and Permit Applications for Those Who Burn Hazardous Waste Fuel at the Site of Generation* for a permit to recycle regulated recyclable materials described in 310 CMR 30.213(2): *Class B(2)*;
 - b. applications pursuant to 310 CMR 30.260(3) or (4) for a permit to recycle regulated recyclable materials described in 310 CMR 30.213(3): *Class B(3)* in amounts less than 100,000 gallons per year;
 - c. applications for transfer stations pursuant to 310 CMR 30.010: *Definitions* and 30.277: *Recycling and Transfer Station Permits and Permit Applications* concerning the regulated recyclable materials described in 310 CMR 30.213(4): *Class B(4)*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 36 days of receipt of an application and payment of the permit application fee, the department shall complete an administrative completeness review.
 - b. Within 36 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 36 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$1,235.
- (c)(2) (HW24) Hazardous waste recycling permits.
1. Category: Level II recycling permit renewals or modifications.
 2. Description: Level II recycling permit renewals or permit modifications for HW23.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,

4.10: continued

- a. Within 24 days of receipt of an application and payment of the permit application fee, the department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
4. Permit application fee: \$325.
- (d) (HW12) Hazardous waste recycling permits.
1. Category: Level III Recycling Permit - Precious Metals.
 2. Description: application for recycling facilities pursuant to 310 CMR 30.277: *Recycling and Transfer Station Permits and Permit Applications* for a permit to recycle regulated recyclable material described in 310 CMR 30.213(4): *Class B(4)*.
 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 96 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 96 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$5,845.
- (d)(1) (HW25) Hazardous waste recycling permits.
1. Category: Level III recycling permits.
 2. Description:
 - a. applications pursuant to 310 CMR 30.224: *Applications for Class A Permits* for a permit to recycle regulated recyclable materials described in 310 CMR 30.212(3) or (5) through (8) allowing applicants to accept for recycling such materials generated off site;
 - b. applications pursuant to 310 CMR 30.260(2) for a permit to market regulated recyclable materials described in 310 CMR 30.213(3): *Class B(3)*;
 - c. applications pursuant to 310 CMR 30.260(3) or (4) for a permit to recycle regulated recyclable materials described in 310 CMR 30.213(3): *Class B(3)* in amounts equal to or greater than 100,000 gallons per year;
 - d. applications pursuant to 310 CMR 30.290: *Requirements for Recycling Class C Regulated Recyclable Materials* for a permit to recycle regulated recyclable materials described in 310 CMR 30.214: *Class C Regulated Recyclable Materials*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the department shall complete an administrative completeness review.
 - b. Within 96 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 96 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 24 days of the close of the period for public comment, including any public hearing, the department shall complete a public comment review.
 4. Permit application fee: \$9,550.
- (d)(2) (HW26) Hazardous waste recycling permits.
1. Category: Level III recycling permit renewals or modifications.

4.10: continued

2. Description: Level III recycling permits renewals or permit modifications for permits HW12 and HW25.
3. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
4. Permit application fee: \$1,065.

Hazardous Waste Transporters

- (g) (HW05) Permits for Transporters of Hazardous Waste.
 1. Category: permits to transport hazardous waste, including mixed waste, pursuant to 310 CMR 30.400: *Requirements for Transporters of Hazardous Waste*, and 310 CMR 30.800: *Licensing Requirements and Procedures*.
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 60 days of making a determination of administrative completeness, the Department shall complete a technical review, including the response to any public comments made during a public comment period if any,
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 60 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 3. Permit application fee: \$3,450.
- (g)(1) (HW28) Permits for Transporters of Hazardous Waste.
 1. Category: annual vehicle identification device (VID).
 2. Description: one or more vehicle VID(s) for use during a single calendar year pursuant to 310 CMR 30.010: *Definitions* and 310 CMR 30.414: *Vehicle Identification Device* by a licensed hazardous waste transporter. After issuance of VID(s) for use during a single calendar year, additional or replacement VID(s) for the same calendar year may be requested without an additional fee.
 3. Schedule for timely action: for projects for which application is filed and fees received on or after March 24, 2017,
 - a. Within 72 days of receipt of an application and payment of the application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any,
 - c. Within 72 days of receipt of materials in response to the Department's statement identifying deficiencies, the Department shall complete a final review.
 4. Permit application fee: calculated in accordance with 310 CMR 30.000: *Hazardous Waste* and 801 CMR 4.07: *Hazardous Waste Transporters Fee* by adding the volume in pounds of all nonexempt hazardous waste manifested for transport in Massachusetts during the 12 months ending the March 31st prior to the application, and multiplying pounds by \$0.00084 for calendar year 2003 VID(s) and by \$0.00172 for applications for each year thereafter; but regardless of calculation, the fee shall be a minimum of \$60.

4.10: continued

- (h)(1) (HW14) Permit Renewals for Transporters of Hazardous Waste.
1. Category: renewal of Hazardous Waste Transporter permits, including mixed waste, pursuant to 310 CMR 30.400: *Requirements for Transporters of Hazardous Waste* and 310 CMR 30.800: *Licensing Requirements and Procedures*.
 2. Schedule of timely action: for projects for which applications are filed and/or fees received on or after May 1, 2020,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 60 days of making a determination of administrative completeness, the Department shall complete a technical review, including the response to any public comments made during a public comment period if any,
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 60 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 3. Permit application fee: \$2,375.

Transporters of Class B(4) Regulated Recyclable Material

- (i) (HW06) permits for Transporters of Class B(4) Regulated recyclable material.
1. Category: permits for Transporters of Class B(4) Regulated recyclable material.
 2. Description: permit to transport Class B(4) Regulated Recyclable Materials pursuant to 310 CMR 30.213(4): *Class B(4)* and 310 CMR 30.275: *Transporter Permits and Permit Applications*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within ten days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$1,290.
- (j)(1) (HW15) Permit Renewal for Transporters of Regulated Recyclable Material
1. Category: permit Renewal for Transporters of Regulated Recyclable Material.
 2. Description: renewal of permit to transport Class B(4) Regulated Recyclable Material pursuant to 310 CMR 30.213(4): *Class B(4)* and 310 CMR 30.275: *Transporter Permits and Permit Applications*.
 3. Schedule of Timely Action: for projects for which applications are filed and/or fees received on or after May 1, 2020,
 - a. Within ten days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$890.

Hazardous Waste Transporter Permit and Class B(4) Regulated Recyclable Material Transporter Permit Modifications

- (j)(3) (HW27) Permit Modification for Hazardous Waste Transporter Permit and Class B(4) Regulated Recyclable Material Transporter Permit.

4.10: continued

1. Category: presumptive approval permit modification for Hazardous Waste transporter permits and Class B(4) Regulated Recyclable Material pursuant to 310 CMR 30.200: *Provisions for Recyclable Material and for Waste Oil*, 310 CMR 30.400: *Requirements for Transporters of Hazardous Waste*, and 310 CMR 30.800: *Licensing Requirements and Procedures*, as applicable.
2. Description: approval of a change in address, E.P.A. identification number, telephone number, waste categories/codes, and the following which are not 310 CMR 30.828: *Transfer of Licenses* license transfers: name changes, stock transfers (less than 5% equity/liability), and new owners/operators.
3. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within ten days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 20 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy any identified deficiencies within 30 days of the Department's statement identifying deficiencies, if any.
 - d. Within 20 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a final review.
4. Permit application fee: \$280.

Treatability Studies

- (k) (HW07) Permits for hazardous waste.
 1. Category: approval of hazardous waste treatability studies pursuant to 310 CMR 30.010: *Definitions* and 310 CMR 30.104(3)(c).
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 36 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 36 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 3. Permit application fee: \$2,695.

TSD Facilities

- (l) (HW08) Permits for hazardous waste treatment, storage, or disposal (TSD) facilities.
 1. Category: license to operate or approval of closure plan for TSD facility.
 2. Description: licenses for facilities that treat, store, or dispose of hazardous wastes, pursuant to 310 CMR 30.010: *Definitions*, 310 CMR 30.099: *Interim Status Facilities*, and 310 CMR 30.800: *Licensing Requirements and Procedures*; approval of closure plans for such facilities pursuant to 310 CMR 30.010 and 310 CMR 30.580: *Closure*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017, individual rule project subject to 310 CMR 4.05.
 4. Permit application fee: individual rule project subject to 310 CMR 4.05.

TSD Facility Modification

- (m) (HW09) Permits for TSD Facility Modifications.
 1. Category: Class I modifications.

4.10: continued

2. Description: modifications to TSD licenses pursuant to 310 CMR 30.852: *Facility License Modification at the Request of the Licensee*, which require prior written approval of the Department pursuant to 310 CMR 30.852(2)(b) and Table 30.852: *Classification of License Modifications*; and modifications to TSD licenses pursuant to 310 CMR 30.099(5): *Changes during Interim Status* and 310 CMR 30.852 which require prior written approval of the Department pursuant to 310 CMR 30.852(2)(b) and Table 30.852.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. The applicant may elect to follow the procedures for Class II modifications. If the applicant so elects, the fee and schedule provisions applicable to Class II modifications at 310 CMR 4.10(3)(n) shall apply.
 4. Permit application fee: \$215.
- (n) (HW10) Permits for TSD Facility Modifications.
1. Category: Class II modifications.
 2. Description: modifications of licenses for TSD facilities pursuant to 310 CMR 30.852(3): *Class 2 Modifications* and Table 30.852: *Classification of License Modifications*; and modifications to TSD licenses pursuant to 310 CMR 30.099(5): *Changes during Interim Status* and 310 CMR 30.852(2): *Class 1 Modifications*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within ten days of the latest date of receipt of the application, payment of the application fee and filing of the public notice required by 310 CMR 30.852(2): *Class 1 Modifications*, the Department shall complete an administrative completeness review.
 - b. Within 96 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 36 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$12,525.
- (o) (HW11) Permits for TSD Facility Modifications.
1. Category: Class III modifications.
 2. Description: modifications of licenses for TSD facilities pursuant to 310 CMR 30.852(4): *Class 1 Modifications* and Table 310 CMR 30.852: *Classification of License Modifications* or 310 CMR 30.852(5): *Other Modifications*; and modifications to TSD licenses pursuant to 310 CMR 30.099(5): *Changes During Interim Status*, and 310 CMR 30.852(3): *Class 2 Modifications* or 310 CMR 30.852(4): *Class 3 Modifications*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after October 8, 2004, individual rule project subject to 310 CMR 4.05.
 4. Permit application fee: individual rule project subject to 310 CMR 4.05.

Declassification

- (p) (HW16) Permit for Declassification.
1. Category: approval of declassification.
 2. Description: approval of petition to classify waste as nonhazardous pursuant to 310 CMR 30.141: *When a Hazardous Waste Ceases to Be a Hazardous Waste* and 310 CMR 30.142: *Petition to Classify a Waste as Nonhazardous*.

4.10: continued

3. Schedule for timely action: individual rule project subject to 310 CMR 4.05.
4. Permit application fee: for projects for which applications are filed and fees received on or after July 1, 1992, individual rule project subject to 310 CMR 4.05.

Research Facilities

- (q) (HW20) Permits for hazardous waste research facilities.
 1. Category: license to operate a research facility where research studies are conducted.
 2. Description: licenses for facilities which intend to conduct research studies or otherwise engage in continuous research, development, and demonstration activities as defined in 310 CMR 30.010: *Definitions* and which require prior Department approval or approval to continue activities as required by 310 CMR 30.104(3)(d): *Research Study Samples* and 30.864: *Research Facility License*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on and after October 8, 2004, individual rule project subject to 310 CMR 4.05.
 4. Permit application fee: individual rule project subject to 310 CMR 4.05.

(4) Solid Waste.

Facility Siting

- (a) (SW01) Permits for solid waste facility siting.
 1. Category: solid waste facility site suitability report pursuant to 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities* for a new site or expanded site or for a site assigned site applying for a major modification where the site had never received a site suitability report.
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 21 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 60 days of receipt of proof that the public notice requirement set forth in 310 CMR 16.10(4): *Public Notice Application* has been satisfied by the applicant, the Department shall finish review and issue the site suitability report.
 3. Permit application fee: \$10,585.
- (a)(1) (SW38) Permits for solid waste facility siting.
 1. Category: solid waste facility site suitability report pursuant to 310 CMR 16.22: *Modifications to and Rescissions and Suspensions of Site Assignments* for a major modification to site assignment where a site suitability report has previously been issued for the site.
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 21 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 60 days of receipt of proof that the public notice requirement set forth in 310 CMR 16.10(4): *Public Notice Application* has been satisfied by the applicant, the Department shall finish review and issue the site suitability report.
 3. Permit application fee: \$1,920.
- (b)(1) (SW46) Permits for solid waste: recyclable and organic material management.
 1. Category: permits for a new recycling, composting or conversion operation handling recyclable or organic material.
 2. Description: recycling, composting, or conversion operation pursuant to 310 CMR 16.05: *Permit for Recycling, Composting or Conversion (RCC) Operations*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.

4.10: continued

- c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
- d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
- e. Within 60 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
- 4. Permit application fee:
 - a. A transfer operation limited to organic material only that receives a maximum of two tons per day and has no more than five tons on-site at any time: \$1,000
 - b. Any other recycling, composting or conversion operation: \$8,750
- (b)(2) (SW47) Permits for solid waste: recyclable and organic material management.
 - 1. Category: permit renewal or modification for recycling, composting, or conversion operation handling recyclable or organic material.
 - 2. Description: permit renewal or modification for recycling, composting or conversion operation pursuant to 310 CMR 16.05: *Permit for Recycling, Composting or Conversion (RCC) Operations*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 24 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 60 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 - 4. Permit application fee:
 - a. A transfer operation limited to organic material only that receives a maximum of two tons per day and has no more than five tons on site at any time: \$200.
 - b. Any other recycling, composting or conversion operation: \$1,458.

Certain Modifications to Any Facility

- (d)(1) (SW45) Permits for solid waste management.
 - 1. Category: presumptive approval procedure for certain modifications of any type of solid waste management facility pursuant to 310 CMR 19.029(3): *Use of Presumptive Approval Procedure at 310 CMR 19.034*.
 - 2. Description: review of a notice of modification pursuant to 310 CMR 19.029(3): *Use of Presumptive Approval Procedure at 310 CMR 19.034*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within ten days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 45 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 45 days of the Department's statement identifying deficiencies, if any.
 - d. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$595.

Transfer Station and Handling Facilities

- (g) (SW05) Permits for solid waste transfer stations or handling facilities.
 - 1. Category: permit and authorization to construct a new or expanded large transfer station, C&D transfer station, large C&D processing facility, or other large handling facility pursuant to 310 CMR 19.029(1): *Use of Permit Procedure at 310 CMR 19.032*, and 310 CMR 19.041: *Authorization to Construct*.

4.10: continued

2. Description: authorization to construct a large transfer station, C&D transfer station, large C&D processing facility or other large handling facility, any of which receives 50 tons per day or more.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 60 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 60 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 60 days of the close of the period of public comment, including any public hearing, the Department shall complete a public comment review.
 - f. Where a variance is required pursuant to 310 CMR 19.080: *Variances*, the time periods for completion of technical and public comment reviews shall each be increased by 30 days.
 4. Permit application fee: \$7,235.
- (h) (SW19) Permits for solid waste transfer stations or other handling facilities.
1. Category: permit and authorization to construct a new or expanded small transfer station, small C&D processing facility or other small handling facility pursuant to 310 CMR 19.029(1): *Use of Permit Procedure at 310 CMR 19.032*, and 19.041: *Authorization to Construct*.
 2. Description: authorization to construct a small transfer station, small C&D processing facility, or other small handling facility, any of which receives less than 50 tons per day.
 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 24 days of the close of the period of public comment, including any public hearing, the Department shall complete a public comment review.
 - f. Where a variance pursuant to 310 CMR 19.080: *Variances* is required, the time periods for completion of technical and public comment reviews shall each be increased by 30 days.
 4. Permit application fee: \$2,075.
- (i) (SW06) Permits for solid waste transfer stations or other handling facility.
1. Category: authorization to operate or renew operation permit for a C&D transfer station, large C&D processing facility, or other large handling facility pursuant to 310 CMR 19.029(2): *Use of Permit Procedures at 310 CMR 19.033* and 19.042: *Authorization to Operate*.
 2. Description: authorization to operate or renew operation permit for a C&D transfer station, large C&D processing facility, or other large handling facility any of which receives 50 tons per day or more excluding non-C&D transfer station.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 36 days of making a determination of administrative completeness, the Department shall complete a technical review.

4.10: continued

- c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 36 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
- 4. Permit application fee: \$1,940.
- (j) (SW20) Permits for solid waste transfer station or other handling facility.
 - 1. Category: authorization to operate or renew operation permit for a small C&D processing facility or other small handling facility pursuant to 310 CMR 19.029(2): *Use of Permit Procedures at 310 CMR 19.033 and 19.042: Authorization to Operate.*
 - 2. Description: authorization to operate or renew operation permit for a small C&D processing facility or other small handling facility, any of which receives less than 50 tons per day excluding all small transfer stations.
 - 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 20 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 20 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$985.
- (k) (SW07) Permits for solid waste transfer stations or other handling facilities.
 - 1. Category: modification of permit for previously approved C&D transfer station, large C&D processing facility or other large handling facility pursuant to 310 CMR 19.029(2): *Use of Permit Procedure at 310 CMR 19.033.*
 - 2. Description: modification of permit for a C&D transfer station, large C&D processing facility or other large handling facility which receives 50 tons per day or more excluding all small transfer stations.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$3,235.
- (l) (SW21) Permits for solid waste transfer stations or other handling facilities.
 - 1. Category: modification of permit for previously approved, small C&D processing facility or other small handling facility pursuant to 310 CMR 19.029(2): *Use of Permit Procedure at 310 CMR 19.033.*
 - 2. Description: modification of permit for a small C&D processing facility or other small handling facility which receives less than 50 tons per day excluding non-C&D transfer station.
 - 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 20 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.

4.10: continued

- d. Within 20 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
4. Permit application fee: \$1,380.

Existing Landfill

- (m) (SW08) Permits for solid waste landfill.
 1. Category: authorization to construct in an existing permitted landfill pursuant to 310 CMR 19.041: *Authorization to Construct*.
 2. Description: authorization to construct in an existing permitted landfill area where construction requires additional approval in phases pursuant to 310 CMR 19.041: *Authorization to Construct* and the initial permit.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 36 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 36 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 72 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$1,780.
- (o) (SW10) Permits for solid waste landfill.
 1. Category: authorization to operate a landfill, pursuant to 310 CMR 19.042: *Authorization to Operate*.
 2. Description: authorization to operate new phases of a permitted landfill as required pursuant to 310 CMR 19.042: *Authorization to Operate* and the initial permit.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 36 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 36 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$1,940.
- (p) (SW11) Permits for solid waste landfill.
 1. Category: major modification of landfill permit pursuant to 310 CMR 19.029(2): *Use of Permit Procedure at 310 CMR 19.033*.
 2. Description: major modification of a landfill plan where a design change will result in the construction of an appurtenance or structure.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.

4.10: continued

- d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
- e. Where a variance pursuant to 310 CMR 19.080: *Variances* is required, the time periods for completion of technical reviews shall each be increased by 30 days.
- 4. Permit application fee,
 - a. Where the Secretary of Energy and Environmental Affairs determines that additional review pursuant to the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00: *MEPA Regulations* is required: \$5,290.
 - b. Where additional review pursuant to MEPA is not required: \$3,880.
- (q) (SW22) Permits for solid waste landfill.
 - 1. Category: minor modification of a landfill pursuant to 310 CMR 19.029(2): *Use of Permit Procedure at 310 CMR 19.033*.
 - 2. Description: modification of a landfill permit with a change in operations, equipment or daily capacity but not construction of an appurtenance or structure.
 - 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 20 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 20 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Where a variance pursuant to 310 CMR 19.080: *Variances* is required, the time periods for completion of technical reviews shall each be increased by 30 days.
 - 4. Permit application fee \$1,380.
- (r) (SW12) Permits for solid waste landfill.
 - 1. Category: approval of landfill closure and assessment evaluation pursuant to 310 CMR 19.150: *Landfill Assessment Requirements*.
 - 2. Description: approval of complete initial site assessment and draft scope of work for a comprehensive site assessment pursuant to 310 CMR 19.150(4): *Initial Site Assessment*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 36 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 36 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$1,380.
- (s) (SW23) Permit for solid waste landfill.
 - 1. Category: approval of landfill closure and assessment evaluation pursuant to 310 CMR 19.150: *Landfill Assessment Requirements*.
 - 2. Description: approval of complete landfill comprehensive site assessment pursuant to 310 CMR 19.150(5): *Comprehensive Site Assessment*.
 - 3. Schedule of timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 60 days of making a determination of administrative completeness, the Department shall complete a technical review.

4.10: continued

- c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 60 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
- 4. Permit application fee: \$5,645.
- (t) (SW24) Permit for solid waste landfill.
 - 1. Category: approval of landfill closure and assessment evaluation pursuant to 310 CMR 19.150: *Landfill Assessment Requirements*.
 - 2. Description: Approval of a corrective action alternative analysis report pursuant to 310 CMR 19.150(6): *Comprehensive Site Assessment*.
 - 3. Schedule of timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$3,565.
- (u) (SW25) Permit for solid waste landfill.
 - 1. Category: approval landfill closure and assessment evaluation pursuant to 310 CMR 19.150: *Landfill Assessment Requirements*.
 - 2. Description: approval of the corrective action design pursuant to 310 CMR 19.151(2)(a): *Corrective Action Design*.
 - 3. Schedule of timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$4,255.
- (u)(1) (SW43) Permits for solid waste landfill.
 - 1. Category: Determination of landfill closure completion pursuant to 310 CMR 19.140(6): *Completion of Closure*.
 - 2. Description: approval of documentation of closure and post-closure planning.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Where a variance pursuant to 310 CMR 19.080: *Variances* is required, the time periods for completion of technical reviews shall each be increased by 30 days.
 - 4. Permit application fee: \$2,435.

4.40: continued

New Landfill or Expanded Existing Landfill

- (v) (SW26) Permit for solid waste landfill.
 1. Category: permit and authorization to construct new large landfill or large expansion of permitted landfill pursuant to 310 CMR 19.029(1): *Use of Permit Procedure at 310 CMR 19.032 and 19.041: Authorization to Construct.*
 2. Description: permit to construct a new landfill with 250 acre-feet or more of disposal volume or expand a permitted landfill by 250 feet or more of disposal volume.
 3. Schedule of timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017, individual rule project subject to 310 CMR 4.05.
 4. Permit application fee: individual rule project subject to 310 CMR 4.05.
- (w) (SW27) Permit for solid waste landfill.
 1. Category: Permit and authorization to construct new medium sized landfill or medium expansion of permitted landfill pursuant to 310 CMR 19.029(1): *Use of Permit Procedure at 310 CMR 19.032 and 19.041: Authorization to Construct.*
 2. Description: permit to construct a new landfill with greater than 25 acre-feet but less than 250 feet of disposal volume or to expand a permitted landfill by greater than 25 feet but less than 250 feet of disposal volume.
 3. Schedule of timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 80 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 80 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 72 days after the close of any public comment period including public hearing, the Department shall complete a public comment review, make any adjustments to the draft permit and issue a final permit decision.
 - f. Where a variance pursuant to 310 CMR 19.080: *Variances* is required, the time periods for completion of technical and public comment reviews shall each be increased by 30 days.
 4. Permit application fee: \$28,555.
- (x) (SW28) Permit for solid waste landfill.
 1. Category: permit and authorization to construct new small landfill or to construct small expansion of permitted landfill pursuant to 310 CMR 19.029(1): *Use of Permit Procedure at 310 CMR 19.032 and 19.041: Authorization to Construct.*
 2. Description: permit to construct a new landfill with no more than 25 acre-feet of disposal volume or to expand a permitted landfill by no more than 25 acre-feet disposal volume.
 3. Schedule of timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 72 days after the close of any public comment period including public hearing, the Department shall complete a public comment review, make any adjustments to the draft permit and issue a final permit decision.

4.10: continued

- f. Where a variance pursuant to 310 CMR 19.080: *Variances* is required, the time periods for completion of technical and public comment reviews shall each be increased by 30 days.
4. Permit application fee: \$14,275.
- (y) (SW29) Permit for solid waste landfill.
1. Category: permit and authorization to construct new woodwaste landfill or to construct the expansion of a permitted woodwaste landfill pursuant to 310 CMR 19.029(1): *Use of Permit Procedure at 310 CMR 19.032 and 19.041: Authorization to Construct*.
 2. Description: permit and authorization to construct a new woodwaste landfill or expand woodwaste capacity of a permitted landfill to dispose of uncontaminated woodwaste pursuant to 310 CMR 19.006: *Definitions*, including reclamation activities but excluding construction and demolition material.
 3. Schedule of timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 72 days after the close of any public comment period including public hearing, the Department shall complete a public comment review, make any adjustments to the draft permit and issue a final permit decision.
 - f. Where a variance pursuant to 310 CMR 19.080: *Variances* is required, the time periods for completion of technical and public comment reviews shall each be increased by 30 days.
 4. Permit application fee: \$14,275.
- (z) (SW48) Permit for a Solid Waste Facility Third Party Inspector.
1. Category: registration of solid waste facility inspector pursuant to 310 CMR 19.018(5): *General Requirements, Registration and Qualification for Third Party Inspectors*.
 2. Description: filing of a Solid Waste Facility Inspector Qualifications Statement.
 3. Schedule of timely action: for a qualifications statement filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of a qualifications statement and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 24 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$595.

Determinations

- (z)(1) (SW39) Permits for solid waste management.
1. Category: determination of beneficial use - use of secondary materials in commercial products pursuant to 310 CMR 19.060(14): *Category 1 – Use of Secondary Materials in Commercial Products*.
 2. Description: determination that the proposed use of a solid waste constitutes the beneficial use of a secondary material when reviewed in accordance with 310 CMR 19.060(14): *Category 1 – Use of Secondary Materials in Commercial Products* and that such material is no longer classified as a solid waste per approval.

4.10: continued

3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 24 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$ 2,375.
- (aa)(1) (SW40) Permits for solid waste management.
1. Category: determination of beneficial use – use of secondary materials in a DEP regulated system pursuant to 310 CMR 19.060(15): *Category 2 – Use of Secondary Materials in Regulated Systems*.
 2. Description: a determination that the proposed use of a solid waste constitutes the beneficial use of a secondary material when reviewed in accordance with 310 CMR 19.060(15): *Category 1 – Use of Secondary Materials in Regulated Systems* and that such material is adequately regulated and no longer classified as a solid waste per approval.
 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 24 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$2,375.
- (aa)(2) (SW41) Permits for solid waste management.
1. Category: determination of beneficial use – use of secondary materials in restricted applications pursuant to 310 CMR 19.060(16): *Category 3 – Use of Secondary Materials in Regulated Applications*.
 2. Description: determination that the proposed use of a solid waste constitutes the beneficial use of a secondary material when reviewed in accordance with 310 CMR 19.060(16): *Category 3 – Use of Secondary Materials in Regulated Applications* and that such material is no longer classified as a solid waste per approval.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$4,455.
- (aa)(3) (SW42) Permits for solid waste management.
1. Category: determination of beneficial use – use of a secondary material in an unrestricted application pursuant to 310 CMR 19.060(17): *Category 4 – Use of Secondary Materials in Unrestricted Applications*.

4.10: continued

2. Description: a determination that the proposed use of a solid waste constitutes the beneficial use of a secondary material when reviewed in accordance with 310 CMR 19.060(17): *Category 4 – Use of Secondary Materials in Unrestricted Applications* and that such material is no longer classified as a solid waste per approval.
 3. Schedule of timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017 individual rule project subject to 310 CMR 4.05.
 4. Permit application fee: individual rule project subject to 310 CMR 4.05.
- (aa)(4) (SW44) Permits for solid waste management.
1. Category: determination of beneficial use – modification.
 2. Description: modification of a previously approved determination of beneficial use permit in accordance with 310 CMR 19.060: *Beneficial Use of Solid Waste*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 24 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$1,065.
- (aa)(5) (SW49) Permits for solid waste management.
1. Category: certification of transfer of permit for any type of solid waste management facility pursuant to 310 CMR 19.044: *Transfer of Permits*.
 2. Description: submission of a transfer of permit certification pursuant to 310 CMR 19.044: *Transfer of Permits*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within ten days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 45 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 45 days of the Department's statement identifying deficiencies, if any.
 - d. Within 45 of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$595.
- (bb) (SW14) Permits for solid waste management.
1. Category: special waste determination.
 2. Description: approval for a facility to accept a listed special waste pursuant to 310 CMR 19.029(3): *Use of Presumptive Approval Procedure at 310 CMR 19.034* and 310 CMR 19.061: *Special Waste*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within ten days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 45 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 45 days of the Department's statement identifying deficiencies, if any.
 - d. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$1,940.

4.10: continued

Combustion Facility

- (dd) (SW15) Permits for solid waste combustion facility.
1. Category: Permit and authorization to construct a new solid waste combustion facility or expansion of an existing facility, pursuant to 310 CMR 19.029(1): *Use of Permit Procedure at 310 CMR 19.032* and 19.041: *Authorization to Construct*.
 2. Schedule for timely action: for projects filed on or after March 24, 2017, individual rule project subject to 310 CMR 4.05.
 3. Permit application fee: individual rule project subject to 310 CMR 4.05.
- (ee) (SW16) Permits for solid waste combustion facility.
1. Category: Authorization to operate or modify an existing combustion facility pursuant to 310 CMR 19.029(2): *Use of Permit Procedure at 310 CMR 19.033*.
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Where a variance pursuant to 310 CMR 19.080: *Variances* is required, the time periods for completion of technical reviews shall each be increased by 30 days.
 3. Permit application fee: \$5,290.

Demonstration Projects

- (ff) (SW32) Permit for Solid Waste Demonstration Project.
1. Category: approval for a demonstration project pursuant to 310 CMR 19.062: *Demonstration Projects or Facilities*.
 2. Description: Approval of a scope of work for demonstrating the effectiveness and utility of a new or innovative solid waste management technology.
 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$2,075.
- (gg) (SW33) Permit for Solid Waste Demonstration Project.
1. Category: approval of a demonstration project report pursuant to 310 CMR 19.062(4): *Department Evaluation of Demonstration Projects*.
 2. Description: Approval of a report providing the results of a demonstration project approved pursuant to 310 CMR 4.10(4)(ff) .
 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.

4.10: continued

- d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
- 4. Permit application fee: \$4,950.
- (hh) (SW35) Permit for Solid Waste: Recycling, Composting, or Conversion Demonstration Project.
 - 1. Category: approval of a demonstration project pursuant to 310 CMR 16.05(8): *Demonstration Project for Recycling, Composting or Converting Recyclable or Organic Material*.
 - 2. Description: approval for a project to demonstrate the effectiveness and utility of a new or innovative recycling, composting, or conversion technology for recyclable or organic material.
 - 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 24 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 24 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 - 4. Permit application fee: \$1,458.
- (ii) (SW36) Permits for Post-closure Use.
 - 1. Category: permit for post-closure use: major category. Approval of a post-closure use at a solid waste management facility site pursuant to 310 CMR 19.016: *Post-closure Use*, 19.029(2): *Use of Permit Procedure at 310 CMR 19.033* and, when the post-closure use is at a landfill, 310 CMR 19.143: *Post-closure Use*.
 - 2. Description: approval for post-closure use that is not subject to SW37.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy any identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$3,425.
- (jj) (SW37) Permits for Post-closure Use.
 - 1. Category: permit for post-closure use: minor category. Approval of a post-closure use at a solid waste management facility site pursuant to 310 CMR 19.016: *Post-closure Use*, 19.029(3): *Use of Presumptive Approval Procedure at 310 CMR 19.034* and, when the post-closure use is at a landfill, 310 CMR 19.143: *Post-closure Use*.
 - 2. Description: approval for post-closure use that:
 - a. does not affect the facility's appurtenances, or
 - b. is not located on the final cover of a landfill.

4.10: continued

3. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within ten days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 45 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy any identified deficiencies within 45 days of the Department's statement identifying deficiencies, if any.
 - d. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
4. Permit application fee: \$1,330.

((5) Industrial Wastewater (Reserved)).

(6) Water Supply.

- (a) (WS) reserved
- (b) (WS) reserved
- (c) (WS) reserved
- (d) (WS) reserved
- (e) (WS) reserved

Underground Injection Control

- (f) (WS06) Permits for water supply, underground injection control.
 1. Category: registration of underground injection wells and Pre-closure Notification.
 2. Description: registration of underground injection wells pursuant to 310 CMR 27.08: *Registration* and Pre-closure Notification pursuant to 310 CMR 27.04: *Prohibited Activities* and 310 CMR 27.12: *Corrective Action*; excluding registration for residential facilities up to four units having only residential activities; and excluding registration in communities where permit review for the UIC well type has been delegated by the Department pursuant to an approved Memorandum of Agreement.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,

4.10: continued

- a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 24 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
4. Permit application fee:
- a. Well codes 5A24 with the exception of abandoned wells, 5B6, 5C4, 5G1, and 5K pursuant to 40 CFR 144.6 and 146.5: \$585.
 - b. Well codes 4P, 5A19, 5A23, 5B2, 5B3, 5C3, 5C5, 5H2, 5H3, and 5X pursuant to 40 CFR 144.6 and 146.5: \$290.
 - c. Well codes 5A18, 5A24 abandoned wells only, 5B1, 5C2, 5E, and 5H1 pursuant to 40 CFR 144.6 and 146.5: \$110.
 - d. Pre-closure Notification pursuant to 310 CMR 27.04: *Prohibited Activities* and 27.12: *Corrective Action*: \$110.
- (g) (WS) reserved
 - (h) (WS) reserved

Zone 2 Determination for Existing Sources of Drinking Water

- (i) (WS07) Zone 2 determination for existing sources of drinking water
 - 1. Category: approval to conduct a pumping test at an existing source for purposes of Zone II delineation.
 - 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 36 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 36 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$970.
- (j) (WS08) Zone 2 determination for existing sources of drinking water.
 - 1. Category: approval of Zone II delineation for existing source.
 - 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 3. Permit application fee: \$3,235.
- (k) (WS) reserved
- (l) (WS) reserved

4.10: continued

Cross Connection

- (n) (WS10) Permits for water supply: cross connections.
1. Category: certification of backflow prevention device testers and cross connection surveyors pursuant to 310 CMR 22.22(13): *Inspection Surveying and Overhauling of Devices*.
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 24 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee:
 - a. certification of cross connection surveyor excluding currently certified testers: \$65.
 - b. certification of backflow prevention device tester excluding currently certified surveyors: \$65.
 - c. certification of backflow prevention device tester and cross connection surveyor: \$65.

New Technology Approval

- (o) (WS11) Permits for water supply: new technology approval.
1. Category: approval of minor new technology for treatment of drinking water.
 2. Description: minor new technology approval pursuant to 310 CMR 22.04(8): *New Product or Technology* where no other Department program or interagency review is required of the new technology. Pilot testing may be required.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$2,265.
- (p) (WS27) Permits for water supply: new technology approval.
1. Category: approval of new technology additives and coatings.
 2. Description: approval of drinking water new technology additives and coatings previously approved by a third-party pursuant to 310 CMR 22.04(8): *New Product or Technology*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 24 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 30 days of the Department's statement identifying deficiencies, if any.
 - d. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$290.

4.10: continued

- (q) (WS31) Permits for vending and POU/POE Devices.
1. Category: approval pursuant to 310 CMR 22.04(1): *New or Substantially Modified Public Water Systems* and 22.23(4) for vending machines and POU/POE treatment devices that have previous third party approval.
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 3. Permit application fee: \$290.
- (r) (WS28) Permits for new technology.
1. Category: approval of one vending site/source prototype pursuant to 310 CMR 22.04(4): *Prohibition on Construction or Substantial Modification of a Public Water System Without Prior Department Approval* -- minor.
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 3. Permit application fee: \$1,380.
- (s) (WS12) Permits for water supply: new technology approval.
1. Category: approval of major new technology for treatment of drinking water.
 2. Description: major new technology approval for treatment of drinking water pursuant to 310 CMR 22.04(8): *New Product Technology* where no other Department program or inter-agency review is required of the new technology.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017, 2009, individual rule project subject to 310 CMR 4.05.
 4. Permit application fee: individual rule project.

Water Quality Assurance/New Source Approval

- (t) (WS13) Permits for water supply, water quality assurance: new source approval.
1. Category: Approval to site source under 70 gallons per minute pursuant to 310 CMR 22.21: *Ground Water Supply Protection*.
 2. Description: approval of exploratory phase work, site examination and land use survey, and approval to conduct pumping test in accordance with the current guidelines and policies for public water systems and 310 CMR 22.21: *Ground Water Supply Protection*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.

4.10: continued

- 4. Permit application fee: \$1,380.
- (u) (Reserved)
- (v) (WS15) Permits for water supply: water quality assurance: new source approval.
 - 1. Category: approval of pumping test report and approval to construct sources under 70 gallons per minute in accordance with current guidelines and policies for public water systems and 310 CMR 22.21: *Ground Water Supply Protection*.
 - 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$1,585.
- (v)(1) (WS37) Permits for water supply, water quality assurance: new source approval.
 - 1. Category: approval of new transient non-community source under 10,000 gallons per day.
 - 2. Description: approval of land use survey, pumping test report, and approval to construct source pursuant to 310 CMR 22.21: *Ground Water Supply Protection*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$810.
- (x) (WS17) Permits for water supply, water quality assurance: new source approval.
 - 1. Category: approval to site source 70 gallons per minute or greater and to conduct pumping test.
 - 2. Description: approval to site source 70 gallons per minute or greater by approval of exploratory phase work, site screening, site examination, land use survey, and approval to conduct pumping test pursuant to 310 CMR 22.21: *Ground Water Supply Protection*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$4,850.
- (z) (WS19) Permits for water supply: water quality assurance: new source approval.
 - 1. Category: approval of pumping test report for source 70 gallons per minute or greater pursuant to 310 CMR 22.21: *Ground Water Supply Protection*.
 - 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 48 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.

4.10: continued

- b. Within 96 days of making a determination of administrative completeness, the Department shall complete a technical review.
- c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
- d. Within 96 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
- 3. Permit application fee: \$8,205.
- (aa) (WS20) Permits for water supply: water quality assurance: new source approval.
 - 1. Category: approval to construct source 70 gallons per minute or greater pursuant to 310 CMR 22.21: *Ground Water Supply Protection*.
 - 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. A WS20 application may be submitted concurrently with a WS19 application in which case both permits will be subject to the WS19 application schedule for timely action.
 - 3. Permit application fee: \$2,910.

Water Quality Assurance/Water Treatment

- (bb) (WS21) Permits for water supply, water quality assurance: water treatment.
 - 1. Category: approval to conduct pilot study.
 - 2. Description: approval to conduct pilot study pursuant to 310 CMR 22.03(1) and (2) and 22.04: *Construction, Operation and Maintenance of Public Water Systems*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 48 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee:
 - a. Less than 40,000 gallons per day: \$320.
 - b. 40,000 gallons per day or more and less than 200,000 gallons per day: \$485.
 - c. 200,000 gallons per day or more and less than one million gallons per day: \$850.
 - d. One million gallons per day or more: \$1,135.
- (cc) (WS22) Permits for water supply, water quality assurance: water treatment.
 - 1. Category: approval of pilot study report.
 - 2. Description: approval of pilot study report pursuant to 310 CMR 22.03(1) and (2) and 22.04: *Construction, Operation and Maintenance of Public Water Systems*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 48 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.

4.10: continued

- c. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
- 4. Permit application fee:
 - a. Less than 40,000 gallons per day: \$915.
 - b. 40,000 gallons per day or more and less than 200,000 gallons per day: \$1,600.
 - c. 200,000 gallons per day or more and less than one million gallons per day: \$2,160.
 - d. One million gallons per day or more: \$2,850.
- (dd) (WS23) Permits for water supply: water treatment.
 - 1. Categories: approval to construct a facility to treat drinking water.
 - 2. Description: approval to construct a facility to treat drinking water in daily volumes of less than one million gallons per day pursuant to 310 CMR 22.03(1) and (2) and 22.04: *Construction, Operation and Maintenance of Public Water Systems*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee:
 - a. Less than 40,000 gallons per day: \$1,125.
 - b. 40,000 gallons per day or more, and less than 200,000 gallons per day: \$1,780.
 - c. 200,000 gallons per day or more, and less than one million gallons per day: \$5,005.
- (ee) (WS24) Permits for water supply water quality assurance: water treatment.
 - 1. Category: treatment approval to construct a facility to treat 1 mgd or greater pursuant to 310 CMR 22.03(1) and (2) and 22.04: *Construction, Operation and Maintenance of Public Water Systems*.
 - 2. Schedule for timely action: for applications filed on or after March 24, 2017, individual rule project subject to 310 CMR 4.05.
 - 3. Permit application fee: individual rule project subject to 310 CMR 4.05.
- (ff) (WS25) Permits for water supply water quality assurance: water treatment
 - 1. Category: approval of treatment facility modification.
 - 2. Description: approval of treatment facility modification permit pursuant to 310 CMR 22.03(1) and (2) and 22.04: *Construction, Operation and Maintenance of Public Water Systems*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee:
 - a. Less than 40,000 gallons per day: \$550.
 - b. 40,000 gallons per day or more, and less than 200,000 gallons per day: \$860.
 - c. 200,000 gallons per day or more, and less than one million gallons per day: \$2,210.
 - d. One million gallons per day or more: \$3,070.

4.10: continued

- (gg) (WS29) Permits for water quality assurance: water treatment.
1. Category: approval of chemical addition retrofit of water systems that serve more than 3300 people.
 2. Description: approval of water treatment modifications for the addition of chemicals pursuant to 310 CMR 22.03(1) and (2) and 22.04: *Construction, Operation and Maintenance of Public Water Systems*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$705.
- (gg)(1) (WS34) Permits for water quality assurance: water treatment.
1. Category: approval of chemical addition retrofit of water systems that serve less than or equal to 3300 people.
 2. Description: approval of water treatment modifications for the addition of chemicals pursuant to 310 CMR 22.03(1) and (2) and 22.04: *Construction, Operation and Maintenance of Public Water Systems*.
 3. Schedule of timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$350.

Water Quality Assurance

- (hh) (WS26) Permits for water quality assurance.
1. Category: approval of sale of land for water supply purposes pursuant to 310 CMR 22.24: *Sale, Transfer of Property Interest, or Change in Use of Water Supply Land*, or of acquisition of land to be used for water supply purposes pursuant to M.G.L. c. 165, § 4B.
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017
 - a. Within 48 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 3. Permit Application fee: \$1,290.
- (hh)(1) (WS32) Permits for water quality assurance: Distribution System Modifications.
1. Category: approval of distribution system modifications such as storage tanks, distribution pump stations, transmission main installation, *etc.* for water systems that serve more than 3300 people.

4.10: continued

2. Description: approval of distribution system modifications pursuant to 310 CMR 22.03(1) and (2) and 22.04: *Construction, Operation and Maintenance of Public Water Systems*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$1,055.
- (hh)(2) (WS33) Permits for water quality assurance: Distribution System Modifications.
1. Category: approval of distribution system modifications such as storage tanks, distribution pump stations, transmission main installation, *etc.* for water systems that serve less than or equal to 3300 people.
 2. Description: approval of distribution system modifications pursuant to 310 CMR 22.03 (1) and (2) and 22.04: *Construction, Operation and Maintenance of Public Water Systems*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$525.
- (hh)(3) (WS36) Permits for water quality assurance.
1. Category: approval of abandonment of a water source pursuant to 310 CMR 22.25: *Abandonment of Water Supply Sources*.
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017.
 - a. Within 48 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy any identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 3. Permit application fee: \$70.
- (ii) (WS30) Permits for water supply: vending machine and POU/POE treatment device.
1. Category: approval to install vending machine or POU/POE water treatment device.
 2. Description: approval to install one type of vending machine or POU/POE water treatment device at one to nine locations on the same public water distribution system pursuant to 310 CMR 22.03(1) and (2) and 22.04: *Construction, Operation and Maintenance of Public Water Systems*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.

4.10: continued

- b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee:
 - a. One type of vending machine at one to nine locations: \$290.
 - b. One type of POU/POE device at one to nine locations: \$290.
- (ii)(1) (WS35) Permits for water supply: vending machine and POU/POE treatment device.
- 1. Category: approval to install vending machine or POU/POE water treatment device.
 - 2. Description: approval to install one type of vending machine or POU/POE water treatment device at ten or more locations on the same public water distribution system pursuant to 310 CMR 22.03(1) and (2) and 22.04: *Construction, Operation and Maintenance of Public Water Systems*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials for the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee:
 - a. One type of vending machine at ten or more locations: \$1,630.
 - b. One type of POU/POE device at ten or more locations: \$1,630.

Well Drilling

- (ii)(2) (WS39) Permits for water supply, well drillers.
- 1. Category: well driller certification.
 - 2. Description: well driller certification pursuant to 310 CMR 46.02: *Certification Requirements*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 45 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - c. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$200.
- (ii)(3) (WS40) Permits for water supply, well drillers.
- 1. Category: well driller certification renewal.
 - 2. Description: well driller certification renewal and renewal of certification with waiver pursuant to 310 CMR 46.02: *Certification Requirements* and 46.03(4): *Annual Renewal*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 45 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.

4.10: continued

- c. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
- 4. Permit application fee: \$100.
- (ii)(4) (WS41) Permits for water supply, well drillers.
 - 1. Category: well driller certification with waiver.
 - 2. Description: initial well driller certification with waiver of some requirements pursuant to 310 CMR 46.02(3): *Waiver*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 45 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - c. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$400.
- (ii)(5) (WS42) Permits for water supply, well drillers.
 - 1. Category: well drilling rig permit and decal and renewal of permit and decal.
 - 2. Description: well drilling rig permit and decal pursuant to 310 CMR 46.03(1)(c): *Rig Permit and Rig Markings for Field Identification* and renewal of permit and decal pursuant to 310 CMR 46.03(4): *Annual Renewal*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 45 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - c. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$100 per rig.

Watershed ManagementWater Withdrawals

- (mm) (WM01) Permits for watershed management.
 - 1. Category: transfer of right to withdraw water pursuant to 310 CMR 36.09: *Transfer of a Registration Statement* (registrations) or 310 CMR 36.33: *Transfer of a Permit* (permits).
 - 2. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 3. Permit application fee: \$215.
- (nn) (WM02) Permits for watershed management.
 - 1. Category: amendments to existing withdrawal permits pursuant to 310 CMR 36.29: *Permit Amendments, Suspensions, and Terminations*.
 - 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 36 days of making a determination of administrative completeness, the Department shall complete a technical review.

4.10: continued

- c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
- d. Within 36 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
3. Permit application fee: \$1,940.
- (oo) (WM03) Permits for watershed management.
 1. Category: withdrawal permits.
 2. Description: withdrawal permits pursuant to 310 CMR 36.00: *Massachusetts Water Resources Management Program*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$4,100.

Herbicide Applications

- (pp) (WM04) Permits for watershed management.
 1. Category: approval to apply herbicide(s) to waters of the Commonwealth pursuant to M.G.L. c. 111, § 5E.
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 24 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 14 days of the Department's statement identifying deficiencies, if any.
 - d. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 3. Permit application fee: \$95.

4.10: continued

Surface Water NPDES Permits

- (qq) (WM05) Permits for watershed management.
1. Category: major NPDES surface water discharge permit and renewal.
 2. Description: permit to discharge pursuant to 314 CMR 3.03: *Discharges Requiring a Permit* and defined by the USEPA as a major NPDES discharge pursuant to 40 CMR 122.2.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 200 days of making a determination of administrative completeness or receipt of EPA's draft NPDES permit, whichever is later, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 200 days of the Department's statement identifying deficiencies, if any.
 - d. Within 200 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 90 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$6,785.
- (rr) (WM06) Permits for watershed management.
1. Category: minor surface water discharge permit and renewal.
 2. Description: permit to discharge pursuant to 314 CMR 3.03: *Discharges Requiring a Permit* and not otherwise defined as a major NPDES discharger by the USEPA pursuant to 40 CFR 122.2.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 150 days of making a determination of administrative completeness or receipt of EPA's draft NPDES permit, whichever is later, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 150 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 90 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$3,170.
- (ss) (WM07) Permits for watershed management.
1. Category: permit modification or renewal.
 2. Description: renewals or modifications of permits for existing permitted facilities as defined in WM05, WM06, IW16, and IW18.

4.10: continued

3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 90 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 90 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 60 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$985.
- (uu) (WM09) Permits for watershed management.
1. Category: approval of stormwater management plan.
 2. Description: review and approval of a stormwater management plan for discharges to Outstanding Resource Waters and coastal Areas of Critical Environmental Concern and other stormwater discharges pursuant to 314 CMR 3.06: *General Permits* as required by the Department, and that file and qualify for inclusion in EPA's NPDES general permit for stormwater.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the appropriate fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completion, the Department shall complete a technical review.
 - c. The permit applicant may remedy any identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review and approve or disapprove the plan.
 4. Permit application fee: \$890.

4.10: continued

(uu)(1) (WM15) Permits for watershed management.

1. Category: general permit coverage for surface water discharge.
2. Description: Notice of Intent for coverage under a general permit for discharges pursuant to 314 CMR 3.06: *General Permits* and that file and qualify for inclusion in EPA's NPDES general permits.
3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within ten days of receipt of an application and payment of the permit application fee, the department shall complete an administrative completeness review.
 - b. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within ten days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a second administrative completeness review.
 - d. Within 21 days of making a determination of administrative completeness the Department shall complete a technical review.
 - e. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - f. Within 21 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
4. Permit application fee: \$500.

(uu)(2) (WM16) Permits for watershed management.

1. Category: treatment works plan approval.
2. Description: plan approval for a new facility or plan approval for a modification to an existing facility holding permit IW16, IW18, WM05, or WM06.
3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
4. Permit application fee: \$980.

4.10: continued

(7) Water Pollution Control.Title 5

(a)(1) (WP57) Permits for Water Pollution Control: Title 5.

1. Category: approval for installation of a recirculating sand filter or approved equivalent alternative technology pursuant to 310 CMR 15.202: *Use of Recirculating Sand Filters.*
2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 45 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy identified deficiencies within 30 days of the Department's statement identifying deficiencies, if any.
 - c. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
3. Permit application fee: \$525.

(a)(2) (WP58) Permits for Water Pollution Control: Title 5.

1. Category: approval of plans to aggregate nitrogen loading or approval for installation of a shared system.
2. Description:
 - a. Approval of nitrogen aggregation plans pursuant to 310 CMR 15.216: *Aggregate Determinations of Flows and Nitrogen Loadings*, or
 - b. Approval for the installation of a shared system pursuant to 310 CMR 15.290: *Shared Systems.*
3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Nitrogen aggregation.
 - i. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - ii. Within 60 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - iii. The permit applicant may remedy any identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - iv. Within 60 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - b. Shared System.
 - i. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - ii. Within 30 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - iii. The permit applicant may remedy any identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - iv. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
4. Permit application fee: \$1,940.

(a)(3) (WP59) Permits for Water Pollution Control: Title 5

1. Category: approval of variance.
2. Description: approval of the following variances,
 - a. (Reserved)
 - b. Approval of variances pursuant to 310 CMR 15.410: *Variances - Standard of Review*, granted by Board of Health, except variance for increased flow to existing system, or
 - c. Approval of variance granted by Board of Health for increased flow pursuant to 310 CMR 15.414: *Variances for Increased Flow to Existing System* or DEP issuance of variance for increased flow pursuant to 310 CMR 15.414: *Variances for Increased Flow to Existing System.*

4.10: continued

3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy any identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
4. Permit application fee: \$335.
- (a)(4) (WP60) Permits for Water Pollution Control: Title 5.
 1. Category: variance from Title 5 provisions for schools.
 2. Description: approval of a variance from Title 5 provisions for schools pursuant to 310 CMR 15.416: *Variations for Schools*.
 3. Schedule for timely action: or projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - c. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$1,940.
- (a)(5) (WP61) Permits for Water Pollution Control: Title 5.
 1. Category: approval or certification of alternative systems.
 2. Description:
 - a. Approval of alternative systems for remedial use pursuant to 310 CMR 15.284: *Approval for Remedial Use*, or
 - b. Approval of alternative systems for pilot use, provisional use, or certification for general use pursuant to 310 CMR 15.281: *Purpose* through 15.288: *Certification of Alternative Systems for General Use*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the department shall complete an administrative review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$3,675.
- (a)(6) (WP62) Permits for Water Pollution Control: Title 5.
 1. Category: determination of acceptability for the use of septic system additives, soil absorption conditioners, approval of effluent tee filters, and approval of alternative devices for grease removal.
 2. Description:
 - a. Determination of acceptability for the use of septic system additives pursuant to 310 CMR 15.027: *Prohibition of Septic System Additives*, or
 - b. Soil absorption conditioners pursuant to 310 CMR 15.027: *Prohibition of Septic System Additives*, or
 - c. Effluent tee filters pursuant to 310 CMR 15.281: *Purpose* through 15.288: *Certification of Alternative Systems for General Use*, or
 - d. Alternative devices for grease removal pursuant to 310 CMR 15.230(12).
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,

4.10: continued

- a. Within 24 days of receipt of an application and payment of the permit application fee, the department shall complete an administrative review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
4. Permit application fee: \$1,140.
- (a)(7) (WP63) Permits for Water Pollution Control: Title 5.
1. Category: disposal system construction permit for state or federal facilities.
 2. Description: disposal system construction permit for new systems, upgrade of small systems, upgrade of large systems which do not trigger failure criteria at 310 CMR 15.303: *Systems Failing to Protect Public Health and Safety and the Environment*, and/or expansion at state or federal facilities, with or without variances which accompany the permit pursuant to 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$1,140.
- (a)(8) (WP64) Permits for Water Pollution Control: Title 5.
1. Category: approval of site use of alternative technology not included in other categories, and approval of tight tanks.
 2. Description:
 - a. Approval of a tight tank pursuant to 310 CMR 15.260: *Tight Tanks*, or
 - b. Approval of installation of an alternative system for pilot use pursuant to 310 CMR 15.281: *Purpose* and 15.285: *Approval for Piloting*, excluding approved grease devices or systems approved pursuant to WP61 for piloting, provisional or general use, and excluding permits under WP57, or
 - c. Approval of installation of alternative system pursuant to 310 CMR 15.284: *Approval for Remedial Use* for remedial use.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Tight Tanks.
 - i. Within 30 days of receipt of an application and payment of the permit application fee, the permit is presumptively approved unless the Department approves the permit with conditions, denies the permit, or issues a statement of technical deficiencies.
 - ii. The permit applicant may remedy identified deficiencies within 30 days of the Department's statement identifying deficiencies, if any.
 - iii. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - b. Installation of alternative system for pilot use or remedial use
 - i. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative review.

4.10: continued

- ii. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - iii. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - iv. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
- 4. Permit application fee: \$525.
- (a)(10) (WP66) Permits for Water Pollution Control: Title 5.
 - 1. Category: upgrade, expansion or continued use of large systems or review determined necessary pursuant to 310 CMR 15.003(2)(b).
 - 2. Description:
 - a. approval for upgrade, expansion or continued use of large systems pursuant to 310 CMR 15.003(2)(b), excluding permits W61 or WP63.
 - b. approval of system required by the Department pursuant to 310 CMR 15.003(2)(b).
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$1,140.
- (a)(12) (WP70) Permits for Water Pollution Control: Title 5.
 - 1. Category: request for alternative design flow pursuant to 310 CMR 15.203(6) or approval to discharge non-sanitary wastewater to a septic system pursuant to 310 CMR 15.004(4).
 - 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 48 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - c. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 3. Permit application fee: \$700.
- (a)(13) (WP75) Permits for Water Pollution Control: Title 5.
 - 1. Category: modification or renewal of alternative systems.
 - 2. Description:
 - a. Modification or renewal of alternative systems for remedial use pursuant to 310 CMR 15.284: *Approval for Remedial Use*, or
 - b. Modification or renewal of alternative systems for pilot use, provisional use, or certification for general use, pursuant to 310 CMR 15.281: *Purpose* through 15.288: *Certification of Alternative Systems for General Use*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the department shall complete an administrative review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.

4.10: continued

- d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
4. Permit application fee: \$ 2,160.

Sanitary Groundwater Discharges

- (l)(WP11) Permits for water pollution control: groundwater discharges.
 1. Category: permit modification or renewal, with plan approval.
 2. Description: permit renewal or major modification with plan approval pursuant to 314 CMR 5.12: *Modification, Suspension, Revocation, Renewal, and Transfer of Permits* and reclaimed water pursuant to 314 CMR 20.00: *Reclaimed Water Permit Program and Standards* for WP05, WP06, WP08, WP10, WP79, WP84, and WP85 permits.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 36 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 60 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$1,830.
- (m)(WP12) Permits for water pollution control: groundwater discharges.
 1. Category: permit modification or renewal without plan approval.
 2. Description: permit renewal or major modification without plan approval pursuant to 314 CMR 5.12: *Modification, Suspension, Revocation, Renewal, and Transfer of Permits* and reclaimed water pursuant to 314 CMR 20.00: *Reclaimed Water Permit Program and Standards* for WP05, WP06, WP08, WP10, WP79, WP84, WP85 permits.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 36 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 60 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$890.
- (m)(1) (WP79) Permits for water pollution control: groundwater discharges.
 1. Category: individual sewage treatment permit.
 2. Description: individual sewage treatment permit not included under WP81 pursuant to 314 CMR 5.03: *Discharges Requiring a Permit*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 36 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.

4.10: continued

- d. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
- e. Within 60 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
- 4. Permit application fee: \$5,000.
- (m)(2) (WP80) Permits for water pollution control: groundwater discharges.
 - 1. Category: general permit or general permit renewal for specified discharges.
 - 2. Description: general permit or general permit renewal for discharge of reject water from reverse osmosis facility, boiler blowdown, carwash, laundromat, wastewater from water purification plant and or water treatment lagoon, and point source agricultural discharge pursuant to 314 CMR 5.03: *Discharges Requiring a Permit*, and 310 CMR 5.13(1): *Authority to Issue General Permits*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness and technical review.
 - b. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 21 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - d. Within 15 days of the close of public comment period or public hearing, if any, the Department shall complete a final decision.
 - 4. Permit application fee: \$745.
- (m)(3) (WP81) Permits for water pollution control: groundwater discharges.
 - 1. Category: small sewage treatment works general permit to discharge or general permit renewal.
 - 2. Description: small sewage treatment work designed to receive 50,000 gpd or less general permit to discharge or renewal of general permit pursuant to 314 CMR 5.03: *Discharges Requiring a Permit*, and 310 CMR 5.13(1): *Authority to Issue General Permits*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness and technical review.
 - b. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 21 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - d. Within 15 days of the close of public comment period or public hearing, if any, the Department shall complete a final decision.
 - 4. Permit application fee: \$755.
- (m)(4) (WP82) Permits for water pollution control: groundwater discharges.
 - 1. Category: administrative renewal of groundwater discharge permit.
 - 2. Description: administrative renewal of groundwater discharge permit pursuant to 314 CMR 5.12(9): *Administrative Renewal of Permits*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after May 1, 2020,
 - a. Within 45 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness and technical review.
 - b. The permit applicant may remedy identified deficiencies within 30 days of the Department's statement identifying deficiencies, if any.
 - c. Within 15 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.

4.10: continued

4. Permit application fee: \$265.
- (m)(5) (WP83) Permits for water pollution control: groundwater discharges.
 1. Category: hydrogeologic report.
 2. Description: hydrogeologic report approval and authorization pursuant to 314 CMR 5.09: *Duty to Submit Hydrogeological Evaluation*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 45 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness and technical review.
 - b. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - c. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$10,005.
- (m)(6) (WP84) Permits for water pollution control: groundwater discharges.
 1. Category: reclaimed water system.
 2. Description: reclaimed water system construction, modification, and operation pursuant to 314 CMR 20.03: *Permit Requirements for Reclaimed Water Systems*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 36 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 60 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$5,000.
- (m)(7) (WP85) Permits for water pollution control: groundwater discharges.
 1. Category: other groundwater discharge individual permits.
 2. Description: permit for project requiring an individual discharge permit not specifically included in category WP79 or WP80.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 36 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 60 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$2,470.

Industrial Groundwater Discharges

- (m)(8) (WP86) Permits for Industrial Wastewater: groundwater discharge.
 1. Category: permit and plan approval for Type II industrial wastewater treatment facility (formerly IW03).
 2. Description: permit to discharge pursuant to 314 CMR 5.03: *Discharges Requiring a Permit* and authorization to construct and operate a Type II industrial wastewater treatment facility, as defined in 257 CMR 2.15: *Permit for Discharge*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,

4.10: continued

- a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 120 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 120 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 72 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
4. Permit application fee: \$6,190.
- (m)(9) (WP87) Permits for Industrial Wastewater: groundwater discharge.
1. Category: permit and plan approval for Type I industrial wastewater treatment facility, (formerly IW05).
 2. Description: permit to discharge pursuant to 314 CMR 5.03: *Discharges Requiring a Permit* and authorization to construct and operate a Type I industrial wastewater treatment facility, as defined in 257 CMR 2.15: *Permit for Discharge*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 96 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 96 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 72 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$3,185.
- (m)(10) (WP88) Permits for Industrial Wastewater: groundwater discharge.
1. Category: permit renewal or modification, with plan modification of industrial wastewater treatment facility; (formerly IW30).
 2. Description: permit renewal or modification, with plan modification, for facility holding permit IW03, IWP05, WP86, or WP87.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the department shall complete an administrative completeness review.
 - b. Within 88 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 88 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 72 days of the close of the period for public comment including any period for public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$1,445.
- (m)(11) (WP89) Permits for Industrial Wastewater: groundwater discharge.
1. Category: permit renewal or modification, without plan modification of industrial wastewater treatment facility (formerly IW31).
 2. Description: permit renewal or modification, without plan modification, for facility holding permit IW03, IW05, WP86, or WP87.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.

4.10: continued

- c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
- d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
- e. Within 72 days of the close of the period for public comment, including any period for public hearing, the Department shall complete a public comment review.
- 4. Permit application fee: \$645.
- (m)(12) (WP90) Permits for Industrial Wastewater: groundwater discharge.
 - 1. Category: plan approval modification for industrial wastewater treatment system (formerly IW32).
 - 2. Description: plan approval modification for facility holding permit IW03, IW05, WP86, or WP87.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$940.

Treatment Works Plan Approval

- (n) (WP68) Permits for Water Pollution Control: treatment works plan approval.
 - 1. Category: treatment works plan approval.
 - 2. Description: plan approval for a new facility or plan approval for modifications to existing facilities with permitted discharges to the ground or surface water pursuant to 310 CMR 5.00: *Ground Water Discharge Permit Program*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 3. Permit application fee: \$970.

Holding Tanks

- (o) (WP56) Permits for Holding Tanks.
 - 1. Category: certification of industrial wastewater holding tank pursuant to M.G.L. c. 21, § 27, and 314 CMR 18.10: *Certification*.
 - 2. Description: certification covers new industrial wastewater holding tank installation and conversion of existing tanks into industrial wastewater holding tanks.
 - 3. Schedule for timely action: for projects for which application is filed and fees received on or after May 1, 2020,
 - a. Within 30 days of receipt of an application and payment of the application fee, the Department shall complete an administrative review.
 - b. Within 30 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any,

4.10: continued

d. Within 30 days of receipt of materials in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review. In the absence of a written decision, the certification shall be presumptively approved.

4. Permit application fee: \$140.

Sewer Connections/Extensions

(y) (WP91) Permits for water pollution control: sewer connections/extensions.

1. Category: sewer connection/ extension.

2. Description: sewer connection permit as determined by the Department permit pursuant to 314 CMR 7.03(3).

3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,

a. Within 90 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.

b. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.

c. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.

d. Within 20 days of the close of the period for public comment, including a public hearing, if any, the Department shall complete a public comment review.

4. Permit application fee: \$3,000.

(z) (WP92) Permits for industrial sewer connections.

1. Category: sewer connection.

2. Description: permit pursuant to 314 CMR 7.03(2).

3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,

a. Within 45 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness and technical review.

b. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any.

c. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.

d. Within 20 days of the close of the period for public comment, including a public hearing, if any, the Department shall complete a public comment review.

4. Permit application fee: \$1,795.

Residuals Management

(aa) (WP28) Permits for water pollution control: residuals management.

1. Category: approval of sampling and analysis plan for land application of residuals, as required prior to classification and permit for land application.

2. Description: approval of sampling and analysis plan pursuant to 310 CMR 32.00: *Land Application of Sludge and Septage* for beneficial use of sludge, sludge products or septage.

3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,

a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.

b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.

c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.

d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.

4. Permit application fee: \$860.

(bb) (WP29) Permits for water pollution control: residuals management.

1. Category: determination of suitability for land application of residuals.

4.10: continued

2. Description: classification of sludge, sludge products, or septage prior to land application for beneficial use, pursuant to 310 CMR 32.00: *Land Application of Sludge and Septage*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 72 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$3,500.
- (cc) (WP30) Permits for water pollution control: residuals management.
1. Category: certification pursuant to 310 CMR 32.00: *Land Application of Sludge and Septage* of major projects for land application of sludge, sludge products, or septage.
 2. Description: land application certification for Type 2 or Type 3 classified residuals, for projects of 0.5 acres or more.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 72 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$2,910.
- (dd) (WP31) Permits for water pollution control: residuals management.
1. Category: certification pursuant to 310 CMR 32.00: *Land Application of Sludge and Septage* of minor projects for land application of sludge, sludge products, or septage.
 2. Description: land application certification for Type 2 or Type 3 classified residuals, for projects of less than 0.5 acre.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 72 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 4. Permit application fee: \$755.
- (ee) (WP32) Permits for water pollution control: residuals management.
1. Category: renewal or modification of certification pursuant to 310 CMR 32.00: *Land Application of Sludge and Septage* of projects for land application of sludge, sludge products, or septage.
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,

4.10: continued

- a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 48 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
4. Permit application fee: \$315.
- (ff) (WP33) Permits for water pollution control: residuals management.
1. Category: approval of wastewater treatment residuals landfill, pursuant to M.G.L. c. 21, § 27 or § 43(2), M.G.L. c. 83, §§ 6 and 7, or M.G.L. c. 21A, § 13, 314 CMR 5.00: *Ground Water Discharge Permit Program* or 3.00: *Surface Water Discharge Permit Program*, or 7.00: *Sewer System Extension and Connection Permit Program*.
 2. Schedule of timely action: for applications received on or after March 24, 2017, individual rule project subject to 310 CMR 4.05.
 3. Permit application fee: for projects for which applications are filed and fees received on or after March 24, 2017, individual rule project subject to 310 CMR 4.05.
- (gg) (WP34) Permits for water pollution control: residuals management.
1. Category: approval of closure of wastewater treatment residuals landfill, pursuant to M.G.L. c. 21, §§ 27 and 43(2), M.G.L. c. 83, §§ 6 and 7, M.G.L. c. 21A, § 13 or 314 CMR 3.00: *Surface Water Discharge Permit Program*, 5.00: *Ground Water Discharge Permit Program*, or 7.00: *Sewer System Extension and Connection Permit Program*.
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 3. Permit application fee: \$8,745.
- (hh) (WP35) Permits for water pollution control: residuals management.
1. Category: approval of design plans and specifications for residuals management facilities, pursuant to M.G.L. c. 21, § 27 or § 43(2), M.G.L. c. 83, §§ 6 and 7, or M.G.L. c. 21A, § 13 or 314 CMR 12.00: *Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Dischargers*.
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 120 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 120 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - e. Within 72 days of the close of the period for public comment, including any public hearing, the Department shall complete a public comment review.
 3. Permit application fee: \$5,350.
- (ii) (WP44) Permits for water pollution control: residuals management.
1. Category: modifications to permits for residuals landfills.

4.10: continued

2. Description: modifications to existing approvals including but not limited to changes in design, operation, and monitoring plans.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 3. Permit application fee: \$2,180.
- (jj) (WP45) Permits for water pollution control: residuals management.
1. Category: modifications to residuals management facilities.
 2. Description: modifications to existing plan approvals for all residual management facilities excluding residual landfills, but including and not limited to revisions to design, operation, monitoring, and material processing operations.
 2. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 3. Permit application fee: \$1,280.
- (kk) (WP93) Permits for water pollution control: residuals management.
1. Category: renewal for land application of Type I residuals.
 2. Description: renewal of Type I approval pursuant to 310 CMR 32.13(11).
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017, (*see* 310 CMR 32.13(11)) for the terms of presumptive approval),
 - a. Within 45 days of receipt of an application and payment of the permit application fee, the Department shall complete a technical review.
 - b. The permit applicant may remedy any identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$1,700.

Wastewater Treatment Plant Operators

- (pp) (WP47) Permits for water pollution control: licenses for wastewater treatment plant operators.
1. Category: certification through reciprocity.
 2. Description: certifications for the seven grades of wastewater treatment plant operators pursuant to 257 CMR 2.00: *Certification of Operators of Wastewater Treatment Facilities* by reciprocity review and status.
 3. Schedule for timely action: for certifications for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the application fee, the Board shall complete an administrative review.
 - b. Within 24 days of making a determination of administrative completeness, the Board shall complete a technical review.
 - c. The applicant may remedy identified deficiencies within 30 days of the Board statement of deficiencies.

4.10: continued

- d. Within 24 days of receipt of materials from the applicant in response to a statement identifying deficiencies, the Board shall complete a supplemental technical review.
- 4. Permit application fee: \$95.
- (qq) (WP48) Permits for water pollution control: licenses for wastewater treatment plant operators.
 - 1. Category: emergency and provisional certifications.
 - 2. Description: approval of emergency and provisional certifications for the seven grades of wastewater treatment plant operators pursuant to 257 CMR 2.00: *Certification of Operators of Wastewater Treatment Facilities*.
 - 3. Schedule for timely action: for certifications for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the application fee, the Board shall complete an administrative review.
 - b. Within 24 days of making a determination of administrative completeness, the Board shall complete a technical review.
 - c. The applicant may remedy identified deficiencies within 30 days of the Board statement of deficiencies.
 - d. Within 24 days of receipt of materials from the applicant in response to a statement identifying deficiencies, the Board shall complete a final technical review.
 - 4. Permit application fee: \$35.

(8) Wetlands and WaterwaysWaterways Permits

- (a) (WW01) Permits for waterways.
 - 1. Category: waterways license or permit: water-dependent use projects.
 - 2. Description: license or permit pursuant to 310 CMR 9.04: *Geographic Areas Subject to Jurisdiction*, 314 CMR 9.05: *Activities Subject to Jurisdiction*, and 9.11(2)(a).
 - 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative review.
 - b. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental administrative review.
 - d. Within 60 days of the close of the public comment period and notification by the applicant that the public notice has been published, the Department shall complete a technical review by issuing a statement of deficiencies or a written document ending this review timeline pursuant to 310 CMR 4.00.
 - e. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - f. Within 60 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review and issue a written document ending this review timeline pursuant to 310 CMR 4.00.
 - 4. Permit application fee:
 - a. Residential water-dependent use projects for four dwelling units or less: \$215.
 - b. Other water-dependent use projects: \$330.
 - c. Licenses with extended terms, or facilities described in 310 CMR 9.00: *Waterways*: \$3,350.
- (a)(1) (WW14) Permits for waterways.
 - 1. Category: waterways license or permit for nonwater-dependent projects with partial initial application.
 - 2. Description: license or permit pursuant to 310 CMR 9.04: *Geographic Areas Subject to Jurisdiction* and 9.05: *Activities Subject to Jurisdiction*, when an applicant initially submits a partial application and completes the application after the public hearing.

4.10: continued

3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 45 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative review.
 - b. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental administrative review.
 - d. Within 90 days of the close of the public comment period and notification by the applicant that the public notice has been published, the Department shall complete a technical review by issuing a statement of deficiencies or a written determination ending this timeline pursuant to 310 CMR 4.00.
 - e. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - f. Within 60 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review by issuing a written determination ending this timeline pursuant to 310 CMR 4.00.
 4. Permit application fee:
 - a. Residential nonwater-dependent use projects for four dwelling units or less: \$665.
 - b. Other nonwater-dependent use projects: \$2,005.
 - c. Licenses with extended terms, or facilities described in 310 CMR 9.16(3)(b)2.: \$3,350.
- (a)(2) (WW15) Permits for waterways
1. Category: non-water Dependent project with initial full application.
 2. Description: license or permit pursuant to 310 CMR 9.04: *Geographic Areas Subject to Jurisdiction* and 9.05: *Activities Subject to Jurisdiction*, when an applicant initially submits a partial application and completes the application after the public hearing.
 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 45 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative review.
 - b. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental administrative review.
 - d. Within 60 days of the close of the public comment period and notification by the applicant that the public notice has been published, the Department shall complete a technical review by issuing a statement of deficiencies or a written determination ending this timeline pursuant to 310 CMR 4.00.
 - e. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - f. Within 60 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review by issuing a written determination ending this timeline pursuant to 310 CMR 4.00.
 4. Permit application fee:
 - a. Residential nonwater-dependent use projects for four dwelling units or less: \$665
 - b. Other nonwater-dependent use projects: \$2,005.
 - c. Licenses with extended terms, or facilities described in 310 CMR 9.16(3)(b)2.: \$3,350.
- (a)(3) (WW16) Permits for waterways
1. Category: waterways license or permit for nonwater-dependent projects within a Municipal Harbor Plan.

4.10: continued

2. Description: license or permit pursuant to 310 CMR 9.04: *Geographic Areas Subject to Jurisdiction* and 9.05: *Activities Subject to Jurisdiction*, within an area subject to a Municipal Harbor Plan approved under 301 CMR 23.00: *Review and Approval of Municipal Harbor Plans*.
 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after, March 24, 2017,
 - a. Within 45 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative review.
 - b. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental administrative review.
 - d. Within 75 days of the close of the public comment period and notification by the applicant that the public notice has been published, the Department shall complete a technical review by issuing a statement of deficiencies or a written determination ending this timeline pursuant to 310 CMR 4.00.
 - e. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - f. Within 45 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review and issue final written determination ending this timeline pursuant to 310 CMR 4.00.
 4. Permit application fee:
 - a. Residential nonwater-dependent use projects (for four dwelling units or less): \$665.
 - b. Other nonwater-dependent use projects: \$2,005.
 - c. Licenses with extended terms, or facilities described in 310 CMR 9.16(3)(b)2.: \$3,350.
- (a)(4) (WW17) Permits for waterways.
1. Category: waterways license or permit for nonwater-dependent projects with Joint MEPA Application.
 2. Description: license or permit when applicants file a Final Environmental Impact Report under 301 CMR 11.07(4) that serves as an application meeting the requirements of 310 CMR 9.11(3)(a) through (c): *Appraisal Procedure*.
 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after, March 24, 2017,
 - a. Within 90 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative review.
 - b. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 25 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental administrative review.
 - d. Within 30 days of the close of the public comment period and notification by the applicant that the public notice has been published, the Department shall complete a technical review by issuing a statement of deficiencies or a written determination ending this timeline pursuant to 310 CMR 4.00.
 - e. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - f. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review and issue a written determination ending this timeline pursuant to 310 CMR 4.00.
 4. Permit application fee:
 - a. Residential nonwater-dependent use projects for four dwelling units or less: \$665.
 - b. Other nonwater-dependent use projects: \$2,005.
 - c. Licenses with extended terms, or facilities described in 310 CMR 9.16(3)(b)2.: \$3,350.

4.10: continued

- (c) (WW03) Permits for waterways.
1. Category: amendment of waterways license or permit.
 2. Description: amendment of license or permit pursuant to 310 CMR 9.04: *Geographic Areas Subject to Jurisdiction* and 9.05: *Activities Subject to Jurisdiction*.
 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative review.
 - b. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental administrative review.
 - d. Within 60 days of the close of the public comment period and notification by the applicant that the public notice has been published, the Department shall complete a technical review by issuing a statement of deficiencies or a written document ending this timeline pursuant to 310 CMR 4.00.
 - e. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - f. Within 60 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review by issuing a written document ending this timeline pursuant to 310 CMR 4.00.
 4. Permit application fee:
 - a. Residential water-dependent use projects for four dwelling units or less: \$100.
 - b. Other water-dependent use projects: \$125.
 - c. Residential nonwater-dependent use projects for four dwelling units or less: \$530.
 - d. Other nonwater-dependent use projects: \$1,000.
 - e. Licenses with extended terms, or facilities described in 310 CMR 9.16(3)(b)2.: \$1,335.
- (d) (WW04) Permits for waterways.
1. Category: determinations of applicability pursuant to 310 CMR 9.06: *Requests for Determination of Applicability*.
 2. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review in accordance with the standards of 310 CMR 9.06(1) and (2).
 - b. Within 48 days of making a determination of administrative completeness, or of the close of any public comment period pursuant to 310 CMR 9.06(3), the Department shall complete a technical review.
 - c. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 3. Permit application fee: \$100.
- (e) (WW05) Permits for waterways.
1. Category: certificates of compliance pursuant to 310 CMR 9.19: *Certificate of Compliance*.
 2. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review in accordance with the standards of 310 CMR 9.16: *Fees* and 9.19: *Certificate of Compliance*.
 - b. Within 292 days of making a determination of administrative completeness, the Department shall complete its technical review.

4.10: continued

- c. If the Department has required changes as necessary to bring the project into compliance, the Department will complete technical review within 146 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies.
- 3. Permit application fee:
 - a. Water-dependent use projects, except facilities described in 310 CMR 9.16(3)(b)2.: \$100.
 - b. Nonwater-dependent use projects: \$215.
 - c. Licenses with extended terms, or facilities described in 310 CMR 9.16(3)(b)2.: \$430.
- (f) (WW06) Permits for waterways.
 - 1. Category: waterways license, small structures accessory to residences.
 - 2. Description: license for small dock/pier projects meeting the requirements of 310 CMR 9.10(1): *Projects Eligible for Simplified Procedures*.
 - 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental administrative review.
 - d. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review by issuing a statement of deficiencies or a written document ending this timeline pursuant to 310 CMR 4.00.
 - e. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - f. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review and issue a written document ending this timeline pursuant to 310 CMR 4.00.
 - 4. Permit application fee: \$75.
- (f)(1) (WW12) Permits for waterways.
 - 1. Category: Waterways License renewal, small structures accessory to residences.
 - 2. Description: license renewal for small dock/pier projects meeting the requirements of 310 CMR 9.10(6): *Renewal and Transfer of Licenses from the Department*.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental administrative review.
 - d. Within 48 days of notification by the applicant that the public notice has been published or the close of the public comment period, whichever is later, the Department shall complete a technical review.
 - e. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - f. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$35.
- (f)(2) (WW24) Permits for waterways.
 - 1. Category: waterways general license, small structures accessory to residences.
 - 2. Description: certification under the general license for small dock/pier projects meeting the requirements of 310 CMR 9.29(2): *Projects Eligible for General License Certification*.

4.10: continued

3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 60 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 45 days of making a determination of administrative completeness, the Department shall complete a technical review.
 4. Permit application fee: \$75.
- (f)(3) (WW25) permits for waterways.
1. Category: permits for test projects.
 2. Description: Permits for *in situ* testing of water-dependant pilot technologies pursuant to 310 CMR 9.30: *Permitting of Test Projects*.
 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 24 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental administrative review.
 - d. Within 30 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - e. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - f. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee: \$440.

Water Quality Certifications

- (g) (WW07) Permits for wetlands and waterways.
1. Category: water quality certifications for major dredging projects.
 2. Description: Water Quality Certification pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* for major dredging and dredge material disposal projects, limited to projects involving dredging of 5,000 cubic yards (c.y.) or greater.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 96 days of making a determination of administrative completeness, the Department shall complete a technical review, including public comment review, if any.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 96 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review, including public comment review.
 4. Permit application fee: \$490.
- (h) (WW08) Permits for wetlands and waterways.
1. Category: water quality certifications for minor dredging projects.
 2. Description: Water Quality Certification pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* for minor dredging and dredge material disposal projects, limited to projects involving dredging less than 5,000 c.y. but more than 100 c.y.

4.10: continued

3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review, including public comment review, if any.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review, including public comment review.
4. Permit application fee: \$95.
- (i) (WW09) Permits for wetlands and waterways.
 1. Category: amendment of water quality certifications for dredging projects.
 2. Description: amendment of Water Quality Certification pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* for dredging and dredge material disposal projects.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review, including public comment review, if any.
 - c. The permit applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - d. Within 48 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review, including public comment review.
 4. Permit application fee:
 - a. Increase in dredge volume by 50% or less with no change in dredge footprint: \$90.
 - b. Change in dredge or disposal construction methods or plans: \$190.
 - c. Change in one or more certification conditions relating to dredging or disposal: \$280.
- (j) (WW10) Permits for wetlands & waterways.
 1. Category: water quality certifications for major projects.
 2. Description: Water Quality Certification pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* for major fill and excavation projects in waters and wetlands, except for those exempted under the provisions of 314 CMR 9.03: *Activities Not Requiring an Application*. Major fill and excavation projects are limited to projects:
 - a. with a cumulative loss of more than 5,000 sq. ft. loss of bordering and isolated vegetated wetland and land under water, except for routine maintenance projects meeting the criteria of 314 CMR 9.04(5): *Routine Maintenance* and agricultural limited projects meeting the criteria of 314 CMR 9.04(1): *More than 5000 sq. ft.*; or
 - b. with a loss of any amount of vegetated wetland or land under water involving:
 - i. Outstanding Resource Waters;
 - ii. rare species in Isolated Vegetated Wetland;
 - iii. salt marsh;
 - iv. an individual 404 Permit;
 - v. activities where the Department invokes discretionary authority pursuant to 314 CMR 9.04(11): *Discretionary Authority* to require an application for an individual Water Quality Certification.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,

4.10: continued

- a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 96 days of making a determination of administrative completeness, the Department shall complete a technical review, including public comment review, if any.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 96 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review, including public comment review.
4. Permit application fee: \$490.
- (k) (WW11) Permits for wetlands & waterways.
1. Category: water quality certifications for minor projects.
 2. Description: Water Quality Certification pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* for minor fill and excavation projects in waters and wetlands, except for those exempted under the provisions of 314 CMR 9.03: *Activities Not Requiring an Application*. Minor fill and excavation projects are limited to projects:
 - a. with a cumulative loss of less than 5000 sq. ft. loss of bordering and isolated vegetated wetland and land under water, involving:
 - i. real estate subdivisions required to file applications for individual water quality certifications under the provisions of 314 CMR 9.04(3): *Real Estate Subdivision*;
 - ii. activities exempt under M.G.L. c. 131, § 40 under the provisions of 314 CMR 9.04(4): *Activities Exempt under M.G.L. c. 131, § 40*;
 - iii. any activity subject to the provisions of 314 CMR 9.04(13);
 - b. with a cumulative loss of more than 5,000 sq. ft. of vegetated wetland or land under water involving routine maintenance meeting the criteria of 314 CMR 9.04(5): *Routine Maintenance*; and
 - c. with any cumulative loss of vegetated wetland or land under water involving an agricultural limited projects meeting the criteria of 314 CMR 9.04(10): *Activities Exempt under M.G.L. c. 131, § 40*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of making a determination of administrative completeness, the Department shall complete a technical review, including public comment review, if any.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review, including public comment review.
 4. Permit application fee: \$95.

Combined Permits

- (k)(1) (WW26) Combined permits for waterways and water quality certifications.
1. Category: combined permits for waterways and water quality certifications.
 2. Description: combined permit for water quality certification and waterways license pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* and 310 CMR 9.00: *Waterways*.
 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative review.
 - b. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.

4.10: continued

- c. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental administrative review.
 - d. Within 96 days of the close of the public comment period and notification by the applicant that the public notice has been published, the Department shall complete a technical review.
 - e. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - f. Within 96 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
4. Permit application fee: the application fee is the sum of fees associated with each individual permit category included in the combined permit. Eligible categories include WW07, \$490, WW08, \$95, WW10, \$490, WW11, \$95, WW01a, \$215, and WW01b, \$330.
- (k)(2)(WW27) Combined permit amendment for waterways and water quality certifications.
- 1. Category: combined permit amendment for waterways and water quality certifications.
 - 2. Description: combined permit amendment for water quality certification (WW09) and waterways license (WW03) pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* and 310 CMR 9.00: *Waterways*.
 - 3. Schedule for timely action: for projects for which applications are filed and/or fees received on or after March 24, 2017,
 - a. Within 30 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative review.
 - b. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - c. Within 30 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental administrative review.
 - d. Within 60 days of the close of the public comment period and notification by the applicant that the public notice has been published, the Department shall complete a technical review.
 - e. The applicant may remedy identified deficiencies within 60 days of the Department's statement identifying deficiencies, if any.
 - f. Within 60 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 - 4. Permit application fee: \$302.

Wetlands

- (m) (WW13) Permits for wetlands.
- 1. Category: permits for renovation of abandoned cranberry bogs.
 - 2. Description: permits pursuant to 310 CMR 23.00: *Renovation of Abandoned Cranberry Bogs* for renovation of abandoned cranberry bogs.
 - 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 72 days of the close of the public comment or administrative completeness period or public hearing, if any, whichever occurs later, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified deficiencies within 180 days of the Department's statement identifying deficiencies, if any.
 - d. Within 72 days of receipt of materials from the applicant in response to the Department's statement identifying deficiencies or the close of public hearing, if any, whichever later, the Department shall complete a supplemental technical review.

4.10: continued

4. Permit application fee: \$785.
- (n) (WW18) Permits for Wetlands.
1. Category: Notice of Intent and Abbreviated Notice of Intent.
 2. Description: Notice of Intent and Abbreviated Notice of Intent pursuant to M.G.L. c. 131, § 40 and 310 CMR 10.05(4): *Notices of Intent*. The designation of the Department's file number shall not imply that the plans and supporting documents have been judged adequate for the issuance of an Order, but only that copies of the minimum submittal requirements contained in the general instructions have been filed.
 3. Schedule for timely action: for projects for which Notices of Intent or Abbreviated Notices of Intent are filed and fees received on or after March 24, 2017,
 - a. Within 21 days of receipt of a Notice of Intent or Abbreviated Notice of Intent and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. The permit applicant may remedy identified deficiencies within 21 days of the Department's statement identifying deficiencies, if any.
 - c. Within 21 days of the Department's receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a final review resulting in a decision to issue or deny a file number.
 4. Permit application fee: The fee, created pursuant to M.G.L. c. 131, § 40, is for work proposed under a single Notice of Intent. When the application involves more than one activity the fee shall be determined by adding the fees for each proposed activity, except that when work involves activities within the riverfront area as well as another resource area, the fee shall be determined by adding an additional 50% to the fee calculated for activities in another resource area(s) or the buffer zone to another resource area for each of the proposed activities within the riverfront area:
 - a. Category 1: \$110
 - b. Category 2: \$500
 - c. Category 3: \$1050
 - d. Category 4: \$1450
 - e. Category 5: \$4 per linear foot
 - f. Category 6: \$2 per linear foot with a maximum of \$200 for a single-family house project and a maximum of \$2000 for any other activity.
- (o) (WW19) Permits for Wetlands.
1. Category: Superseding Determination of Applicability.
 2. Description: Superseding Determination of Applicability pursuant to 310 CMR 10.05(3)(c): *Appeal to the Department*.
 3. Schedule: for projects for which Requests for Superseding Determination of Applicability are filed and fees received on or after March 24, 2017,
 - a. Within 70 days of receipt of Request for Superseding Determination of Applicability and payment of the application fee, the Department shall complete technical review.
 - b. The permit applicant may remedy identified deficiencies within 70 days of the Department's statement identifying deficiencies, if any.
 - c. Within 40 days of the Department's receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental review.
 4. Permit application fee: \$120.
- (p) (WW20) Permits for Wetlands.
1. Category: Superseding Order of Conditions.
 2. Description: Superseding Order of Conditions pursuant to 310 CMR 10.05(7): *Requests for Actions by the Department (Appeals)*.
 3. Schedule: for projects for which Requests for Superseding Order of Conditions are filed and fees received on or after March 24, 2017,
 - a. Within 70 days of receipt of Request for Superseding Order of Conditions and payment of the application fee, the Department shall complete technical review.
 - b. The permit applicant may remedy identified deficiencies within 70 days of the Department's statement identifying deficiencies, if any.
 - c. Within 40 days of the Department's receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental review.

4.10: continued

4. Permit application fee:
 - a. Superseding Order of Conditions for individual single-family homes with associated structures: \$120.
 - b. All Other Superseding Order of Conditions: \$245.
- (q) (WW21) Permits for Wetlands.
 1. Category: Superseding Order of Resource Area Delineation.
 2. Description: Superseding Order of Resource Area Delineation pursuant to 310 CMR 10.05(7): *Requests for Actions by the Department (Appeals)*.
 3. Schedule: for projects for which Requests for Superseding Order of Resource Area Delineation are filed and fees received on or after March 24, 2017,
 - a. Within 70 days of receipt of Request for Superseding Determination of Applicability and payment of the application fee, the Department shall complete technical review.
 - b. The permit applicant may remedy identified deficiencies within 70 days of the Department's statement identifying deficiencies, if any.
 - c. Within 40 days of the Department's receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental review.
 4. Permit application fee: \$120.
- (r) (WW22) Permits for Wetlands.
 1. Category: Request for Variance.
 2. Description: Variance pursuant to 310 CMR 10.05(10): *Variance*.
 3. Schedule: for projects for which Requests for Variance are filed and fees received on or after March 24, 2017,
 - a. Within 70 days of receipt of Request for Variance and payment of the application fee, the Department shall complete technical review.
 - b. The permit applicant may remedy identified deficiencies within 70 days of the Department's statement identifying deficiencies, if any.
 - c. Within 40 days of the Department's receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental review.
 4. Permit application fee: \$9,830.
- (s) (WW23) Permits for Wetlands.
 1. Category: Request for Variance with a claim of unconstitutional taking of property.
 2. Description: Variance with a claim of unconstitutional taking of property pursuant to 310 CMR 10.05(10): *Variance*.
 3. Schedule: for projects for which Requests for Variance are filed and fees received on or after March 24, 2017,
 - a. Within 70 days of receipt of Request for Variance and payment of the application fee, the Department shall complete technical review.
 - b. The permit applicant may remedy identified deficiencies within 70 days of the Department's statement identifying deficiencies, if any.
 - c. Within 40 days of the Department's receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental review.
 4. Permit application fee: \$245.

(9) Laboratory Certification

- (a) (LES01EA) Permits for laboratory certification.
 1. Category: initial certification for microbiology laboratory.
 2. Description: initial certification of laboratory for microbiology analyses pursuant to 310 CMR 42.05(1)(a): *Microbiology* and (2)(a): *Microbiology*.
 3. Schedule for timely action for applications filed after March 24, 2017,
 - a. Within 36 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.

4.10: continued

- b. Within 48 days of making a determination of administrative completeness, the Department shall complete the technical review required prior to on-site inspection.
 - c. The permit applicant may remedy identified deficiencies during technical review within 60 days of the Department's statement identifying deficiencies, if any. The Department shall complete review of supplemental material within 48 days.
 - d. Within 80 days of completing a technical review, the Department shall complete on-site inspection and post-inspection review.
 - e. The permit applicant may remedy deficiencies identified during inspection review within 90 days of the Department's statement identifying deficiencies, if any.
 - f. Within 80 days of receipt of supplemental materials from the applicant in response to the Department's statement identifying deficiencies during the inspection review period, the Department shall complete the supplemental technical review.
4. Permit application fee: \$280 includes an application for one or more certifications to test potable water treatment and distribution samples for total coliform, fecal coliform, *Escherichia coli*, and or heterotrophic plate count; plus an amount for each testing category applied for as follows:
- a. Total Coliform in Source Water: \$45.
 - b. One or more certifications to test for Fecal Coliform in Source Water, and or Wastewater: \$43.
 - c. One or more certifications to test for *Escherichia coli* in Source water, Ambient water, and or Wastewater: \$45.
 - d. One or more certifications to test for *Enterococci* in Source Water, Ambient Water, and or Wastewater: \$43.
- Single fee includes later added certification using the same or similar method, and no modification fee is required.
- e. When an out-of-state inspection of a laboratory is necessary, applicants shall be charged for on-site inspection where costs are reasonably expected to exceed \$100 including necessary costs of travel, meals, and lodging, at the rate established for state employees, as determined by the Department. The Department shall promptly notify the applicant of all such costs and may require payment prior to inspection.
- (b) (LES02EA) Permits for laboratory certification.
- 1. Category: initial certification for chemical laboratory.
 - 2. Description: initial certification of laboratory for chemical analyses pursuant to 310 CMR 42.00: *Certification and Operation of Environmental Analysis Laboratories*.
 - 3. Schedule for timely action for applications filed after March 24, 2017,
 - a. Within 36 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete the technical review required prior to on-site inspection.
 - c. The permit applicant may remedy identified deficiencies during technical review within 60 days of the Department's statement identifying deficiencies, if any, and the Department shall complete review of supplemental material within 48 days.
 - d. Within 80 days of completing a technical review, the Department shall complete on-site inspection and post-inspection review.
 - e. The permit applicant may remedy deficiencies identified during inspection review within 90 days of the Department's statement identifying deficiencies, if any.
 - f. Within 80 days of receipt of supplemental materials from the applicant in response to the Department's statement identifying deficiencies during the inspection review period, the Department shall complete the supplemental technical review.
 - 4. Permit application fee: \$1,055 plus an amount for each certification category as follows:
 - a. Single Fee for one or both of potable water or non-potable water chemistry certifications for a single analyte category listed in group a. Single fee includes later added potable or nonpotable component using the same or similar method. Later addition of a component will not require a modification fee.

Alkalinity, Total	\$40
Calcium	\$65
Chloride	\$35

4.10: continued

Chlorine, Residual	\$35
Cyanide	\$90
Fluoride	\$65
Metals: one or more of aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, strontium, thallium, titanium, vanadium, zinc. Single fee includes later added certification using the same or similar method and no modification fee.	\$230
Nitrate-N	\$65
Perchlorate	\$95
pH	\$18
Sodium	\$65
Sulfate	\$55
Total Dissolved Solids	\$40
Volatile Organic Compounds, including vinyl chloride	\$140
b. Chemistry Certification for Potable Water Only	
Adipate/Phthalates	\$90
Asbestos	\$90
Benzo-a-pyrene	\$110
Bromate	\$60
Carbamates: aldicarb, aldicarb sulfone, aldicarb sulfoxide, carbofuran, Vydate. Single fee includes later added certifications using the same or similar method and no modification fee.	\$90
Chlorite	\$60
1,4-Dioxane	\$110
Diquat	\$70
EDB (1,2-Dibromoethane) and DBCP (1,2-Dibromo-3-chloropropane)	\$70
Endothall	\$70
Glyphosate	\$60
Haloacetic Acids	\$100
Herbicides: 2,4-D; 2,4,5-TP; dalapon, dinoseb, pentachlorophenol, picloram. Single fee includes later added certifications using the same or similar method and no modification fee.	\$110
Nitrite-N	\$55
Polychlorinated biphenyls	\$110
Pesticides: alachlor, atrazine, chlordane, endrin, heptachlor, heptachlor epoxide, hexachlorobenzene, hexachlorocyclopentadiene, lindane, methoxychlor, simazine, and toxaphene. Single fee includes later added certifications using the same or similar method and no modification fee.	\$110
Per- and Polyfluoroalkly substances (PFAS)	\$100
Radiochemistry	
Gross alpha and gross beta	\$45
Strontium-89 and Strontium-90	\$70
Radium-226 and Radium-228	\$60
Tritium	\$60
Uranium	\$60
Iodine-131	\$60
Cesium-134 and Cesium-137	\$60
Cobalt-60	\$70
Ruthenium-106	\$60
Trihalomethanes	\$70
Turbidity	\$35
c. Chemistry Certification for Non-Potable Water Only	
Ammonia-N	\$70
Biochemical Oxygen Demand	\$55
Chemical Oxygen Demand	\$35
Hardness, total	\$35
Kjeldahl-N	\$70

4.10: continued

Magnesium	\$55
Oil and Grease	\$55
Orthophosphate	\$70
Polychlorinated biphenyls (water)	\$110
Polychlorinated biphenyls (oil)	\$110
Pesticides: aldrin, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC, chlordane, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, dieldrin, endosulfan I, endosulfan II, endosulfan sulfate, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, and toxaphene. Single fee includes later added certifications using the same or similar method, and no modification fee.	\$110
Phenols, total	\$55
Phosphorus, total	\$70
Potassium	\$55
Residue, Non-filterable	\$35
Semi-volatile Organic Compounds: Acid Extractables and Base/Neutral Extractables. Single fee includes later added certifications using the same or similar method, and no modification fee.	\$140
Specific Conductivity	\$35
Total Organic Carbon	\$35

d. When an out-of-state inspection of a laboratory is necessary, applicants shall be charged for on-site inspection where costs are reasonably expected to exceed \$100 including necessary costs of travel, meals, and lodging, at the rate established for state employees, as determined by the Department. The Department shall promptly notify the applicant of all such costs and may require payment prior to inspection.

(c) (LES03EA) Permits for laboratory certification.

1. Category: modification of certification for chemical laboratory.
2. Description: application to certify additional testing categories pursuant to 310 CMR 42.00: *Certification and Operation of Environmental Analysis Laboratories*.
3. Schedule for timely action for applications filed and fees received after March 24, 2017,
 - a. Within 36 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete the technical review required prior to on-site inspection.
 - c. The permit applicant may remedy identified deficiencies during technical review within 60 days of the Department's statement identifying deficiencies and the Department shall complete review of supplemental material within 48 days.
 - d. Within 80 days of completing a technical review, the Department shall complete on-site inspection and post-inspection review.
 - e. The permit applicant may remedy deficiencies identified during the inspection review period within 90 days of the Department's statement identifying deficiencies, if any.
 - f. Within 80 days of receipt of supplemental materials from the applicant in response to the Department's statement identifying deficiencies during the inspection review period, the Department shall complete the supplemental technical review.
4. Certificate modification permit fee:
 - a. The certificate modification permit fee shall include \$385 plus an amount for each testing category included in the application in the amounts as set forth in 310 CMR 4.10(9)(b).
 - b. When an out-of-state inspection of a laboratory is necessary, applicants shall be charged for on-site inspection where costs are reasonably expected to exceed \$100 including necessary costs of travel, meals, and lodging, at the rate established for state employees, as determined by the Department. The Department shall promptly notify the applicant of all such costs and may require payment prior to inspection.

(d) (LES04EA) Permits for laboratory certification.

1. Category: modification of certification for microbiological laboratory.
2. Description: application to certify additional testing categories pursuant to 310 CMR 42.05(1)(a): *Microbiology* and 310 CMR 42.05(2)(a): *Microbiology*.

4.10: continued

3. Schedule for timely action for applications filed and fees received after March 24, 2017,
 - a. Within 36 days of receipt of an application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete the technical review required prior to on-site inspection.
 - c. The permit applicant may remedy identified deficiencies during technical review within 60 days of the Department's statement identifying deficiencies and the Department shall complete review of supplemental material within 60 days.
 - d. Within 80 days of completing a technical review, the Department shall complete on-site inspection and post-inspection review.
 - e. The permit applicant may remedy deficiencies identified during the inspection review period within 90 days of the Department's statement identifying deficiencies, if any.
 - f. Within 80 days of receipt of supplemental materials from the applicant in response to the Department's statement identifying deficiencies during the inspection review period, the Department shall complete the supplemental technical review.
4. Permit application fee:
 - a. \$220 plus an amount for each testing category included in the application in the amounts as set forth in 310 CMR 4.10(9)(a).
 - b. When an out-of-state inspection of a laboratory is necessary, applicants shall be charged for on-site inspection where costs are reasonably expected to exceed \$100 including necessary costs of travel, meals, and lodging, at the rate established for state employees, as determined by the Department. The Department shall promptly notify the applicant of all such costs and may require payment prior to inspection.

(10) Waste Site Cleanup

- (g) (WSC40) Permits for Waste Site Cleanup: Grants of Environmental Restriction.
 1. Category: grants of Environmental Restriction.
 2. Description: a Grant of Environmental Restriction implemented pursuant to 310 CMR 40.1070: *Implementation and Use Limitations*.
 3. Schedule for timely action: for sites for which permit applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of a permit application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified technical deficiencies within 30 days of the Department's statement identifying deficiencies, if any.
 - d. Within 36 days from receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee, not to exceed \$6,000:
 - a. \$1,290 per Grant of Environmental Restriction.
 - b. The applicant(s) may apply for consolidated review of multiple applications related to a site meeting the following criteria:
 - i. the application includes Grants of Environmental Restriction for six or more separate parcels which comprise, in whole or in part, a single site; and
 - ii. each of the proposed Grants of Environmental Restriction references a single Activity and Use Limitation Opinion rendered in accordance with 310 CMR 40.1071(2)(g); and
 - iii. the activities and uses to be prohibited and permitted by, and the obligations and conditions listed in, the proposed Grants of Environmental Restriction are identical for each of the parcels to which the proposed Grants of Environmental Restrictions would apply.

4.10: continued

- c. For consolidated applications, the Department shall refund any portion of the permit application fees that exceed the Department's actual costs of Departmental review and approval. The Department's costs shall be calculated by applying the same method used to calculate Response Action Costs in 310 CMR 40.1220(1): *Response Action Costs* and the Indirect Rate set forth in 310 CMR 40.1221(2). In no event shall the fee for reviewing multiple applications for Grants of Environmental Restriction for a site be less than \$1,290.
- (h) (WSC41) Permits for Waste Site Cleanup: Amendments of Environmental Restriction.
1. Category: Amendments of Environmental Restrictions.
 2. Description: an Amendment of a Grant of Environmental Restriction implemented pursuant to 310 CMR 40.1070: *Implementation of Activity and Use Limitations*.
 3. Schedule for timely action: for sites for which permit applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of a permit application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified technical deficiencies within 30 days of the Department's statement identifying deficiencies, if any.
 - d. Within 36 days from receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee, not to exceed \$6000: \$1,040.
- (i) (WSC42) Permits for Waste Site Cleanup: Releases of Environmental Restriction.
1. Category: Releases of Environmental Restriction.
 2. Description: a Release of a Grant of Environmental Restriction implemented pursuant to 310 CMR 40.1070: *Implementation of Activity and Use Limitations*.
 3. Schedule for timely action: for sites for which permit applications are filed and fees received on or after March 24, 2017,
 - a. Within 24 days of receipt of a permit application and payment of the permit application fee, the Department shall complete an administrative completeness review.
 - b. Within 48 days of making a determination of administrative completeness, the Department shall complete a technical review.
 - c. The permit applicant may remedy identified technical deficiencies within 30 days of the Department's statement identifying deficiencies, if any.
 - d. Within 36 days from receipt of materials from the applicant in response to the Department's statement identifying deficiencies, the Department shall complete a supplemental technical review.
 4. Permit application fee, not to exceed \$6000: \$795.
- (j) (BWSC50) Permits for Waste Site Cleanup: Special Project Designation.
1. Category: Special Project Designation.
 2. Description: project containing one or more properties, sites or portions of sites pursuant to 310 CMR 40.0060: *Special Project Designation Permits*.
 3. Schedule for timely action: for projects for which applications are filed and fees received on or after March 24, 2017,
 - a. Within 36 days of receipt of a complete application and payment of the permit application fee, pursuant to 310 CMR 40.0070(2): *Commencement of Schedule*, the Special Project designation permit is presumptively approved unless the Department approves the permit with conditions, denies the permit, or issues a notice of extended review pursuant to 310 CMR 40.0070(3)(c), extending the permit review a second 36 days or the permit review schedule is extended by written agreement.
 - b. Within 36 days of issuing a notice of extended review pursuant to 310 CMR 4.10(10)(j)3.a., the permit is presumptively approved unless the Department approves the permit with conditions, denies the permit, or the permit review schedule is extended by written agreement.
 4. Permit application fee: \$920.

4.10: continued

(11) Environmental Results Program

- (b) (ERP02) Permits for Dental Mercury Amalgam Recycling.
1. Category: certification of Dental Mercury Amalgam Collection and Recycling.
 2. Description: certification of dental facilities and practices subject to collection and recycling dental mercury amalgam pursuant to 310 CMR 70.00: *Environmental Results Program Certification* and 73.00: *Amalgam Wastewater and Recycling Regulations for Dental Facilities*, but excluding dental facilities and practices filing one-time certifications pursuant to 310 CMR 73.03(1) to establish their exemption from the provisions of 310 CMR 70.00: *Environmental Results Program Certification* and 73.00: *Amalgam Wastewater and Recycling Regulations for Dental Facilities* or who hold five year certifications that will expire in a fiscal year following the fiscal year of the two year certification due date.
 3. Schedule for timely action: for projects for which application is filed and fee received on or after March 24, 2017;
 - a. Within 48 days of receipt of an application and payment of the application fee, the Department shall complete an administrative and technical review;
 - b. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies; if any
 - c. Within 48 days of receipt of materials in response to the Department's statement identifying deficiencies, the Department shall complete a final review.
 4. Permit application fee: \$200.
- (d) (ERP04) Permits for Mercury-added Product Collection and Recycling Programs
1. Category: certification of Mercury-added Product Collection and Recycling Programs.
 2. Description: certification of mercury-added product manufacturer product collection and recycling program subject to product collection and recycling requirements pursuant to 310 CMR 70.00: *Environmental Results Program Certification* and 75.04(9): *Annual Compliance Certification*.
 3. Schedule for timely action: for projects for which application is filed and fees received on or after March 24, 2017,
 - a. Within 60 days of receipt of an application and payment of the application fee, the Department shall complete an administrative and technical review.
 - b. The permit applicant may remedy identified deficiencies within 90 days of the Department's statement identifying deficiencies, if any,
 - c. Within 60 days of receipt of materials in response to the Department's statement identifying deficiencies, the Department shall complete a final review.
 4. Permit application fee: \$160.

REGULATORY AUTHORITY

310 CMR 4.00: M.G.L. c. 21A, § 18 and c. 21E, § 3B.

NON-TEXT PAGE

310 CMR 5.00: ADMINISTRATIVE PENALTY

Section

- 5.01: Authority
- 5.02: Purpose
- 5.03: Applicability
- 5.04: Severability
- 5.05: Definitions
- 5.06: Effective Date
- 5.07: Computation of Time
- 5.08: Issuance of Notices
- 5.09: Receipt of Notices
- 5.10: Preconditions for Assessment of a Civil Administrative Penalty
- 5.11: Noncompliance with a Law, Regulation, Order, License, or Approval
- 5.12: Notice of Noncompliance
- 5.13: Pattern of Noncompliance
- 5.14: Willful Noncompliance
- 5.15: Noncompliance Resulting in Significant Impact on Public Health, Safety, or Welfare, or the Environment
- 5.16: Noncompliance Consisting of Failure to Promptly Report Any Unauthorized Disposal of Hazardous Waste or Unauthorized Release or Discharge of Oil or Hazardous Material Into the Environment
- 5.17: Noncompliance Consisting of Failure to Maintain a Permanent Solution or Remedy Operation Status
- 5.18: Noncompliance Consisting of Failure to Comply with Terms of Activity and Use Limitation
- 5.19: Noncompliance Consisting of Knowingly Making, or Causing any Person to Make, a False, Inaccurate, Incomplete or Misleading Statement In Document
- 5.20: Determining the Money Amount of a Civil Administrative Penalty
- 5.21: Minimum Permissible Penalty
- 5.22: Maximum Permissible Penalty
- 5.23: Penalizing Continued and/or Repeated Noncompliance
- 5.24: Calculating the Duration of Continued and/or Repeated Noncompliance
- 5.25: Factors to be Applied in Determining the Money Amount of a Civil Administrative Penalty
- 5.30: Procedures for Assessment of a Civil Administrative Penalty
- 5.31: Notice of Intent to Assess a Civil Administrative Penalty
- 5.32: Content of Notice of Intent to Assess a Civil Administrative Penalty
- 5.33: Service of Notice of Intent to Assess a Civil Administrative Penalty
- 5.34: Right to Adjudicatory Hearing
- 5.35: Waiver of Right to Adjudicatory Hearing
- 5.36: Conducting the Adjudicatory Hearing
- 5.37: Paying a Civil Administrative Penalty

5.01: Authority

310 CMR 5.00 is promulgated by the Commissioner of the Department pursuant to the authority granted by M.G.L. c. 21A, §§ 2(28) and 16; by M.G.L. c. 30A, §§ 2 and 3; and by St. 1985, c. 95, §§ 2 and 3. 310 CMR 5.00 should be read together with M.G.L. c. 21A, § 16, which has many important substantive requirements not repeated in 310 CMR 5.00.

5.02: Purpose

310 CMR 5.00 is intended to:

- (1) promote protection of public health, safety, and welfare, and the environment, by promoting compliance, and deterring and penalizing noncompliance, with laws, regulations, orders, licenses, and approvals to which 310 CMR 5.00 apply.
- (2) assure that the Department assesses civil administrative penalties, and otherwise implements M.G.L. c. 21A, § 16, lawfully, fairly, and consistently.
- (3) enhance the Department's ability and effectively:
 - (a) administer its present and future programs.
 - (b) enforce laws, regulations, orders, licenses, and approvals to which 310 CMR 5.00 apply.

5.03: Applicability

310 CMR 5.00 applies to every law the Department has the authority or the responsibility to enforce, and to every regulation, order, license, and approval issued or adopted by the Department. This includes laws, regulations, orders, licenses and approvals now in effect or enacted, issued, or adopted, or otherwise put into effect, in the future.

5.04: Severability

It is hereby declared that the provisions of 310 CMR 5.00 are severable, and if any provision hereof or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions hereof or applications thereof which can be given effect without the invalid provision or application.

5.05: Definitions

As used throughout 310 CMR 5.00, the following terms shall have the following meanings, unless the context clearly indicates otherwise.

Civil Administrative Penalty and Penalty each mean a civil administrative penalty that the Department seeks to assess pursuant to M.G.L. c. 21A, § 16 and 310 CMR 5.00.

Department means the Massachusetts Department of Environmental Protection.

Facility means a site, works, installation, establishment, structure, equipment, or any other thing for activity that is regulated, or that is subject to being regulated, pursuant to any Requirement to which 310 CMR 5.00 apply.

License and Approval each mean any license, permit, certificate, registration, charter, authority, approval, or other form of permission required by law or by regulation or order of the Department.

Noncompliance and Failure to Comply and Violation each mean any act or failure to act which constitutes or results in one or more of the following:

- (a) engaging in any business or other activity without a license or approval whenever engaging in such business or activity requires such license or approval.
- (b) engaging in any activity prohibited by, or not in compliance with, any Requirement.
- (c) not fully doing, or not doing in timely fashion, anything required by any Requirement.

Notice of Intent to Assess a Civil Administrative Penalty and Penalty Assessment Notice each mean a written notice that the Department is seeking to assess a Penalty pursuant to M.G.L. c. 21A, § 16 and 310 CMR 5.00.

Notice of Noncompliance and Noncompliance Notice each mean a written notice given to a person by the Department and which says that said person has failed to comply on any specified occasion with any described Requirement(s).

Person means any agency or political subdivision of the Commonwealth, any state, public or private corporation or authority, individual, trust, firm, joint stock company, partnership, association, or other entity, or any group thereof, or any officer, employee, or agent thereof. Without limiting the generality of the foregoing, the term Person shall also include:

- (a) any city, town, district, or body politic of the Commonwealth, and
- (b) any agency or authority of the Federal government whenever, as a matter of Federal law, that Federal agency or authority is required to comply with State law, and is subject to State-imposed penalties for noncompliance.

5.05: continued

Requirement means any regulation, order, license, or approval issued or adopted by the Department, or any law which the Department has the authority or responsibility to enforce.

Right-to-Know Requirements means Requirements enforced by the Department governing disclosure of information regarding the use of toxic or hazardous substances in the workplace [see M.G.L. c. 111F, §§ 1 through 3 and 16 through 19, and 310 CMR 33.00].

Same Requirement(s) means Requirement(s) that require, or prohibit, the same action or activity.

Site means the same or geographically contiguous property owned, operated, or controlled by the same person. A site may be divided by a public or private right-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way which that person controls, and to which the public does not have access, are considered on-site property.

5.06: Effective Date

310 CMR 5.00 shall be effective on and after September 2, 1986.

5.07: Computation of Time

Unless otherwise specifically provided by statute, 310 CMR 5.00, or any determination issued pursuant to 310 CMR 5.00, any time period prescribed or referred to in 310 CMR 5.00 or in any determination issued pursuant to 310 CMR 5.00 shall begin with the first day following the act which initiates the running of the time period, and shall include every calendar day, including the last day of the time period so computed. If the last day is a Saturday, Sunday, legal holiday, or any other day in which the Department's offices are closed, the deadline shall run until the end of the next business day. If the time period prescribed or referred to is six days or less, only days when the offices of the Department are open shall be included in the computation.

5.08: Issuance of Notices

Each notice given by the Department to a person pursuant to M.G.L. c. 21A, § 16 and 310 CMR 5.00 shall be deemed to be issued by the Department as follows:

- (1) If served in hand, the notice shall be deemed to be issued on the date when delivered:
 - (a) personally to the person, or
 - (b) personally to any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service, or
 - (c) at the person's last known address in the Commonwealth, or
 - (d) at the last known address of any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service.
- (2) If given by mail (either regular mail or certified mail, return receipt requested) the notice shall be deemed to be issued when postmarked by the U.S. Postal Service.

5.09: Receipt of Notices

Each notice given by the Department to a person pursuant to M.G.L. c. 21A, § 16 and 310 CMR 5.00 shall be deemed to be received by said person as follows:

- (1) If served in hand, the notice shall be deemed to be received when delivered:
 - (a) personally to the person, or
 - (b) personally to any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service, or
 - (c) at the person's last known address in the Commonwealth of Massachusetts, or
 - (d) at the last known address of any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service.

5.09: continued

- (2) If given by certified mail, return receipt requested, the notice shall be deemed to be received either:
- (a) when signed for by:
 - 1. the person, or
 - 2. the person's officer, employee, or agent, including, without limitation, any officer, employee, or agent authorized by appointment of the person or by law to accept service, or
 - (b) when returned by the U.S. Postal Service to the Department as unclaimed, unless the Department is persuaded that the notice was not claimed for reasons beyond the control of the person to whom the notice was sent.
- (3) If given by regular mail, the notice shall be deemed to be received no later than the third business day after it is mailed to the person, unless the Department is persuaded otherwise by the person to whom the notice was mailed.

5.10: Preconditions for Assessment of a Civil Administrative Penalty

A Penalty may be assessed only for a failure to comply that:

- (1) meets the criteria set forth in 310 CMR 5.11, and
- (2) was any of the following:
 - (a) the subject of a previous Noncompliance Notice, as set forth in 310 CMR 5.12.
 - (b) part of a pattern of noncompliance, as set forth in 310 CMR 5.13.
 - (c) willful and not the result of error, as set forth in 310 CMR 5.14.
 - (d) a failure to comply that resulted in significant impact on public health, safety, or welfare, or the environment, as set forth in 310 CMR 5.15.
 - (e) a failure to comply that consisted of failure to promptly report to the Department any unauthorized disposal of hazardous waste or any unauthorized release or discharge of oil or hazardous material into the environment, as set forth in 310 CMR 5.16.
 - (f) a failure to comply that consisted of a failure to maintain a permanent solution or a remedy operation status pursuant to M.G.L. c. 21E and 310 CMR 40.0000 and as set forth in 310 CMR 5.17.
 - (g) a failure to comply with the terms of an activity and use limitation pursuant to M.G.L. c. 21E, § 6 and 310 CMR 40.0000 and as set forth in 310 CMR 5.18.
 - (h) a failure to comply that consisted of knowingly making, or causing any person to make, a false, inaccurate, incomplete or misleading statement in a document submitted to or required to be kept by the department as set forth in 310 CMR 5.19

5.11: Noncompliance with a Law, Regulation, Order, License, or Approval

A Penalty may be assessed only for a failure to comply that:

- (1) at the time it occurred constituted noncompliance with a Requirement:
 - (a) which was then in effect; and
 - (b) to which that person was then subject; and
 - (c) to which 310 CMR 5.00 apply; and
- (2) occurred on or after September 2, 1986.

5.12: Notice of Noncompliance

- (1) Criteria for Determining Whether Prior Issuance of a Notice of Noncompliance Is Required for Assessment of a Civil Administrative Penalty. A Penalty may be assessed only if either:
- (a) a Noncompliance Notice has been given to that person as set forth in 310 CMR 5.12, or
 - (b) a Noncompliance Notice has not been given to that person but the failure to comply was as set forth in 310 CMR 5.10(2)(b) through (h).

5.12: continued

- (2) Content of a Notice of Noncompliance. A Noncompliance Notice shall:
- (a) describe one or more Requirement(s) in effect when the Noncompliance Notice was given, and for each such Requirement, the occasion(s) that the Department asserts said person was not in compliance therewith; and
 - (b) specify a reasonable deadline or deadlines by which the person shall either
 1. come into compliance with the Requirement(s) described in the Noncompliance Notice, or
 2. submit to the Department a written proposal setting forth how and when that person proposes to come into compliance with the Requirement(s) described in the Noncompliance Notice.
- (3) Criteria to be Considered in Determining Whether a Civil Administrative Penalty May Be Assessed After a Notice of Noncompliance Has Been Given. The Department may assess a Penalty on any person when the criteria set forth in 310 CMR 5.11 are met, and the following criteria are met:
- (a) The Department has previously given that person a Noncompliance Notice. Solely for purposes of implementing 310 CMR 5.12(3), the violation(s) described in the Noncompliance Notice must have occurred on or after September 18, 1985.
 - (b) That person did not:
 1. come into compliance, within the deadline specified in the Noncompliance Notice, with the Requirement(s) described in the Noncompliance Notice, or
 2. submit, within the deadline specified in the Noncompliance Notice, a written proposal setting forth how and when that person proposed to come into compliance with the Requirement(s) described in the Noncompliance Notice.
 - (c) Noncompliance with the Requirement(s) described in the Noncompliance Notice continued or was repeated on or after the deadline(s) specified in the Noncompliance Notice.
- (4) Additional Criteria to be Considered in Determining Whether a Civil Administrative Penalty May Be Assessed After a Notice of Noncompliance Has Been Given. In determining whether to assess a Penalty after a Notice of Noncompliance has been given, the Department may consider, but shall not be limited to considering, the following criteria:
- (a) Whether or not five years or less have elapsed between the date of the most recent notice of noncompliance with the Requirement(s) for which a Penalty would be assessed and the date of the Penalty Assessment Notice.
 - (b) What the person did to prevent the violation for which the person would be assessed the Penalty and the other violation(s) described in the prior Noncompliance Notice(s).
 - (c) What the person did, and how quickly the person acted, to come into compliance after the occurrence of the violation for which the person would be assessed the Penalty and the other violation(s) described in the prior Noncompliance Notice(s).
 - (d) What the person did, and how quickly the person acted, to remedy and mitigate whatever harm might have been done as a result of the occurrence of the violation for which the person would be assessed the Penalty and the other violation(s) described in the prior Noncompliance Notice(s).
 - (e) The actual and potential damages suffered, and actual or potential costs incurred, by the Commonwealth, or by any other person, as a result of the occurrence of the violation for which the person would be assessed the Penalty and the other violation(s) described in the prior Noncompliance Notice(s).

5.13: Pattern of Noncompliance

- (1) Criteria to be Considered in Determining Whether Instances of Noncompliance Constitute a Pattern of Noncompliance for which a Civil Administrative Penalty May Be Assessed. A Penalty may be assessed without the prior issuance of a Noncompliance Notice if the criteria set forth in 310 CMR 5.11 are met and the violation thus being penalized is not an isolated instance but part of a pattern of noncompliance. In determining whether the violation to be thus penalized is not an isolated instance but part of a pattern of noncompliance, the Department shall consider, but shall not be limited to considering, the following criteria:

5.13: continued

(a) Whether the person who would be assessed the Penalty was given by the Department, on at least one previous occasion during the five-year period prior to the date of the Penalty Assessment Notice, a Noncompliance Notice asserting violation(s) of the Same Requirement(s) as the Requirement(s) for violation of which the person would be assessed the Penalty. Solely for purposes of implementing 310 CMR 5.13(1)(a), violations occurring prior to September 18, 1985 shall not be considered.

(b) Whether the person who would be assessed the Penalty was given by the Department, on at least two previous occasions during the four-year period prior to the date of the Penalty Assessment Notice, a Noncompliance Notice asserting violation(s) of Requirement(s) different from the Requirement(s) for violation of which the person would be assessed the Penalty. Solely for purposes of implementing 310 CMR 5.13(1)(b), violations occurring prior to June 26, 1986 shall not be considered.

(c) Whether the violation for which the person would be assessed the Penalty and the other violation(s) described in the prior Noncompliance Notice(s) occurred at the same facility.

(d) Whether the violation for which the person would be assessed the Penalty and the other violation(s) described in the prior Noncompliance Notice(s), considered together, indicate:

1. a potential threat to public health, safety, or welfare, or the environment; or
2. an interference with the Department's ability to efficiently and effectively administer its programs; or
3. an interference with the Department's ability to efficiently and effectively enforce any Requirement to which 310 CMR 5.00 apply.

(2) Additional Criteria to be Considered in Determining Whether Instances of Noncompliance Constitute a Pattern of Noncompliance for which a Civil Administrative Penalty May Be Assessed. In determining whether the violation to be penalized is not an isolated instance but part of a pattern of noncompliance, the Department may consider, but shall not be limited to considering, the following criteria:

(a) What the person did to prevent the violation for which the person would be assessed the Penalty and the other violation(s) described in the prior Noncompliance Notice(s).

(b) What the person did, and how quickly the person acted, to come into compliance after the occurrence of the violation for which the person would be assessed the Penalty and the other violation(s) described in the prior Noncompliance Notice(s).

(c) What the person did, and how quickly the person acted, to remedy and mitigate whatever harm might have been done as a result of the occurrence of the violation for which the person would be assessed the Penalty and the other violation(s) described in the prior Noncompliance Notice(s).

(d) The actual and potential damages suffered, and actual or potential costs incurred, by the Commonwealth, or by any other person, as a result of the occurrence of the violation for which the person would be assessed the Penalty and the other violation(s) described in the prior Noncompliance Notice(s).

5.14: Willful Noncompliance

A Penalty may be assessed without the prior issuance of a Noncompliance Notice if the criteria set forth in 310 CMR 5.11 are met and the violation thus being penalized was willful and not the result of error.

5.15: Noncompliance Resulting in Significant Impact on Public Health, Safety, or Welfare, or the Environment

A Penalty may be assessed without the prior issuance of a Noncompliance Notice if the criteria set forth in 310 CMR 5.11 are met and the violation thus being penalized resulted in significant impact on public health, safety, or welfare, or the environment.

5.16: Noncompliance Consisting of Failure to Promptly Report Any Unauthorized Disposal of Hazardous Waste or Unauthorized Release or Discharge of Oil or Hazardous Material Into the Environment

A Penalty may be assessed without the prior issuance of a Noncompliance Notice if the criteria set forth in 310 CMR 5.11 are met and the violation thus being penalized consisted of failure to promptly report to the Department:

- (1) any unauthorized disposal of oil or hazardous waste, as is defined by M.G.L. c. 21C, or
- (2) any unauthorized release or discharge of oil or hazardous material into the environment, as are defined by M.G.L. c. 21E.

5.17: Noncompliance Consisting of Failure to Maintain a Permanent Solution or Remedy Operation Status

A Penalty may be assessed without the prior issuance of a Noncompliance Notice if the criteria set forth in 310 CMR 5.11 are met and the violation thus being penalized consisted of a failure to maintain a permanent solution or remedy operation status, as are defined by M.G.L. c. 21E and 310 CMR 40.0000.

5.18: Noncompliance Consisting of Failure to Comply with Terms of Activity and Use Limitation

A Penalty may be assessed without the prior issuance of a Noncompliance Notice if the criteria set forth in 310 CMR 5.11 are met and the violation thus being penalized consisted of a failure to comply with the terms of an activity and use limitation, as is defined by M.G.L. c. 21E and 310 CMR 40.0000.

5.19: Noncompliance Consisting of Knowingly Making, or Causing any Person to Make, a False, Inaccurate, Incomplete or Misleading Statement In Document

A Penalty may be assessed without the prior issuance of a Noncompliance Notice if the criteria set forth in 310 CMR 5.11 are met and the violation thus being penalized consisted of knowingly making, or causing any person to make, a false, inaccurate, incomplete or misleading statement in a document submitted to or required to be kept by the department.

5.20: Determining the Money Amount of a Civil Administrative Penalty

The money amount of each Penalty assessed shall be determined in accordance with the criteria set forth in 310 CMR 5.20 through 5.29.

5.21: Minimum Permissible Penalty

No Penalty assessed shall be less than \$100.00.

5.22: Maximum Permissible Penalty

Subject to the provisions of 310 CMR 5.23 and 5.24, for each noncompliance, the Penalty assessed shall not exceed the amounts set forth in 310 CMR 5.22(1) or (2):

- (1) \$25,000 for each of the following:
 - (a) each release, discharge, or disposal of material into the environment without the approval of the Department, or in a manner not approved by the Department, whenever such release, discharge, or disposal requires the approval of the Department.
 - (b) engaging in any business or activity without a license or other approval from the Department whenever engaging in such business or activity requires such license or approval by the Department.
 - (c) failure to promptly report to the Department each unauthorized disposal of hazardous waste, as defined by M.G.L. c. 21C.
 - (d) failure to promptly report to the Department each unauthorized release or discharge of hazardous materials into the environment, as defined by M.G.L. c. 21E.

5.22: continued

- (e) failure to comply that is part of a pattern of noncompliance and not an isolated instance.
 - (f) knowingly making, or causing any person to make, any false, inaccurate, incomplete or misleading statement in any document submitted to or required to be kept by the department.
 - (g) failure to comply with or otherwise violate M.G.L. c. 21E or any regulation adopted thereunder.
- (2) \$250.00 for each failure to comply with Right-to-Know Requirements.
 - (3) \$1,000.00 for each noncompliance which is not described in 310 CMR 5.22(1) or (2).
 - (4) Notwithstanding the foregoing, the maximum permissible penalty amount may exceed the economic benefit realized by a person for noncompliance.

5.23: Penalizing Continued and/or Repeated Noncompliance

Subject to the provisions of 310 CMR 5.24, each day during which each noncompliance occurs or continues shall constitute a separate offense and shall be subject to a separate Penalty.

5.24: Calculating the Duration of Continued and/or Repeated Noncompliance

The number of days which shall constitute a separate offense and shall be subject to a separate Penalty shall be calculated as in 310 CMR 5.24(1) through (3). If noncompliance occurs or continues during any part of a day, that day shall be included in the calculation.

- (1) When a Noncompliance Notice Has Previously Been Given. If the Penalty would be assessed in accordance with 310 CMR 5.12(1)(a) the Department may assess a Penalty for:
 - (a) each day during which noncompliance occurred or continued,
 - 1. commencing with the day on which the Noncompliance Notice was received by the person on whom the Penalty would be assessed [see 310 CMR 5.09], and
 - 2. ending on the date of the Penalty Assessment Notice, and
 - (b) each day calculated pursuant to 310 CMR 5.24(3).
- (2) When a Noncompliance Notice Has Not Previously Been Given. If the Penalty would be assessed in accordance with 310 CMR 5.13, 5.14, 5.15, 5.16, 5.17, 5.18 or 5.19, the Department may assess a Penalty for:
 - (a) one day, and
 - (b) each day calculated pursuant to 310 CMR 5.24(3).
- (3) After a Penalty Assessment Notice Has Been Issued. If, after receiving a Penalty Assessment Notice, the person who would be assessed the Penalty does not come into compliance with any Requirement(s) described in said Penalty Assessment Notice, and does not make reasonable efforts to come into compliance with said Requirement(s), the Department may, subject to the provisions of 310 CMR 5.36, assess a Penalty for each day during which such noncompliance occurs or continues,
 - (a) commencing with the day on which the Penalty Assessment Notice was issued by the Department [see 310 CMR 5.08], and
 - (b) ending on the earliest of the following days:
 - 1. the day when the Person comes into compliance with said Requirement(s), or
 - 2. the day when the adjudicatory proceeding on the Penalty Assessment Notice is ended [see 310 CMR 5.36(5)] after the filing of the statement described in 310 CMR 5.35.

5.25: Factors to be Applied in Determining the Money Amount of a Civil Administrative Penalty

In determining the amount of each Penalty, the Department shall consider each of the following:

- (1) The actual and potential impact on public health, safety, and welfare, and the environment, of the failure(s) to comply that would be penalized.

5.25: continued

- (2) The actual and potential damages suffered, and actual or potential costs incurred, by the Commonwealth, or by any other person, as a result of the failure(s) to comply that would be penalized.
- (3) Whether the person who would be assessed the Penalty took steps to prevent the failure(s) to comply that would be penalized.
- (4) Whether the person who would be assessed the Penalty took steps to promptly come into compliance after the occurrence of the failure(s) to comply that would be penalized.
- (5) Whether the person who would be assessed the Penalty took steps to remedy and mitigate whatever harm might have been done as a result of the failure(s) to comply that would be penalized.
- (6) Whether the person being assessed the Penalty has previously failed to comply with any regulation, order, license, or approval issued or adopted by the Department, or any law which the Department has the authority or responsibility to enforce.
- (7) Making compliance less costly than the failure(s) to comply that would be penalized.
- (8) Deterring future noncompliance by the person who would be assessed the Penalty.
- (9) Deterring future noncompliance by persons other than the person who would be assessed the Penalty.
- (10) The financial condition of the person who would be assessed the Penalty.
- (11) The public interest.
- (12) Any other factor(s) that reasonably may be considered in determining the amount of a Penalty, provided that said factor(s) shall be set forth in the Penalty Assessment Notice.

5.30: Procedures for Assessment of a Civil Administrative Penalty

Each Penalty assessed shall be assessed in accordance with the procedures set forth in 310 CMR 5.30 through 5.39. For each noncompliance with Right-to-Know Requirements, each Penalty assessed shall be assessed in accordance with the procedures set forth in the Right-to-Know Requirements to the extent said procedures are more stringent than the procedures set forth in 310 CMR 5.30 through 5.39.

5.31: Notice of Intent to Assess a Civil Administrative Penalty

Whenever the Department seeks to assess a Penalty, the Department shall issue to the person on whom the Penalty would be assessed a notice of intent to assess a civil administrative penalty, the content of which shall be as set forth in 310 CMR 5.32, and which shall be served as set forth in 310 CMR 5.33.

5.32: Content of Notice of Intent to Assess a Civil Administrative Penalty

Each Penalty Assessment Notice shall include all of the following:

- (1) a concise statement of the alleged act or omission for which such Penalty would be assessed.
- (2) each law, regulation, order, license, or approval which has not been complied with as a result of such alleged act or omission.
- (3) the money amount which would be assessed as a Penalty for each alleged act or omission for which the Penalty would be assessed, and a concise statement of the factors considered by the Department in determining this amount.

5.32: continued

- (4) a statement that the person on whom the Penalty would be assessed has a right to an adjudicatory hearing on such assessment.
- (5) a statement of the requirements that must be complied with by the person on whom the Penalty would be assessed in order for said person to avoid being deemed to have waived said person's right to an adjudicatory hearing.
- (6) a statement of how and by when the Penalty must be paid if the person on whom the Penalty would be assessed waives said person's right to an adjudicatory hearing.

5.33: Service of Notice of Intent to Assess a Civil Administrative Penalty

Each Penalty Assessment Notice shall be served, by one or more of the following methods, on the person on whom the Department seeks to assess the Penalty:

- (1) Service in hand at the person's last known address in the Commonwealth or at the last known address of any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service.
- (2) Service in hand personally to the person, or to any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service.
- (3) By certified mail, return receipt requested, addressed to the person's last known address in the Commonwealth, or to the last known address of any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service.

5.34: Right to Adjudicatory Hearing

Subject to the provisions of 310 CMR 5.35, whenever the Department seeks to assess a Penalty on any person, such person shall have the right to an adjudicatory hearing.

5.35: Waiver of Right to Adjudicatory Hearing

Whenever the Department seeks to assess a Penalty on any person, such person shall be deemed, effective 21 days after the date of issuance of the Penalty Assessment Notice [*see* 310 CMR 5.08], to have waived the right to an adjudicatory hearing unless, within 21 days of the date of issuance of the Penalty Assessment Notice, such person files with the Department (*i.e.* the Department receives) a written statement that does either or both of the following, and does so subject to and in compliance with applicable provisions of 310 CMR 1.00: *Adjudicatory Proceedings*

- (1) denies the occurrence of the act(s) or omission(s) alleged by the Department in the Penalty Assessment Notice.
- (2) asserts that the money amount of the proposed Penalty is excessive.

5.36: Conducting the Adjudicatory Hearing

- (1) Every adjudicatory hearing conducted pursuant to M.G.L. c. 21A, § 16 and 310 CMR 5.00 shall be conducted in accordance with all applicable provisions of M.G.L. c. 30A and 310 CMR 1.00 (the Department's Rules for Adjudicatory Proceedings), provided that to the extent such provisions are inconsistent with M.G.L. c. 21A, § 16 and 310 CMR 5.00, the provisions of M.G.L. c. 21A, § 16 and 310 CMR 5.00 shall apply.
- (2) The Department shall not be required to prove the occurrence of the act(s) or omission(s) alleged by the Department in the Penalty Assessment Notice and not denied in the statement filed pursuant to 310 CMR 5.35 (as may be amended in accordance with 310 CMR 1.01(6)(g)).

5.36: continued

- (3) If, in the statement filed pursuant to 310 CMR 5.35, the person who would be assessed the Penalty denies the occurrence of the act(s) or omission(s) alleged by the Department in the Penalty Assessment Notice, the Department shall, by a preponderance of the evidence, prove the occurrence of the act(s) or omission(s) denied in said statement.
- (4) If the person assessed the Penalty files the statement required pursuant to 310 CMR 5.35, the subsequent adjudicatory proceeding shall be ended either by:
 - (a) a written agreement, which shall take effect only upon written approval by the Commissioner of the Department, or by
 - (b) a final decision, which shall take effect only upon approval and signature by the Commissioner of the Department.

5.37: Paying a Civil Administrative Penalty

- (1) How Payment Shall Be Made. Each Penalty shall be paid by certified check, cashier's check, or money order payable to the order of the Commonwealth of Massachusetts. No other form of payment shall be accepted.
- (2) When Payment Shall Be Made.
 - (a) Except as provided in 310 CMR 5.37(2)(b), each Penalty shall be paid in full as follows:
 1. If the person assessed the Penalty waives the right to an adjudicatory hearing pursuant to 310 CMR 5.35, the Penalty shall be due, and shall be paid in full, when such waiver takes effect, *i.e.* no later than 21 days after the date of issuance of the Penalty Assessment Notice [see 310 CMR 5.08].
 2. If the person assessed the Penalty files the statement required pursuant to 310 CMR 5.35, and if the subsequent adjudicatory proceeding is ended by a written agreement pursuant to 310 CMR 5.36(5)(a), the Penalty shall be due, and shall be paid in full, no later than 21 days after the date the Commissioner of the Department approves said agreement in writing.
 3. If the person assessed the Penalty files the statement required pursuant to 310 CMR 5.35, and if the subsequent adjudicatory proceeding is ended by a final decision approved and signed by the Commissioner of the Department [see 310 CMR 5.36(5)(b)], and if a Penalty is assessed pursuant to said final decision, and if a civil action for judicial review is not commenced, pursuant to M.G.L. c. 30A, within 30 days of the date said final decision is approved and signed by the Commissioner of the Department, the Penalty shall be due, and shall be paid in full, no later than 30 days after the date the Commissioner of the Department approves and signs said final decision.
 4. If the person assessed the Penalty files the statement required pursuant to 310 CMR 5.35, and if the subsequent adjudicatory proceeding is ended by a final decision approved and signed by the Commissioner of the Department [see 310 CMR 5.36(5)(b)], and if a Penalty is assessed pursuant to said final decision, and if a civil action for judicial review is commenced, pursuant to M.G.L. c. 30A, within 30 days of the date said final decision is approved and signed by the Commissioner of the Department, and if the Court upholds the assessment of the Penalty in whole or in part, the Penalty shall be due, and shall be paid in full, no later than 21 days after the date of the Court's decision, or by such other deadline as the Court may prescribe.
 - (b) The Department may authorize payment of a civil administrative penalty at a time or times later than those prescribed pursuant to 310 CMR 5.37(2)(a). No such authorization shall be valid unless made expressly and in writing. In the absence of any such express written authorization, the provisions of 310 CMR 5.37(2)(a) shall apply. If the Department gives any such express written authorization, the civil administrative penalty shall be paid in full at the time or times specified therein.

5.37: continued

(3) Consequences of Failure to Make Payment When Due. Each person who fails to pay a Penalty in full and on time in compliance with 310 CMR 5.37(2) shall be liable to the Commonwealth for up to three times the amount of the Penalty, together with costs, plus interest from the time the Penalty became final, and attorneys' fees, including all costs and attorneys' fees incurred directly in the collection thereof. This is in addition to any other remedy authorized by any Requirement.

REGULATORY AUTHORITY

310 CMR 5.00: M.G.L. c. 21A, § 16; St. 1985 c. 95, §§ 2 and 3.

310 CMR 6.00: AMBIENT AIR QUALITY STANDARDS FOR THE COMMONWEALTH OF MASSACHUSETTS

Section

- 6.01: Definitions
- 6.02: Scope
- 6.03: Reference Conditions
- 6.04: Standards

6.01: Definitions

Ambient Air means that portion of the atmosphere, external to buildings, to which the general public has access.

Department means the Department of Environmental Protection.

Equivalent Method means a method of sampling and analyzing the ambient air for an air pollutant that has been designated as an equivalent method in accordance with 40 CFR Part 53; it does not include a method for which an equivalent method designation has been canceled in accordance with 40 CFR Part 53.11 or 53.16.

Reference Method means a method of sampling and analyzing the ambient air for an air pollutant that is specified as a reference method in an appendix to 40 CFR Part 50, or a method that has been designated as a reference method in accordance with 40 CFR Part 53; it does not include a method for which a reference method designation has been cancelled in accordance with 40 CFR Part 53.11 or 53.16.

6.02: Scope

(1) Primary ambient air quality standards define levels of air quality which the Department judges are necessary, with an adequate margin of safety, to protect the public health. Secondary ambient air quality standards define levels of air quality which the Department judges are necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Such standards are subject to revision, and additional primary and secondary standards may be promulgated as the Department deems necessary to protect the public health and welfare.

(2) The promulgation of primary and secondary ambient air quality standards shall not be considered in any manner to allow significant deterioration of existing air quality in any portion of the Commonwealth.

6.03: Reference Conditions

All measurements of air quality that are expressed as mass per unit volume (*e.g.*, micrograms per cubic meter) other than for particulate matter (PM_{2.5}) standards contained in 310 CMR 6.04(2)(b) and (c), and lead standards contained in 310 CMR 6.04(6), shall be corrected to a reference temperature of 25°C. and a reference pressure of 760 millimeters of mercury (1,013.2 millibars). Measurements of PM_{2.5} for purposes of comparison to the standards contained in 310 CMR 6.04(2)(b) and (c), and of lead for purposes of comparison to the standards contained in 310 CMR 6.04(6) shall be reported based on actual ambient air volume measured at the actual ambient temperature and pressure at the monitoring site during the measurement period.

6.04: Standards

(1) Oxides of Sulfur (sulfur dioxide).

(a) Primary Ambient Air Quality Standards for Oxides of Sulfur (sulfur dioxide).

1. The level of the primary one hour ambient air quality standard for oxides of sulfur is 75 parts per billion (ppb, which is 1 part in 1,000,000,000), measured in the ambient air as sulfur dioxide (SO₂).

6.04: continued

2. The one hour primary standard is met at an ambient air quality monitoring site when the three-year average of the annual (99th percentile) of the daily maximum one hour average concentrations is less than or equal to 75 ppb, as determined in accordance with 40 CFR Part 50, Appendix T.
 3. The level of the standard shall be measured by a reference method based on 40 CFR Part 50, Appendix A or A-1 or by a federal equivalent method (FEM) designated in accordance with 40 CFR Part 53.
- (b) Secondary Ambient Air Quality Standards for Oxides of Sulfur (sulfur dioxide).
1. The level of the secondary three-hour ambient air quality standard for oxides of sulfur is 0.5 parts per million (ppm), not to be exceeded more than once per calendar year. The three-hour averages shall be determined from successive non-overlapping three-hour blocks starting at midnight each calendar day and shall be rounded to one decimal place (fractional parts equal to or greater than 0.05 ppm shall be rounded up).
 2. Oxides of sulfur shall be measured in the ambient air as sulfur dioxide by the reference method described in 40 CFR Part 50, Appendix A or by a federal equivalent method designated in accordance with 40 CFR Part 53.
 3. To demonstrate attainment, the second-highest three-hour average must be based upon hourly data that are at least 75% complete in each calendar quarter. A three hour block average shall be considered valid only if all three hourly averages for the three hour period are available. If only one or two hourly averages are available, but the three hour average would exceed the level of the standard when zeros are substituted for the missing values, subject to the rounding rule of 310 CMR 6.04(1), then this shall be considered a valid three-hour average. In all cases, the three-hour block average shall be computed as the sum of the hourly averages divided by three.
- (2) Particulate Matter.
- (a) Primary and Secondary Ambient Air Quality Standards for PM₁₀:
1. The level of the primary and secondary 24-hour ambient air quality standards for particulate matter is 150 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), 24-hour average concentration. The standards are attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu\text{g}/\text{m}^3$, as determined in accordance with 40 CFR Part 50, Appendix K is equal to or less than one.
 2. For the purpose of determining attainment of the primary and secondary standards, particulate matter shall be measured in the ambient air as PM₁₀ (particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers) by:
 - a. A reference method based on 40 CFR Part 50, Appendix J and designated in accordance with 40 CFR Part 53, or
 - b. An equivalent method designated in accordance with 40 CFR Part 53.
- (b) Primary Ambient Air Quality Standards for PM_{2.5}:
1. The primary ambient air quality standards for PM_{2.5} are 12.0 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) annual arithmetic mean concentration and 35 $\mu\text{g}/\text{m}^3$ 24-hour average concentration measured in the ambient air as PM_{2.5} (particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers) by either:
 - a. A reference method based on 40 CFR Part 50, Appendix L and designated in accordance with 40 CFR Part 53; or
 - b. An equivalent method designated in accordance with 40 CFR Part 53.
 2. The primary annual PM_{2.5} standard is met when the annual arithmetic mean concentration, as determined in accordance with 40 CFR Part 50, Appendix N is less than or equal to 12.0 $\mu\text{g}/\text{m}^3$.
 3. The primary 24-hour PM_{2.5} standard is met when the 98th percentile 24-hour concentration, as determined in accordance with 40 CFR Part 50, Appendix N is less than or equal to 35 $\mu\text{g}/\text{m}^3$.
- (c) Secondary Ambient Air Quality Standards for PM_{2.5}:
1. The secondary ambient air quality standards for PM_{2.5} are 15.0 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) annual arithmetic mean concentration, and 35 $\mu\text{g}/\text{m}^3$ 24-hour average concentration measured in the ambient air as PM_{2.5} (particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers) by either:
 - a. A reference method based on 40 CFR Part 50, Appendix L and designated in accordance with 40 CFR Part 53; or
 - b. An equivalent method designated in accordance with 40 CFR Part 53.

6.04: continued

2. The annual secondary PM_{2.5} standard is met when the annual arithmetic mean concentration, as determined in accordance with 40 CFR Part 50, Appendix N is less than or equal to 15.0 µg/m³.
3. The 24-hour secondary PM_{2.5} standard is met when the 98th percentile 24-hour concentration, as determined in accordance with 40 CFR Part 50, Appendix N is less than or equal to 35 µg/m³.

(3) Carbon Monoxide.(a) The primary ambient air quality standards for carbon monoxide are:

1. 9 parts per million (10 milligrams per cubic meter) for an eight-hour average concentration not to be exceeded more than once per year; and
2. 35 parts per million (40 milligrams per cubic meter) for a one hour average concentration not to be exceeded more than once per year.

(b) The levels of carbon monoxide in the ambient air shall be measured by:

1. A reference method based on 40 CFR Part 50, Appendix C and designated in accordance with 40 CFR Part 53; or
2. An equivalent method designated in accordance with 40 CFR Part 53.

(c) An eight-hour average shall be considered valid if at least 75% of the hourly average for the eight-hour period are available. In the event that only six (or seven) hourly averages are available, the eight-hour average shall be computed on the basis of the hours available using six (or seven) as the divisor.(d) When summarizing data for comparison with the standards, averages shall be stated to one decimal place. Comparison of the data with the levels of the standards in parts per million shall be made in terms of integers with fractional parts of 0.5 or greater rounding up.(4) Ozone. Primary and Secondary Ambient Air Quality Standards for Ozone:(a) The level of the eight hour primary ambient air quality standard for ozone (O₃) is 0.070 parts per million (ppm), daily maximum eight-hour average, measured by a reference method based on 40 CFR Part 50, Appendix D and designated in accordance with 40 CFR Part 53 or an equivalent method designated in accordance with 40 CFR Part 53.(b) The eight-hour primary O₃ ambient air quality standard is met at an ambient air quality monitoring site when the three-year average of the annual fourth-highest daily maximum eight-hour average O₃ concentration is less than or equal to 0.070 ppm, as determined in accordance with 40 CFR Part 50, Appendix U.(c) The level of the secondary ambient air quality standard for O₃ is 0.070 ppm, daily maximum eight-hour average, measured by a reference method based on 40 CFR Part 50, Appendix D and designated in accordance with 40 CFR Part 53 or an equivalent method designated in accordance with 40 CFR Part 53.(d) The eight-hour secondary O₃ ambient air quality standard is met at an ambient air quality monitoring site when the three-year average of the annual fourth-highest daily maximum eight-hour average O₃ concentration is less than or equal to 0.070 ppm, as determined in accordance with 40 CFR Part 50, Appendix U.(5) Oxides of Nitrogen (nitrogen dioxide). Primary and Secondary Ambient Air Quality Standards for Oxides of Nitrogen:

(a) The level of the primary annual ambient air quality standard for oxides of nitrogen is 53 parts per billion (ppb, which is 1 part in 1,000,000,000), annual average concentration, measured in the ambient air as nitrogen dioxide.

(b) The level of the primary one hour ambient air quality standard for oxides of nitrogen is 100 ppb, one hour average concentration, measured in the ambient air as nitrogen dioxide.

(c) The level of the secondary ambient air quality standard for nitrogen dioxide is 0.053 parts per million (100 micrograms per cubic meter), annual arithmetic mean concentration.

6.04: continued

- (d) The levels of the standards shall be measured by:
 - 1. A reference method based on 40 CFR Part 50, Appendix F; or
 - 2. By a Federal equivalent method (FEM) designated in accordance with 40 CFR Part 53.
- (e) The annual primary standard is met when the annual average concentration in a calendar year is less than or equal to 53 ppb, as determined in accordance with 50 CFR Part 50, Appendix S for the annual standard.
- (f) The one hour primary standard is met when the three-year average of the annual 98th percentile of the daily maximum one hour average concentration is less than or equal to 100 ppb, as determined in accordance with 40 CFR Part 50, Appendix S for the one hour standard.
- (g) The secondary standard is attained when the annual arithmetic mean concentration in a calendar year is less than or equal to 0.053 ppm, rounded to three decimal places (fractional parts equal to or greater than 0.0005 ppm must be rounded up). To demonstrate attainment, an annual mean must be based upon hourly data that are at least 75% complete or upon data derived from manual methods that are at least 75% complete for the scheduled sampling days in each calendar quarter.

(6) Lead.

- (a) The primary and secondary ambient air quality standards for lead (Pb) and its compounds are 0.15 micrograms per cubic meter, arithmetic mean concentration over a three-month period, measured in the ambient air as Pb either by:
 - 1. A reference method based on 40 CFR Part 50, Appendix G and designated in accordance with 40 CFR Part 53 or;
 - 2. An equivalent method designated in accordance with 40 CFR Part 53.
- (b) The primary and secondary ambient air quality standards for Pb are met when the maximum arithmetic three-month mean concentration for a three-year period, as determined in accordance with 40 CFR Part 50, Appendix R is less than or equal to 0.15 micrograms per cubic meter.

REGULATORY AUTHORITY

310 CMR 6.00: M.G.L. c. 111, § 142D.

310 CMR 7.00: AIR POLLUTION CONTROL

Section

- 7.00: Statutory Authority; Legend; Preamble; Definitions
 - 7.01: General Regulations to Prevent Air Pollution
 - 7.02: U Plan Approval and Emission Limitations
 - 7.03: U Plan Approval Exemption: Construction Requirements
 - 7.04: U Fossil Fuel Utilization Facilities
 - 7.05: U Fuels All Districts
 - 7.06: U Visible Emissions
 - 7.07: U Open Burning
 - 7.08: U Incinerators
 - 7.09: U Dust, Odor, Construction and Demolition
 - 7.10: U Noise
 - 7.11: U Transportation Media
 - 7.12: U Source Registration
 - 7.13: U Stack Testing
 - 7.14: U Monitoring Devices and Reports
 - 7.15: U Asbestos
 - 7.16: U Reduction of Single Occupant Commuter Vehicle Use
 - 7.18: U Volatile and Halogenated Organic Compounds
 - 7.19: U Reasonably Available Control Technology (RACT) for Sources of Oxides of Nitrogen (NO_x)
 - 7.24: U Organic Material Storage and Distribution
 - 7.25: U Best Available Controls for Consumer and Commercial Products
 - 7.26: Industry Performance Standards
 - 7.29: Emissions Standards for Power Plants
 - 7.30: MB Massport/Logan Airport Parking Freeze
 - 7.31: MB City of Boston/East Boston Parking Freeze
 - 7.33: MB City of Boston/South Boston Parking Freeze
 - 7.34: Massachusetts NO_x Ozone Season Program (MassNO_x)
 - 7.36: U Transit System Improvements
 - 7.37: MB High Occupancy Vehicle Lanes
 - 7.38: Certification of Tunnel Ventilation Systems in the Metropolitan Boston Air Pollution Control District
 - 7.40: U Low Emission Vehicle Program
 - 7.51: U Hearings Relative to Orders and Approvals
 - 7.52: U Enforcement Provisions
 - 7.54: U Large Combustion Emission Units
 - 7.60: U Severability
 - 7.70: Massachusetts CO₂ Budget Trading Program
 - 7.71: Reporting of Greenhouse Gas Emissions
 - 7.72: Reducing Sulfur Hexafluoride Emissions from Gas-insulated Switchgear
 - 7.73: Reducing Methane Emissions from Natural Gas Distribution Mains and Services
 - 7.74: Reducing CO₂ Emissions from Electricity Generating Facilities
 - 7.75: Clean Energy Standard
 - 7.76: Prohibitions on Use of Certain Hydrofluorocarbons in Refrigeration, Chillers, Aerosol Propellants, and Foam End-uses
- Appendix A: EMISSION OFFSETS AND NONATTAINMENT REVIEW
Appendix B: U EMISSIONS BANKING, TRADING, AND AVERAGING
Appendix C: OPERATING PERMIT PROGRAM

STATUTORY AUTHORITY

All provisions of 310 CMR 7.00 are adopted pursuant to the authority granted by M.G.L. c. 111, §§ 142A through 142J, M.G.L. c. 21N, and Sections 56, 58, 60 and 102C of Chapter 8 of the Acts of 2021. In addition, 310 CMR 7.08(2) is adopted pursuant to the authority granted by M.G.L. c. 111, § 150A and the following provisions of 310 CMR 7.00 are adopted pursuant to the authority granted by M.G.L. c. 21C, §§ 4 and 6 and by M.G.L. c. 21E, § 6.

7.00: continued

- (1) The following definitions in 310 CMR 7.00:
 - (a) COMBUSTION EFFICIENCY (C.E.).
 - (b) FUEL, including the definition of HAZARDOUS WASTE FUEL and USED OIL FUEL.
 - (c) GENERATOR.
 - (d) HAZARDOUS WASTE.
 - (e) HAZARDOUS WASTE INCINERATOR.
 - (f) PRINCIPAL ORGANIC HAZARDOUS CONSTITUENT (POHC).
 - (g) PRODUCTS OF INCOMPLETE COMBUSTION (PICs).
 - (h) RECYCLABLE MATERIAL.
 - (i) REGULATED RECYCLABLE MATERIAL.
 - (j) SPACE HEATER, including the definition of USED OIL FUEL FIRED SPACE HEATER.
 - (k) TOTAL HALOGENS.
 - (l) UNUSED WASTE OIL.
 - (m) USED OIL FUEL.
 - (n) USED WASTE OIL.
 - (o) WASTE.
- (2) 310 CMR 7.04(9).
- (3) 310 CMR 7.05(7), (8), and (9) and 310 CMR 7.05(8): *Table 3*.
- (4) 310 CMR 7.08(4).

LEGEND

The following symbols will indicate, in the attached 310 CMR 7.00: *Air Pollution Control*, which Air Pollution Control Districts they apply to:

U = Universal, all districts	MB = Metropolitan Boston
B = Berkshire	PV = Pioneer Valley
CM = Central Massachusetts	SM = Southeastern Massachusetts
MV = Merrimack Valley	

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.00: continued

Massachusetts Cities & Towns
with corresponding DEP

Regional Offices and Air Pollution Control Districts

<u>City/Town</u>	<u>Region</u>	<u>District</u>	<u>City/Town</u>	<u>Region</u>	<u>District</u>
	<u>A</u>			<u>C</u>	
Abington	SE	MB	Cambridge	NE	MB
Acton	C	MB	Canton	S	MB
Acushnet	SE	SM	Carlisle	NE	MV
Adams	W	B	Carver	SE	SM
Agawam	W	PV	Charlemont	W	PV
Alford	W	B	Charlton	C	CM
Amesbury	NE	MV	Chatham	SE	SM
Amherst	W	PV	Chelmsford	NE	MV
Andover	NE	MV	Chelsea	NE	MB
Arlington	NE	MB	Cheshire	W	B
Ashburnham	C	CM	Chester	W	PV
Ashby	C	CM	Chesterfield	W	PV
Ashfield	W	PV	Chicopee	W	PV
Ashland	NE	MB	Chilmark	SE	SM
Athol	W	CM	Clarksburg	W	B
Attleboro	SE	SM	Clinton	C	CM
Auburn	C	CM	Cohasset	S	MB
Avon	SE	MB	Colrain	W	PV
Ayer	C	MV	Concord	NE	MB
	<u>B</u>		Conway	W	PV
			Cummington	W	PV
				<u>D</u>	
Barnstable	SE	SM			
Barre	C	CM			
Becket	W	B	Dalton	W	B
Bedford	NE	MB	Danvers	NE	MB
Belchertown	W	PV	Dartmouth	SE	SM
Bellingham	C	SM	Dedham	NE	MB
Belmont	NE	MB	Deerfield	W	PV
Berkley	SE	SM	Dennis	SE	SM
Berlin	C	CM	Dighton	SE	SM
Bernardston	W	PV	Douglas	C	CM
Beverly	NE	MB	Dover	NE	MB
Billerica	NE	MV	Dracut	NE	MV
Blackstone	C	CM	Dudley	C	CM
Blandford	W	PV	Dunstable	C	MV
Bolton	C	MB	Duxbury	SE	MB
Boston	NE	MB			
Bourne	SE	SM		<u>E</u>	
Boxborough	C	MB			
Boxford	NE	MV	E. Bridgewater	SE	MB
Boylston	C	CM	E. Longmeadow	W	PV
Braintree	S	MB	E. Brookfield	C	CM
Brewster	SE	SM	Eastham	SE	SM
Bridgewater	SE	MB	Easthampton	W	PV
Brimfield	W	PV	Easton	SE	MB
Brockton	SE	MB	Edgartown	SE	SM
Brookfield	C	CM	Egremont	W	B
Brookline	NE	MB	Erving	W	PV
Buckland	W	PV	Essex	NE	MB
Burlington	NE	MB	Everett	NE	MB

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.00: continued

<u>City/Town</u>	<u>Region</u>	<u>District</u>	<u>City/Town</u>	<u>Region</u>	<u>District</u>
	<u>F</u>			<u>I</u>	
Fairhaven	SE	SM	Ipswich	NE	MB
Fall River	SE	SM			
Falmouth	SE	SM		<u>K</u>	
Fitchburg	C	CM			
Florida	W	B	Kingston	SE	SM
Foxborough	SE	SM			
Framingham	NE	MB		<u>L</u>	
Franklin	C	SM			
Freetown	SE	SM	Lakeville	SE	SM
			Lancaster	C	CM
	<u>G</u>		Lanesborough	W	B
Gardner	C	CM	Lawrence	NE	MV
Gay Head	SE	SM	Lee	W	B
Georgetown	NE	MV	Leicester	C	CM
Gill	W	PV	Lenox	W	B
Gloucester	NE	MB	Leominster	C	CM
Goshen	W	PV	Leverett	W	PV
Gosnold	SE	SM	Lexington	NE	MB
Grafton	C	CM	Leyden	W	PV
Granby	W	PV	Lincoln	NE	MB
Granville	W	PV	Littleton	C	MV
Greenfield	W	PV	Longmeadow	W	PV
Groton	C	MV	Lowell	NE	MV
Groveland	NE	MV	Ludlow	W	PV
Gt. Barrington W	B		Lunenburg	C	CM
			Lynn	NE	MB
			Lynnfield	NE	MB
	<u>H</u>			<u>M</u>	
Hadley	W	PV			
Halifax	SE	SM	Malden	NE	MB
Hamilton	NE	MB	Manchester	NE	MB
Hampden	W	PV	Mansfield	SE	SM
Hancock	W	B	Marblehead	NE	MB
Hanover	SE	MB	Marion	SE	SM
Hanson	SE	MB	Marlborough	C	MB
Hardwick	W	CM	Marshfield	SE	MB
Harvard	C	CM	Mashpee	SE	SM
Harwich	SE	SM	Mattapoisett	SE	SM
Hatfield	W	PV	Maynard	C	MB
Haverhill	NE	MV	Medfield	C	MB
Hawley	W	PV	Medford	NE	MB
Heath	W	PV	Medway	C	SM
Hingham	S	MB	Melrose	NE	MB
Hinsdale	W	B	Mendon	C	CM
Holbrook	S	MB	Merrimac	NE	MV
Holden	C	CM	Methuen	NE	MV
Holland	W	PV	Middleborough	SE	SM
Holliston	C	MB	Middlefield	W	PV
Holyoke	W	PV	Middleton	NE	MB
Hopedale	C	CM	Milford	C	SM
Hopkinton	C	MB	Millbury	C	CM
Hubbardston	C	CM	Millis	C	MB
Hudson	C	MB	Millville	C	CM
Hull	S	MB	Milton	NE	MB
Huntington	W	PV			

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.00: continued

<u>City/Town</u>	<u>Region</u>	<u>District</u>	<u>City/Town</u>	<u>Region</u>	<u>District</u>
Monroe	W	PV	Plainfield	W	PV
Monson	W	PV	Plainville	SE	SM
Montague	W	PV	Plymouth	SE	SM
Monterey	W	B	Plympton	SE	SM
Montgomery	W	PV	Princeton	C	CM
Mt. Washington	W	B	Provincetown	SE	SM
	<u>N</u>			<u>Q</u>	
N. Attleborough	SE	SM	Quincy	NE	MB
N. Brookfield	C	CM			
N. Reading	NE	MB		<u>R</u>	
Nahant	NE	MB			
Nantucket	SE	SM	Randolph	S	MB
Northampton	W	PV	Raynham	SE	SM
Northborough	C	CM	Reading	NE	MB
Natick	NE	MB	Rehoboth	SE	SM
Needham	NE	MB	Revere	NE	MB
New Salem	W	PV	Richmond	W	B
New Braintree	C	CM	Rochester	SE	SM
New Ashford	W	B	Rockland	SE	MB
New Marlborough	W	B	Rockport	NE	MB
New Bedford	SE	SM	Rowe	W	PV
Newbury	NE	MV	Rowley	NE	MV
Newburyport	NE	MV	Royalston	W	CM
Newton	NE	MB	Russell	W	PV
Norfolk	C	MB	Rutland	C	CM
North Adams	W	B			
North Andover	NE	MV		<u>S</u>	
Northbridge	C	CM			
Northfield	W	PV	Salem	NE	MB
Norton	SE	SM	Salisbury	NE	MV
Norwell	SE	MB	Sandisfield	W	B
Norwood	S	MB	Sandwich	SE	SM
	<u>O</u>		Saugus	NE	MB
Oak Bluffs	SE	SM	Savoy	W	B
Oakham	C	CM	Scituate	SE	MB
Orange	W	PV	Seekonk	SE	SM
Orleans	SE	SM	Sharon	SE	MB
Otis	W	B	Sheffield	W	B
Oxford	C	CM	Shelburne	W	PV
Palmer	W	PV	Sherborn	NE	MB
Paxton	C	CM	Shirley	C	CM
Peabody	NE	MB	Shrewsbury	C	CM
Pelham	W	PV	Shutesbury	W	PV
Pembroke	SE	MB	Somerset	SE	SM
Pepperell	C	MV	Somerville	NE	MB
Peru	W	B	South Hadley	W	PV
Petersham	W	CM	Southampton	W	PV
Phillipston	C	CM	Southborough	C	MB
Pittsfield	W	B	Southbridge	C	CM
			Southwick	W	PV
			Spencer	C	CM

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.00: continued

<u>City/Town</u>	<u>Region</u>	<u>District</u>	<u>City/Town</u>	<u>Region</u>	<u>District</u>
Springfield	W	PV	Watertown	NE	MB
Sterling	C	CM	Wayland	NE	MB
Stockbridge	W	B	Webster	C	CM
Stoneham	NE	MB	Wellesley	NE	MB
Stoughton	SE	MB	Wellfleet	SE	SM
Stow	C	MB	Wendell	W	PV
Sturbridge	C	CM	Wenham	NE	MB
Sudbury	NE	MB	W. Brookfield	C	CM
Sunderland	W	PV	W. Stockbridge	W	B
Sutton	C	CM	W. Springfield	W	PV
Swampscott	NE	MB	West Newbury	NE	MV
Swansea	SE	SM	W. Bridgewater	SE	MB
	<u>T</u>		West Tisbury	SE	SM
Taunton	SE	SM	West Boylston	C	CM
Templeton	C	CM	Westborough	C	CM
Tewksbury	NE	MV	Westfield	W	PV
Tisbury	SE	SM	Westford	N	MV
Tolland	W	PV	Westhampton	W	PV
Topsfield	NE	MB	Westminster	C	CM
Townsend	C	CM	Weston	NE	MB
Truro	SE	SM	Westport	SE	SM
Tyngsborough	N	MV	Westwood	NE	MB
Tyringham	W	B	Weymouth	S	MB
	<u>U</u>		Whately	W	PV
Upton	C	CM	Whitman	SE	MB
Uxbridge	C	CM	Wilbraham	W	PV
	<u>W</u>		Williamsburg	W	PV
Wakefield	NE	MB	Williamstown	W	B
Wales	W	PV	Wilmington	NE	MB
Walpole	S	MB	Winchester	NE	MB
Waltham	NE	MB	Winchendon	C	CM
Ware	W	PV	Windsor	W	B
Wareham	SE	SM	Winthrop	NE	MB
Warren	W	CM	Woburn	NE	MB
Warwick	W	PV	Worcester	C	CM
Washington	W	B	Worthington	W	PV
			Wrentham	SE	SM
				<u>Y</u>	
			Yarmouth	SE	SM

PREAMBLE

The purpose of 310 CMR 7.00 is to prevent the occurrence of conditions of air pollution where such do not exist and to facilitate the abatement of conditions of air pollution where and when such occur. They are designed to attain, preserve, and conserve the highest possible quality of the ambient air compatible with needs of society.

7.00: continued

DEFINITIONS

When used in 310 CMR 7.00 or in communications, notices or orders relative thereto, the following words and phrases shall have the meanings ascribed to them below:

12-MONTH PERIOD, 12-MONTH ROLLING PERIOD, ROLLING 12-MONTH PERIOD, CONSECUTIVE 12-MONTH TIME PERIOD OR CONSECUTIVE 12-MONTH PERIOD means a consecutive rolling 12-month period over which emissions are calculated for the purpose described by the regulatory section in which this phrase appears. A rolling 12-month period is calculated monthly starting with the month just ended and counting back 12 months (*e.g.*, December through the previous January, January through the previous February, February through the previous March, *etc.*)

ABOVEGROUND STORAGE TANK or AST, as used in 310 CMR 7.24(3) and (6), means a motor vehicle fuel storage tank that is intended for fixed installations, without backfill, that is located above or below grade.

ACT means the Federal Clean Air Act, 42 U.S.C. 7401 *et seq.*

ACTUAL CONSTRUCTION means in general, initiation of physical on-site construction activities of any facility subject to the requirements of 310 CMR 7.00, which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying underground pipework and construction of permanent structures.

ACTUAL EMISSIONS means the rate that an emission unit or facility discharges air contaminants into the ambient air. This can be calculated on a daily, weekly, monthly, ozone season, 12-month rolling, calendar year basis or other time period as determined by the requirements of the applicable regulation(s). Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period including the efficiency of pollution control equipment, if present.

ADHESION PRIMER means a coating that is applied to a polyolefin part to promote the adhesion of a subsequent coating. An adhesion primer is clearly identified as an adhesion primer or adhesion promoter on its accompanying safety data sheet.

ADHESION PROMOTER means a coating designed to facilitate the bonding of a primer or topcoat on surfaces such as trim moldings, door locks, and door sills, where sanding is impracticable, and on plastic parts and the edges of sanded areas.

ADMINISTRATOR means the administrator of the U.S. Environmental Protection Agency or his or her designee.

AEROSOL means a system of solid or liquid particles dispersed in a gas.

AEROSPACE MANUFACTURING AND REWORK OPERATIONS means manufacturing, rework, repair or specialized service (such as chemical milling, rather than actual component production or assembly), of an aerospace vehicle or component including, but not limited to, any fabricated part, processed part, assembly of parts, or completed unit of any aircraft including, but not limited to, airplanes, helicopters, missiles, rockets, and space vehicles. In general, aerospace manufacturing and rework facilities are covered by the SIC codes 3720, 3721, 3724, 3728, 3760, 3761, 3764, 3769, 4512, 4581 and 9711. However, facilities classified under other SIC codes may also perform operations that meet the definition of aerospace manufacturing and rework operations.

AFFECTED FACILITY for the purposes of 310 CMR 7.16, means any employment facility at which 250 or more employees are commuters, or any educational facility at which 1000 or more persons are commuters.

7.00: continued

AGRICULTURE for the purpose of 310 CMR 7.07, means those practices involved with the cultivation of soil for purposes of crop production and/or the raising of livestock when such crops are produced primarily for commercial foodstuffs and such livestock are raised primarily for commercial foodstuffs or work purposes.

AIR means atmosphere.

AIR CONTAMINANT means any substance or man-made physical phenomenon in the ambient air space and includes, but is not limited to, dust, flyash, gas, fume, mist, odor, smoke, vapor, pollen, microorganism, radioactive material, radiation, heat, sound, any combination thereof, or any decay or reaction product thereof.

AIR CONTAMINATION SOURCE means any place at or from which any air contaminant is emitted to the ambient air space.

AIR POLLUTION means the presence in the ambient air space of one or more air contaminants or combinations thereof in such concentrations and of such duration as to:

- (a) cause a nuisance;
- (b) be injurious, or be on the basis of current information, potentially injurious to human or animal life, to vegetation, or to property; or
- (c) unreasonably interfere with the comfortable enjoyment of life and property or the conduct of business.

AIR-ASSISTED AIRLESS SPRAY means an airless spray with a compressed air jet at the nozzle opening to atomize a coating.

AIR-DRIED COATING for purposes of 310 CMR 7.18(11)(d)2.a. and b., means a coating that is cured at a temperature below 90°C (194°F).

AIR-DRIED COATING for purposes of 310 CMR 7.18(21), means a coating that is dried by the use of air or forced warm air at temperatures below 90°C (194°F).

AIRLESS SPRAY means a spray coating method in which the coating is atomized by forcing it through a small nozzle opening at high pressure. The coating is not mixed with air before exiting from the nozzle opening.

ALCOHOL SUBSTITUTE means non-alcohol fountain solution additives including, but not limited to, glycol ethers or ethylene glycol.

ALTER OR ALTERATION means any physical change or change in the method of operation (including modification or reconfiguration of an emissions unit, change in the raw material used or change in the operating rate) which would result in an increase in potential emissions or an increase in ambient air impacts (*i.e.*, reduced stack height).

ALTERNATIVE FUEL means any fuel designated as such on an annual list issued by the Department, including methanol, denatured ethanol, and other alcohols; mixtures containing 85% or more by volume of methanol, denatured ethanol, and other alcohols with gasoline or other fuels; natural gas; liquified petroleum gas; hydrogen, coal-derived liquid fuels; fuels (other than alcohol) derived from biological materials; electricity (including electricity from solar energy); and any other fuel that the Department determines is substantially not petroleum.

AMBIENT AIR SPACE means the unconfined space occupied by the atmosphere above the geographical area of the District which includes the air outside a facility or structure.

7.00: continued

ANNUAL CAPACITY FACTOR means the ratio between the actual heat input to the emission unit during the calendar year and the potential heat input to the emission unit had it been operated for 8,760 hours during a calendar year at the rated capacity; rated capacity for combustion turbines shall be at ISO (the International Organization for Standardization) conditions (*i.e.*, 59° Fahrenheit, 60% relative humidity, and 101.3 kilopascals pressure).

ANTIFOULANT COATING means any coating applied to the underwater portion of a pleasure craft to prevent or reduce the attachment of biological organisms, and registered with the United States Environmental Protection Agency (EPA) as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. Section 136).

ANTI-GLARE SAFETY COATING means a low gloss coating formulated to eliminate glare for safety purposes on interior surfaces of a vehicle, as specified under the U.S. Department of Transportation Motor Vehicle Safety Standards.

APPLICABLE REQUIREMENT for the purposes of 310 CMR 7.02(12), means any emission limitation, standard, term, condition or other requirement provided for in a Department regulation, a plan approval, an emission control plan or other document issued by the Department pursuant to 310 CMR 7.00.

APPLICATION AREA means any area where a coating is applied including, but not limited to, application by dipping, rolling, spraying or flowcoating techniques.

AQUEOUS CLEANER means a cleaning fluid or device using a cleaning fluid that is composed of soap and/or other water-soluble materials in a water solution.

ASPHALT means a dark-brown to black cementitious material (solid, semi-solid, or liquid) in which the predominating constituents are bitumens which occur in nature as such, or which are obtained as residue in refining petroleum.

ATTAINMENT AREA means any area determined by the Administrator as one in which the ambient air concentration for a criteria pollutant does not exceed a primary or a secondary National Ambient Air Quality Standard.

AUTOMOBILE means a motor vehicle capable of carrying no more than 12 passengers.

AUTOMOTIVE EXTERIOR FLEXIBLE PARTS means flexible plastic parts used in the manufacture or repair of exterior components of automobiles.

AUTOMOTIVE EXTERIOR RIGID (NON-FLEXIBLE) PARTS means rigid plastic parts used in the manufacture or repair of exterior components of automobiles.

AUTOMOTIVE INTERIOR PARTS means plastic parts used in the manufacture or repair of interior components of automobiles.

AUTOMOTIVE REFINISHING FACILITY means any facility at which the interior or exterior bodies of automobiles, motorcycles, trucks, mobile equipment, or vans are repainted. This definition includes refinishing operations that travel to various locations, that refinish new vehicles damaged in transit before their initial sale, and that refinish aftermarket vehicles.

AUTOMOTIVE/TRANSPORTATION COATING means the coating of any plastic part that is or shall be assembled with other parts to form an automobile or truck.

Btu means British thermal unit, the amount of heat necessary to raise the temperature of one pound of water from 39°F to 40°F.

BAKED COATING means a coating that is cured at a temperature that is at or above 90°C (194°F).

7.00: continued

BAKERY means a facility consisting of one or more ovens for the baking of bread or other yeast leavened products.

BASE DATE means the date on which the base number of single occupant commuter vehicles at a particular employment facility or educational institution must be determined.

BEST AVAILABLE CONTROL TECHNOLOGY means an emission limitation based on the maximum degree of reduction of any regulated air contaminant emitted from or which results from any regulated facility which the Department, on a case-by-case basis taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through application of production processes and available methods, systems and techniques for control of each such contaminant. The best available control technology determination shall not allow emissions in excess of any emission standard established under the New Source Performance Standards, National Emission Standards for Hazardous Air Pollutants or under any other applicable section of 310 CMR 7.00, and may include a design feature, equipment specification, work practice, operating standard, or combination thereof.

BIOTECHNOLOGY means the use of cellular and molecular processes from living systems to make or assist in making products.

BLACK COATING means a coating which meets the following criteria:

(a) Maximum lightness: 23 units.

(b) Saturation: less than 2.8, where saturation equals the square root of $A^2 + B^2$.

These criteria are based on Cielab color space, 0/45 geometry. For spherical geometry, specular included, maximum lightness is 33 units.

BLANKET means a rubber-covered cylinder that receives the printed image from the plate cylinder and transfers the image to the substrate.

BOSTON METROPOLITAN PLANNING ORGANIZATION means the organization designated for maintaining a continuing, cooperative, and comprehensive (3C) transportation planning process under Section 134 of the Federal Aid Highway Act and Section 5303 of the Federal Transit Act in the Boston metropolitan region.

BOSTON TRANSPORTATION DEPARTMENT means the agency within the City of Boston responsible for transportation and traffic-related activities including the regulation of off-street parking spaces in the City under M.G.L. c. 148, § 56.

BOTTOM FILLING means the filling of a tank truck or stationary storage tank through an opening which is flush with the bottom of the tank.

BUBBLE means an alternative emission control strategy where several emission points are regarded as being placed under an hypothetical dome which is then regarded as a single emission source. Sources under a bubble may reallocate emission decreases and increases so long as the requirements of 310 CMR 7.00 are met. Bubbles need not be confined to a single facility or source site.

BULK PLANT means any organic material storage and/or distribution facility with an average daily throughput ($1/30$ of the total throughput on a rolling 30-day time period) of greater than or equal to 4,000, but less than 20,000 gallons of organic material having a true vapor pressure greater than 1.5 psia under actual storage conditions.

BULK TERMINAL means any organic material storage and/or distribution facility with an average daily throughput ($1/30$ of the total throughput on a rolling 30-day time period) of greater than 20,000 gallons of organic material having a true vapor pressure greater than 1.5 psia under actual storage conditions.

BUSINESS DAY as used in 310 CMR 7.24(3) and (6), means a day of the week that the Department is open for business.

7.00: continued

BUSINESS MACHINE means a device that uses electronic or mechanical methods to process information, perform calculations, print or copy information, or convert sound into electrical impulses for transmission, including devices listed in North American Industry Classification System (NAICS) numbers 333318, 334112, 334118, 334210, and photocopy machines, a subcategory of products classified under NAICS code 333316.

BUSINESS MACHINE COATING means the coating of any plastic part that is or shall be assembled with other parts to form a business machine.

CALIFORNIA AIR RESOURCES BOARD (or CALIFORNIA ARB or CARB) means the California state agency established and empowered to regulate sources of air pollution in California, including motor vehicles, pursuant to California Health and Safety Code, Sections 39500 *et seq.*

CAMOUFLAGE COATING means a coating used, principally by the military, to conceal equipment from detection.

CAPTURE EFFICIENCY means the ability of a building, enclosure or system to capture air contaminants within the building, enclosure or system before the air contaminants are directed to an air pollution control device. Capture efficiency is determined in accordance with EPA Reference Test Method Number 204, as specified in 40 CFR Part 51: *Appendix M*, or by other methods approved by the Department and EPA.

CARBON DIOXIDE EQUIVALENT (CO₂e) means the amount of GHGs emitted computed by multiplying the mass amount of emissions in tons per year for each of the greenhouse gases in the air contaminant GHGs, by each gas' associated global warming potential set forth in 40 CFR Part 98, Subpart A: *Table A-1 – Global Warming Potentials* as in effect on January 1, 2015, and summing the resultant value for each gas to compute tons per year CO₂e.

CEMS means a continuous emissions monitoring system

CFR means the Code of Federal Regulations.

CHAIRMAN OF THE BOSTON MPO means the chairman of the Boston Metropolitan Planning Organization; which position is held by the Massachusetts Secretary of Transportation and Construction.

CHART means the Ringelmann Scale for grading the density of smoke, as published by the United States Bureau of Mines and as referred to in the Bureau of Mines Information Circular No. 8333, or any smoke inspection guide approved by the Department.

CLASS I HARDBOARD PANELING FINISH means a finish that meets the specifications for Class I of Voluntary Product Standard PS-59-73 as approved by the American National Standards Institute (ANSI).

CLASS II HARDBOARD PANELING FINISH means a finish that meets the Class II specifications of ANSI A135.5-2012 as approved by the American National Standards Institute (ANSI).

CLEANUP SOLUTION means a solution which is used to clean any equipment and its parts.

CLEAR COAT means a coating which lacks color and opacity or is transparent and uses the undercoat as a reflectant base or undertone color.

COATING means a material applied onto, or impregnated into, a substrate for protective, decorative, or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealants, adhesives and temporary protective coatings.

DEFINITIONS: continued

COATING for purposes of 310 CMR 7.18(14) means materials applied onto or impregnated into a substrate for decorative, protective, or functional purposes. Such materials include, but are not limited to, solvent-borne coatings, waterborne coatings, adhesives, wax coatings, wax laminations, extrusion coatings, extrusion laminations, 100% solid adhesives, UV cured coatings, electron beam cured coatings, hot melt coatings, and cold seal coatings. Materials used to form unsupported substrates, such as calendaring of vinyl, blown film, cast film, extruded film, and co-extruded film, are not defined as coatings.

COATING LINE(S) means one or more apparatuses or operations which apply, convey and dry a surface coating comprised of including but not limited to the coating applicator (knife coating, roll coating, spray booths, flow coaters, dipping), conveyors, flashoff areas, air dryers, drying ovens and curing ovens. A coating line is considered to convey, apply and dry one or more layers of surface coating including, but not limited to, base coat, single coat, prime coat, and top coat.

COATING LINE for purposes of 310 CMR 7.18(14), means a series of coating applicators, flash-off areas, and any associated curing/drying equipment between one or more unwind/feed stations and one or more rewind/cutting stations.

COATING MIXING TANK means any portable or stationary tank used to disperse, blend, strain, thin, or tint an ink or formulation used for surface coating.

COMBINED CYCLE COMBUSTION TURBINE means any combustion turbine, including the duct burner portion thereof, in which heat is recovered from the exhaust gases to heat water or generate steam.

COMBUSTION DEVICE means all equipment including, but not limited to, thermal incinerators, catalytic incinerators, flares, boilers, and process heaters used for combustion of organic vapors.

COMBUSTION EFFICIENCY (C.E.) means a measure of the completeness of combustion, expressed as a percent, determined by the measurement of carbon dioxide (CO₂) and carbon monoxide (CO) in flue gas in accordance with the following formula: $C.E. = [CO_2 / (CO + CO_2)] \times 100$.

COMMENCE OPERATIONS, as used in 310 CMR 7.24(3) and (6), means that point, after a Stage I or Stage II system has been installed or has undergone a substantial modification, when motor vehicle fuel is first dispensed for sale or use from a motor vehicle fuel dispensing facility or tank truck for the purpose said facility or tank truck is intended.

COMMERCIAL PARKING SPACES means, for the purposes of 310 CMR 7.30, parking spaces provided for a fee, excluding employee parking spaces.

COMMISSIONER means the Commissioner of the Department of Environmental Protection.

COMMUTER means any employee or student during his or her journey to or from work or classes and whose automobile is not customarily required to be used in the course of employment or classes.

COMPLIANCE CERTIFICATION means a statement detailing the compliance status of the emission unit or facility in regards to each applicable requirement, signed by a responsible official of the facility as being complete, accurate and true to the best knowledge of the signatory.

COMPONENT for the purpose of 310 CMR 7.18(19), means a piece of equipment including, but not limited to, pumps, valves, compressors, and pressure relief valves, which has the potential to leak volatile organic compounds.

7.00: continued

CONDENSATE for the purposes of 310 CMR 7.24, means hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature and/or pressure and remains liquid at standard conditions.

CONDENSIBLE SUBSTANCES means any inorganic or organic compound or element, which exist in vapor phase prior to being emitted to the ambient atmosphere and undergoes rapid condensation under ambient conditions.

CONDENSOR means a device which cools a gas stream to a temperature which removes specific organic compounds by condensation.

CONSTRUCT OR CONSTRUCTION means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) which would result in an increase in potential emissions.

CONTAMINATED GROUNDWATER TREATMENT SYSTEM (CGTS) means a system designed to remediate groundwater contaminated with VOC through stripping of VOC from the water and transferring the VOC to an air stream.

CONTAMINATED SOIL VENTING SYSTEM means a system designed to remediate soil contaminated with a volatile organic compound (VOC) through stripping of the VOC from the soil by use of an on-site venting system constructed into the contaminated soil area. CONTAMINATED SOIL VENTING SYSTEM does not include the venting of landfills.

CONTINUOUS COMPLIANCE means meeting emission limitations established by 310 CMR 7.00 at all times.

CONTINUOUS PROCESS POLYSTYRENE RESIN MANUFACTURING PLANT means a plant in which styrene, with various dissolved additives, is continuously fed into a thermal reactor system and a molten resin product is continuously discharged from the reactor system.

COOLING TOWER as used in 310 CMR 7.02(2)(g)6., means an open water recirculation device that uses fans or natural draft to draw or force ambient air through the device to cool warm water by direct contact.

CRITERIA AIR CONTAMINANT or CRITERIA POLLUTANT means ozone (O₃), particulate matter (PM), sulfur oxides measured as sulfur dioxide (SO₂), nitrogen dioxide (NO₂), volatile organic compounds (VOC) as non-methane hydrocarbons, carbon monoxide (CO) or lead (Pb), or any other air contaminant for which national ambient air quality standards have been adopted.

CRUDE OIL means a naturally occurring mixture which consists of hydrocarbons, and sulfur, nitrogen and/or oxygen derivatives of hydrocarbons which is a liquid at standard conditions.

CURB WEIGHT describes a vehicle's weight classification as determined by the Registrar of Motor Vehicles.

CUTBACK ASPHALT means asphalt cement which has been liquefied by blending with petroleum solvent (diluent) such that the blend contains greater than seven per cent by weight of such petroleum solvents. Upon exposure to atmospheric conditions the diluents evaporate, leaving the asphalt cement to perform its function.

DEFINITIONS: continued

CYLINDER means any one of several components of a printing press used to transfer printed images or guide paper through the press including, but not limited to, intermediate, blanket, impression, plate and sheet transfer cylinders.

DEMOLITION OR RENOVATION means, unless otherwise specified, any operation which involves the wrecking, taking out, removal, stripping, or altering in any way (including repairing, restoring, drilling, cutting, sanding, sawing, scratching, scraping, or digging into) or construction of one or more facility components or facility component insulation. DEMOLITION or RENOVATION includes load- and nonload - supporting structural members of a facility.

DEPARTMENT means the Department of Environmental Protection (pursuant to St. 1989 c. 240, §§ 101, "...the department of environmental quality engineering shall be known as the department of environmental protection").

DIGITAL PRINTING means a method of printing in which an electronic output device transfers variable data, in the form of an image, from a computer to a variety of substrates.

DIP COATING means a method of applying coatings to a substrate by submersion into and removal from a coating bath.

DISTRICT means the Berkshire (BAPCD), Central Massachusetts (CMAPCD), Merrimack Valley (MVAPCD), Metropolitan Boston (MBAPCD), Pioneer Valley (PVAPCD), and Southeastern Massachusetts (SMAPCD) Air Pollution Control Districts.

DRUM means any cylindrical metal shipping container larger than 12 gallons capacity but no larger than 110 gallons capacity.

DRY BOTTOM means a furnace design in which the coal-fired unit equipped with an ash disposal hopper bottom with sufficient cooling surface so that the ash particles impinging on the furnace walls or hopper bottom can be removed in a dry state.

DUAL-POINT STAGE I SYSTEM as used in 310 CMR 7.24(3), means a type of Stage I system in which the storage tank is equipped with an entry port for a motor vehicle fuel fill pipe and a separate exit port for a vapor connection.

DUCT BURNER means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary gas turbine, internal combustion engine, kiln etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.

DUST means finely divided solid matter.

DYEING FORMULATION means a fluid used to apply color to a textile substrate.

ELASTOMERIC COATING means a coating that is designed for application over flexible parts, such as elastomeric bumpers.

ELECTRIC DISSIPATING COATING means a coating that rapidly dissipates a high voltage electric charge.

ELECTRIC-INSULATING AND THERMAL-CONDUCTING COATING means a coating that displays an electrical insulation of at least 1000 volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 BTU per hour-foot-°F.

ELECTRIC-INSULATING VARNISH means a non-convertible-type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.

7.00: continued

ELECTRICAL AND ELECTRONIC COMPONENTS for purposes of 310 CMR 7.18(31) means components and assemblies of components that generate, convert, transmit, or modify electrical energy. Electrical and electronic components include, but are not limited to, wires, windings, stators, rotors, magnets, contacts, relays, printed circuit boards, printed wire assemblies, wiring boards, integrated circuits, resistors, capacitors, and transistors. Cabinets in which electrical and electronic components are housed are not considered electrical and electronic components.

ELECTRODEPOSITION means a specialized form of dip coating where opposite electric charges are applied to the coating and the part.

ELECTROMAGNETIC INTERFERENCE/RADIO FREQUENCY INTERFERENCE (EMI/RFI) COATING means a coating used in plastic business machine housings to attenuate electromagnetic and radio frequency interference signals that would otherwise pass through the plastic housings.

ELECTROSTATIC PREPARATION COATING means a coating that is applied to a plastic part solely to provide conductivity for the subsequent application of a primer, a topcoat, or other coating through the use of electrostatic application methods. An electrostatic preparation coating is clearly identified as an electrostatic preparation coating on its accompanying safety data sheet.

ELECTROSTATIC SPRAY APPLICATION means the application of charged atomized paint particles thereby enhancing deposition by electrostatic attraction of the paint to the substrate.

EMERGENCY DEMOLITION/RENOVATION OPERATION means any operation that was not planned but results from a sudden unexpected event which requires the demolition/renovation of a structurally sound or unsound facility or facility component. This term includes operations necessitated by non-routine failures of equipment.

EMERGENCY MOTOR VEHICLE as used in 310 CMR 7.24(6), means any publicly or privately-owned motor vehicle used for the restoration or maintenance of electricity, gas, telephone, or other utilities essential to maintain public services during an emergency situation; any publicly-owned motor vehicle operated by a peace officer in performance of their duties; any authorized emergency motor vehicle used for fighting fires or responding to emergency fire calls; any publicly-owned authorized emergency motor vehicle used by an emergency medical technician or paramedic; any publicly or privately-owned motor vehicle under contract for snow removal; any publicly or privately-owned motor vehicle used for towing or servicing other emergency motor vehicles; or any ambulance used by a private entity under contract with a public agency.

EMERGENCY SITUATION as used in 310 CMR 7.24(6), means a situation in which a local, state, or federal official has declared a "state of emergency," or during fire fighting activities.

EMERGENCY OR STAND-BY ENGINE for the purposes of 310 CMR 7.02(8)(i) and 7.03(10), means any stationary internal combustion engine which operates as an emergency or standby mechanical or electrical power source.

EMI/RFI SHIELDING COATING means a coating used on electrical or electronic equipment to provide shielding against electromagnetic interference (EMI), radio frequency interference (RFI), or static discharge.

7.00: continued

EMISSION means any discharge or release of an air contaminant to the ambient air space.

EMISSION POINT means any place (including, but not limited to, a stack or vent) at or from which any air contaminant is emitted to the ambient air space.

EMISSION STATEMENT is a certification submitted by the owner or operator of a facility that describes the actual annual emissions of VOC and/or NOx from the facility as well as the average Ozone Season daily emissions from the facility.

EMISSION UNIT means any individual piece of equipment from which any air contaminant is emitted to the ambient air space; for example, an individual boiler, a single degreaser, etc.

EMISSIONS CAPTURE AND CONTROL EQUIPMENT means a system designed to limit the release of air contaminants into the ambient air by collecting emissions from a facility or emission unit, before they are emitted to the ambient air, and controlling these emissions by reducing or eliminating the mass of the air contaminants contained in the emissions. Control methods include, but are not limited to, oxidation, filtration, scrubbing, condensation, absorption and adsorption.

EMPLOYEE means any person who performs work for an employer 17 or more hours per week and for more than 20 weeks per year for compensation and who travels to and from work by any mode of travel.

EMPLOYEE PARKING SPACES means for the purposes of 310 CMR 7.30, parking spaces provided for use by employees of MASSPORT and employees of tenants at Logan Airport.

EMPLOYER means any person or entity who employs 250 or more daytime employee commuters at any time during a calendar year at any employment facility, or any educational institution with 1000 or more commuters.

EMPLOYMENT FACILITY means any facility or group of facilities of the same employer which are within walking distance of each other at which 250 or more persons are commuters.

END SEALING COMPOUND means a synthetic rubber compound which is coated on to ends of cans and which functions as a gasket when the can is assembled.

ENERGY INPUT CAPACITY means the ability of a fuel utilization facility, based on the Higher Heating Value (HHV) of the fuel, to combust a stated maximum amount of fuel on a steady state basis, as determined by the physical design and characteristics of the fuel utilization facility and does not include the energy input from preheated combustion air, recirculated flue gases, or exhaust gases from other sources.

ENVIRONMENTAL JUSTICE POPULATION.

- (a) A Neighborhood that meets one or more of the following criteria:
1. the annual median household income is not more than 65% of the statewide annual median household income;
 2. minorities comprise 40% or more of the population;
 3. 25% or more of households lack English language proficiency;
 4. minorities comprise 25% or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150% of the statewide annual median household income; or
- (b) a geographic portion of a Neighborhood designated by the Secretary as an Environmental Justice Population pursuant to M.G.L. c. 30, § 62; provided, however, that a Neighborhood or a geographic portion of a Neighborhood that the Secretary has determined shall not be designated an Environmental Justice Population pursuant to M.G.L. c. 30, § 62 shall not be considered an Environmental Justice Population.

DEFINITIONS: continued

EPA means the United States Environmental Protection Agency.

ETCHING FILLER means a coating that contains less than 23% solids by weight and at least ½% acid by weight, and is used instead of applying a pretreatment coating followed by a primer.

EXECUTIVE ORDER, as used in 310 CMR 7.24(3) and (6), means a certification document, including but not limited to, applicable exhibits, installation, operation and maintenance manuals, manufacturer guidance documents and manufacturer advisory correspondence or mail outs, as issued or approved by CARB, in accordance with the applicable certification procedures (17 of the California Code of Regulations, section 94011, as amended April 12, 1996) and adopted by the Department in 310 CMR 7.24(3) and (6).

EXISTING FACILITY for the purposes of 310 CMR 7.02(8), means any facility that is in operation on or before June 1, 1972, or any proposed facility of which the construction, substantial reconstruction or alteration of which has been approved in writing by the Department on or before June 1, 1972. All facilities as specified in the Federal Register, Volume 36, No. 247, December 23, 1971, the construction or modification of which was initiated after August 17, 1971 shall not be defined as existing facilities.

EXTERIOR BASE COAT means any coating applied to the exterior of a can to provide exterior protection to the metal and/or provide background for the lithographic or printing operation.

EXTERNAL FLOATING ROOF means a storage vessel cover in an open top tank consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is equipped with a closure seal or seals to close the space between the roof edge and tank shell.

EXTREME ENVIRONMENTAL CONDITIONS means continuous exposure to temperatures consistently above 95°C, detergents, abrasives, scouring agents, solvents, corrosive atmospheres, or similar environmental conditions.

EXTREME HIGH-GLOSS COATING for purposes of 310 CMR 7.18(11)(d)2.a. and b., means a coating which, when tested by ASTM standard D523-14, shows a reflectance of 75% or more on a 60° meter.

EXTREME HIGH-GLOSS COATING for purposes of 310 CMR 7.18(11)(b)4. and (d)2.c., means a coating which, when tested by ASTM standard D523-14, shows a reflectance of 90% or more on a 60° meter.

EXTREME PERFORMANCE COATING means coatings designed for exposure to harsh or extreme environmental conditions, as determined by the Department including, but not limited to, constant weather exposure, detergents, temperatures consistently above 203°F (95°C), or corrosive atmospheres.

EXTREME PERFORMANCE COATING for purposes of 310 CMR 7.18(11)(d)2.a. and b. means a coating used on a metal or plastic surface where the coated surface is, in its intended use, exposed to extreme environmental conditions such as those listed in (a) through (c).

EXTREME PERFORMANCE COATING includes, but is not limited to, coatings applied to locomotives, railroad cars, farm machinery, and heavy duty trucks. Extreme environmental conditions include, but are not limited to, any of the following:

- (a) Chronic exposure to corrosive, caustic, or acidic agents, chemicals, chemical fumes, chemical mixtures, or solutions;
- (b) Repeated exposure to temperatures in excess of 121°C (250°F); or
- (c) Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents.

FABRIC SURFACE COATING means the coating of a textile substrate to impart properties that are not initially present, such as strength, stability, water or acid repellency, or appearance.

DEFINITIONS: continued

FACE FIRING means a furnace firing design in which the burners are mounted in an array on one or more vertical walls including

- (a) opposed firing, where the burners are mounted on two opposite walls; and
- (b) single-wall firing, where the burners are mounted on only one wall.

FACILITY means any installation or establishment and associated equipment, located on the same, adjacent or contiguous property, capable of emissions.

FACILITY COMPONENT means any part of a facility including, but not limited to, any equipment, pipe, duct, boiler, tank, turbine, furnace, building material, insulation, load supporting and nonload supporting structural member or non-structural member at the facility.

FEDERAL POTENTIAL TO EMIT or FEDERAL POTENTIAL EMISSIONS means the maximum capacity of a stationary source to emit a regulated pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a regulated pollutant, including air pollution control equipment and restriction on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is federally enforceable. To be federally enforceable, a limitation on any facility's capacity to emit a pollutant shall include testing, monitoring, and recordkeeping procedures sufficient to demonstrate compliance with the limitations. Examples of permit or SIP limitations generally considered federally enforceable are limitations on the allowable capacity of the equipment, requirements for the installation, operation and maintenance of pollution control equipment, limits on hours of operation, and restrictions on amounts of materials combusted, stored, or produced. To be federally enforceable, restrictions on operation, production, or emissions must be stated in terms of the shortest averaging time that can be used as a practical matter, *e.g.*, pounds per hour, or gallons per hour, and they must be tied to other enforceable operating restrictions at the source. General limitations on potential to emit, such as yearly limits (*e.g.*, in tons per year), by themselves, are not considered federally enforceable. The use of hourly, daily, weekly, or monthly rolling limits are generally acceptable. Any federally enforceable limitations or conditions must be enforceable as a practical matter, ensure continuous compliance with the restrictions, and include adequate testing, monitoring, and record keeping procedures sufficient to demonstrate compliance with the limitations or conditions of an applicable federally enforceable document described above. Fugitive emissions, to the extent quantifiable, are included in determining the potential to emit of a stationary source. Secondary emissions do not count in determining the potential to emit of a stationary source.

FEDERALLY ENFORCEABLE means all limitations and conditions which are enforceable by the Administrator, including but not limited to, those requirements developed pursuant to 40 CFR Part 60 (New Source Performance Standards), 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants), 40 CFR Part 63 (National Emission Standards for Hazardous Air Pollutants for Source Categories), 40 CFR Parts 72 through 80 (Acid Rain Program) and requirements within the Massachusetts State Implementation Plan. Federally enforceable requirements also include those requirements in operating permits issued either pursuant to 40 CFR Part 71 or under 310 CMR 7.00: *Appendix C*, (except those listed as state enforceable only) any permit requirements established pursuant to 40 CFR 52.21 (Prevention of significant deterioration of air quality), under plan approval requirements in either 310 CMR 7.02 or 7.00: *Appendix A*. Federally enforceable limitations and conditions can also be contained in either a permit restriction issued under 310 CMR 7.02(9), (10), (11) or equipment installed under 310 CMR 7.03, that has been made federally enforceable after the EPA has approved 310 CMR 7.02 and 7.03 into the Massachusetts SIP.

FERROUS CUPOLA FOUNDRY means a vertical cylindrical furnace using pig iron, scrap iron, scrap steel and coke as charging components. Ferrous Cupola Foundries can be separated into "Jobbing" Foundries and "Production" foundries. Jobbing foundries run intermittently for just long enough at one time to pour the molds that are ready on the foundry floor on a job-by-job basis. Production foundries will melt metal continuously and pour to a succession of molds that are constantly being prepared to receive the flow of molten iron.

7.00: continued

FINAL FINISH APPLICATION LINE means one or more apparatuses or operations which apply, convey, and dry/cure a final finish on to a textile substrate.

FINAL FINISHING means the functional enhancement of a textile by application of shape-retentive, water-repellent, stain-resistant, antistatic, flame-retardant, or other chemical treatments.

FINISH PRIMER/SURFACER means a coating applied with a wet film thickness of less than ten mils prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, a moisture barrier, or promotion of a uniform surface necessary for filling in surface imperfections.

FINISHING FORMULATION means a material applied to a textile substrate to enhance the textile's performance or appearance.

FLASHOFF AREA means part of a coating line between the application area and the oven.

FLAT WOOD PANELING means hardwood plywood, thin particleboard and hardboard, but does not include Class I hardboard panels, exterior siding, tile board, insulation board or particleboard used in furniture manufacturing.

FLAT WOOD PANELING SURFACE COATING means a coating applied to flat wood panels including: printed interior panels made of hardwood plywood and thin particleboard; natural finish hardboard plywood panels; and hardwood paneling with Class II finishes.

FLEXIBLE COATING means any coating that is required to comply with engineering specifications for impact resistance, mandrel bend, or elongation as defined by the original equipment manufacturer.

FLEXOGRAPHIC PRINTING means the application of words, designs, and pictures to a substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials.

FLOW COATING means a coating labeled and formulated exclusively for use by electric power companies or their subcontractors to maintain the protective coating systems present on utility transformer units.

FLYASH means the aerosolized solid component of burned or partially burned fuel. "Soot" and "cinders" are included within the meaning of the term "flyash".

FOG COATING means a coating that is applied to a plastic part for the purpose of color matching without masking a molded-in texture.

FOUNTAIN ADDITIVE means any of several volatile and/or non volatile compounds or mixtures of compounds used to enhance the functioning of dampening systems in offset lithographic presses.

FOUNTAIN SOLUTION means a mixture of water and fountain additives, including isopropyl alcohol, for use in the dampening system of offset lithographic presses. Also referred to as dampening solution.

DEFINITIONS: continued

FOUR-STAGE COATING SYSTEM means a topcoat system composed of a colored basecoat, two semi-transparent midcoats, and a final transparent clearcoat. For compliance purposes, the VOC content of four-stage coating systems shall meet the emission limitation for three or four-stage topcoats in Table 7.18(28)(c), and is calculated according to the following formula:

$$VOC T_{4\text{-stage}} = \frac{VOC_{bc} + VOC_{mc1} + VOC_{mc2} + 2 VOC_{cc}}{5}$$

Where:

VOC $T_{4\text{-stage}}$ is the weighted average of the VOC content, as applied, in the basecoat, midcoat, and clearcoat system.

VOC_{bc} is the VOC content, as applied, of any given basecoat.

VOC_{mc1} is the VOC content, as applied, of the first midcoat.

VOC_{mc2} is the VOC content, as applied, of the second midcoat.

2VOC_{cc} is twice the VOC content, as applied, of any given clearcoat.

FREEBOARD HEIGHT means for a Cold Cleaner Degreaser, the distance from the top of the liquid level to the lip of the tank; for an Open Top Vapor Degreaser, the distance from the top of the vapor zone during idling to the lip of the degreaser tank; for a Conveyorized Cold Cleaner, the distance from the top of the solvent level to the bottom of the entrance or exit opening, whichever is lower, for a Conveyorized Vapor Degreaser, the distance from the top of the solvent vapor level while idling to the bottom of the entrance or exit opening, whichever is lower.

FREEBOARD RATIO means ratio of the freeboard height to the smaller interior dimension (length, width, or diameter) of the degreaser.

FUEL means any solid, liquid, or gaseous material such as, but not limited to, coal, gasoline, manufactured gas, natural gas, oil, or wood, used for the production of heat or power by burning.

-COAL means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388-77, standard specification for classification of coals by Rank, coal-derived synthetic fuels including, but not limited to, solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures.

-DISTILLATE FUEL OIL means No. 1 or No. 2 fuel oil. Distillate fuel oil having a sulfur content of 0.17 pounds of million Btu heat release potential is approximately equal to distillate fuel oil having a sulfur content of 0.3% by weight.

-FOSSIL FUEL means coal, coke, distillate oil, residual oil, used oil fuel or natural or manufactured gas.

-HAZARDOUS WASTE FUEL means a regulated recyclable material, other than waste oil, and other than a material that [i] has the hazardous waste characteristics set forth in 310 CMR 30.120 through 30.125, [ii] has waste oil as a significant ingredient, and [iii] does not have as an ingredient any hazardous waste, other than waste oil, listed or otherwise identified in 310 CMR 30.130 through 30.136,

1. that is recycled by being burned for energy recovery in an industrial or utility boiler or in an industrial furnace, but not in a hazardous waste incinerator licensed pursuant to 310 CMR 7.08 and 30.800:*Licensing Requirements and Procedures*, and

2. that is:

a. presumed to be hazardous waste fuel pursuant to 310 CMR 30.215: *Distinguishing Waste Oil That Is Used Oil Fuel from Waste Oil That Is Not Used Oil Fuel*,

b. a mixture of

(i) any hazardous waste, other than waste oil, or of any material presumed to be hazardous waste fuel pursuant to 310 CMR 30.215: *Distinguishing Waste Oil That Is Used Oil Fuel from Waste Oil That Is Not Used Oil Fuel*, with

(ii) any other material (including, without limitation, waste oil, any other hazardous waste, any material presumed to be hazardous waste fuel pursuant to 310 CMR 30.215: *Waste Oil That Is Used Oil Fuel from Waste Oil That Is Not Used Oil Fuel*, specification used oil fuel, off-specification used oil fuel, unused commercial fuel oil, unused commercial crude oil, or any hazardous or non-hazardous material burnable as fuel), and

DEFINITIONS: continued

3. that is managed in compliance with 310 CMR 30.200: *Provisions for Recyclable Material and for Waste Oil*.

-NATURAL GAS means

1. a naturally occurring mixture of hydrocarbon and nonhydrocarbon gas found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or
2. liquefied petroleum gas, as defined by the American Society of Testing and Materials in ASTM D1835-97, "Standard Specification for Liquefied Petroleum Gases"

-RESIDUAL FUEL OIL means No. 4, No. 5, or No. 6 fuel oil. Residual fuel oil having a sulfur content of 0.55 or 0.28 pounds per million Btu heat release potential is approximately equal to residual fuel oil having a sulfur content of 1.0 or 0.5% by weight respectively.

-USED OIL FUEL means a regulated recyclable material

1. that is recycled by burning for energy recovery, and
2. that is:
 - a. a waste oil, or
 - b. any fuel, other than hazardous waste fuel, produced from waste oil by processing, blending, or other treatment, and
3. that is managed in compliance with 310 CMR 30.200 30.200: *Provisions for Recyclable Material and for Waste Oil*.

-WOOD FUEL means all wood intended to be used as a fuel including, but not limited to, trees, cord wood, logs, lumber, saw dust, and wood from: manufacturing processes (but offs, shavings, turnings, sander dust, etc.), wood pellets, slabs, bark, chips, waste pallets, boxes, etc. -WOOD FUEL does not include materials which are chemically treated with any preservative, paint, or oil.

FUEL ADDITIVE means any substance which is not a natural component of the fuel to which it may be added or in conjunction with which it may be used.

FUEL CELL means an electrochemical device that converts the chemical energy in a fuel into electricity and heat.

FUEL UTILIZATION FACILITY means any furnace(s), fuel burning equipment, boiler(s), space heaters or any appurtenance thereto used for the burning of fuels, for the emission of products of combustion, or in connection with any process which generates heat and emits products of combustion, but does not mean a motor vehicle or an incinerator.

FUGITIVE EMISSIONS means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

FUME means any aerosol resulting from chemical reaction, distillation, or sublimation.

FURNACE means any enclosed structure designed to produce heat from the burning of a fuel therein, but does not mean open hearths, incinerators, stoves for cooking, fireplaces, or equipment for the melting, reclaiming, or refining of metals or maple syrup.

GAS means the state of matter having neither independent shape nor independent volume but having a tendency to expand and diffuse infinitely.

GASOLINE for the purpose of 310 CMR 7.24, means any petroleum distillate having an RVP of more than four pounds per square inch as defined by ASTM Method D323. Mixtures of 10% or greater simple alcohols are excluded from this definition.

GASOLINE MARKETING FACILITY for the purpose of 310 CMR 7.24, means a stationary tank having a capacity of greater than 250 gallons in which gasoline is stored or from which it is dispensed be it through retail or wholesale transfer.

GENERATOR means any person, by site, whose act or process produces hazardous waste, or whose act first causes a hazardous waste to become subject to regulation pursuant to 310 CMR 30.000: *Hazardous Waste*

DEFINITIONS: continued

GLASS means a hard amorphous inorganic substance made by fusing silicates, and sometimes borates and phosphates, with certain basic oxides.

GLASS MELTING FURNACE means equipment using heat for the production of glass. A unit comprising a refractory vessel in which raw materials are charged, melted at high temperature, refined, and conditioned to produce molten glass.

GLOSS REDUCER means a coating that is applied to a plastic part solely to reduce the shine of the part. A gloss reducer shall not be applied at a thickness of more than 0.5 mils of coating solids.

GREENHOUSE GASES (GHGs) means the air contaminant that is the aggregate group of six greenhouse gases: Carbon dioxide (CO₂), Methane (CH₄), Nitrous oxide (N₂O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur hexafluoride (SF₆). To represent an amount of GHGs emitted, the term Carbon Dioxide Equivalent (CO₂e) shall be used.

HALOGENATED ORGANIC COMPOUND is any compound of carbon (excluding metallic carbides or carbonates and ammonium carbonate) combined with a halogen. For purposes of 310 CMR 7.12 and 7.18, halogenated organic compounds (HOC) are the following specific chemicals: methylene chloride, perchloroethylene (tetrachloroethylene), CFC-11 (trichlorofluoromethane), CFC-12 (dichlorodifluoromethane), CFC-22 (chlorodifluoromethane), FC-23 (trifluoromethane), CFC-114 (dichlorotetrafluoroethane), and CFC-115 (chloropentafluoroethane).

HAND-FIRED FURNACE means any furnace in which fuel is manually placed directly on the hot fuel bed but does not mean stoves or fireplaces or other equipment used for the cooking of food.

HARDBOARD is a panel manufactured primarily from inter-felted ligno-cellulosic fibers that are consolidated under heat and pressure in a hot press.

HARDENER means an additive designed to promote a faster cure of coatings which cure by chemical cross-linking of the resin components.

HARDWOOD PLYWOOD is plywood whose surface layer is a veneer of hardwood.

HAZARDOUS AIR POLLUTANT (HAP) means an air contaminant designated by EPA under 42 U.S.C. 7412, as modified by EPA in 40 CFR Part 63, Subpart C (40 CFR 63.60 through 63.69). That list is incorporated by reference herein, together with all amendments and supplements thereto. A copy of the list is available from the Department.

HAZARDOUS WASTE means a waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical or infectious characteristics may cause, or significantly contribute to an increase in serious irreversible, or incapacitating reversible illness or pose a substantial present or potential hazard to human health, safety, or welfare or to the environment when improperly treated, stored, transported, used or disposed of, or otherwise managed, however, not to include solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under Section 402 of the Federal Water Pollution Control Act of 1967 as amended, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954. Hazardous waste shall include any waste which is listed, identified, or otherwise determined to be hazardous waste pursuant to 310 CMR 30.100.

HEAT RELEASE RATE means the steam generating unit design heat input capacity (in Btu per hour) divided by the furnace volume (in cubic feet); the furnace volume is that volume bounded by the front furnace wall where the burner is located the furnace side waterwall, and extending to the level just below or in front of the first row of convection pass tubes.

DEFINITIONS: continued

HEAT-RESISTANT COATING means a coating intended to withstand a temperature of at least 204°C (400°F), during normal use.

HEATSET OFFSET LITHOGRAPHIC PRINTING means offset lithographic process that requires heat to set or dry the ink.

HEATSET PRINTING means a process that requires heat to set or dry the ink.

HIGH BAKE coating means a coating which is designed to cure only at temperatures of more than 90°C (194°F).

HIGH BUILD PRIMER/SURFACER means a coating applied with a wet film thickness of ten mils or more prior to the application of a topcoat for purposes of providing corrosion resistance, adhesion of subsequent coatings, or a moisture barrier, or promoting a uniform surface necessary for filling in surface imperfections.

HIGH GLOSS COATING means any coating which achieves at least 85% reflectance on a 60° meter when tested by ASTM D 523-14.

HIGH OCCUPANCY VEHICLE (HOV) means an automobile, van or bus with one or more passengers in addition to the driver, including taxi's with a single passenger.

HIGH OCCUPANCY VEHICLE LANE means a lane of travel designated for the sole use of high occupancy vehicles.

HIGH PRECISION PRODUCTS means products for which contamination must be minimized in accordance with a customer or other specification including but not limited to:

- (a) Products for use in extreme environments;
- (b) Products covered by rigorous military or commercial specifications that require extremely accurate and quality controlled manufacturing; and
- (c) Products with quality standards that do not allow for potential excess contamination.

HIGH VOLUME LOW PRESSURE (HVLP) SPRAY APPLICATION means spray equipment used to apply a coating by means of a spray gun which operates between 0.1 and 10 Psig air pressure.

HIGH-PERFORMANCE ARCHITECTURAL COATING means a coating used to protect architectural subsections and which meets the requirements of the American Architectural Manufacturers Association's publication number *AAMA 2604-17 (Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels)* or *2605-17 (Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels)*.

HIGH-PRECISION OPTICS for purposes of 310 CMR 7.18(31), means the optical elements used in electro-optical devices that are designed to sense, detect, or transmit light energy, including specific wavelengths of light energy and changes of light energy levels.

HIGH-TEMPERATURE COATING means a coating that is certified to withstand a temperature of 1000°F for 24 hours.

IMPACT-RESISTANT COATING means a coating designed to resist chipping caused by road debris.

IN GAS SERVICE for the purpose of 310 CMR 7.18(19), means any component which contacts process fluid that is in the gaseous state under operating conditions.

IN LIGHT LIQUID SERVICE for the purpose of 310 CMR 7.18(19), means a component is in contact with a fluid containing greater than 10% by weight light liquid.

DEFINITIONS: continued

IN VOC SERVICE for the purpose of 310 CMR 7.18(19), means equipment handling 10% or greater VOC by weight is subject to 310 CMR 7.00.

INCINERATOR means any article, machine, equipment, contrivance, structure, or part of a structure, used primarily for the reduction of combustible waste(s) by burning.

- COMMERCIAL or INDUSTRIAL INCINERATORS means any incinerator operated by any commercial or industrial establishment primarily for the reduction of refuse generated by said establishment.
- DOMESTIC INCINERATOR means any incinerator used primarily for the reduction of domestic refuse generated on the premises.
- FLUE-FED INCINERATOR means any incinerator provided with a single flue which serves as both the charging chute and the duct for conduction of the products of combustion to the ambient air space.
- HAZARDOUS WASTE INCINERATOR means any incinerator used for the reduction of hazardous waste except infectious waste as regulated by the Department of Public Health pursuant to the provisions of 105 CMR 130.354.
- MODULAR INCINERATOR means any incinerator of a standard design and identifiable by the manufacturer's markings.
- MUNICIPAL INCINERATOR means any incinerator operated by any person primarily for the reduction of refuse generated by the public at large.
- SPECIAL INCINERATOR means any incinerator designed for a special purpose such as but not limited to burning of biological, pathological, or toxicological refuse or for a specific facility.

INDUSTRIAL CLEANING SOLVENT for purposes of 310 CMR 7.18(31), means liquid used to clean parts, products, tools, machinery, equipment, and general work areas, including cleanup solutions and degreasing agents. Industrial cleaning solvent does not include janitorial supplies used for cleaning offices, bathrooms or other similar areas. Industrial cleaning solvent does not include solvent used in cold cleaning degreasing, vapor degreasing, or conveyORIZED degreasing at a facility subject to 310 CMR 7.18(8).

INTERNAL FLOATING ROOF means a cover in a fixed roof tank which rests upon or is floated upon the petroleum liquid being contained, and is equipped with a closure seal or seals to close the space between the cover's edge and the tank shell.

INTERIOR BASE COAT means any coating applied by roller coater or spray to the metal sheets for three piece cans to provide a protective lining between the can metal and the product.

INTERIOR BODY SPRAY means any coating sprayed on the interior of the can body to provide a protective film between the product and the can.

ISOLATE means, for the purposes of 310 CMR 7.24(6), to take out of service one or more components of a Stage II system so that the remainder of the Stage II system operates as required by the terms and conditions of the system's currently applicable Executive Order.

KNIFE COATING means the application of any coating to a substrate by means of drawing the substrate beneath a thin blade that spreads the coating evenly over the full width of the substrate.

LARGE APPLIANCE SURFACE COATING means the coating of doors, cases, lids, panels, and interior support parts of residential and commercial washers, dryers, ranges, refrigerators, freezers, water-heaters, dishwasher, trash compactors, air conditioners, and other associated products.

LEAK for the purpose of 310 CMR 7.18(19) and 7.24(8), means the emission of a volatile organic compound concentration greater than or equal to 10,000 parts per million by volume (ppmv) as shown by monitoring or dripping of process fluid.

LEAKING COMPONENT for the purpose of 310 CMR 7.18(19) and 7.24(8), means any component which has a leak.

7.00: continued

LEAN BURN ENGINE means a stationary reciprocating internal combustion engine in which the amount of O₂ in the engine exhaust gases is 1.0% or more.

LEASE CUSTODY TRANSFER means the transfer of produced crude oil and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other form of transportation.

LEATHER SURFACE COATING means the coating of a leather substrate to impart properties that are not initially present, such as strength, stability, water or chemical repellency, or appearance.

LETTERPRESS PRINTING means a method where the image area is raised relative to the non-image area and the ink is transferred to the substrate directly from the image surface.

LIGHT-DUTY TRUCK means any motor vehicle rated at 8500 pounds gross vehicle weight or less which is designed primarily for the transportation of property.

LIGHT LIQUID for the purpose of 310 CMR 7.18(19), means a fluid with a vapor pressure greater than 0.3 kiloPascals (0.044 psi) at 20°C.

LIGHTERING OR LIGHTERING OPERATION means the offshore transfer of a bulk liquid cargo from one marine tank vessel to another vessel.

LIQUID-MOUNTED SEAL means a primary seal mounted in continuous contact with the liquid between the tank wall and the floating roof around the circumference of the tank.

LITHOGRAPHIC PRINTING means a printing process in which the image and non-image areas of the plate are on the same geometric plane. The image area is oil-receptive (hydrophobic) and the non-image area is water receptive (hydrophilic).

LOADING EVENT means an occurrence beginning with the connecting of marine terminal storage tanks to a marine tank vessel by means of pipes or hoses followed by the transferring of organic liquid cargo from the storage tank into the tank vessel and ending with the disconnecting of the pipes or hoses; or any other means of admitting any other organic liquid into marine vessel cargo tanks.

LOWEST ACHIEVABLE EMISSION RATE (LAER) means, for any source, the more stringent rate of emissions based on the following:

- (a) The most stringent emissions limitation which is contained in any state SIP for such class or category of stationary source, unless the owner or operator of the proposed stationary source demonstrates that such limitations are not achievable; or
- (b) The most stringent emissions limitation which is achieved in practice by such class or category of stationary source. This limitation, when applied to a modification, means the lowest achievable emissions rate for the new or modified emissions units within a stationary source.

In no event shall LAER allow a proposed new or modified stationary source to emit any pollutant in excess of the amount allowable pursuant to applicable New Source Performance Standards of 40 CFR Part 60.

MAGNET WIRE INSULATION SURFACE COATING means the application of electrically insulating varnish or enamel to aluminum or copper wire for use in electrical machinery.

7.00: continued

MAKEUP SOLVENT means any solvent(s) which is(are) added to printing inks to reduce viscosity or otherwise modify properties.

MALFUNCTION means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

MARINE TANK VESSEL means any marine vessel which is capable of carrying liquid bulk cargo in tanks.

MARINE TERMINAL means any facility or structure constructed to load or unload organic liquid bulk cargo into or out of marine tank vessels.

MARINE VESSEL means any tugboat, tanker, freighter, barge, passenger ship, or any other boat, ship, or watercraft except those used primarily for recreation.

MASK COATING means thin film coating applied through a template to coat a small portion of a substrate.

MATERIAL RECOVERY SECTION means a vacuum devolatilizer system, styrene recovery system, or other system of equipment which separates styrene monomer and/or reaction by-products from polystyrene, or separates styrene monomer from reaction by-products.

MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY means the standard established by the Administrator pursuant to the Clean Air Act, §§ 112 and 129 (42 U.S.C. 7412 and 42 U.S.C. 7429), that represents the maximum degree of reduction in emissions of hazardous air pollutants determined, after examination of economics, health, and environmental impacts, to be achievable for new or existing sources in the category or sub-category to which the emission standard applies. MACT Standards may be determined by the Department pursuant to 40 CFR 63 Subpart B.

MAXIMUM DESIGN CAPACITY means the rated design capacity, operating rate or production rate of an emission unit as determined by the manufacturer of that unit or other method approved by the Department.

MEDICAL DEVICE for purposes of 310 CMR 7.18(31), means an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent or other similar article, including any component or accessory that is:

- (a) intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of diseases;
- (b) intended to affect the structure or any function of the body; or
- (c) defined in the National Formulary or the United States Pharmacopoeia or any supplement to it.

METAL CAN SURFACE COATING means the coating of two or three piece metal cans.

METAL COIL SURFACE COATING means the coating of any flat metal sheet or strip that comes in rolls or coils.

7.00: continued

METAL FURNITURE SURFACE COATING means the coating of any metal parts which will be assembled with other metal, wood, fabric, plastic, or glass parts to form a furniture piece.

METALLIC COATING means a coating that contains more than five grams total of pure elemental metal or a combination of elemental metals per liter of coating as applied.

MILITARY SPECIFICATION COATING means a coating that has a formulation approved by a United States military agency for use on military equipment.

MINOR MODIFICATION means, for the purposes of 310 CMR 7.24(6), the re-installation repair or replacement of one or more Stage II System components that is not substantial including, but not limited to: less than 50% of the motor vehicle fuel dispensers (*e.g.*, one of four dispensers); a central vacuum unit of a Healy 400 ORVR nozzle system or Healy 600 nozzle system; ball float extractor valve housings; dispenser mounted vapor pumps; or “screw-on” spill or dry break buckets. If the re-installation, repair or replacement of Stage II System components occurs at a motor vehicle fuel dispensing facility with two or less dispensers, the re-installation, repair or replacement of only one of the motor vehicle fuel dispensers shall be a Minor Modification.

MISCELLANEOUS METAL PARTS AND PRODUCTS means farm machinery (harvesting, fertilizing, and plant machines, tractors, combines, lawn mowers, rototillers, *etc.*); small appliances; commercial and office equipment (computers and auxiliary equipment, typewriters, calculators, vending machines, *etc.*); fabricated metal products (metal doors, frames, *etc.*); industrial machinery (pumps, compressors, conveyor components, fans, blowers, transformers, *etc.*); and any other metal parts or products which are coated under Standard Industrial Classification Codes of Major Groups 33, 34, 35, 36, 37, 38, and 39. The use of autobody anti-chip coatings and underbody plastisols in automobile and light-duty truck surface coating is considered coating of miscellaneous parts and products. This definition does not include metal cans, flat metal sheets, and strips in the form of rolls or coils; magnet wire for use in electrical machinery; metal furniture; large appliances; automobile and light duty trucks, automobile refinishing; exterior coating of assembled entire aircraft or assembled entire metal marine vessels; or customized topcoating of automobiles and trucks, if production is less than 35 vehicles per day.

MIST means any liquid aerosol formed by the condensation of vapor or by the atomization of liquids.

MOBILE EQUIPMENT means, for the purposes of 310 CMR 7.18(28), any equipment that is physically capable of being driven or drawn upon a highway including, but not limited to, construction vehicles (such as mobile cranes, bulldozers and concrete mixers); farming equipment (such as tractors and plows); hauling equipment (such as truck trailers, utility bodies and camper shells) and miscellaneous equipment (such as street sweepers and golf carts).

MOLD-SEAL COATING means the initial coating applied to a new mold or a repaired mold to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold.

MONITOR for the purpose of 310 CMR 7.18(19), means to measure volatile organic compound concentration by the appropriate EPA reference method.

MONTHLY THROUGHPUT means the total volume of motor vehicle fuel that is loaded into, or dispensed from, all motor vehicle fuel storage tanks at a motor vehicle fuel dispensing facility during a month. Monthly throughput is calculated by summing the volume of motor vehicle fuel loaded into, or dispensed from, all motor vehicle fuel storage tanks at a motor vehicle fuel dispensing facility during the current day, plus the total volume of motor vehicle fuel loaded into, or dispensed from, all motor vehicle fuel storage tanks at a motor vehicle fuel dispensing facility during the previous 364 days, and then dividing that sum by 12.

MOTOR VEHICLE means any equipment or mechanical device propelled primarily on land by power other than muscular power but does not mean railroad and railway engines and cars, vehicles operated by the system known as trolley motor or trackless trolley, or devices used for domestic purposes.

7.00: continued

MOTOR VEHICLE BEDLINER means a multi-component coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to a cargo bed after the application of topcoat to provide additional durability and chip resistance.

MOTOR VEHICLE CAVITY WAX means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied into the cavities of the vehicle primarily for the purpose of enhancing corrosion protection.

MOTOR VEHICLE DEADENER means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to selected vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment.

MOTOR VEHICLE FUEL means any petroleum distillate having a Reid Vapor Pressure of more than four pounds per square inch as determined by ASTM Method D323 and which is used primarily to power motor vehicles. This definition includes, but is not limited to, gasoline and mixtures of simple alcohols and gasoline.

MOTOR VEHICLE FUEL DISPENSING FACILITY means any facility where motor vehicle fuel is dispensed into motor vehicle fuel storage tanks, motor vehicle fuel-powered equipment, or portable containers from a storage tank with a capacity of 250 gallons or more.

MOTOR VEHICLE GASKET/SEALING MATERIAL means a fluid, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to coat a gasket or replace and perform the same function as a gasket. Automobile and light-duty truck gasket/gasket sealing material includes room temperature vulcanization (RTV) seal material.

MOTOR VEHICLE LUBRICATING WAX/COMPOUND means a protective lubricating material, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to vehicle hubs and hinges.

MOTOR VEHICLE PARKING SPACE means any space which is used for the purpose of parking motor vehicles (whether or not demarcated as such), and whether or not a fee has been charged for its use; except those parking spaces used by residents, on street parking spaces, parking spaces designated by the City of Boston as parking for residents only shall not be considered as motor vehicle parking spaces. Nor shall parking spaces used for the purpose of the temporary storage of motor vehicles for sale, or parking spaces owned or operated by the Massachusetts Bay Transit Authority and used solely by transit users be considered motor vehicle parking spaces.

MOTOR VEHICLE SEALER means a high viscosity material, used at a facility that is not an automobile or light-duty truck assembly coating facility, generally, but not always, applied in the paint shop after the body has received an electrodeposition primer coating and before the application of subsequent coatings (e.g., primer-surfacer). The primary purpose of automobile and light-duty truck sealer is to fill body joints completely so that there is no intrusion of water, gases or corrosive materials into the passenger area of the body compartment. Such materials are also referred to as sealant, sealant primer, or caulk.

MOTOR VEHICLE TRUNK INTERIOR COATING means a coating, as used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to the trunk interior to provide chip protection.

MOTOR VEHICLE UNDERBODY COATING means a coating, used at a facility that is not an automobile or light-duty truck assembly coating facility, applied to the undercarriage or firewall to prevent corrosion and/or provide chip protection.

MULTI-COLORED COATING means a coating which exhibits more than one color when applied, and is packaged in a single container and applied in a single coat.

MULTI-COMPONENT COATING means a coating requiring the addition, before application, of a separate reactive resin, commonly known as a catalyst or hardener, in order to form an acceptable dry film.

7.00: continued

MW means megawatt or a unit of electrical power equal to one million watts.

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) OR FEDERAL AMBIENT AIR QUALITY STANDARDS means the ambient air quality standards for criteria pollutants adopted by the Administrator pursuant to the Clean Air Act § 109 (42 U.S.C. § 7410) and codified at 40 CFR Part 50 as in effect on November 17, 2016.

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS) means those standards adopted by the EPA and contained in the CFR Title 40, Part 61 as of June 20, 2014.

NATURAL DRAFT OPENING means any permanent opening in an enclosure that remains open during operation of the emission unit and is not connected to a duct in which a fan is installed.

NATURAL FINISH HARDWOOD PLYWOOD PANELS means panels whose original grain pattern is enhanced by essentially transparent finishes which are frequently supplemented by fillers and toners.

NEIGHBORHOOD. A census block group as defined by the United States Census Bureau, excluding people who live in college dormitories and people who are under formally authorized, supervised care or custody, including federal, state or county prisons.

NEW SOURCE PERFORMANCE STANDARDS (NSPS) means Standards of Performance for New Stationary Sources adopted by the U.S. Environmental Protection Agency and contained in 40 CFR 60, and subsequent revisions as specified in the Regulations. Any emission testing to be compared with NSPS must be conducted in accordance with applicable procedures as specified in 40 CFR 60, or by another method which has been demonstrated to the satisfaction of the Department as being equivalent.

NEWSPAPER PRINTING is a non-heatset web offset lithographic process.

NO-BUILD ALTERNATIVE means the project roadway, the appurtenant highway network and roadway operational characteristics that would exist if the project were not built and assuming the level of development and services (*e.g.*, transit) which physically exist at the time of analysis or for which construction has commenced and completion and full utilization is expected prior to the projected completion date of the project under review.

NOISE means sound of sufficient intensity and/or duration as to cause or contribute to a condition of air pollution.

NONATTAINMENT AREA means an area designated by the EPA as not meeting the National Ambient Air Quality Standard for a criteria pollutant pursuant to the Clean Air Act, § 107 (42 U.S.C. 7407) and 40 CFR Part 81. The current Massachusetts attainment status is published at 40 CFR 81.322, Subpart C - Section 107: *Attainment Status Designations*.

NONATTAINMENT REVIEW is plan review for major sources and major modifications as defined and described in 310 CMR 7.00: *Appendix A*.

NON-CRITERIA POLLUTANT is any air contaminant that is not listed as a criteria pollutant.

7.00: continued

NON-HEATSET OFFSET LITHOGRAPHIC PRINTING means an offset lithographic process that does not require heat to set or dry the ink. UV-cured and electron beam-cured inks are considered non-heatset.

NORTHEAST STATES means Maine, New Hampshire, Vermont, Massachusetts, New York, Connecticut, Rhode Island, and New Jersey.

ODOR means that property of gaseous, liquid, or solid materials that elicits a physiologic response by the human sense of smell.

OFF-PEAK PARKING SPACES means motor vehicle parking spaces not available for parkers between the hours of 7:30 A.M. and 9:30 A.M. on weekdays.

OFFSET LITHOGRAPHIC PRINTING means a printing process that transfers the printing image to an intermediary surface, which, in turn, transfers the image to the printing substrate.

OFF-STREET PARKING SPACES means parking spaces on private or public property adjacent to and/or with access to but not on a public or private roadway.

ONE-COMPONENT COATING means a coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component.

OPACITY means that characteristic of matter which renders it capable of interfering with the transmission of rays of light and causes a degree of obscuration of an observer's view.

OPAQUE STAIN means all stains that contain pigments, but are not classified as semitransparent stains, and includes stains, glazes and other opaque material applied to wood surfaces.

OPEN BURNING means burning under such conditions that the products of combustion are emitted directly to the ambient air space and are not conducted thereto through a stack, chimney, duct, or pipe. Open burning includes above or underground smoldering fires.

OPTICAL COATING means a coating applied to an optical lens.

ORGANIC LIQUID for the purpose of 310 CMR 7.24(8), means any liquid organic material having a vapor pressure of equal to or greater than 1.5 pounds per square inch absolute under actual storage conditions.

ORGANIC MATERIAL means any chemical compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbonates, metallic carbides and ammonium carbonates.

OVERVARNISH means a coating applied directly over ink to reduce the coefficient of friction, to provide gloss and/or to protect the finish against abrasion and corrosion.

OWNER/OPERATOR means any person, any department or instrumentality of the federal government, or any public or private group which:

- (a) has legal title, alone or with others, of a facility; or
- (b) has the care, charge, or control of a facility.

OXIDES OF NITROGEN(NO_x) means all oxides of nitrogen including, but not limited to, nitrogen oxide and nitrogen dioxide.

OXYGENATE means any substance which, when added to gasoline, increases the amount of oxygen in that gasoline blend. Lawful use of any such substance or combination of substances must occur in compliance with Section 211 (f)(1) and 211 (m) of the Clean Air Act, or be permitted under a waiver granted by the US Environmental Protection Agency Administrator under the authority of section 211 (f)(4) of the Clean Air Act.

7.00: continued

OXYGENATED GASOLINE means gasoline with an oxygen content of at least 2.7% but no more than 2.9% of oxygen by weight.

OXYGENATED GASOLINE CONTROL AREA means any community located within the Metropolitan Boston Air Pollution Control District, the Merrimac Valley Air Pollution Control District, and the following specific communities: Bellingham, Berlin, Carver, Foxborough, Franklin, Halifax, Harvard, Hopedale, Kingston, Lakeville, Lancaster, Mansfield, Medway, Mendon, Middleborough, Milford, Norton, Plymouth, Plympton, Raynham, Shirley, Townsend, Upton, and Wrentham.

OXYGENATED GASOLINE CONTROL PERIOD means the period beginning November 1st of a calendar year and continuing through the last day of February of the subsequent calendar year.

OZONE SEASON means the period beginning May 1st of a calendar year and ending on September 30th of the same year.

PACKAGING ROTOGRAVURE PRINTING or PACKAGING FLEXOGRAPHIC PRINTING means rotogravure or flexographic printing upon paper, paper board, metal foil, plastic films, and other substrates which are, in subsequent operations, formed into packaging products and labels for articles to be sold.

PAINT SPRAY BOOTH means a structure housing automatic or manual spray application equipment where coating is applied.

PAN-BACKING COATING means a coating applied to the surface of pots, pans, or other cooking implements that are exposed directly to a flame or other heating elements.

PAPER, FILM AND FOIL SURFACE COATING means the application of a continuous layer of coating across the width or any portion of the width of a paper, film or foil substrate to:

- (a) create a functional or protective layer;
- (b) saturate a substrate for lamination; or
- (c) provide adhesion between two substrates for lamination,

for a variety of decorative and functional products including, but not limited to, adhesive tapes, adhesive labels, metal foil, decorated, coated and glazed paper, book covers, office copier paper (zinc oxide coated), carbon paper, typewriter ribbons, and photographic films. Coating performed on or in-line with any offset lithographic, screen, letterpress, flexographic, retrogravure, or digital printing press is part of a printing process and is not part of the paper, film, and foil surface category.

PARK AND FLY PARKING SPACES means privately owned and operated off-street parking spaces located in the East Boston Parking Freeze Area provided for use by Logan Airport air travellers and visitors.

PARKING FREEZE means a limitation on the number of parking spaces available for specific uses within a specific geographic area.

PARKING SPACE means that area of public or private property that is designated or used for the parking or storage of one motor vehicle, excluding areas used for the loading and the unloading of goods.

PARTICULATE means any material that exists in a finely divided form as a liquid or solid at ambient air temperatures, humidity and pressures.

PARTICULATE MATTER (PM) means any airborne finely divided solid or liquid material, other than uncombined water.

7.00: continued

PARTICULATE MATTER EMISSIONS means all finely divided solid or liquid material, other than uncombined water, emitted into the ambient air, as measured by applicable reference methods, or equivalent or alternative specified methods, specified by EPA in the CFR, or by test methods specified by DEP and approved by EPA.

PEAK HOUR means a one hour period where the highest volume of traffic is utilizing any given roadway segment.

PENETRATING PRIME COAT means an application of low viscosity liquid asphalt to an absorbent surface used to prepare an untreated base for an asphalt surface.

PERSON means any individual, public or private partnership, association, firm, syndicate, company, trust, corporation, department or instrumentality of the federal or state government, political subdivision of the commonwealth, authority, bureau, agency, law enforcement agency, fire fighting agency, or any other entity recognized by law as the subject of rights and duties.

PETROLEUM HEATSET INK means an ink that is not a water-based, UV-cured, or electron beam-cured ink.

PETROLEUM LIQUIDS means crude oil, condensate and any finished or intermediate products manufactured or extracted in a petroleum refinery (through the petroleum refining process).

PIGMENTED COAT means opaque coatings that contain binders and colored pigments and are formulated to conceal the wood surface either as an undercoat or topcoat.

PLAN APPROVAL means the written approval by the Department of a comprehensive plan application or a limited plan application issued under 310 CMR 7.02(1).

PLASTIC PARTS are parts made from a substance that has been formed from a resin through the application of heat, pressure or both. They include, but are not limited to, plastic components for the following areas: automotive interior parts; automotive exterior parts, both flexible and rigid; business and office machine parts; medical equipment housings; entertainment equipment housings; toys; musical equipment housings; sporting goods; outdoor signs; architectural structures such as doors, floors and window frames; transportation equipment; and other miscellaneous plastic parts.

PLASTIC PARTS SURFACE COATING means the coating of a plastic part to impart properties that are not initially present, such as strength, stability, water or chemical repellency, resistance to EMI/RFI or appearance.

PLEASURE CRAFT means a vessel which is manufactured or operated primarily for recreational purposes, or leased, rented, or chartered to a person or business for recreational purposes. The owner or operator of such vessels shall be responsible for certifying that the intended use is for recreational purposes.

PLEASURE CRAFT SURFACE COATING means any marine coating, except unsaturated polyester resin (fiberglass) coatings, applied by brush, spray, roller, or other means to a pleasure craft.

PM10 OR PARTICULATE MATTER 10 means particulate matter with an aerodynamic diameter less than or equal to a nominal ten micrometers as measured by a federal reference method based on Appendix J of 40 CFR Part 50 and designated in accordance with 40 CFR Part 53 or by a federal equivalent method designated in accordance with 40 CFR Part 53.

PM10 EMISSIONS means finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal ten micrometers, or condensible substance, other than uncombined water, emitted to the ambient air, as measured by an applicable reference method, or equivalent or alternative method specified by DEP and approved by EPA.

7.00: continued

PM_{2.5} OR PARTICULATE MATTER 2.5 means particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers as measured by a federal reference method based on Appendix L of 40 CFR Part 50 and designated in accordance with 40 CFR Part 53 or by a federal equivalent method designated in accordance with 40 CFR Part 53.

PM_{2.5} EMISSIONS means finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers, or condensable substance, other than uncombined water, emitted to the ambient air, as measured by applicable reference methods, or equivalent or alternative methods, specified by EPA in the CFR or by test methods specified by DEP and approved by EPA.

POLLUTION PREVENTION means, for the purpose of 310 CMR 7.02(8)(a)2.b., using one or more materials (*e.g.*, coatings, inks, solvents, *etc.*) formulations, processes, work practices, design features, equipment specifications or any combination thereof, which reduce air emissions to the extent feasible.

POTENTIAL EMISSIONS OR POTENTIAL TO EMIT means the maximum capacity of a facility or a stationary source to emit any air contaminant or pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or stationary source to emit any air contaminant or pollutant, including air pollution control equipment and/or restrictions on hours of operation, or on the type or amount of material combusted, stored or processed, shall be treated as part of the design only if the limitation is specifically stated in the facility's or stationary source's plan approvals, emission control plans, operating permit, certifications, restricted emission status, notifications and applicable regulations, or in the case of *de minimis* sources, in records of actual emissions established and maintained at the facility or stationary source pursuant to 310 CMR 7.02(2)(b). Fugitive emissions, to the extent quantifiable, are included in determining the potential emissions or the potential to emit of a facility or stationary source; secondary emissions are not included.

PREFABRICATED ARCHITECTURAL COMPONENT COATINGS means coatings applied to metal parts and products that are to be used as an architectural structure.

PRESSURE RELIEF VALVE for the purpose of 310 CMR 7.18(19), means a safety relief device used in applications where the process pressure may exceed the maximum allowable working pressure of the vessel.

PRESSURE SENSITIVE TAPE means a flexible backing material with a pressure-sensitive adhesive coating on one or both sides of the backing. Examples include, but are not limited to, duct/duct insulation tape and medical tape.

PRETREATMENT COATING means a coating which contains no more than 12% solids, by weight, and at least ½% acid, by weight; is used to provide surface etching; and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

PRETREATMENT WASH PRIMER means the first coat applied to bare metal if solvent-based primers will be applied. This coating contains a minimum of 0.5% acid by weight, is necessary to provide surface etching, and is applied directly to bare metal surfaces to provide corrosion resistance.

PRETREATMENT WASH PRIMER for purposes of 310 CMR 7.18(11) and (21), means a coating which contains no more than 12% solids, by weight, and at least ½% acids, by weight; is used to provide surface etching; and is applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings.

PRIME COAT or PRIMER means a coating formulated to provide a firm bond between substrate and subsequent coats.

7.00: continued

PRIMER SEALER means a coating that improves the adhesion of the topcoat, provides corrosion resistance, promotes color uniformity, and resists penetration by the topcoat.

PRIMER SURFACER means a coating that fills in surface imperfections and builds a film thickness in order to allow sanding.

PRINCIPAL ORGANIC HAZARDOUS CONSTITUENT (POHC) means a specific hazardous waste constituent(s) which is listed in 310 CMR 30.160: *Hazardous Constituents* or otherwise specified by the Department, which is in a hazardous waste incinerator waste feed, and for which the Department determines that a performance standard shall apply. In determining whether a hazardous waste constituent shall be a POHC, the Department shall consider the degree of difficulty to incinerate (*e.g.*, heat of combustion, auto ignition temperature, *etc.*), concentration or mass in the waste feed, toxicity, and other factors as determined by the Department.

PRINTING PRESS means a printing production assembly, with the ability to print one or multiple colors, designed to produce a printed product.

PRINTING INK means any fluid or viscous mixture used in printing, impressing, or transferring an image onto a substrate.

PRINT PASTE means a viscous mixture containing a pigment or dye which is applied to a textile substrate as a decorative pattern or design.

PRINTED INTERIOR PANEL means a panel whose grain or natural surface is obscured by fillers and base coats upon which a simulated grain or decorative pattern is printed.

PROCESS WEIGHT PER HOUR means the total weight of all materials introduced into any specific process that may cause any emissions of particulate matter. Solid fuels charged are considered as part of the process weight, but liquid and gaseous fuels and combustion air are not. For a cyclical or batch operation, the process weight per hour is derived by dividing the total process weight by the number of hours in one complete operation from the beginning of any given process to the completion thereof, excluding any time during which the equipment is idle. For a continuous operation, the process weight per hour is derived by dividing the process weight for a typical period of time.

PRODUCTS OF INCOMPLETE COMBUSTION (PICs) means organic compounds in a hazardous waste incinerator flue gas other than principal organic hazardous constituents (POHCs).

PROJECT AREA means the geographical area defined by Executive Office of Environmental Affairs as the study area in its decision setting forth the scope of a project pursuant to 301 CMR 11.06: *ENF Review and Decision*.

PROJECT ROADWAY means the roadway which is enclosed (or proposed to be enclosed) within a tunnel or similar structure which is identified by the Executive Office of Environmental Affairs as falling within the project area in its determination issued pursuant to 301 CMR 11.06: *ENF Review and Decision*.

PUBLIC FACILITY means a facility wholly owned or operated by the Commonwealth; or by a city, town or governmental entity which is protected from the imposition of additional costs being assessed against such city, town or entity by M.G.L. c. 29, § 27C as amended (Proposition 2½).

PUBLICATION ROTOGRAVURE PRINTING or PUBLICATION FLEXOGRAPHIC PRINTING means rotogravure or flexographic printing upon paper which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, and other types of printed materials.

7.00: continued

QUARTERLY for the purpose of 310 CMR 7.18(19), means four times per year at 90-day intervals.

QUENCH AREA means a chamber where the hot metal exiting an oven is cooled by either a spray of water or a blast of air followed by water cooling.

RADIATION means any ionizing or non-ionizing, electromagnetic or particulate radiation or any sonic, infrasonic, or ultrasonic wave.

RADIATION EFFECT COATING for purposes of 310 CMR 7.18(31), means a material that prevents radar detection.

RADIOACTIVE MATERIAL means any material or materials in combination (solid, liquid, or gaseous) which emit(s) ionizing radiation.

REASONABLY AVAILABLE CONTROL TECHNOLOGY means the lowest emission limitation that a particular facility is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.

RECOVERY DEVICE means an individual unit of equipment including, but not limited to, an absorber, carbon adsorber, or condenser, capable of and used for the purpose of removing vapors and recovering liquids or chemicals.

RECYCLABLE MATERIAL

- (a) Recyclable material means any material that is used or reused or reclaimed.
- (b) Used or reused material means any material that is either:
 - 1. employed as an ingredient (including use as an intermediate) in an industrial process to make a product, except when distinct components of the material are recovered as separate end products; or
 - 2. employed in a particular function or application as an effective substitute for a commercial product.
- (c) Reclaimed material means any material that is processed to recover a useable product or that is regenerated.

RED COATING means a coating which meets all of the following criteria:

- (a) Yellow limit: the hue of hostaperm scarlet.
- (b) Blue limit: the hue of monastral red-violet.
- (c) Lightness limit for metallics: 35% aluminum flake.
- (d) Lightness limit for solids: 50% titanium dioxide white.
- (e) Solid reds: hue angle of -11 to 38 degrees and maximum lightness of 23 to 45 units.
- (f) Metallic reds: hue angle of -16 to 35 degrees and maximum lightness of 28 to 45 units.

These criteria are based on Cielab color space, 0/45 geometry. For spherical geometry, specular included, the upper limit is 49 units. The maximum lightness varies as the hue moves from violet to orange. This is a natural consequence of the strength of the colorants, and real colors show this effect.

REDUCER means a solvent added to dilute a coating, usually for the purpose of lowering its viscosity.

REFRIGERATED CHILLER means a device which is mounted above the water jacket and the primary condenser coils, consisting of secondary coils which carry a refrigerant to provide a chilled air blanket above the solvent vapor to reduce emissions from the degreaser bath. The chilled air blanket temperature measured at the centroid of the degreaser at the coldest point shall be no greater than 30% of the solvents boiling point measured in °F.

7.00: continued

REFUSE means any animal, vegetable, or mineral, solid, liquid, or gaseous waste. It includes, but is not limited to, rubbish, garbage, ashes, construction waste, industrial waste, commercial waste, demolition waste, agricultural waste, abandoned vehicles, and any unwanted or discarded material. It does not include hazardous waste.

REGENERATIVE CYCLE COMBUSTION TURBINE means any stationary combustion turbine which recovers heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine.

REGISTRAR means the Registrar of the Registry of Motor Vehicles.

REGISTRY means the Registry of Motor Vehicles.

REGULATED POLLUTANT means any air contaminant regulated under the Federal Clean Air Act, 42 U.S.C. 7401 *et seq.*, excluding pollutants regulated under 42 U.S.C. 7401, § 112.

REGULATED RECYCLABLE MATERIAL means any recyclable material which either

- (a) has a characteristic described in 310 CMR 30.120 through 30.125, or
- (b) is listed or otherwise described in 310 CMR 30.131 through 30.136, or
- (c) has been determined by the Department to be a hazardous waste pursuant to 310 CMR 30.144.

REID VAPOR PRESSURE is a standardized measure of the vapor pressure of a liquid in pounds per square inch absolute at 100°F as determined by ASTM Method D323.

REMOTE PARKING SPACES means any parking space (whether or not defined as a "motor vehicle parking space" for the purpose of 310 CMR 7.00) which serves end uses outside of a parking freeze area including, but not limited to, parking for airport use, for Downtown Boston parking, and for remote employee parking.

RENTAL MOTOR VEHICLE parking spaces means off-street parking spaces for rental/leased passenger motor vehicles at a facility owned, operated and/or leased by a motor vehicle rental company.

REPAIR for the purpose of 310 CMR 7.18(19), means to reduce the volatile organic compound concentration of a leaking component to below 10,000 ppmv as shown by monitoring.

REPAIR COATING means a coating used to recoat portions of a previously coated product which had sustained mechanical damage to the coating.

REPOWERING means the replacement of an emission unit with a new unit that is less polluting and more efficient than the unit which is being replaced.

RESIST COAT means a coating that is applied to a plastic part before metallic plating to prevent deposits of metal on portions of the plastic part.

RESPONSIBLE OFFICIAL means, in the case of:

- (a) a sole proprietorship - the sole proprietor.
- (b) a partnership - a general partner with the authority to bind the partnership.
- (c) a corporation or a nonprofit corporation - a president, secretary, treasurer, or a vice-president of the corporation in charge of a principal business function who has been duly authorized to bind the corporation pursuant to a corporate vote, or an employee of the corporation who has been duly authorized to bind the corporation pursuant to a corporate vote.
- (d) a municipality or other public agency - a principal executive officer or ranking elected official who is empowered to enter into contracts on behalf of the municipality or public agency.
- (e) a trust - a trustee or any other natural person authorized:
 1. to enter into contracts regarding the trust property;

7.00: continued

2. to bind the trust; or
 3. to encumber or dispose of the trust property.
- (f) a limited liability company - a person authorized pursuant to M.G.L. c. 156C, § 24 and the limited liability company's operating agreement to bind the company and all the members.

RESTRICTED USE PARKING for the purpose of 310 CMR 7.30, means parking spaces which are provided by Massport for use by Logan Airport air travellers and visitors for free when commercial parking space demand exceeds the supply of on-Logan airport commercial parking spaces, and which are not otherwise available for use by Logan Airport air travellers and visitors; RESTRICTED USE PARKING for the purpose of 310 CMR 7.33, means parking spaces which are provided for free when motor vehicle parking space demand exceeds the supply of motor vehicle parking spaces in the South Boston Parking Freeze area.

RICH BURN ENGINE means any stationary reciprocating internal combustion engine that is not a lean burn engine.

ROLL COATING means the application of a coating to a substrate by means of hard rubber or steel rolls.

ROLL PRINTING means the application of decorative print, words, designs, or pictures to a substrate by means of hard rubber or steel rolls each with only partial coverage of the substrate.

ROLLER PRINTING means rotogravure printing on a textile substrate.

ROTARY SCREEN PRINTING means the application of a decorative print, words, designs, or pictures to a textile substrate by means of a cylindrical, metal screen.

ROTOGRAVURE PRINTING means the application of words, designs and pictures to a substrate by means of a roll printing technique which involves an intaglio or recessed image areas in the form of cells.

ROUTINE MAINTENANCE means, for the purposes of 310 CMR 7.24(6), the regular re-installation, repair or replacement of one or more Stage II System components including, but not limited to: hoses; nozzles; breakaways; swivels; hose retractors; bucket plow rings; "slip-on" spill or dry break buckets; "O" rings and seals; submersible pumps or suction pipes; fill adaptors; fill tubes; vapor adaptors; fill and vapor caps; drain valves; monitor caps; or riser caps.

SAFETY-INDICATING COATING means a coating that changes physical characteristics, such as color, to indicate unsafe conditions.

SEALER means a coating formulated and applied to prevent subsequent coatings from being absorbed into the substrate, or to prevent harm to subsequent coatings by materials in the substrate.

SECONDARY EMISSIONS means emissions which would occur as a result of the construction or operation of a major stationary source/facility or major modification but do not come from the major stationary source/facility or major modification itself. Secondary emissions must be specific, well defined, quantifiable, and impact the same general areas as the facility which causes the secondary emissions. Secondary emissions may include, but are not limited to:

- emissions from motor vehicles, ships or trains going to or from the major stationary source/facility, and
- emissions from any offsite support facility which would not otherwise be constructed, or increase its emissions as a result of the construction or operation of the major stationary source/facility or major modification.

SECRETARY means the Secretary of Transportation and Construction.

7.00: continued

SEMI-TRANSPARENT STAIN means a coating which is formulated to change the color of the substrate but not conceal the substrate.

SHEET-FED means a printing operation in which the substrate is fed to the printing press in individual sheets.

SHOCK-FREE COATING means a coating applied to electrical components to protect the user from electric shock. The coating has characteristics of being of low capacitance and high resistance, and having resistance to breaking down under high voltage.

SILICONE-RELEASE COATING means any coating which contains silicone resin and is intended to prevent food from sticking to metal surfaces such as baking pans.

SIMPLE CYCLE COMBUSTION TURBINE means any stationary combustion turbine which does not recover heat from the combustion turbine exhaust gases to heat water or generate steam.

SINGLE COAT means a single film of coating applied directly to the substrate omitting any primer application.

SINGLE-OCCUPANT COMMUTER VEHICLE means a motor-powered vehicle with four or more wheels with capacity for a driver plus one or more passengers which is used by a commuter traveling alone to and/or from work or classes and is not customarily required to be used in the course of his or her employment, or studies.

SINGLE-STAGE TOPCOAT means a topcoat consisting of only one coating.

SMALLER EMPLOYERS means any person or entity who employs between 50 and 250 employee commuters who are located within an industrial or office park and are within walking distance of each other.

SMOKE means the visible aerosol, which may contain fly ash, resulting from combustion of materials but does not mean condensed water vapor.

SOAP means cleansing agents made of the alkali metal salts of fatty acids having from ten to 18 carbon atoms.

SOLAR-ABSORBENT COATING means a coating which has as its prime purpose the absorption of solar radiation.

SOLID-FILM LUBRICANT means a very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene (PTFE), or other solids that act as a dry lubricant between faying surfaces.

SOLIDS as used in 310 CMR 7.18, means the volume (in gallons) of solid material in a coating, ink, or other organic material as determined by EPA Test Method 24:40 CFR 60: *Appendix A* (volume of coating minus volume of carrier such as photochemically reactive and or non-photochemically reactive solvents and water) or as provided by the coating manufacturer.

SOLVENT means a substance that is used to dissolve or dilute another substance; this term includes, but is not limited to, solvers, viscosity reducers, degreasing agents or cleaning agents.

SOLVENT METAL DEGREASING means the process of cleaning metal surfaces by using a volatile organic compound:

- Cold Cleaning Degreasing means the batch process of solvent metal cleaning by spraying, brushing, flushing or immersion while maintaining the solvent below its boiling point. Wipe cleaning is not included in this definition.

7.00: continued

- Conveyorized Degreasing means the continuous process of solvent metal cleaning by operating with either cold or vaporized solvents.
- Vapor Degreasing means the process of solvent metal cleaning by condensing hot solvent vapor on the colder metal parts.

SOUND means the phenomenon of alternative increases and decreases in the pressure of the atmosphere, caused by radiations having a frequency range of from 20 to 20,000 cycles per second, that elicits a physiologic response by the human sense of hearing.

SPACE HEATER means a heating device that is used for the direct heating of the area in and adjacent to the area in which the device is located.

- Used Oil Fuel Fired Space Heater means a space heater that is capable of burning used oil fuel.

SPECIAL AND EXTREME SOLVENT METAL CLEANING means the use of degreasers:

- (a) To clean metal parts used in the manufacturing and rework of electronic parts, assemblies, boxes, wiring harnesses, sensors and connectors used in aerospace service;
 - (b) To clean metal parts used in the manufacturing of ozone, nitrous oxide, fluorine, chlorine, bromine, halogenated compounds, or oxygen in concentrations greater than 23%;
- or
- (c) To clean metal parts exposed to ozone, nitrous oxide, fluorine, chlorine, bromine, halogenated compounds, or oxygen in concentrations greater than 23%.

SPECIALTY COATING means a product which is necessary due to unusual job performance requirements. These coatings or additives include, but are not limited to, adhesion promoters, uniform finish blenders, elastomeric materials, impact resistant coatings, underbody coatings, weld through primers, gloss flatteners, bright metal trim repair, and anti-glare/safety coatings.

SPECIALTY PRINTING means all gravure and flexographic operations which print a design or image, excluding packaging rotogravure printing, packaging flexographic printing, publication rotogravure printing, and publication flexographic printing. Specialty printing operations include, but are not limited to, printing on paper cups and plates, patterned gift wrap, wall paper, and floor coverings.

SPLASH FILLING means the filling of a tank truck or stationary tank through a pipe or hose whose discharge opening is above the surface level of the liquid in the tank being filled.

STAGE I CARB ENHANCED VAPOR RECOVERY (EVR) COMPONENT or EVR COMPONENT as used in 310 CMR 7.24(3), means a component identified in any of the Executive Orders listed in 310 CMR 7.24(3)(c)1.: *Table 1.* and 310 CMR 7.24(3)(c)1.: *Table 2.*

STAGE I CARB ENHANCED VAPOR RECOVERY (EVR) SYSTEM as used in 310 CMR 7.24(3), means a vapor balance system certified by CARB pursuant to a Phase I Executive Order to prevent discharge to the atmosphere of at least 98% by weight of vapors displaced during the transfer of motor vehicle fuel from a tank truck to a motor vehicle fuel storage tank.

STAGE I COMPONENT ENHANCED VAPOR RECOVERY (EVR) SYSTEM as used in 310 CMR 7.24(3), means:

- (a) for an underground storage tank, a vapor balance system constructed from components identified in any one of the Phase I Executive Orders listed in 310 CMR 7.24(3)(c)1.: *Table 1.* including, but not be limited to, the following components: spill containment buckets, drain valves, dust caps, rotatable product adaptors, riser adaptors, drop tubes, rotatable vapor adaptors, tank gauge ports, and pressure/vacuum vent valves; and
- (b) for aboveground storage tanks, a vapor balance system constructed from components identified in any of the Phase I Executive Orders and applicable Standing Loss Control Executive Orders listed in 310 CMR 7.24(3)(c)1.: *Table 2.*

STAGE I MINOR MODIFICATION as used in 310 CMR 7.24(3), means the installation, repair or replacement of one or more Stage I system components that is not substantial including, but not limited to, product drop tubes; overfill prevention devices; "screw-on" spill containment and dry break buckets.

7.00: continued

STAGE I NON-ENHANCED VAPOR RECOVERY SYSTEM as used in 310 CMR 7.24(3), means a vapor balance system certified by CARB to prevent discharge to the atmosphere of at least 95% by weight of vapors displaced during the transfer of motor vehicle fuel from a tank truck to a motor vehicle fuel storage tank.

STAGE I ROUTINE MAINTENANCE as used in 310 CMR 7.24(3), means the regular installation, repair or replacement of one or more Stage I system components including, but not limited to, bucket plow rings; "slip-on" spill containment and dry break buckets; "O" rings and seals; product adaptors; vapor adaptors; product caps; vapor caps; monitor caps; riser caps; drain valves; and pressure/vacuum vent valves.

STAGE I SUBSTANTIAL MODIFICATION as used in 310 CMR 7.24(3), means, the installation, repair or replacement of one or more Stage I system components requiring excavation below a shear valve or tank pad including, but not limited to, vent piping; vapor space tie bar; dual-point or co-axial Stage I systems; or motor vehicle fuel storage tanks.

STAGE I SYSTEM means a Stage I CARB EVR System, a Stage I Component EVR System, or a Stage I Non-enhanced vapor recovery system.

STAGE II MINOR MODIFICATION means, for the purposes of 310 CMR 7.24(6), the re-installation, repair or replacement of one or more Stage II System components that is not substantial including, but not limited to, less than 50% of the motor vehicle fuel dispensers (*e.g.*, one of four dispensers); a central vacuum unit of a Healy 400 ORVR nozzle system or Healy 600 nozzle system; ball float extractor valve housings; dispenser mounted vapor pumps; or "screw-on" spill or dry break buckets. If the re-installation, repair or replacement of Stage II System components occurs at a motor vehicle fuel dispensing facility with two or less dispensers, the re-installation, repair or replacement of only one of the motor vehicle fuel dispensers shall be a Minor Modification.

STAGE II ROUTINE MAINTENANCE means, for the purposes of 310 CMR 7.24(6), the regular reinstallation, repair or replacement of one or more Stage II System components including, but not limited to, hoses; nozzles; breakaways; swivels; hose retractors; bucket plow rings; "slip-on" spill or dry break buckets; "O" rings and seals; submersible pumps or suction pipes; fill adaptors; fill tubes; vapor adaptors; fill and vapor caps; drain valves; monitor caps; or riser caps.

STAGE II SUBSTANTIAL MODIFICATION means, for the purposes of 310 CMR 7.24(6), the reinstallation, repair or replacement of one or more Stage II System components including, but not limited to, 50% or more of the motor vehicle fuel dispensers (*e.g.*, two of four dispensers); the replacement of one type of Stage II system with another type (*e.g.*, replacement of a balance system with a vacuum assist system, or a Healy 400 ORVR nozzle system or Healy 600 nozzle system with a Healy VP-1000 system); or the re-installation, repair or replacement of Stage II System components requiring excavation below a shear valve or tank pad (*e.g.*, vapor return piping, vent piping, vapor space tie bar, two-point or coaxial Stage I systems; or motor vehicle fuel storage tanks). If the re-installation, repair or replacement of one or more Stage II System components occurs at a motor vehicle fuel dispensing facility with two or fewer dispensers, the re-installation, repair or replacement of all motor vehicle fuel dispensers shall be a Substantial Modification.

STAGE II SYSTEM as used in 310 CMR 7.24(6), means a vapor recovery system identified in an Executive Order and specifically designed for the purpose of controlling vapors during the direct dispensing of motor vehicle fuel to a motor vehicle.

STANDARD CONDITIONS mean a temperature of 20°C and pressure of 760 millimeters of mercury.

STANDARD OPERATING PROCEDURE (S.O.P.) means the specific procedure for operation of, and which minimizes the emission from, an air contamination source.

7.00: continued

STATE IMPLEMENTATION PLAN ("SIP") means the most recently prepared plan or revision thereof required by the Federal Clean Air Act which has been approved by the U.S. EPA.

STATIONARY COMBUSTION TURBINE means any stationary internal combustion engine which operates with a rotary motion, including any simple cycle turbine, regenerative cycle turbine, or any turbine portion of a combined cycle steam/electric generating system that is not self propelled.

STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINE means any reciprocating internal combustion engine. It does not include an engine that is regulated by EPA as a non-road engine defined under 40 CFR 1068.30 or is self-propelled.

STENCIL COATING means an ink or pigmented coating which is rolled or brushed onto a template or stamp in order to add identifying letters, symbols, or numbers to motor vehicles, or their parts or components.

STENCIL COATING for purposes of 310 CMR 7.18(11)(b)2. and (21)(b)1., means an ink or a pigmented coating which is rolled or brushed onto a template or stamp in order to add identifying letters, symbols, and/or numbers.

STENCIL COATING for purposes of 310 CMR 7.18(21)(b)2., means a coating that is applied over a stencil to a plastic part at a thickness of one mil or less of coating solids. Stencil coatings are most frequently letters, numbers, or decorative designs.

STOKER means a boiler/furnace design that incorporates a feeding mechanism, fuel distribution and ash residue collection system for the purpose of introducing solid fuel into the combustion zone of the boiler/furnace by feeding the fuel onto a grate.

STRUCTURAL MEMBER means any load-supporting member of a facility including beams and load-supporting walls, or any nonload-supporting member including ceilings and nonload-supporting walls.

STUDENT means any daytime student who does not live at the educational institution and who travels to and from classes by any mode of travel.

SUBMERGED FILLING means the filling of a motor vehicle fuel storage tank through a pipe whose discharge opening is entirely submerged below the surface level of the liquid in the tank.

SUBSTANTIAL RECONSTRUCTION means any physical change in, or changes in the method of operation of a facility or its appurtenances which changes the amount of emissions from such facility.

SUBSTRATE means the surface onto which a coating, ink or other material is applied or impregnated.

SULFUR IN FUEL - for the purpose of 310 CMR 7.05, sulfur in fuel is as follows:

- (a) Oil
 - 2.2% sulfur content = 1.21 pounds of sulfur per million Btu heat release potential
 - 1% sulfur content = 0.55 pounds of sulfur per million Btu heat release potential
 - 0.5% sulfur content = 0.28 pounds of sulfur per million Btu heat release potential
- (b) Coal
 - 1.57% sulfur content = 1.21 pounds of sulfur per million Btu heat release potential (assuming 13,000 Btu per pound)
 - 0.72% sulfur content = 0.55 pounds of sulfur per million Btu heat release potential (assuming 13,000 Btu per pound)
 - 0.36% sulfur content = 0.28 pounds of sulfur per million Btu heat release potential (assuming 13,000 Btu per pound)

7.00: continued

SURFACE COATING means a process whereby a layer of one substance is deposited on or in another material. The layer of coating may be used to decorate, bond, protect, strengthen, or impart other properties to substrate.

SURFACE PREPARATION PRODUCT means a product formulated to dissolve and remove tar, grease, wax, and other hydrophobic contaminants from a surface prior to application of a primer.

SYNTHETIC ORGANIC CHEMICAL MANUFACTURING FACILITY for the purpose of 310 CMR 7.18(19), means a facility which manufactures, as a final or intermediate product, polyethylene, polypropylene, polystyrene, methyl tert-butyl ether (MTBE), or one of the chemicals listed in 40 CFR Part 60.489.

TANGENTIAL FIRING means a furnace firing design where the burners are mounted at the corners of the furnace chamber.

TANK TRUCK means a truck or trailer equipped with a storage tank and used for the transport of motor vehicle fuel from sources of supply to stationary fuel tanks, or to motor vehicle fuel tanks.

TEXTILE FINISHING means the preparation, decorative enhancement, or functional enhancement of a natural or man-made textile substrate. Specific textile finishing processes include, but are not limited to, textile cleaning (desizing and scouring), bleaching, dyeing, printing, and final finishing.

TEXTURE COATING means a coating that is applied to a plastic part which, in its finished form, consists of discrete raised spots of the coating.

THIN PARTICLEBOARD means a manufactured board that is 0.25 inches or less in thickness, and made of individual wood particles that have been coated with a binder and formed into flat sheets by pressure.

THIRD-PARTY VANPOOL PROGRAM means a vanpool program operated by an organization other than an employer which acquires and provides vans to groups of interested commuters.

THREE PIECE CAN SIDE SEAM SPRAY means a coating sprayed on the exterior and interior of a welded, cemented or soldered seam to protect the exposed metal.

THREE-STAGE COATING SYSTEM means a topcoat system composed of a colored basecoat, a semi-transparent midcoat, and a final transparent clearcoat. For compliance purposes, the VOC content of three-stage coating systems shall meet the emission limitation for topcoats in Table 7.18(28)(c), and is calculated according to the following formula:

$$VOC T_{3-stage} = \frac{VOC_{bc} + VOC_{mc} + 2 VOC_{cc}}{4}$$

Where:

VOC $T_{3-stage}$ is the weighted average of the VOC content, as applied, in the basecoat, midcoat, and clearcoat system.

VOC_{bc} is the VOC content, as applied, of any given basecoat.

VOC_{mc} is the VOC content, as applied, of any given midcoat.

2VOC_{cc} is twice the VOC content, as applied, of any given clearcoat.

TILEBOARD means paneling that has a colored, waterproof surface coating.

TOPCOAT means the final film of coating applied in a multiple coat operation.

TOTAL HALOGENS means the total concentration, by weight, of fluorine, chlorine, bromine, and iodine, as measured by a method acceptable to the Department.

7.00: continued

TOUCH-UP COATING means a coating applied by brush, airbrush, or non-refillable aerosol can of no more than eight ounces to cover minor surface damage and imperfections.

TOUCH-UP COATING for purposes of 310 CMR 7.18(11) and (21), means a coating used to cover minor coating imperfections that appear after the main coating operation is completed.

TRANSFER EFFICIENCY means the portion of coating solids which remain on the substrate during the application process, expressed as a percentage of the total volume of coating solids delivered by the applicator.

TRANSLUCENT COATING means a coating which contains binders and pigment, and is formulated to form a colored, but not opaque, film.

TWO PIECE CAN EXTERIOR END COATING means a coating applied by roller coating or spraying to the exterior end of a can to provide protection to the metal.

TUNNEL VENTILATION SYSTEM means any mechanical system which is designed to provide ventilation of any air contaminant regulated herein from any public roadway which is covered or otherwise enclosed in a tunnel or similar structure.

TWO-STAGE TOPCOAT means a basecoat/clearcoat system composed of a colored basecoat and a transparent final coat. For compliance purposes, the VOC content of basecoat/clearcoat systems shall meet the emission limitation for two-stage topcoats in 310 CMR: *Table 7.18(28)(c)*, and shall be calculated according to the following formula:

$$VOC T_{bc/cc} = \frac{VOC_{bc} + 2 VOC_{cc}}{3}$$

Where:

VOC $T_{bc/cc}$ is the weighted average of the VOC content, as applied, in the basecoat (bc) and clearcoat (cc) system.

VOC_{bc} is the VOC content, as applied, of any given basecoat.

2VOC_{cc} is twice the VOC content, as applied, of any given clearcoat.

UNDERBODY COATING means a coating designed for protection and sound deadening that is typically applied to the wheel wells and underbody of an automobile.

UNIFORM FINISH BLENDER means a coating designed to blend a repaired topcoat into an existing topcoat.

UNIT TURNAROUND for the purpose of 310 CMR 7.18(19), means unit shutdown and purge for internal inspection and repair.

UNUSED WASTE OIL means waste oil that is superfluous or abandoned fuel, storage tank bottoms, clean-out sludge, sludge from the separation of unused oil from a non-hazardous waste, contaminated oil resulting from the clean-up of a release of oil, and any other waste oil that is not used waste oil.

USED WASTE OIL means used and/or reprocessed, but not subsequently re-refined, waste oil that has served its original intended purpose. Such oil includes, but is not limited to, fuel oil, engine oil, gear oil, cutting oil, transmission fluid, and dielectric fluid.

VACUUM ASSIST SYSTEM means a Stage II system utilizing a pump, blower, or other vacuum inducing device, to collect and, or, process vapors during the dispensing of motor vehicle fuel.

VACUUM METALLIZING means a process whereby metal is vaporized and deposited on a substrate in a vacuum chamber.

7.00: continued

VACUUM-METALLIZING COATING means:

- (a) the undercoat applied to a substrate on which the metal is deposited; or
- (b) the overcoat applied directly to the metal film.

VAPOR means the gaseous state of certain substances that can exist in equilibrium with their solid or liquid states under standard conditions.

VAPOR BALANCE SYSTEM means a vapor recovery system utilizing direct displacement to collect and/or process vapors during the transfer of motor vehicle fuel.

VAPOR-MOUNTED SEAL means a primary seal mounted so there is an annular vapor space underneath the seal. The annular vapor space is bounded by the bottom of the primary seal, the tank wall, the liquid surface, and the floating roof.

VAPOR-TIGHT means equipment that allows no loss of vapors. Compliance with vapor-tight requirements can be determined by checking to ensure that the concentration at a potential leak source is not equal to or greater than 100% of the Lower Explosive Limit when measured with a combustible gas detector, calibrated with propane, at a distance of one inch from the source.

VINYL SURFACE COATING means the application of a decorative, protective or functional coating and/or printing on vinyl coated fabric or vinyl sheets.

VISIBLE EMISSIONS for the purpose of 310 CMR 7.15, means any emissions that are detectable without the aid of instruments. This does not include condensed uncombined water vapor.

VOC COMPOSITE PARTIAL PRESSURE means the sum of the partial pressures of the compounds defined as VOC.

VOC Composite Partial Pressure is calculated as follows:

$$PP_c = \sum_{i=1}^n \frac{\frac{W_w}{Mw_w} + \frac{W_e}{Mw_e} + \frac{(W_i)(VP_i)/MW_i}{\sum_{i=1}^n \frac{W_i}{MW_i}}}{1}$$

Where:

- Wi = Weight of the "i"th VOC compound, in grams
- Ww = Weight of water, in grams
- We = Weight of exempt compounds, in grams
- Mwi = Molecular weight of the "i"th VOC compound, in $\frac{g}{mole}$
- Mww = Molecular weight of water, in $\frac{g}{mole}$
- Mwe = Molecular weight of exempt compound, in $\frac{g}{mole}$
- PPc = VOC composite partial pressure, in mm Hg
- VPi = Vapor pressure of the "i"th compound, in mm Hg
- n = The number of VOC compounds

VOLATILE ORGANIC COMPOUND (VOC) means any compound of carbon which participates in atmospheric photochemical reactions. For the purpose of determining compliance, VOC is measured by the applicable reference test methods specified in 40 CFR 60. VOC includes all organic compounds except the following:

<u>CAS Number</u>	<u>Chemical Name</u>
67641	acetone,
124685	AMP (2-amino-2-methyl-1-propanol),
506876	ammonium carbonate,
540885	t-butyl acetate,
630080	carbon monoxide,
124389	carbon dioxide,
463796	carbonic acid,

7.00: continued

616386	dimethyl carbonate,
N/A	metallic carbides or carbonates,
74828	methane,
74840	ethane,
79209	methyl acetate,
71556	methyl chloroform (1,1,1-trichloroethane),
107313	methyl formate,
75092	methylene chloride, (dichloromethane),
98566	parachlorobenzotrifluoride (PCBTF),
127184	perchloroethylene (tetrachloroethylene),
108327	propylene carbonate,
75694	CFC-11 (trichlorofluoromethane),
75718	CFC-12 (dichlorodifluoromethane),
75456	CFC-22 (chlorodifluoromethane),
76131	CFC-113 (trichlorotrifluoroethane),
76142	CFC-114 (dichlorotetrafluoroethane),
76153	CFC-115 (chloropentafluoroethane),
593704	HCFC-31 (chlorofluoromethane),
306832	HCFC-123 (2,2-dichloro-1,1,1-trifluoroethane),
354234	HCFC-123a (1,2-dichloro-1,1,2-trifluoroethane),
2837890	HCFC-124 (2-chloro-1,1,1,2-tetrafluoroethane),
1717006	HCFC-141b (1,1-dichloro-1-fluoroethane),
75683	HCFC-142b (1-chloro-1,1-difluoroethane),
1615754	HCFC-151a (1-chloro-1-fluoroethane),
422560	HCFC-225ca (3,3-dichloro-1,1,1,2,2-pentafluoropropane),
507551	HCFC-225cb (1,3-dichloro-1,1,2,2,3-pentafluoropropane),
75467	HFC-23 (trifluoromethane),
75105	HFC-32 (difluoromethane),
354336	HFC-125 (pentafluoroethane),
359353	HFC-134 (1,1,2,2-tetrafluoroethane),
811972	HFC-134a (1,1,1,2-tetrafluoroethane),
4129462	HFC-143a (1,1,1-trifluoroethane),
75376	HFC-152a (1,1-difluoroethane),
353366	HFC-161 (ethylfluoride),
690391	HFC-236fa (1,1,1,3,3,3-hexafluoropropane),
679867	HFC-245ca (1,1,2,2,3-pentafluoropropane),
24270664	HFC-245ea (1,1,2,3,3-pentafluoropropane),
431312	HFC-245eb (1,1,1,2,3-pentafluoropropane),
460731	HFC-245fa (1,1,1,3,3-pentafluoropropane),
431630	HFC-236ea (1,1,1,2,3,3-hexafluoropropane),
431890	HFC-227ea (1,1,1,2,3,3,3-heptafluoropropane),
406586	HFC-365mfc (1,1,1,3,3-pentafluorobutane),
138495428	HFC 43-10mee (1,1,1,2,3,4,4,5,5,5-decafluoropentane),
1691174	HFE-134 (HCF ₂ OCF ₂ H),
78522471	HFE-236cal2 (HCF ₂ OCF ₂ OCF ₂ H),
188690780	HFE-338pcc13 (HCF ₂ OCF ₂ CF ₂ OCF ₂ H),
188690779	H-Galden 1040X or H-Galden ZT 130 (or 150 or 180), (HCF ₂ OCF ₂ OCF ₂ CF ₂ OCF ₂ H),
75031	HFE-7000 or n-C3F7OCH3 (1,1,1,2,2,3,3-heptafluoro-3-methoxy- propane),
163702076	HFE-7100 or C4F9OCH3 (1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy- butane),
163702087	(CF3)2CF2CF2OCH3 (2-(difluoromethoxymethyl)-1,1,1,2,3,3,3- hepta-fluoropropane),
163702054	HFE-7200 or C4F9OC2H5 (1-ethoxy-1,1,2,2,3,3,4,4,4- nonafluorobutane),
54376602	HFE-7300 or L-14787 or C2F5CF(OCH3)CF(CF3)2 (1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl- pentane),

7.00: continued

163702065	(CF ₃) ₂ CF ₂ OC ₂ H ₅ (2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-hepta-fluoropropane),
297730939	HFE-7500 or HFE-s702 or T-7145 or L-15381 (3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane)
754121	HFO-1234yf (2,3,3,3-tetrafluoropropene),
29118249	HFO-1234ze (trans-1,3,3,3-tetrafluoropropene),
N/A	Cyclic, branched, or linear, completely fluorinated alkanes,
N/A	Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations,
N/A	Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations,
N/A	Cyclic, branched, or linear, completely methylated siloxanes,
102687650	Solstice™ 1233zd(E) (trans-1-chloro-3,3,3-trifluoroprop-1-ene),
N/A	Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

WASH COAT means a coating containing binders that raises wood surfaces, prevents undesired staining and controls stain penetration.

WASTE

(a) Waste means any solid, liquid, semi-solid, or contained gaseous material, resulting from industrial, commercial, mining, or agricultural operations or from municipal activities, or any refuse, or sludge, which:

1. is sometimes discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded; or
2. has served its original intended purpose or is no longer suitable for its original intended purpose; or
3. is a manufacturing or mining by-product and sometimes is discarded; or
4. has served its original intended purpose and will be "used" as defined in 310 CMR 30.000.

(b) A material is discarded if it is:

1. abandoned or intended to be abandoned;
2. disposed of;
3. incinerated; or
4. physically, chemically, or biologically treated in *lieu* of or prior to being disposed of or abandoned.

(c) A manufacturing or mining by-product is a material that is not one of the primary products of a particular manufacturing or mining operation, is a secondary and incidental product of the particular operation and would not be solely and separately manufactured or mined by the particular manufacturing or mining operation. The term does not include an intermediate manufacturing or mining product which results from one of the steps in a manufacturing or mining process and is typically processed through the next step of the process within a short time.

(d) Materials, which have been approved by the Department for reuse or burning as a fuel at the site of generation pursuant to 310 CMR 30.200, are not wastes.

WATER BASED INK/COATING/ADHESIVES means an ink, coating, or adhesive with VOC content less than or equal to 10% by weight as applied.

WATER HOLD-OUT COATING means a coating applied to the interior cavity areas of doors, quarter panels, and rocker panels for the purpose of corrosion resistance to prolonged water exposure.

WAXY, HEAVY POUR CRUDE OIL means a crude oil with a pour point of 50°F or higher as determined by ASTM D97-66 "Test for Pour Point of Petroleum Oils."

WEB means a continuous roll of paper or other material which is used as a substrate.

7.00: continued

WELD-THROUGH PRIMER means a primer that is applied to an area before welding is performed, and that provides corrosion resistance to the surface after welding has been performed.

WOOD PRODUCT means any product made of wood or a wood composite including, but not limited to: kitchen cabinets, equipment cabinets, household furniture, and office furniture, but excluding flat wood panels.

WOOD PRODUCTS SURFACE COATING means the coating of a wood product to impart properties that are not initially present, such as strength, stability, water or chemical repellency, or appearance.

NON-TEXT PAGE

7.01: General Regulations to Prevent Air Pollution

(1) No person owning, leasing, or controlling the operation of any air contamination source shall willfully, negligently, or through failure to provide necessary equipment or to take necessary precautions, permit any emission from said air contamination source or sources of such quantities of air contaminants which will cause, by themselves or in conjunction with other air contaminants, a condition of air pollution.

(2) (a) Accurate Submittal to the Department No person shall make any false, inaccurate, incomplete, or misleading statements in any application, record, report, plan, design, statement or document which that person submits to the Department pursuant to M.G.L. c. 111, §§ 142A through 142M, M.G.L. c. 111, § 150A, c. 21H, or 310 CMR 7.00.

(b) Accurate and Complete Record Keeping No person shall make any false, inaccurate, incomplete or misleading statements in any record, report, plan, file, log, or register which that person is required to keep pursuant to M.G.L. c. 111, §§ 142A through 142M, M.G.L. c. 111, § 150A, c. 21H, or 310 CMR 7.00. Such records shall be made available to the Department for inspection upon request.

(c) Certification Any person providing information required to be submitted to the Department pursuant to M.G.L. c. 111, §§ 142A through 142M, M.G.L. c. 111, § 150A, c. 21H, or 310 CMR 7.00 *et seq.* shall make the following certification: "I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

(d) Change in Ownership. Any person owning, operating or leasing a facility for which a notification or certification submitted to the Department under these regulations is in effect, or a plan approval, emission control plan, operating permit, certification, restricted emission status or any other approval issued by the Department is in effect, who transfers responsibility, coverage and liability, shall provide a written notification of said action to the Department containing the specific date of the transfer of responsibility, coverage, and liability between the current and new owner, operator or lessor.

(3) Any person subject to 310 CMR 7.00, who submits a notification (*e.g.*, 310 CMR 7.02(11)) or certification (*e.g.*, 310 CMR 7.26); or obtains a restricted emission status approval, plan approval, emission control plan approval, operating permit or other approval issued by the Department, shall comply with the terms and conditions contained therein.

(4) Computation of Time. Unless otherwise specifically provided by statute or 310 CMR 7.00, any time period prescribed or referred to in 310 CMR 7.00 or in any action taken pursuant to 310 CMR 7.00 shall begin with the first day following the act which initiates the running of the time period, and shall include every calendar day, including the last day of the time period so computed. If the last day is a Saturday, Sunday, legal holiday, or any other day on which the Department's offices are closed, the deadline shall run until the end of the next business day. If the time period described or referred to is seven days or less, only days when the offices of the Department are open shall be included in the computation. Where used, the term working days shall refer to any full day on which the Department office is open for public business.

7.02: U Plan Approval and Emission Limitations

(1) Purpose and Applicability.

(a) Purpose. The purpose of 310 CMR 7.02 is to provide procedures and standards for the issuance of approvals in the Commonwealth of Massachusetts, and establish emission limitations and/or restrictions for a facility or emission unit.

(b) Plan Approvals to Construct, Substantially Reconstruct or Alter. Except as provided in 310 CMR 7.02(2), a plan approval is required prior to any construction, substantial reconstruction, alteration, or subsequent operation of a facility or emission unit that may emit air contaminants to the ambient air.

(c) Reserved.

7.02: continued

(d) Determining Plan Approval Applicability. For the portion of the facility or emission unit that is proposed to be constructed, substantially reconstructed or altered and subsequently operated, the need for a plan approval is determined by comparing the maximum design capacity of the proposed equipment for fuel utilization facilities or the potential to emit to the plan approval thresholds in 310 CMR 7.02(4) and 310 CMR 7.02(5). For the air contaminant GHGs, the potential to emit shall be determined based on tons per year CO₂e, and 310 CMR 7.02 shall be applicable to GHGs only if construction, substantial reconstruction or alteration of a facility or emission unit results in an increase in potential emissions equal to or greater than 75,000 tons per year CO₂e. If a plan approval is required due to potential emissions of GHGs, a comprehensive plan approval shall be required pursuant to 310 CMR 7.02(5).

(e) Department Participation. In approving or denying an application for plan approval, the Department shall limit its action to matters that may cause or contribute to a condition of air pollution.

(2) Exemptions from Plan Approval.

(a) Introduction. 310 CMR 7.02(2)(b) specifies changes that may be made at a facility that are exempt from the approval requirements of 310 CMR 7.02(4) and (5). 310 CMR 7.02(2)(c) specifies situations that are not eligible for such exemption. 310 CMR 7.02(2)(d) through (f) specify record keeping, reporting and enforcement provisions.

(b) Exemptions. Except as provided by 310 CMR 7.02(2)(c), construction, substantial reconstruction or alteration of a facility or emission unit is exempt from the requirement to obtain a plan approval under 310 CMR 7.02(4) if it qualifies as one or more of the following:

1. Air Pollution Control Equipment. An air pollution control device, excluding oxidizers or afterburners, added to any facility currently in compliance with the provisions of 310 CMR 7.02. This exemption is only available where the air pollution control equipment is not otherwise required by regulation, the air pollution control equipment does not increase the potential emissions of any single criteria pollutant or any single non-criteria pollutant by one ton or more as calculated over any 12 consecutive month time period, and the air pollution control equipment does not replace an existing air pollution control device required by plan approval or regulation.

2. Air Pollution Control Equipment for Control of Particulate. Replacement of an existing air pollution control device for particulate matter (*e.g.*, baghouse), even if required by a plan approval. The replacement device shall be similar in design as the existing control device, and the same size or larger than the original control device. The replacement control device must be designed to achieve the same or better collection efficiency as the original control device. The Department must be notified in writing that a particulate air pollution control device is going to be replaced. This notification must be made at least 30 days prior to installation of the new unit. Said notification shall include a full description of the replacement control device.

3. Battery Charging. Battery charging facilities used to charge lead acid batteries.

4. Reserved.

5. Burner Tip Replacement. A fuel utilization facility burner tip replacement.

6. Cooling Towers. A cooling tower that has maximum recirculation rate of 20,000 gallons per minute (gpm) or less, a drift eliminator, a non-chromium inhibitor, and has total dissolved solids concentration in the blowdown less than 1800 mg/l. The total dissolved solids concentration shall be determined using Part 2540C as published in the latest edition of *Standard Methods For the Examination of Water and Wastewater* as published by the American Public Health Association, American Waterworks Association and Water Pollution Control Federation or by an equivalent method approved by the Department.

7. De Minimis Increase in Emissions. Construction, substantial reconstruction, or alteration that results in an increase in potential emissions of less than one ton of any air contaminant, calculated over any 12 consecutive month time period. In order to determine eligibility under 310 CMR 7.02(2)(b)7., emissions shall be calculated based on the increase in potential emissions (as defined in 310 CMR 7.00) of the planned action. Reductions in emissions resulting from reduced utilization or elimination of emission units cannot be deducted. Products of combustion from any fuel utilization

7.02: continued

facility and emissions from an emission unit(s) installed in compliance with 310 CMR 7.03 or 7.26 are not included when calculating an increase in potential emissions for the purpose of determining applicability under 310 CMR 7.02(4)(a)1. or 2. or 7.02(5)(a)1., 2. or 3. (See also 310 CMR 7.02(6)).

8. Emergency Engines or Stand-by Engines. (Reserved).

9. Emergency Release Containment. An area constructed for the containment of unplanned releases.

10. Fire Suppression Systems. Fire protection, fire fighting and fire suppression system, except for those fire suppression systems and activities associated with the intentional combustion of materials for the purpose of fire suppression system evaluation or fire science research.

11. Fuel and Chemical Storage Tanks. Organic liquid storage tanks with a capacity less than or equal to 40,000 gallons and used exclusively to store product with a vapor pressure of less than 1.5 psi at the average annual ambient temperature. Storage tanks subject to this exemption must be equipped with conservation vents and aboveground units shall have a white or reflective surface. Organic liquid storage tanks may be subject to 40 CFR Part 60, subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which construction, substantial reconstruction, or modification commenced after July 23, 1984.

12. Fuel Atomization Equipment. Fuel utilization facility burner atomization equipment replacement or repair. Replacement of steam or air atomization with mechanical atomization is not eligible under this exemption.

13. Fuel Loading Racks. Organic liquid transfer racks that transfer less than 172,000 gallons per year of organic liquids or organic liquid transfer racks that transfer exclusively organic liquids with a vapor pressure of less than 1.5 psi at the average ambient annual temperature. Transfer racks eligible under this exemption must comply with the requirements of 310 CMR 7.24, as applicable.

14. Fuel Switching. Conversion of a fuel utilization facility rated at a maximum heat input capacity of less than 100,000,000 Btu per hour energy input where the unit is converted from oil or solid fuel to oil/natural gas dual-fuel capability or natural gas as the only fuel. For purposes of this exemption, a fuel utilization facility is defined as any single boiler, hot oil generator, melt furnace, process heater, oven or similar fuel burning unit as determined by the Department.

15. Fuel Utilization Facilities. (Reserved).

16. Insignificant Activities. An activity listed in 310 CMR 7.00: *Appendix C* (5)(i), as well as office equipment, static electricity reduction devices, electric arcs, and motors that generate ozone.

17. Maintenance or Repair. Routine maintenance or repair of a facility.

18. Mixing and Blending Equipment. Equipment used exclusively to mix or blend materials at ambient temperatures to make water-based solutions containing no more than 5% volatile organic compound (VOC) by weight.

19. Molding. Plastic injection or compression molding machines. Extrusion molding and blow molding is not eligible under this exemption.

20. Motor Vehicle Maintenance. Motor vehicle maintenance and repair facilities. Automobile refinishing facilities are not eligible under this exemption.

21. Operating Hours. An increase in the hours of production of a facility not otherwise restricted.

22. Operating Rate/Product Changes. An increase in the rate of production at a facility not otherwise restricted.

23. Ownership. A change in facility ownership. The new owner shall notify the Department in writing of the ownership change within 60 days of the effective date of the change.

24. Plan Approval by Rule. An emission unit listed in 310 CMR 7.03 provided that the emission unit fully conforms to the design, operation, maintenance, and record keeping requirements of 310 CMR 7.03.

25. Plumbing. Plumbing soil stacks or vents.

26. Pressure Relief Devices. Safety pressure relief devices associated with emission units having plan approvals, unless otherwise required by the Department.

7.02: continued

27. Relocation of Approved Equipment. Relocation of any previously approved equipment, provided that the equipment is relocated within the facility or to a contiguous property and provided that the relocated equipment does not cause or contribute to a condition of air pollution.

28. Thermal and Catalytic Oxidizers. A process emission oxidizer or afterburner with a rated capacity of less than 40,000,000 Btu per hour using natural gas and installed on a previously approved facility or on a new facility which otherwise meets the plan approval exemptions provided in 310 CMR 7.02(2). This exemption is only available where the air pollution control equipment is not otherwise required by regulation, and the air pollution control equipment does not replace existing air pollution control equipment required by plan approval or regulation. Flares are not eligible under this exemption. Persons installing thermal or catalytic oxidizers as allowed by this exemption shall notify the Department, within 60 days of installation, that oxidizers have been installed.

29. Turbines and Reciprocating Engines. (Reserved).

30. Wastewater Treatment. Wastewater treatment and/or pumping facilities with average daily input flows of less than 50,000 gallons per day, and that treat sanitary sewage exclusively.

31. Water Treatment. Water treatment systems for process cooling water or boiler feed water.

32. RACT, Organic Material Storage and Distribution, ERP, or NO_x Ozone Season Program. Construction, substantial reconstruction or alteration required to comply with the requirements of 310 CMR 7.18, 7.19, 7.24, 7.26 or 7.34. This exception does not apply to any boiler complying with the repowering provisions of 310 CMR 7.19(4)(b), any printer complying with 310 CMR 7.26(23)(a)3., or any wood fuel-fired boiler.

33. Actions that Contravene an Issued Plan Approval. Except as provided in 310 CMR 7.02(2)(b)33.a. and b., the construction, substantial reconstruction, or alteration of a facility or emission unit that would contravene an issued plan approval does not require a new plan approval, provided that the planned construction, substantial reconstruction, or alteration does not increase potential emissions by one ton per year or more above the emission limitation established by the issued plan approval. Persons constructing, substantially reconstructing or altering a facility or emission unit as allowed by this exemption shall notify the Department within 30 days of any such action. In order to determine applicability under 310 CMR 7.02(2)(b)33., emissions shall be calculated based on the increase in potential emissions (as defined in 310 CMR 7.00) of the planned action. Reductions in emissions resulting from reduced utilization or elimination of emission units cannot be deducted. Products of combustion from any fuel utilization facility and emissions from an emission unit(s) installed in compliance with 310 CMR 7.02 are not included when calculating an increase in potential emissions.

7.02: continued

a. Notwithstanding the provisions of 310 CMR 7.02(2)(b)33., the provisions of 310 CMR 7.02(4) and (5) requiring a written plan approval shall apply to any construction, substantial reconstruction, or alteration of a facility or emission unit that would contravene those provisions of an issued plan approval that require:

- i. emission control equipment design specifications; or
- ii. emission control equipment capture and/or destruction efficiency standards; or
- iii. emission limits (except emission limits per year or rolling 12-month average); or
- iv. air contaminant ventilation characteristics such as stack height; or
- v. limitations on the VOC/HOC content of coatings; or
- vi. recordkeeping, monitoring, testing or reporting requirements.

b. Where the action would result in an increase in allowable or potential emissions above limits established in an approved RES, the RES must be modified as described in 310 CMR 7.02(10).

34. Biotechnology Laboratory. A laboratory used solely for research, development or support for medical device, drug, or biologic products derived in whole or in part from biotechnology, and such products are either undergoing preclinical research in preparation for, or are the subject of, one of the following U.S. Food and Drug Administration (FDA) regulatory applications or notices: an Investigational New Drug Application, an Investigational Device Exemption Notice, a New Drug Application, premarket approval application, premarket notification pursuant to section 510(k) of the federal Food, Drug and Cosmetic Act (510(k)) and any other product exempted by FDA from the 510(k) premarket notification requirement.

(c) Exclusions from Exemptions. Notwithstanding the provisions of 310 CMR 7.02(2)(a) and (b), the provisions 310 CMR 7.02(4) and (5) requiring a written plan approval shall apply to construction, substantial reconstruction or alteration of a facility or emission unit that:

1. is specifically included in 310 CMR 7.02(4)(a)3. or 4.; or
2. is specifically included in 310 CMR 7.02(5)(a)5. through 11.; or
3. would cause increases in aggregate emissions pursuant to 310 CMR 7.02(6) that equal or exceed plan approval thresholds in 310 CMR 7.02(5)(a)6.; or
4. would cause or contribute to a condition of air pollution under 310 CMR 7.02(7); or
5. would cause a facility to become subject to 310 CMR 7.00: *Appendix C*.

(d) Recordkeeping. The owner or operator of a facility or emission unit that is exempt from plan approval under 310 CMR 7.02(2)(b) shall keep the following records on-site and up-to-date, such that year-to-date information is readily available for Department examination upon request:

1. Documentation of the date of construction, substantial reconstruction or alteration.
2. Documentation, including emission calculations, under the specific condition(s) that qualifies the activity for exemption (*e.g.*, size threshold, emissions).
3. Air pollution control and other equipment performance specifications.
4. Verification of the overall efficiency of any air pollution control device adequate to support assumptions of emission control equipment capture efficiency (documentation of permanent total enclosures) and destruction/removal efficiency.

(e) Reporting.

1. The owner or operator of a facility subject to the Source Registration reporting requirements of 310 CMR 7.12, shall report the construction, substantial reconstruction or alteration activities that qualified for exemption in the next required Source Registration. Quantification of emissions from exempt activities is not required unless specifically requested.

7.02: continued

2. The owner or operator of a facility required to report under 310 CMR 7.02(2)(b)33. for contravening the provisions of a plan approval shall submit the report within 30 days of said action.
- (f) Enforcement. If construction, substantial reconstruction, alteration or operation of an emission unit for which an exemption from plan approval is claimed, violates any provisions of 310 CMR 7.00, the person owning, leasing, operating or controlling the facility will be subject to enforcement under M.G.L. c. 111, §§ 142A and B, and M.G.L. c. 21A, § 16 and/or any other relief or remedy provided by law including, but not limited to, injunctive relief.
- (3) General Requirements for Plan Approval.
- (a) General. No person shall construct, substantially reconstruct, alter, or subsequently operate any facility subject to the requirements of 310 CMR 7.02(4) or (5), unless an application for a plan approval has been submitted to the Department and plan approval has been granted by the Department. Procedures and contents of an application for plan approval can be found at 310 CMR 7.02(4) and (5).
- (b) Form of Approval. Any plan approval or plan disapproval will be issued by the Department in writing. If a plan application is disapproved, the Department will provide a written explanation of the circumstances that led to the decision to disapprove the application.
- (c) Conditions of Approval. The Department may impose any reasonable conditions in a plan approval including conditions determined to be necessary to insure that the facility will be built, operated, and maintained as specified in the application for plan approval.
- (d) Monitoring and Testing. The Department may require the applicant to monitor and/or test emissions as a condition of approval. The plan approval may include conditions that direct the applicant to install sampling ports of a specified size, number or location, direct the applicant to provide safe access to each sampling port or direct the applicant to install instrumentation to monitor and record emissions data and/or operating parameters.
- (e) Recordkeeping and Reporting. The Department may require an applicant to maintain records and provide periodic reports to the Department, as necessary, to assure continuous compliance with standard operating procedures, standard maintenance procedures, emission limitations, and any work practices contained in the plan approval.
- (f) Compliance with Plan Approvals. Other than as provided in 310 CMR 7.02(2)(f), no person shall operate a facility approved under 310 CMR 7.02, except in compliance with any plan approval issued to the facility. A plan approval does not reduce or negate the responsibility of the facility owner or operator to comply with any other applicable requirements of the Department.
- (g) Massachusetts Environmental Policy Act (MEPA) Review. Prior to obtaining a plan approval, an applicant must comply with the requirements of 301 CMR 11.00 if applicable. The review thresholds for stationary sources of criteria or hazardous air pollutants are contained at 301 CMR 11.03(8): *Air*.
- (h) Opportunity for Comment. The Department shall provide an opportunity for public comment in accordance with 310 CMR 7.02(3)(i) on the Department's proposed decision to approve or deny a plan application required under:
1. 310 CMR 7.02(4) (LPA) for any facility that meets or exceeds a MEPA Review threshold for stationary sources of criteria or hazardous air pollutants, contained at 301 CMR 11.03(8): *Air*; and
 2. 310 CMR 7.02(5) (CPA).
- (i) Public Comment Procedures. For each plan application subject to 310 CMR 7.02(3)(h), the Department shall:
1. Provide a 30-day period for submittal of public comment;
 2. Post on a public website identified by the Department (which may be the Department's website), for the duration of the public comment period, the following:
 - a. A notice of availability of the Department's proposed decision to approve or deny the plan application and information on how to submit public comment;
 - b. The Department's proposed decision to approve or deny the plan application;
 - c. Information on how to access the administrative record for the Department's proposed decision to approve or deny the plan application.
 3. Send a copy of the notice required in 310 CMR 7.02(3)(i)2.a. to EPA.

7.02: continued

- (j) Department Approval. Plan approval will be issued by the Department where:
1. The emissions from a facility do not result in air quality exceeding either the Massachusetts or National Ambient Air Quality Standards; and
 2. The emissions from the facility do not exceed applicable emission limitations specified in 310 CMR 7.00; and
 3. The emissions from the facility do not result in violation of any provision of 310 CMR 7.00; and
 4. The facility does not require a plan approval pursuant to 310 CMR 7.00: *Appendix A* or the plan approval requirements of 310 CMR 7.00: *Appendix A* have been met by the application and a 310 CMR 7.00: *Appendix A* plan approval has been issued by the Department. The Department has the discretion to issue the 310 CMR 7.00: *Appendix A* plan approval in conjunction with a 310 CMR 7.02 plan approval; and
 5. Reserved.
 6. The emissions from such a facility or operation of such a facility represent the most stringent emission limitation as specified in 310 CMR 7.02(8); and
 7. The owner or operator of the facility has made a demonstration of compliance required under 310 CMR 7.02(4)(d)5. or 310 CMR 7.02(5)(c)8.; and
 8. The requirements of 40 CFR Part 63.40 through 40 CFR Part 63.44 are applicable and have been met and an approval has been issued as required by 40 CFR Part 63.40 through 40 CFR Part 63.44. The Department has the discretion to issue an approval under 40 CFR Part 63.40 through 40 CFR Part 63.44 in conjunction with a plan approval issued under 310 CMR 7.02.
- (k) Plan Approval Revocation. The Department may revoke any plan approval if construction has not commenced within two years of the date of a plan approval or, if during construction, construction is suspended for a period of one year or more. For purposes of 310 CMR 7.02(3)(k), construction has commenced if the owner or operator of the facility has begun a continuous program of physical on-site construction of the facility or emission unit that is permanent in nature.
- (l) Plan Approval Duration. Plan approvals are valid for the life of the emission unit or facility, regardless of changes in ownership. Plan approvals issued to a facility that changes ownership, are binding upon the new owner. (See 310 CMR 7.02(2)(b)23.)
- (m) Reactivating an Inactive Emission Unit. Any person who owns, operates or controls an emission unit or facility that has not operated for at least 24 hours in each of the most recent two calendar years is required to obtain a new plan approval prior to re-commencing operation of that emission unit unless sufficient evidence is presented to convince the Department that the shutdown was temporary and the re-startup could occur within a short time period in full compliance with 310 CMR 7.00. Such evidence shall include documentation showing that during the shutdown period:
1. Continued maintenance of the equipment was performed,
 2. There has been compliance with all regulatory requirements such as installation of any monitoring equipment, instrumentation, control equipment, or process controls,
 3. The facility or unit was included in Source Registration submissions to the Department pursuant to 310 CMR 7.12, and
 4. Any other relevant supporting information.
- If the facility does not, in the judgment of the Department, submit sufficient evidence to demonstrate to the Department that the shutdown was temporary, then the Department may revoke the plan approval. If the Department revokes the plan approval, the facility must obtain a new plan approval prior to re-commencing operation of that facility or emission unit.
- (n) Prohibitions.
1. Concealing Emissions. No person shall cause, suffer, allow, or permit the installation or use of any material, article, machine, equipment, or contrivance which conceals an emission without reducing the total weight of emissions where such emission would constitute a violation of any applicable regulation.
 2. Air Pollution Control Equipment. No person shall cause, suffer, allow or permit the removal, alteration or shall otherwise render inoperable any air pollution control equipment or equipment used to monitor emissions that is required by 310 CMR 7.00, without specific written authority of the Department or in conformance with the specific exemptions listed in 310 CMR 7.02(2). An exception to 310 CMR 7.02(3)(n)2. is allowed for reasonable maintenance periods or unexpected and unavoidable failure of the equipment provided that the Department is notified, in writing, within 24 hours of the occurrence of such failure.

7.02: continued

(4) Limited Plan Application (LPA).

(a) Applicability. Calculation of potential emissions associated with an LPA shall be in accordance with 310 CMR 7.02(4)(b). An LPA is required from any person prior to constructing, substantially reconstructing, altering, or subsequently operating any facility or emission unit described as follows:

1. Emission Increase of Less than Ten Tons per Year. Any facility where the construction, substantial reconstruction, alteration or subsequent operation would result in an increase in potential emissions of a single air contaminant equal to or greater than one ton per year and less than ten tons per year, calculated over any consecutive 12-month time period.

2. Fuel Utilization Emission Units. Any fuel utilization emissions unit, excluding internal combustion engines such as combustion turbines or reciprocating engines, where construction, substantial reconstruction, alteration or subsequent operation results in an increase in potential emissions of a single air contaminant equal to or greater than one ton per year and the emission unit has a maximum energy input capacity equal to or greater than:

a. 10,000,000 Btu and less than 40,000,000 Btu per hour utilizing natural gas or propane;

b. 10,000,000 Btu and less than 40,000,000 Btu per hour utilizing distillate fuel oil;

c. 10,000,000 Btu and less than 20,000,000 Btu per hour utilizing residual fuel oil having a sulfur content of equal to or less than 0.28 pounds per million Btu heat release potential (approximately equal to 0.5% sulfur by weight). (Also *see* 310 CMR 7.05(1) and (2));

d. 5,000,000 Btu and less than 10,000,000 Btu per hour utilizing residual fuel oil having a sulfur content of less than 0.55 pounds per million Btu heat release (approximately equal to 1% sulfur by weight). (Also *see* 310 CMR 7.05(1) and (2));
or

e. 3,000,000 Btu and less than 10,000,000 Btu per hour utilizing used oil fuel. (Also *see* 310 CMR 7.04(9), and 7.05(7) through (9).)

NOTE: Multiple fuel utilization emission units constructed or modified at a single facility must be evaluated for aggregate emissions to ensure that 310 CMR 7.00: *Appendix A* or PSD (40 CFR 52.21) is not triggered.

3. Modification of Plan Approval Terms and Conditions. Except as provided in 310 CMR 7.02(5) and (6), construction, substantial reconstruction, alteration or subsequent operation of a facility that would contravene the terms and conditions in an existing plan approval, provided that:

a. The planned construction, substantial reconstruction, alteration or subsequent operation would increase potential emissions by equal to or greater than one ton per year but less than ten tons per year, calculated over any consecutive 12-month time period, over the emission limitation established by an existing plan approval, and

b. The planned construction, substantial reconstruction, alteration, or subsequent operation would only affect the:

i. Allowable or potential emission rates; or

ii. Operating hours; or

iii. Process feed rates; or

iv. A combination of 310 CMR 7.02(4)(a)3.b.i. through iii.

Actions that would contravene emission control equipment design specifications, capture and/or destruction efficiency standards for control equipment, emission limits established by a BACT approval, air contaminant ventilation characteristics such as a reduction in stack height, or limitations on the VOC/HOC content of coatings, require a plan approval. Where the action would result in an increase in allowable or potential emissions above limits established in an approved RES, the RES must be modified as described in 310 CMR 7.02(10). In order to determine applicability under 310 CMR 7.02(4)(a)3.b., emissions must be calculated in accordance with 310 CMR 7.02(4)(b).

7.02: continued

4. Applicability of Non-attainment, PSD, or MACT Review. Unless enforceable restrictions are established, any construction, substantial reconstruction, alteration or subsequent operation that would result in a portion or all of the facility being subject to:
- a. Emission Offsets and Non-attainment Review at 310 CMR 7.00: *Appendix A*;
 - b. PSD Permitting at 40 CFR Part 52.21;
 - c. 40 CFR Part 63.40 through 40 CFR Part 63.44; or
 - d. 310 CMR 7.00: *Appendix C*.
- (b) Calculation of Emissions. Calculation of potential emissions associated with an LPA must be based on the potential emissions (as defined in 310 CMR 7.00) of the proposed construction, substantial reconstruction or alteration. Limitations on the potential emissions proposed in the application must be made enforceable as a practical matter to be federally enforceable (*see* 310 CMR 7.00: *Federal Potential to Emit*). Reductions in emissions resulting from reduced utilization or elimination of an existing emission unit cannot be deducted, (*i.e.*, no netting). Products of combustion are not included when calculating applicability under 310 CMR 7.02(4)(a)1. Emissions from an emission unit(s) installed in accordance with 310 CMR 7.03 or 310 CMR 7.26 are not included when calculating an increase in potential emissions for purposes of determining applicability under 310 CMR 7.02(4)(a)1. and 2.
- (c) Reserved.
- (d) Limited Plan Application Requirements. To apply for an LPA, an applicant shall satisfy each of the following conditions:
1. The application shall be made on a form furnished by the Department or by other means required by the Department.
 2. The application shall be signed by a responsible official.
 3. The application shall be submitted in duplicate.
 4. The application shall be accompanied by sufficient information to document the facility's potential emissions.
 5. The application shall contain an affirmative demonstration that any facility in Massachusetts owned or operated by such persons (or by an entity controlling, controlled by or under common control with such person) that is subject to 310 CMR 7.00, is in compliance with or on a Department approved compliance schedule to meet all provisions of 310 CMR 7.00 and any plan approval, notice of noncompliance order or plan approval issued thereunder.
- (5) Comprehensive Plan Application (CPA).
- (a) Applicability. Calculation of potential emissions associated with a CPA shall be in accordance with 310 CMR 7.02(5)(b) and 310 CMR 7.02(1)(d) for GHGs. A CPA is required from any person prior to constructing, substantially reconstructing, altering or subsequently operating any facility or emission unit as follows:
1. Emission Increase Greater than or Equal to Ten Tons Per Year. Any facility where the construction, substantial reconstruction, alteration or subsequent operation would result in an increase in potential emissions of a single air contaminant equal to or greater than ten tons per year, calculated over any consecutive 12-month time period.
 2. Fuel Utilization Emission Units. Any fuel utilization emission unit, excluding internal combustion engines such as combustion turbines or reciprocating engines, where construction, substantial reconstruction, alteration or subsequent operation results in an increase in potential emissions of a single air contaminant of equal to or greater than one ton per year, and said emission unit has a maximum energy input capacity equal to or greater than:
 - a. 40,000,000 Btu per hour utilizing natural gas or propane.
 - b. 40,000,000 Btu per hour utilizing distillate fuel oil.
 - c. 20,000,000 Btu per hour utilizing residual fuel oil having a sulfur content of equal to or less than 0.28 pounds per million Btu heat release potential (approximately equal to 0.5% sulfur by weight).

7.02: continued

- d. 10,000,000 Btu per hour utilizing residual fuel oil having a sulfur content of less than 0.55 pounds per million Btu heat release (approximately equal to 1% sulfur by weight) or used oil fuel (*See* also the requirements of 310 CMR 7.04(9) and 310 CMR 7.05(7), (8) and (9)).
- e. 3,000,000 Btu per hour utilizing:
 - i. Residual fuel oil having a sulfur content greater than 0.55 pounds per million Btu but not in excess of 1.21 pounds per million Btu heat release potential (greater than 1% sulfur by weight but less than or equal to approximately 2.2% sulfur by weight).
 - ii. Hazardous waste fuel.
 - iii. Solid fuel with automatic fuel feed.
 - iv. Landfill gas.
 - v. Digester gas.

NOTE: Multiple fuel utilization emission units installed at a facility must be evaluated for aggregate emissions to ensure that 310 CMR 7.00: *Appendix A* or PSD (40 CFR 52.21) is not triggered.
- 3. Internal Combustion Engines and Turbines.
 - a. Prior to March 23, 2006 an internal combustion engine, such as a stationary combustion turbine or a stationary reciprocating engine, having a maximum energy input capacity equal to or greater than 3,000,000 Btu per hour, and the construction, substantial reconstruction, alteration or subsequent operation results in an increase in potential emissions of a single air contaminant of equal to or greater than one ton per year.
 - b. On and after March 23, 2006 a non-emergency turbine with a rated output of less than one megawatt (MW) burning fuel oil, or greater than ten MW burning any fuel.
 - c. An engine for which the owner/operator elects to apply for a plan approval pursuant to 310 CMR 7.02(5)(c) in *lieu* of complying with 310 CMR 7.26(42) or 310 CMR 7.26(43).
 - d. A combined heat and power project (CHP) for which the owner/operator elects to apply for a plan approval pursuant to 310 CMR 7.02(5)(c) in *lieu* of complying with 310 CMR 7.26(45).
- 4. Hand-fired Solid Fuel Utilization Facilities. Any hand fired solid fuel utilization facility having an energy input capacity equal to or greater than 1,000,000 Btu per hour.
- 5. Incinerators. Any incinerator.
- 6. Aggregated *De Minimis* Emission Increases. Any facility where the sum of the incremental changes (less than one ton each) in potential to emit, calculated over any consecutive 12-month time period, equals or exceeds ten tons for any single criteria pollutant or any single non-criteria pollutant. (*See* 310 CMR 7.02(6).)
- 7. PSD, Nonattainment Review or Case-by-case MACT. Any facility, regardless of any exemption established elsewhere in 310 CMR 7.00, where the construction, substantial reconstruction or alteration would cause a facility to be subject to Prevention of Significant Deterioration (40 CFR Part 52.21), Emissions Offsets and Non-attainment Review (310 CMR 7.00: *Appendix A*), or Case-by-case MACT (40 CFR Part 63.40 through 40 CFR Part 63.44).
- 8. Modification of Plan Approval Conditions. Any facility, regardless of any exemption established elsewhere in 310 CMR 7.00, that requires a modification to a condition of any plan approval issued by the Department due to an increase in potential emissions equal to or greater than ten tons per year (calculated over any consecutive 12-month time period), over the emission limitation established by plan approval. The increase in potential emissions shall be calculated in accordance with 310 CMR 7.02(5)(b).
- 9. Modification of a PSD Permit, a Non-attainment Review Plan Approval or a Case-by-case MACT. Any facility, where the construction, substantial reconstruction or alteration would violate a condition of a PSD permit, a Non-attainment Review approval (310 CMR 7.00: *Appendix A*) or a Case-by-case MACT (40 CFR Part 63.40 through 40 CFR Part 63.44) regardless of the expected change in emissions and any exemptions established elsewhere in 310 CMR 7.00; such a facility may require a revision to the existing permit regardless of whether a CPA is required.

7.02: continued

10. Facilities with the Potential to Cause or Contribute to Air Pollution. Any facility, regardless of any exemption established elsewhere in 310 CMR 7.00 that the Department determines has the potential for causing or contributing to a condition of air pollution.

11. Major Modifications at Large Combustion Emission Units (LCEU). A Comprehensive Plan Application is required for major modifications for any large combustion emission unit. The applicability criteria for a CPA and associated definitions for LCEU(s) are set forth in 310 CMR 7.54.

(b) Calculation of Emissions. Calculation of potential emissions associated with a CPA must be based on the potential emissions (as defined in 310 CMR 7.00) of the proposed construction, substantial reconstruction or alteration. Limitations proposed on the potential emissions in the application must be made enforceable, as a practical matter, to be federally enforceable (*see* definition of federal potential to emit). Reductions in emissions resulting from reduced utilization or elimination of emission units cannot be deducted (*i.e.*, no netting). Products of combustion are not included when calculating applicability under 310 CMR 7.02(5)(a)1. Emissions from an emission unit(s) installed in accordance with 310 CMR 7.03 or 7.26 are not included when calculating an increase in potential emissions for purposes of determining applicability under 310 CMR 7.02(5)(a)1. through 3.

(c) Comprehensive Plan Application Requirements. To apply for a CPA, an applicant shall satisfy each of the following conditions:

1. The application shall be made on a form furnished by the Department or by other means required by the Department.
2. The application shall be signed by a responsible official.
3. The application shall be submitted in duplicate.
4. The application shall be accompanied by a description of the proposed activity, site information, plans, specifications, drawings illustrating the design of the facility, calculations detailing the nature and amount of all emissions, and procedures describing the manner in which the facility will operate and be maintained.
5. The application shall demonstrate compliance with the requirements of 310 CMR 7.02(8)(a) relating to compliance with emission limitations.
6. Additional information shall be furnished upon request by the Department including, but not limited to, air dispersion modeling, additional plans or specifications, and documentation or evidence to support the application.
7. The application shall bear the seal and signature of a professional engineer registered in the Commonwealth of Massachusetts under the provisions of M.G.L. c. 112.
8. The application shall contain an affirmative demonstration that any facility(ies) in Massachusetts owned or operated by such persons (or by an entity controlling, controlled by or under common control with such person) that is subject to 310 CMR 7.00, is in compliance with or on a Department approved compliance schedule to meet all provisions of 310 CMR 7.00, and any plan approval, notice of noncompliance order or plan approval issued thereunder.

(d) Prevention of Significant Deterioration. In addition to the requirements contained at 310 CMR 7.02(5)(c), new major stationary sources of air contaminants and major modifications of existing major stationary sources (as those terms are defined in 40 CFR 52.21) located in attainment areas are subject to Prevention of Significant Deterioration (PSD) regulations promulgated in 40 CFR Part 52.21.

(e) Case-by-case Maximum Achievable Control Technology. In addition to the requirements contained at 310 CMR 7.02(5)(c), the construction or reconstruction of major sources of hazardous air pollutants (as defined by 40 CFR Part 63.41) is subject to 40 CFR Part 63.40 through 63.44. This is a requirement to satisfy The Clean Air Act, § 112(g) that construction or reconstruction after June 29, 1998 of a major source of hazardous air pollutants (as defined in 40 CFR Part 63.2) be equipped with MACT. These requirements apply only if the source has not been either regulated or exempted by a standard issued pursuant to The Clean Air Act, § 112(d), 112(h), or 112(j) or the process category has been delisted pursuant to The Clean Air Act, § 112(c)(9). 40 CFR Part 63.40 through 63.44 is implemented by the Department as of August 3, 2001.

7.02: continued

(6) Aggregated Emissions.(a) Applicability.

1. Any person who owns or operates a facility shall track emission increases as defined in 310 CMR 7.02(6)(a)2. over any consecutive 12-month time period which includes a particular emission increase in order to determine if plan approval is required pursuant to 310 CMR 7.02(5)(a)6.
2. Emission increases that are subject to this requirement are those associated with the construction, substantial reconstruction or alteration of a facility or emission units that:
 - a. Are individually not subject to plan approval under 310 CMR 7.02(4) or (5); and
 - b. Have not previously been aggregated for purposes of plan approval under 310 CMR 7.02(4) and (5); and
 - c. Are not part of a program of construction or modification in planned incremental phases previously approved by the Department.

(b) Calculation of Emissions. Aggregated emissions shall be calculated as the sum of the potential emissions of any air contaminant identified in 310 CMR 7.02(6)(a). Products of combustion from any fuel utilization facility or emissions resulting from construction, substantial reconstruction or alteration, in accordance with the requirements of 310 CMR 7.03 or 7.26, are not included in this calculation.

(7) Mitigation of Air Pollution.

(a) Requirement to Collect Information. When the Department determines that any facility or product manufactured therein has the likelihood of causing or contributing to a condition of air pollution, the Department may require the person owning, leasing or controlling said facility to submit information to document facility emissions, operating parameters of emission control equipment, and standard operating and maintenance procedures. In doing so, the Department may require any person who owns, operates or controls any facility, or who manufactures emissions control equipment or process equipment to:

1. Establish and maintain records;
2. Make reports;
3. Install, use, and maintain monitoring equipment;
4. Perform audits on monitoring equipment using standard procedures and methods;
5. Quantify emissions in accordance with the procedures, and methods as the Department may prescribe;
6. Keep records on control equipment parameters, production variables, and other indirect data when direct monitoring of emissions is not practical;
7. Conduct stack testing or submit modeling analysis; or
8. Maintain other records and provide any other information as the Department might reasonably require.

(b) Department Review of Information. The Department will use information submitted pursuant to 310 CMR 7.02(7)(a) to determine the adequacy and application of existing air pollution control technology at a facility to prevent a condition of air pollution. In addition, the Department's representative, upon presentation of credentials:

1. Shall have right of entry to, upon, or through any premises of any such person in which records required by 310 CMR 7.02(7)(a) are located, and
2. May at reasonable times have access to copy any records, inspect any equipment, review any documents, and sample any emissions that the owner or operator of the facility is required to sample under 310 CMR 7.02(7)(a).

(c) Compliance Monitoring and Compliance Certification. The Department may require any person to perform compliance monitoring and submit a compliance certificate subject to the standards of 310 CMR 7.01(2). Compliance certifications shall include:

1. Identification of all applicable requirements that are the basis for certification;
2. The method used to determine compliance status of the facility;
3. The compliance status of the facility, and each emission unit;
4. Whether compliance is continuous or intermittent; and
5. Other facts as the Department might require.

7.02: continued

(d) Plan Approval and Compliance Schedule Requirement. If, after review of the submitted information, the Department determines that the facility is in need of reconstruction, alteration or repair to prevent the facility from causing or contributing to a condition of air pollution, the Department may require the person owning, leasing, operating or controlling the facility to submit an application for a CPA under 310 CMR 7.02(5). The plan application required by this section shall be provided to the Department by the deadline specified by the Department and shall contain a proposed compliance schedule subject to Department approval.

(e) Continuing Operations. The Department may allow the facility to temporarily continue to operate pending reconstruction or repair provided that the person owning, leasing, operating or controlling the facility complies with all requirements and deadlines of 310 CMR 7.02(7)(d).

(8) Emission Limitations.

(a) Emission Limitations in Plan Approvals. The Department's written approval of an LPA or CPA shall include the most stringent emission limitation of the following, as applicable:

1. Lowest Achievable Emission Rate (LAER) where the construction, substantial reconstruction or alteration is subject to the requirements of Emission Offsets and Non-attainment Review in 310 CMR 7.00: *Appendix A*.
2. Best Available Control Technology (BACT). BACT is required of all LPA approvals and CPA approvals. In no case will BACT be less stringent than any applicable emissions limitation contained in a Department regulation (*e.g.*, 310 CMR 7.05, 7.18, 7.19, 7.24, 7.26 or 7.29) or federal regulation (*e.g.*, 40 CFR 60, 61 or 63). BACT may include a design feature, equipment specification, work practice, operating standard or combination thereof. (*See* Definition of BACT in 310 CMR 7.00.) Applicants shall identify BACT for their specific application using a top-down BACT analysis. Refer to Department guidance for conducting a top-down BACT analysis. In *lieu* of an emission unit-specific top-down BACT analysis, an applicant may propose an emission control limitation by using one or more of the following approaches:
 - a. Propose a level of control from the most recent plan approval or other action issued by the Department (Top Case BACT).
 - b. Propose a level of control based on a combination of best management practices, pollution prevention, and a limitation on the hours of operation and/or raw material usage that minimizes emissions to the extent feasible. This approach is only available if the proposed allowable emissions, calculated over any consecutive 12-month time period, are:
 - i. Less than 18 tons VOC and HOC combined;
 - ii. Less than 18 tons of total organic material HAP; and
 - iii. Less than ten tons of a single organic material HAP.
 - c. Notwithstanding 310 CMR 7.02(8)(a)2.a. and b., the Department may consider any other information in determining BACT for any given plan application and approval.
3. New Source Performance Standards (NSPS) as defined in 40 CFR Part 60.
4. National Emission Standards for Hazardous Air Pollutants (NESHAP) as defined at 40 CFR Part 61.
5. National Emission Standards for Hazardous Air Pollutants for Source Categories as defined at 40 CFR Part 63.
6. Case-by-case MACT as determined under 310 CMR 7.02(5)(e).
7. Plan Approvals under 310 CMR 7.02(5)(a)10 or 7.02(7). Any emission limitation required in such plan approval shall be sufficient to eliminate the potential to cause a condition of air pollution, even if said emission limitation is more stringent than an emission limitation that would otherwise be determined to be BACT.
8. Plan Approvals under 310 CMR 7.26(45) shall use credits calculated by 310 CMR 7.26(45)(b)4. to subtract from the actual emissions in determining compliance with the emission limits established under 310 CMR 7.26(43)(b).

7.02: continued

(b) Fuel Switching. Applicants for conversion of fuel utilization facilities equal to or greater than 100,000,000 Btu per hour from oil or solid fuel to natural gas or dual-fuel oil/natural gas, are not required to provide an assessment of BACT in the application for plan approval (LPA or CPA). Further, this action is not considered a major modification subject to 310 CMR 7.00: *Appendix A* provided that the project qualifies as a pollution control project. For the purpose of 310 CMR 7.02(8), a fuel utilization facility is defined as any single boiler, hot oil generator, melt furnace, oven, or similar fuel burning unit as determined by the Department.

(c) Emission Limitations for Existing Facilities. Existing facilities must comply with the applicable requirements of 310 CMR 7.02(8)(d) through (g) unless subject to more stringent requirements that have been established by plan approval, state regulation or federal requirement (NSPS or NESHAP) as applicable. Under 310 CMR 7.02(8)(c) through (g), an existing facility is any facility or emission unit that was in operation on or before June 1, 1972 and has not been constructed, substantially reconstructed or altered since that date. (See also Definition of Existing Facility in 310 CMR 7.00.) Stationary combustion turbines and stationary reciprocating engines are not subject to the emission limits in 310 CMR 7.02: *Tables 4, 5 and 6*.

(d) Maximum Particulate Emission Limits in Areas of Critical Concern. Existing facilities in the communities listed in 310 CMR 7.02: *Table 3* shall, at a minimum, meet the particulate emission limits in Table 4 unless subject to a more stringent emission limit in a plan approval, state regulation or federal program (e.g., NSPS or NESHAP), as applicable. Stationary combustion turbines and stationary reciprocating engines are not subject to the emission limits in 310 CMR 7.02: *Table 4, 5 and 6*.

Table 3

Adams	Fall River	Millbury	Southbridge
Amherst	Fitchburg	Milton	Springfield
Arlington	Gardner	Needham	Stoneham
Athol	Grafton	New Bedford	Taunton
Attleboro	Greenfield	Newburyport	Wakefield
Auburn	Hadley	Newton	Waltham
Belmont	Haverhill	North Adams	Ware
Boston	Holden	Northampton	Watertown
Boylston	Holyoke	Orange	Webster
Braintree	Lawrence	Palmer	West Boylston
Brookline	Lee	Peabody	Westfield
Cambridge	Leicester	Pittsfield	West Springfield
Canton	Leominster	Quincy	Weymouth
Chelsea	Longmeadow	Revere	Winchester
Chicopee	Lowell	Salem	Winthrop
Dalton	Ludlow	Sandwich	Woburn
Dedham	Lynn	Saugus	Worcester
Easthampton	Malden	Shrewsbury	
East Longmeadow	Medford	Somerset	
Everett	Melrose	Somerville	

7.02: continued

Table 4

<u>Facility Type</u>	<u>Size</u>	<u>Existing unit</u>
Ferrous Cupola Foundries		
Production	all	0.06 grains/DSCF ¹
Jobbing	all	0.21 grains/DSCF
Non-ferrous Cupola Foundries	all	0.06 grains/DSCF
Municipal, Commercial, Industrial, and Institutional Incinerators	all	0.1 grains/scf at 12% CO ₂ ²
Municipal Sewerage Sludge Incinerators	all	0.65 gr./kg dry sludge input
Asphalt Batching plants	all	0.04 gr./DSCF
Fossil Fuel Utilization Facility	3 - 250 MMBtu ³ 250 MMBtu or larger	0.12 lb./MMBtu 0.12 lb./MMBtu
Fuel Utilization Facilities	<i>City of Worcester only</i>	
Solid Fuel	3 MMBtu or larger	0.12 lb./MMBtu
Residual Oil	3 MMBtu or larger	0.12 lb./MMBtu
Distillate oil	3 MMBtu or larger	0.10 lb./MMBtu
Natural gas	3 MMBtu or larger	0.10 lb./MMBtu

(e) Maximum Particulate Emission Rate: All Other Communities. In communities other than those listed in 310 CMR 7.02: *Table 3*, existing facilities shall, at minimum, meet the particulate emission limits in 310 CMR 7.02: *Table 5* unless subject to more stringent emission limits as applicable in a plan approval, state regulation or federal program (NSPS or NESHAP). Stationary combustion turbines and stationary reciprocating engines are not subject to the emission limits in 310 CMR 7.02: *Table 4, 5 and 6*.

Table 5

<u>Facility Type</u>	<u>Size</u>	<u>Existing unit</u>
Fossil Fuel Utilization Facility	3 - 250 MMBtu 250 MMBtu or larger	0.15 lb./MMBtu 0.15 lb./MMBtu
Ferrous Cupola Foundries		
Production	all	0.13 gr./DSCF
Jobbing	all	0.21 gr./DSCF
Non-ferrous Cupola Foundries	all	0.08 gr./DSCF
Municipal, Industrial, Commercial, and Institutional Incinerators	all	0.1 gr./scf at 12% CO ₂
Municipal Sewerage Sludge Incinerators	all	0.65 gr./kg dry sludge input
Asphalt Batching Plants	all	0.06 gr./DSCF

(f) Any facility which, when constructed, was subject to a federal New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants, shall continue to be subject to such standard and operate in compliance with such standard unless more stringent requirements are applied through plan approval.

¹ DSCF - Dry Standard Cubic Foot

² CO₂ - Carbon Dioxide

³ MMBtu - Million British Thermal Units

7.02: continued

- (g) Emission Testing and Monitoring. For purposes of determining compliance with 310 CMR 7.02(8)(d) through (f) and (h), any emission testing for compliance with these limitations shall be conducted under isokinetic sampling conditions and in accordance with EPA test methods, as appropriate including, but not limited to, Test Methods 1 through 5 as specified in 40 CFR Part 60, Appendix A: *Standards of Performance for New Stationary Sources*, 40 CFR Part 60 Subpart E: *Standards of Performance for Incinerators*, (originally promulgated in the Federal Register, Volume 36, No. 247, December 23, 1971) or 40 CFR Part 60 Subpart O: *Standards of Performance for Sewerage Treatment Plants* (originally promulgated in the Federal Register, Volume 39, No. 2, March 8, 1974) or by another method which has been correlated to the above method to the satisfaction of the Department.
- (h) Particulate Emission Limitations for New Wood and Fossil Fuel Utilization Facilities. New facilities shall, at a minimum, comply with the particulate emission limits in 310 CMR 7.02: *Table 6* unless subject to more stringent emission limits as applicable in a plan approval, state regulation or federal program (NSPS or NESHAP). Stationary combustion turbines and stationary reciprocating engines are not subject to the emission limits in 310 CMR 7.02: *Table 4, 5 and 6*.

Table 6

<u>Facility Size</u> Million Btu/hr. Input	<u>Emission Limitation</u> lbs.(particulate)/million Btu	
<u>Wood</u>	<u>New</u>	<u>New (Critical Area –Table 3)</u>
3-25	0.20	0.10
greater than 25	0.10	0.10
<u>Fossil Fuel</u>		
3-250	0.10	
greater than 250	0.05	

- (i) U Emergency or Standby Engine(s).
1. Applicability.
 - a. On and after March 23, 2006, the construction, substantial reconstruction, or alteration of any emergency or standby engine greater than or equal to 37kW shall comply with the requirements of 310 CMR 7.26(40) through (42), Engines and Combustion Turbines,
 - b. Persons owning, operating or controlling an emergency or standby engine constructed, substantially reconstructed, or altered prior to June 1, 1990, having an energy input capacity equal or greater than 3,000,000 Btu per hour shall operate said engine in compliance with 310 CMR 7.02(8)(i)2. through 5.; or may apply for alternative operating and reporting requirements under 310 CMR 7.02(5)(a)3.
 2. Limits of Operation.
 - a. Each engine shall be operated only:
 - i. for up to 100 hours per calendar year, or as otherwise approved by EPA, for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine;
 - ii. as part of the 100 hours, for up to 50 hours per calendar year for non-emergency situations; and
 - iii. during periods of electric power outage due to failure of the electrical supply, in whole or in part, onsite disaster, local equipment failure, flood, fire or natural disaster, or when the imminent threat of a power outage is likely due to failure of the electrical supply.
 - b. Additional limitations and conditions may apply including, but not limited to, 40 CFR Part 63, Subpart ZZZZ; 40 CFR Part 60, Subpart JJJJ; and 40 CFR Part 60, Subpart IIII.

7.02: continued

3. Record Keeping. The owner/operator shall maintain on site or, for remote locations, at the closest facility where records can be maintained, the following records for each engine:

- a. Information on equipment type, make and model, and maximum power input/output; and
- b. A log of operations, including date, time and duration of operation and reason for each start, fuel type and supplier; and
- c. Purchase orders, invoices, and other documents to support information in the log.
- d. A log of conditions under which the engine operated pursuant to 310 CMR 7.02(8)(i)2.

4. Availability of Records. Logs and records established under 310 CMR 7.02(8)(i)3. shall be made available to the Department or its designee upon request. The owner/operator shall certify that the log is accurate and true in accordance with 310 CMR 7.01(2)(c).

5. Fuel Requirements. No person shall accept for delivery for burning in any engine subject to 310 CMR 7.02(8)(i), diesel or any other fuel that does not meet the sulfur content limit for fuel in 310 CMR 7.05.

(9) Restricted Emission Status (RES).

(a) General. Any person who owns, leases, operates or controls a facility may apply to the Department for a restricted emission status in order to:

1. restrict potential emissions of regulated air contaminants to eliminate applicability of an otherwise applicable requirement including, but not limited to, restricting potential emissions to allow redesignation for purposes of annual compliance fee assessment (310 CMR 4.03: *Annual Compliance Assurance Fee*); or
2. restrict potential emissions below the Reasonably Available Control Technology (RACT) applicability thresholds for halogenated organic compounds (HOC) (310 CMR 7.18); or,
3. restrict federal potential emissions below the Reasonably Available Control Technology (RACT) applicability thresholds for volatile organic compounds (310 CMR 7.18) and 310 CMR 7.00: *Appendix C* where applicable; or,
4. restrict federal potential emissions below the Reasonably Available Control Technology (RACT) applicability thresholds for oxides of nitrogen (NO_x) (310 CMR 7.19) and 310 CMR 7.00: *Appendix C* where applicable; or,
5. restrict federal potential emissions of regulated pollutants for eliminating applicability to an otherwise applicable requirement including, but not limited to, 310 CMR 7.00: *Appendix C*.

(b) Application Requirements. Any person who owns, leases, operates or controls a facility may apply for a restricted emission status as follows:

1. The application shall be made on form(s) obtained from the Department or by other means prescribed by the Department.
2. The application shall be submitted in duplicate and signed by a responsible official.
3. The application shall be accompanied by sufficient information to document the proposed restriction.
4. Applications for restricted emission status to lower potential emissions below the Reasonably Available Control Technology (RACT) applicability thresholds for volatile organic compounds (VOC) or oxides of Nitrogen (NO_x) stated in 310 CMR 7.18 and 7.19, shall include the following information:
 - a. the actual amount of VOC, HOC and/or NO_x (as required) emitted from each affected emitting equipment for the highest emitting calendar year beginning January 1, 1990.
 - b. a description of the design and operation of the affected VOC, HOC and/or NO_x emitting equipment, and
 - c. any other information deemed by the Department to be required to establish enforceable conditions to be contained in the permit restriction.

(c) Relationship to RACT. Restricted emission status to avoid RACT requirements at either 310 CMR 7.18 or 7.19 will only be available if actual emissions from the facility have not exceeded a threshold contained in 310 CMR 7.18 or 7.19 on or after January 1, 1990. If the facility was subject to the RACT requirements of a section of 310 CMR 7.18 before 1990, it will continue to be subject to these requirements.

7.02: continued

- (d) Form of Approval. Any restricted emission status the Department issues will be in writing.
- (e) Conditions of Approval. Restricted emission status issued by the Department shall include:
1. some combination of production and/or operational limitations to ensure that emissions are limited by quantifiable and enforceable means. Operational limitations may include control equipment; and
 2. requirements to maintain records sufficient to demonstrate that the limitations in the permit are followed and that emissions have not exceeded those allowed by the restriction.
- (f) Federal Enforceability. Restricted emission status issued pursuant to 310 CMR 7.02(9) for the purpose of restricting federal potential emissions must be federally enforceable.
1. Federally enforceable permit restrictions shall contain per unit emission factors, production and/or operational limitations and controls, and monitoring, recordkeeping, and reporting requirements capable of assuring compliance with such limitations and controls.
 2. All emissions limitations, controls, and other requirements imposed by such restricted emission status must be at least as stringent as all other applicable limitations and requirements contained in the Massachusetts SIP, enforceable under the Massachusetts SIP, or otherwise federally enforceable. All limitations, controls and other requirements imposed by such restricted emissions status must be permanent, quantifiable, and otherwise enforceable as a practical matter.
 3. Federally enforceable restricted emission status shall go through the public review process at 310 CMR 7.02(9)(g).
- (g) Notification and Public Comment. The following public review process shall apply to all proposed restricted emission status (RES) if they are to be federally enforceable.
1. After notification of receipt of a technically complete application the Department shall issue either a disapproval of the application and notify the applicant and EPA of said disapproval; or, issue a proposal that the application be approved or approved with conditions.
 2. If the Department proposes to approve the application or approve the application with conditions, it shall:
 - a. Provide a 30-day period for submittal of public comment;
 - b. Post on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period, the following:
 - i. Notice of availability of the Department's proposed decision to approve or deny the application and information on how to submit public comment;
 - ii. The Department's proposed decision to approve or deny the application;
 - iii. Information on how to access the administrative record for the Department's proposed decision to approve or deny the application; and
 - iv. Send a copy of the notice required under 310 CMR 7.02(9)(g)2.b.i. to EPA.
 - c. Send a copy of the notice of public comment to the applicant, the EPA, and officials and agencies having jurisdiction over the community in which the facility is located, including local air pollution control agencies, chief executives of said community, and any regional land use planning agency.
 - d. Make a final determination whether the restricted emission status application should be approved or approved with conditions.
 - e. Notify the applicant and EPA in writing of the final determination and send a copy of the final restricted emission status (RES) approval or approval with conditions.
- (h) Return to Major Status. If construction, substantial reconstruction or alteration of a facility operating under Restricted Emission Status (RES), results in the increase in emissions at the facility so that the facility can no longer stay below major source threshold(s), then the owner or operator must comply with previously applicable requirement(s) including, but not limited to, obtaining an operating permit.

7.02: continued

(10) Modification of a Restricted Emission Status (RES).

(a) General. Any person who owns, leases, operates or controls a facility may apply to modify a RES for the purpose of increasing the facility-wide emission limit, amending the list of emission units included in the existing RES approval or adding emission units not included in the RES approval or to make administrative changes.

(b) Increase RES Cap. If it is proposed to modify a RES to increase the approved RES emission limits without construction, substantial reconstruction or alteration of emission units that require approval under 310 CMR 7.02(4) or (5), an application shall be made in accordance with the procedures in 310 CMR 7.02(9).

(c) Increase RES Cap with Construction. If it is proposed to construct, substantially reconstruct or alter a facility in a manner that requires plan approval, and which increases the facility wide emission limit, and the facility has a RES, then:

1. The following procedure will be used to modify the RES:

a. The proposed construction, substantial reconstruction or alteration shall be submitted for Department approval pursuant to 310 CMR 7.02(5)- Comprehensive Plan Application;

b. The emission limitations in the existing RES shall be modified to incorporate the new emissions approved through plan approval without additional application to the Department; and

c. The plan approval, and revised emission limitations established in the RES, shall be subject to public notice provisions of 310 CMR 7.02(9)(g).

2. Notwithstanding 310 CMR 7.02(10)(c)1., if the facility seeks to construct an emission unit not listed in the RES, the facility may elect to submit the appropriate limited or comprehensive plan application without modification to the RES. In this case, the potential to emit approved under the LPA or CPA will become additive to the potential of the emission units listed in the RES. It is the responsibility of the facility to ensure that the combined potential to emit will not exceed relevant regulatory thresholds.

(d) Construction with No Increase in RES Cap. If it is proposed to modify a RES approval to construct, substantially reconstruct or alter a facility, amend terms or conditions of the RES approval, and the construction, substantial reconstruction or alteration will not increase the facility-wide emission limit, the applicant shall:

1. File an application with the Department at least 30 days prior to the change at the facility that requires modification of the RES approval;

2. Provide a complete description of the proposed changes on forms obtained from the Department or by other means required by the Department;

3. Submit the application in duplicate, signed by a responsible official as being accurate and complete;

4. Provide in the application documentation of the equipment or procedure that will be used to ensure that short and long term emissions shall not exceed the limits in the RES approval including but not limited to, emission monitoring, and daily or monthly recordkeeping;

5. Provide a determination of BACT for those emission units not exempt from plan approval; and

6. Provide in the application a demonstration that the proposed construction, substantial reconstruction, or alteration is not subject to Nonattainment New Source Review (310 CMR 7.00: *Appendix A*) or MACT (40 CFR 63).

(e) Procedures for 310 CMR 7.02(10)(d). For applications made pursuant to 310 CMR 7.02(10)(d), construction, substantial reconstruction or alteration may commence 30 days after receipt of the application for a modified RES under 310 CMR 7.02(10)(d) by the Department, unless the applicant is notified by the Department that other permits may be necessary. Operation of the newly constructed, substantially reconstructed or altered emission unit shall not occur until the public review process procedures of 310 CMR 7.02(9)(g) are complete at which time the modification will satisfy plan approval requirements of 310 CMR 7.02 (3), (4), and (5).

(f) Return to Major Source Status. If construction, substantial reconstruction or alteration of a facility operating under a RES approval results in an increase in emissions at the facility so that the facility can no longer stay below major source threshold(s), then the owner or operator of the facility must comply with the requirements of 310 CMR 7.00 applicable to major sources including, but not limited to, the implementation of RACT (310 CMR 7.18 and 310 CMR 7.19) and the requirement to obtain an operating permit (310 CMR 7.00: *Appendix C*).

7.02: continued

(11) U 50% or 25% Facility Emission Cap Notification.(a) General.

1. 310 CMR 7.02(11) is an alternative means for an owner or operator to establish an emission cap on a facility's federal potential to emit. An owner or operator complying with 310 CMR 7.02(11) will no longer be subject to the restrictions established in the facility's RES granted pursuant to 310 CMR 7.02(9), or the requirements pursuant to 310 CMR 7.00: *Appendix C* after the Department has returned to the owner or operator a copy of the processed notification form.

2. Failure to comply with the emission cap set forth at 310 CMR 7.02(11)(e) or (f) means that an owner or operator is subject to all previously applicable requirements, including but not limited to, 42 U.S.C. 7401, § 112 (Title III), § 501 (Title V) and 40 CFR 52.21, or 310 CMR 7.18 (only where applicability is determined by the facility's potential to emit), 310 CMR 7.19, 310 CMR 7.00: *Appendix A* and/or 310 CMR 7.00: *Appendix C*.

3. Applicability of § 112 (Title III) may be avoided pursuant to 310 CMR 7.02(11) only where the owner or operator complies with 310 CMR 7.02(11) prior to the first substantive requirement of the applicable MACT standard. The first compliance date is defined as the date an owner or operator must comply with an emission limitation or other substantive regulatory requirement.

(b) Duty to Comply. Operation under 310 CMR 7.02(11) does not relax or eliminate any emission limitation(s), or recordkeeping requirement(s) established by regulation or previously issued source specific plan approval(s) or emission control plan(s). Annual emission limitations established by regulation or source specific plan approval or emission control plan, may not be less stringent than the emission limitations established at 310 CMR 7.02(11)(e) and (f).

(c) Plan Approval. Notwithstanding 310 CMR 7.02(11)(a), an owner or operator is subject to preconstruction plan approval pursuant to 310 CMR 7.02(1) for future construction, substantial reconstruction or alteration at the facility.

(d) Application Requirements. An owner or operator electing to comply with 310 CMR 7.02(11) shall notify the Department on forms provided by the Department, of his/her intentions to operate under one of the emission caps established at 310 CMR 7.02(11)(e) or (f), and that the facility's actual emissions in the prior calendar year were equal to or less than the emission cap. This facility wide emission cap shall remain in effect until the owner or operator notifies the Department.

(e) 50% Cap Requirements. For owners or operators electing 50% emission cap, in every 12-month period (rolling 12-month), the potential and actual emissions of the facility shall be less than or equal to the following limitations:

1. 25 tons per year of VOC or NO_x, or 50 tons per year of any other regulated air pollutant;
2. 5 tons per year of a single HAP;
3. 12.5 tons per year of any combination of HAPs; and
4. 50% of any lesser threshold for a single HAP that the EPA may establish by rule.

(f) 25% Cap Requirements. For owners or operators electing 25% emission cap, in every 12-month period (rolling 12-month), the potential and actual emissions of the facility shall be less than or equal to the following limitations:

1. 15 tons per year of VOC or NO_x, or 25 tons per year of any other regulated air pollutant;
2. 2.5 tons per year of a single HAP;
3. 6.25 tons per year of any combination of HAPs, and
4. 25% of any lesser threshold for a single HAP that the EPA may establish by rule.

(g) Eligible Restrictions. The owner or operator may take into account the operation of air pollution control equipment when calculating the facility's potential emissions, if the equipment is required by Federal or State regulations, or operated in accordance with 310 CMR 7.02(1) or 7.03, or an emission control plan issued pursuant to 310 CMR 7.18 or 310 CMR 7.19.

(h) Record Keeping. The owner or operator electing to operate under one of the emission caps established at 310 CMR 7.02(11)(e) or (f), shall establish and maintain records of actual emissions. Such information shall be summarized in a monthly log, maintained on site for five years, be made available to the Department or EPA staff upon request, and contain the following items where applicable:

7.02: continued

1. Coating or Solvent Usage.
 - a. A list of process related coatings, solvents, inks and adhesives in use. This list shall include: information on the VOC and HAPs content in lbs per gallon as applied;
 - b. A description of production equipment including type, make and model; maximum design process rate or throughput; control device(s) type and description (if any); and a description of the coating/solvent application/drying method(s) employed;
 - c. A monthly log of the gallons consumed of each production solvent (including solvents used in clean-up and surface preparation), coating, ink and adhesive used;
 - d. All purchase orders, invoices, and other documents to support information in the monthly log; and
 - e. The emissions of VOC from any coating used in small amounts are exempt from the emission limitations provided the amount of all coatings exempted does not exceed 55 gallons on a rolling 12 month period. A list of coatings used in small amounts shall be established and records of the consumption of these coatings shall be maintained.
 2. Organic Liquid Storage.
 - a. A monthly log identifying the liquid stored and monthly throughput;
 - b. Information on the tank design and specifications including control equipment; and
 - c. The emissions of VOC from any coating used in small amounts are exempt from the emission limitations provided the amount of all coatings exempted does not exceed 55 gallons on a rolling 12 month period. A list of coatings used in small amounts shall be established and records of the consumption of these coatings shall be maintained.
 3. Fuel Utilization Facility.
 - a. Information on equipment type, make and model, maximum power input/output, minimum operating temperature and capacity, control equipment and all source test information;
 - b. A monthly log of hours of operation, fuel type, fuel usage in gallons or tons as appropriate, fuel heating value, percent sulfur for fuel oil and coal; and
 - c. All purchase orders, invoices, and other documents to support information in the monthly log.
 4. Air Pollution Control Equipment.
 - a. Information on equipment type and description, make and model, and emission units served by the control unit;
 - b. Information on equipment design including where applicable: pollutants(s) controlled; control effectiveness; maximum design or rated capacity; inlet and outlet temperatures, and concentrations for each pollutant controlled; catalyst data (type, material, life, volume, space velocity, ammonia injection rate and temperature); baghouse data (design, cleaning method, fabric material, flow rate, air/cloth ratio); electrostatic precipitator data (number of fields, cleaning method, and power input); scrubber data (type, design, sorbent type, pressure drop); other design data as appropriate; all source test information; and
 - c. A monthly log of hours of operation including notation of any control equipment breakdowns, upsets, repairs, maintenance and any other deviations from design parameters.
 5. Not Otherwise Classified Process.
 - a. Information on the process and equipment including the following: equipment type, description, make and model, maximum design process rate or throughput, control device(s) type and description (if any);
 - b. Any additional information requested in writing by the Department;
 - c. A monthly log of operating hours, each raw material used and its amount; and
 - d. Purchase orders, invoices, and other documents to support information in the monthly log.
- (i) Reporting. In order to document compliance and maintain an emissions inventory, the Department may require reporting from any owner or operator of a facility with an emissions cap established at 310 CMR 7.02(11)(e) or (f).

7.02: continued

(12) U Consolidation of Applicable Requirements.

(a) General. Any person who owns, leases, operates or controls a facility may apply to the Department to consolidate the facility's applicable requirements into a single plan approval to streamline the emission limitations, monitoring, emission testing, recordkeeping and reporting and other requirements as contained in the facility's plan approval(s), emission control plan(s) or other document(s) issued by the Department pursuant to any regulation under 310 CMR 7.00.

(b) 310 CMR 7.02(12) is only for use when the facility is not subject to the Department's operating permit and compliance program, 310 CMR 7.00: *Appendix C*. If the facility subsequently becomes subject to the operating permit and compliance program, the requirements of the consolidated plan approval will be incorporated into the facility's operating permit.

(c) When a consolidation application is made in conjunction with an application to construct, substantially reconstruct or alter the facility under 310 CMR 7.02(4) or (5), the decision concerning consolidation will be made under 310 CMR 7.02(12) following issuance of the plan approval.

(d) Application Requirements. An application to consolidate the applicable requirements shall, at a minimum:

1. Be made on form(s) obtained from the Department or by other means prescribed by the Department.
2. Be submitted in duplicate and signed by a responsible official.
3. Contain the following information for each emission unit in the application:
 - a. an emission-unit-by-emission-unit, side-by-side comparison of all requirements to which the emission unit is subject;
 - b. A determination of the most stringent emission limitations and/or performance standards and the documentation relied upon to make this determination;
 - c. A set of proposed terms and conditions which detail the most stringent emissions limitations and/or standards, appropriate monitoring and its associated recordkeeping and reporting, and such other proposed conditions as are necessary to assure compliance with all applicable requirements; and
 - d. A proposed schedule to implement any new monitoring/compliance approach relevant to a consolidated plan approval if the owner/operator of the facility requires additional time to implement the streamlined terms and conditions. The current record keeping, monitoring, and reporting requirements (applicable requirements) shall continue to apply until the new monitoring/compliance approach is operational.

(e) Form of Approval. Any consolidated plan approval issued by the Department shall be in writing.

(f) Conditions of Approval. A consolidated plan approval shall include:

1. A combination of production and/or operational limitations to ensure that emissions are limited by quantifiable and enforceable means.
2. Emissions limitations and control requirements that are at least as stringent as those imposed by the facility's applicable requirements.
3. A requirement to maintain records and conduct monitoring sufficient to demonstrate that emissions limitations and other applicable requirements are being achieved;
4. Reporting on a schedule as determined by the Department;
5. A list of previously issued plan approvals, emission control plans and other documents addressing the applicable requirements of the emission units covered by the consolidated plan approval; and
6. Other conditions as deemed necessary by the Department based on the applicable requirements.

(13) U Administrative Amendment to Plan Approval.

(a) An administrative amendment to a plan approval is required for the following:

1. A change in the business name, facility name, mailing address, telephone number or name of the facility contact; or
2. A change in the ownership of the facility that is subject to the plan approval; or
3. An increase in the frequency of recordkeeping, monitoring, reporting or testing above that previously specified in the plan approval; or

7.02: continued

4. Where the Department or the owner/operator of the facility determines that a plan approval has typographical errors; or
 5. Other changes the Department determines are necessary for the effective administration of the Commonwealth's air pollution control program.
- (b) The Department or the owner/operator may propose an administrative amendment to a plan approval on Department forms or in a format provided by the Department.
1. If the Department determines a plan approval should be amended, the Department will provide the owner/operator with a draft amended plan approval for review.
 2. If the owner/operator determines a plan approval should be amended, the owner/operator shall submit an application for an administrative amendment to the Department within 60 days of the change described in 310 CMR 7.02(13)(a).

NON-TEXT PAGE

7.02: continued

- (c) The administrative amendment shall take effect 30 days after receipt by the owner/operator or the Department respectively, unless prior to the expiration of the 30 days:
 - 1. The owner or operator contests the administrative amendment in writing, or
 - 2. The Department disapproves the proposed amendment in writing.
- (d) In addition to complying with 310 CMR 7.02(13)(a) and (b), the owner/operator of a facility for which a final operating permit has been issued in accordance with the provisions of 310 CMR 7.00: *Appendix C*, shall comply with the Administrative Amendment procedures contained in 310 CMR 7.00: *Appendix C*(8).

7.03: U Plan Approval Exemption: Construction Requirements

(1) General.

- (a) Any person who constructs, substantially reconstructs or alters, and subsequently operates an emission unit listed in 310 CMR 7.03(1)(a), may comply with the specific requirements of 310 CMR 7.03(5) through (7) in lieu of filing either a Comprehensive Plan Application (CPA) required by 310 CMR 7.02(5)(a) or a Limited Plan Application (LPA) required by 310 CMR 7.02(4)(a), except as provided in 310 CMR 7.03(2).
- (b) Under 310 CMR 7.03, VOC shall include Volatile Organic Compounds (VOC) and Halogenated Organic Compounds (HOC) as defined in 310 CMR 7.00.
- (c) Nothing in 310 CMR 7.03 relieves a person who owns, operates, leases or controls a facility from having to comply with other applicable requirements of 310 CMR 7.00 including, but not limited to, applicable 310 CMR 7.18 and 7.19 Reasonably Available Control Technology (RACT) requirements that come into effect after a person constructs, substantially reconstructs or alters, or operates an emission unit under 310 CMR 7.03.
- (d)
 - 1. Any person who constructs, substantially reconstructs, or alters and subsequently operates an emission unit in accordance with 310 CMR 7.03(8), (15), (16) or (19) shall limit the facility-wide emission of any individual hazardous air pollutant (HAP) to less than ten tons in each consecutive 12-month time period, and all combined HAPs to less than 25 tons in each consecutive 12-month time period.
 - 2. The limits specified in 310 CMR 7.03(1)(d)1. do not apply to an owner or operator subject to 310 CMR 7.00 *Appendix C: Operating Permit and Compliance Program*.

(2) Prohibition. 310 CMR 7.03 is not an alternative to obtaining a plan approval pursuant to 310 CMR 7.02 if construction, substantial reconstruction or alteration would violate requirements of:

- (a) 310 CMR 7.02(5)(a)7. relating to Prevention of Significant Deterioration (PSD) requirements or the need for Non-attainment Review;
- (b) 310 CMR 7.02(5)(a)8. and 9. relating to plan approvals, Nonattainment Review approval or PSD permits, or MACT requirements at 40 CFR 63.40 through 63.44;
- (c) 310 CMR 7.02(5)(a)10. relating to Department determinations of a potential condition of air pollution;
- (d) 310 CMR 7.02(5)(a)5. relating to any incinerator;
- (e) 310 CMR 7.02(4)(a)3. relating to plan approvals; or
- (f) 310 CMR 7.02(4)(a)4. relating to significant increase in federal potential emissions.

(3) Including Emission Units in Calculation of Net Emission Increase. Persons who construct, substantially reconstruct or alter an emission unit that complies with the requirements of 310 CMR 7.03 must include said emission unit in calculating significant net emission increase and determining applicability of Non-attainment New Source Review, 310 CMR 7.00: *Appendix A*, PSD (40 CFR 52.21) or Case-by-case MACT (310 CMR 7.02(5)(e)).

(4) Emission Units Constructed or Altered Since 1970.

- (a) Persons who construct, substantially reconstruct, alter, or subsequently operate an emission unit after July 1, 1970 in the Metropolitan Boston Air Pollution Control District and after September 15, 1970 in all other districts are not required to obtain plan approval if said emission unit complies with the requirements of 310 CMR 7.03(5) through (7), and is not prohibited by 310 CMR 7.03(2).
- (b) Persons who already have plan approval for emission units that might otherwise be subject to 310 CMR 7.03 must continue to comply with the terms and conditions of the plan approval and are not subject to the requirements of 310 CMR 7.03.

7.03: continued

(5) Reporting. Any construction, substantial reconstruction or alteration, as described in 310 CMR 7.03, at a facility subject to the reporting requirements of 310 CMR 7.12, shall be reported to the Department on the next required source registration.

(6) Record-keeping. A record-keeping system shall be established and continued in sufficient detail to document the date of construction, substantial reconstruction or alteration and that the respective emission rates, operational limitations, equipment specifications and other requirements pursuant to 310 CMR 7.03 are met. All records shall be maintained up-to-date such that year-to-date information is readily available for Department examination.

(7) Operation. No person shall operate a facility constructed, substantially reconstructed or altered pursuant to 310 CMR 7.03 except in conformance with the requirements established herein. This exemption from the requirements of 310 CMR 7.02(4) and (5) shall not affect the responsibility of the owner or operator to comply with other provisions of 310 CMR 7.00, other applicable regulations or any plan approval, notice of noncompliance order, PSD permit or other approval issued to said facility.

(8) Degreaser. Construction, substantial reconstruction or alteration of any degreaser in compliance with the criteria established in 310 CMR 7.18(8), regardless of the item being degreased, with a solvent consumption rate of less than 100 gallons per month. Consumption rate is the amount of solvent added into the unit less any documented solvent waste disposal or recycling amounts, each in gallons per month.

(9) Wave Solder. Construction, substantial reconstruction or alteration of an oil-less wave solder operation or any wave solder operation with a flux consumption rate, including any thinner, of less than 200 gallons per month, either equipped with an electrostatic precipitator capable of maintaining a particulate control efficiency of greater than 90% or emitting visible emissions with 0% opacity.

(10) Emergency or Standby Engine.

(a) On or after June 1, 1990, but prior to March 23, 2006, construction, substantial reconstruction or alteration of any emergency or standby engine shall comply with 310 CMR 7.03(10)(a) through (c). All such emergency or standby engines shall:

1. Have an energy input capacity of equal to or greater than 3,000,000 Btu per hour and less than or equal to 10,000,000 Btu per hour; and
2. Be equipped with an exhaust gas silencer so that sound emissions from the generator will not cause or contribute to a condition of air pollution; and
3. Utilize an exhaust stack that discharges so as to not cause or contribute to a condition of air pollution; and
4. Operate only:
 - a. for up to 100 hours per calendar year, or as otherwise approved by EPA, for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine;
 - b. as part of the 100 hours, for up to 50 hours per calendar year for non-emergency situations; and
 - c. during periods of electric power outage due to failure of the electrical supply, in whole or in part, onsite disaster, local equipment failure, flood, fire or natural disaster, or when the imminent threat of a power outage is likely due to failure of the electrical supply.

Additional limitations and conditions may apply, including but not limited to, 40 CFR Part 63, Subpart ZZZZ; 40 CFR Part 60, Subpart IIII; and 40 CFR Part 60, Subpart JJJJ.

(b) No person shall accept for delivery for burning in any engine subject to 310 CMR 7.03(10), diesel or any other fuel that does not meet the sulfur content limit for fuel in 310 CMR 7.05.

(c) Reporting and record keeping requirements for 310 CMR 7.03(10), as required by 310 CMR 7.03(5) and (6), shall be in accordance with 310 CMR 7.02(8)(i)3. through 4.

7.03: continued

(11) Lead Melt Pots. Construction, substantial reconstruction or alteration of any lead melt pot(s) equipped with fabric filter control capable of maintaining 99.5% control efficiency of particulate matter.

(12) Dry Material Storage Silo. Construction, substantial reconstruction or alteration of any storage silo equipped with fabric filter control capable of maintaining 99.5% control efficiency.

(13) Motor Vehicle Fuel Dispensing Facility. Construction, substantial reconstruction or alteration of a Stage I or Stage II system at a motor vehicle fuel dispensing facility, provided that such system meets the requirements of 310 CMR 7.24(3) and (6), and the Department is notified of said installation.

((14) Reserved))

(15) Non-heatset Offset Lithographic Printing. On or after July 1, 1992, construction, substantial reconstruction or alteration of any non-heatset offset lithographic printing press, except such presses present at a facility subject to 310 CMR 7.26(20), utilizing materials containing VOCs or organic material including, but not limited to, printing inks, overprint coatings, makeup solvents, fountain solution additives, adhesives, alcohol and cleanup solutions, complying with the applicable performance standards set forth in 310 CMR 7.03(15)(b) and (c) shall be subject to the requirements in either 310 CMR 7.03(15)(a)1. or 2. and in 310 CMR 7.03(15)(d) and (f), and to the recordkeeping requirements in 310 CMR 7.03(15)(e).

(a)1. The total facility, including the new or modified printing press, shall use less than 670 gallons per month of all materials containing VOCs, or alternatively, its emission rate shall be less than 2.5 tons of VOC per calendar month. This emission rate shall include emissions from all printing and non-printing operations at the facility including, but not limited to, non-heatset offset lithographic printing presses. The owner/operator is subject to the reporting requirements of 310 CMR 7.12.

2. The total facility, including the new or modified printing press, shall use less than 2,000 gallons per 12-month rolling period of all materials containing organic material (includes VOC), or, alternatively, shall emit less than ten tons of organic material (includes VOC), per 12-month rolling period. This emission rate shall include emissions from all printing and non-printing operations at the facility including, but not limited to, non-heatset offset lithographic printing presses. The owner/operator is not subject to the reporting requirements of 310 CMR 7.12 unless otherwise required.

(b) Non-heatset offset lithographic printing presses subject to 310 CMR 7.03(15) and employing a fountain solution containing VOC shall meet the following as applied specifications:

1. For web presses installed on or after May 1, 1998, the fountain solution shall not contain any alcohol.

2. For sheet-fed presses with cylinder widths greater than 21 inches installed on or after July 1, 1992:

a. The fountain solution shall be maintained at 3% by weight or less of alcohol; or

b. The fountain solution shall be maintained at 5% by weight or less of alcohol and the fountain solution refrigerated to a temperature of less than 60°F.

3. For sheet-fed presses with cylinder widths of less than or equal to 21 inches, installed on or after July 1, 1992, the fountain solution shall be maintained at 5% by weight or less of alcohol.

4. For newspaper printing, the fountain shall contain 0% alcohol.

5. Any VOC-containing fountain additive other than alcohol shall be limited to a mix ratio that will result in a VOC concentration in the fountain solution, excluding alcohol, equal to or less than 2.5% by weight.

(c) Cleanup solution containing VOC shall meet the following criteria:

1. Cleanup solution as used at the press shall either:

a. not exceed 70% by weight VOC; or

b. have a VOC composite partial pressure of 10 mmHg or less at 20°C (68°F).

7.03: continued

2. Cleanup solution shall be kept in tightly covered containers during transport and storage; and
 3. The used cleaning rags used in conjunction with the cleanup solution shall be placed, when not in use, in closed containers and collected for proper disposal or recycle.
- (d) Adhesives shall meet a VOC content Limit of 300 grams VOC per liter of product as applied (2.5 pounds per gallon), less water.
- (e) Any person subject to 310 CMR 7.03(15) shall maintain records sufficient to demonstrate compliance. Records kept to demonstrate compliance shall be kept on-site for five years and shall be made available to representatives of the Department upon request. Such records shall include, but are not limited to:
1. Identity, formulation (percent VOC by weight as determined by the manufacturer's formulation data or EPA Method 24 or 24A test), and quantity (gallons per calendar month) for each VOC-containing compound used at the facility including, but not limited to:
 - a. Alcohol;
 - b. Makeup solvent;
 - c. Fountain additives, including fountain solution alcohol substitute;
 - d. Fountain solution concentrate;
 - e. Printing Ink;
 - f. Cleanup solution;
 - g. Adhesives; and
 - h. Overprint coatings.
 2. The percent by weight of alcohol in the fountain solution as determined each time alcohol or alcohol mix is added to the system;
 3. The weight percent of VOC-containing fountain additives other than alcohol in the fountain solution;
 4. For fountain solutions subject to refrigeration requirements of 310 CMR 7.03(15)(b), the temperature of the fountain solution, as recorded on a once per shift basis; and
 5. Total VOC emissions (tons per calendar month) for all printing presses combined at the facility, as described in 310 CMR 7.03(15)(a).
- (f) Any person who complies with 310 CMR 7.03(15) in *lieu* of obtaining a plan approval for a press under 310 CMR 7.02 shall comply with applicable RACT requirements of 310 CMR 7.18(25) when such requirements become more stringent than those in 310 CMR 7.03(15).
- (16) Paint Spray Booths. Construction, substantial reconstruction or alteration of any paint spray booth utilizing coatings, thinners, reducers and cleanup solutions, and complying with the applicable performance standard of 310 CMR 7.03(16)(b) through (l) shall be subject to the requirements in 310 CMR 7.03(16)(m) and either 310 CMR 7.03(16)(a)1. or 2.
- (a) 1. The total facility, including the new or modified paint spray booth, shall use less than 670 gallons per calendar month of all materials containing VOCs, or alternatively, has an emission rate of less than 2.5 tons of VOC per calendar month. This emission rate includes all coating operations at the facility. The owner/operator is subject to the reporting requirements of 310 CMR 7.12.
2. The total facility, including the new or modified paint spray booth, shall use less than 2,000 gallons per 12-month rolling period of any material containing organic material (includes VOC), or alternatively, has an emission rate less than ten tons of organic material (includes VOC) per 12-month rolling period. This emission rate includes all coating operations at the facility. The owner/operator is not subject to the reporting requirements of 310 CMR 7.12 unless otherwise required.
- (b) The coating operation shall be of a type described in 310 CMR 7.18, regardless of annual or potential emission applicability criteria contained in 310 CMR 7.18. These operations are:
- 310 CMR 7.18(3) Metal Furniture Surface Coating;
 - 310 CMR 7.18(4) Metal Can Surface Coating;
 - 310 CMR 7.18(5) Large Appliance Surface Coating;
 - 310 CMR 7.18(6) Magnetic Wire Insulation Surface Coating;
 - 310 CMR 7.18(10) Metal Coil Coating;
 - 310 CMR 7.18(11) Surface Coating of Miscellaneous Metal Parts and Products;
 - 310 CMR 7.18(21) Plastic Parts Surface Coating;

7.03: continued

310 CMR 7.18(22) Leather Surface Coating;
 310 CMR 7.18(23) Wood Products Surface Coating;
 310 CMR 7.18(24) Flat Wood Paneling Surface Coating; and
 310 CMR 7.18(28) Automotive Refinishing.

Operations not listed in 310 CMR 7.03(16)(b) are not covered by this exemption and require either a Limited Plans Application (LPA) or Comprehensive Plans Application (CPA) as required by 310 CMR 7.02.

(c) All coatings used in the new or modified spray booth shall comply with the as-applied formulations contained in 310 CMR 7.18 for the spray coating of material described by the relevant subsection. Notwithstanding the previous statement, for any person who owns, leases, operates or controls a facility with coating operation(s) subject to 310 CMR 7.03(16), the emissions of VOC from any coatings used in small amounts at the facility are exempt from the emission limitations of the relevant subsection, provided the person satisfies the following conditions:

1. the total amount of all coatings exempted does not exceed 55 gallons during any rolling 12 month period at the facility; and,
2. the person identifies and tracks the usage of the coatings covered by this exemption; and,
3. the person complies with the record keeping and testing requirements of the applicable section(s) of 310 CMR 7.03(16)(b).

(d) Spray guns shall utilize one of the following methods of spray application and be maintained and operated in accordance with the recommendations of the manufacturer:

1. Electrostatic spray application; or
2. High Volume Low Pressure (HVLP) spray application; or
3. Any other coating application method that achieves a transfer efficiency equivalent to electrostatic or HVLP spray application and is approved by the Department in writing.

(e) Each paint spray booth shall utilize two or more layers of dry fiber mat filter with a total thickness of at least two inches or an equivalent system as determined in writing by the Department and that achieves particulate control efficiency of at least 97% by weight. Filter material shall be disposed in accordance with all applicable DEP regulations.

(f) Face velocity of air at filter shall not exceed 200 feet per minute.

(g) For surface preparation, prior to coating, the VOC content of any surface preparation solution shall not exceed 1.67 pounds per gallon. However, for surface preparation of plastic parts the VOC content of the surface preparation solution shall not exceed 6.5 pounds of VOC per gallon.

(h) Spray guns shall be cleaned in a device that:

1. minimizes solvent evaporation during the cleaning, rinsing, and draining operations;
2. recirculates solvent during the cleaning operation so that the solvent is reused; and,
3. collects spent solvent in a container with a tight-fitting cover so that it is available for proper disposal or recycling.

(i) The paint spray booth shall have a stack conforming to the following criteria:

1. The stack shall discharge vertically upwards;
2. The stack shall not have rain protection of a type that restricts the vertical exhaust flow;
3. The stack gas exit velocity shall be greater than 40 feet per second; and
4. The minimum stack exit height shall be 35 feet above the ground or ten feet above roof level.

(j) Emissions from stack shall have 0% opacity.

(k) Sufficient records shall be prepared and maintained to demonstrate compliance for each calendar month. Such records shall include, but are not limited to:

1. For each coating, as applied:
 - a. Gallons of coating used;
 - b. Coating density (Pounds per gallon);
 - c. Pounds of VOC per gallon of coating;
 - d. Pounds of solids per gallon of coating;
 - e. Pounds of water per gallon of coating;
 - f. Pounds of other non-VOC liquid per gallon of coating; and
 - g. Pounds of VOC per gallon of solids as applied.
2. Gallons of exempt/non-compliance coatings used; and
3. Gallons of cleanup solution used and pounds VOC per gallon; and

7.03: continued

4. Maintenance records of filter pad replacement and disposal.

(l) As an alternative to 310 CMR 7.03(16)(k)1. and (k)2., persons subject to 310 CMR 7.18(28): *Automotive Refinishing* shall maintain purchase records of coatings and surface preparation products on a monthly basis. The purchase records shall be summarized and include coating category, coating or coating component, and surface preparation product as identified on the container, the quantity of each coating or component, and surface preparation product, and the VOC content (in pounds per gallon) of each coating and surface preparation product, after mixing according to the manufacturer's instructions. Records shall be kept for three years, and be made available to representatives of the Department upon request.

(m) Any person who complies with 310 CMR 7.03(16), in *lieu* of obtaining a plan approval for a spray booth under 310 CMR 7.02, shall comply with applicable RACT requirements of 310 CMR 7.18(3) through (6), (10), (11), (21) through (24), and (28) when such requirements become more stringent than those in 310 CMR 7.03(16).

(17) Groundwater/Soil Venting Systems. Construction, substantial reconstruction or alteration of any Contaminated Groundwater Treatment System (CGTS) or contaminated soil venting system complying with the following criteria:

(a) CGTS or contaminated soil venting systems shall be equipped and operated such that the system continuously reduces VOC in air effluent stream by at least 95% (by weight). Such systems include, but are not limited to, the following:

1. CGTS followed by carbon adsorber, incinerator or equivalent air pollution control device; or
2. Contaminated soil venting followed by carbon adsorber, incinerator or equivalent air pollution control device.

(b) Systems shall be equipped and operated with the necessary procedures and instrumentation to assure operation in compliance with this standard including, but not limited to:

1. Interlock to prevent operation of the entire system without proper control device operation including, but not limited to, automatic shutoff if incinerator drops below normal operating temperature;
2. Inlet/outlet incinerator temperature indicators;
3. For a CGTS, flowmeter(s) indicating rate and total amount of groundwater being treated, if applicable; and
4. On-site regeneration of carbon or regularly scheduled replacement of carbon, if used.

(d) Sufficient records shall be prepared and maintained to demonstrate emissions compliance for each month. Records shall include, but are not limited to the following, as applicable:

1. Once per month, measurement of water flow rate and total flow to date for the month;
2. For a CGTS, once per month measurement of inlet and effluent water VOC concentration;
3. Once per month, measurement of VOC concentration in air prior to control, and VOC concentrations after control;
4. Once per month, measurement of overall VOC reduction efficiency of the air pollution control system in percent by weight;
5. Maintenance records of the system;
6. Monthly operating hours of the system;
7. Once per month, measurement of incinerator outlet temperatures; and
8. Carbon regeneration/replacement records.

(18) Fuel Cells. Construction, substantial reconstruction or alteration of any fuel cell(s) complying with the following criteria:

(a) The emissions from the fuel cell will not exceed the following standards based upon a one hour averaging time:

1. NO_x - 0.03 pounds per megawatt hour.
2. Carbon Monoxide - 0.05 pounds per megawatt hour.
3. Non methane organic compounds - 0.008 pounds per megawatt hour.

(b) Any person subject to 310 CMR 7.03(18) shall keep records of monthly electric generation.

7.03: continued

(19) Flexographic, Gravure, Letterpress and Screen Printing. On and after May 1, 1998, construction, substantial reconstruction, or alteration of any flexographic, gravure, letterpress, or screen printing press at a facility that is not subject to 310 CMR 7.26(20) through (29), but that is utilizing materials containing VOC or organic material including, but not limited to, printing inks and overprint coating, alcohol, makeup solvents, and cleanup solutions complying with the applicable performance standards in 310 CMR 7.26(25) and 310 CMR 7.26(26), shall be subject to the limits and reporting requirements in either 310 CMR 7.03(19)(a)1. or 2. and shall also be subject to the requirements in 310 CMR 7.03(19)(c) and to the recordkeeping requirements in 310 CMR 7.03(19)(b).

(a) 1. The total facility including, but not limited to, the new or modified printing press, and non-printing operations at the facility, shall use less than 670 gallons per calendar month of all materials containing VOCs or, alternatively, the total facility emission rate shall be less than 2.5 tons of VOC per calendar month. The owner/operator is subject to the reporting requirements of 310 CMR 7.12; or

2. The total facility including, but not limited to, the new or modified printing press, and non-printing operations at the facility, shall use less than 2,000 gallons per 12-month rolling period of all materials containing organic material (includes VOC) or, alternatively, the total facility emission rate shall be less than ten tons of organic material (includes VOC) per 12-month rolling period. The owner/operator is not subject to the reporting requirements of 310 CMR 7.12 unless otherwise required.

(b) Any person subject to 310 CMR 7.03(19) shall maintain records sufficient to demonstrate compliance. Such records shall include, but are not limited to, records demonstrating that cleanup solutions, inks, coatings, and adhesives are in compliance with applicable standards set forth in 310 CMR 7.26(20) through (29) and that the usage rate or the emissions rate do not exceed the rates set forth in 310 CMR 7.03(19)(a). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department upon request.

(c) Any person who complies with 310 CMR 7.03(19), in *lieu* of obtaining a plan approval for a press under 310 CMR 7.02, shall comply with applicable RACT requirements of 310 CMR 7.18(12) and (25) and 310 CMR 7.26(20) through (29) when such requirements become more stringent than those in 310 CMR 7.03(19).

(21) Corona Surface Treatment Devices. Construction, substantial reconstruction or alteration of any bare-roll or covered-roll corona surface treatment device equipped with a catalytic ozone decomposer designed to reduce ozone emissions by 99.9% or to an emission limit of 0.1 ppm at the catalytic device outlet.

(22) Conveyors, and Dry Material Storage (Except Silos). Construction, substantial reconstruction or alteration of equipment used exclusively to convey or store dry solid materials in an enclosed system or equipped with a fabric filter or equivalent particulate control device capable of maintaining 99.5% control efficiency for particulate emissions. In addition, said operation shall not generate any visible emissions and shall comply with provisions of 310 CMR 7.10: *U Noise*. This standard is not applicable to conveyors and dry material storage associated with Standard Industrial Classification Code Major Group 1400 (Mining), Major Group 2900 (Petroleum and Coal products) and Major Group 3200 (Stone, Clay and Glass Products).

(23) Temporary Boilers. Construction or installation of a temporary boiler at a facility where a boiler is no longer available for use. A boiler is considered unavailable for use if it has been shut down for repair or inspection or is no longer available or operating due to circumstances beyond the control of the person who owns or operates the facility. Temporary boilers must meet the following conditions:

- (a) Have a maximum heat input capacity less than or equal to the boiler it is replacing;
- (b) Be installed for a period not to exceed 120 days;
- (c) Use the same or lower sulfur content fuel as the boiler it is replacing; and
- (d) Comply with all other applicable requirements for the boiler that it replaced.

The Department may grant an extension to operate the temporary boiler beyond 120 days. Such an extension shall be considered upon receiving a written request for an extension. Approval of an extension will be issued in writing.

(24) Welding. Construction, substantial reconstruction, alteration or operation of welding equipment provided that:

- (a) The facility uses ten tons or less of welding rod per year; and

7.03: continued

(b) Each welding station is equipped with a ventilation system designed to vent fumes and particulate to a particulate collection device having a control efficiency of 90% or greater.

(25) Biotechnology Surface Disinfection Processes.

(a) Construction, substantial reconstruction, or alteration of any surface disinfection process used in making any of the following medical device, drug, or biologic products:

1. a product derived in whole or in part from biotechnology, and
2. one of the following applications or notices has been filed with U.S. Food and Drug Administration (FDA) for such product: an Investigational New Drug Application, an Investigational Device Exemption Notice, a New Drug Application, a premarket approval application, or a premarket notification pursuant to section 510(k) of the federal Food, Drug and Cosmetic Act (510(k)) (including an FDA-approved exemption from the 510(k) premarket notification requirement).

(b) Surface disinfection processes shall comply with the following criteria:

1. The total facility-wide actual emissions, including new or modified surface disinfection processes, shall comply with the requirements in either 310 CMR 7.03(25)(b)1.a. or b.
 - a. 15 tons of volatile organic compounds (VOC) per 12-month rolling period. This VOC emission limitation includes all process operations at the facility. In addition, facility-wide actual emissions of VOC shall not exceed 2.5 tons per calendar month. The owner/operator is subject to the reporting requirements of 310 CMR 7.12.
 - b. Less than ten tons of materials containing organic material (includes VOC) per 12-month rolling period. This organic material emission limitation includes all process operations at the facility. The owner/operator is not subject to the reporting requirements of 310 CMR 7.12 unless otherwise required.
2. The total facility-wide actual emissions, shall not exceed nine tons of any single Hazardous Air Pollutants (HAP as defined at 40 CFR Part 63) per 12-month rolling period, and shall not exceed 15 tons of any combination of (total) HAP per 12-month rolling period. In addition, facility-wide actual emissions of any individual HAP shall not exceed two tons per calendar month, and any combination of (total) HAP shall not exceed three tons per calendar month.
3. Processes that emit or will emit VOCs or HAPs in exceedance of limitations for VOCs and HAPs established in 310 CMR 7.02(25)(b)1. or 2., are subject to 310 CMR 7.02(5), and a person shall obtain written Department plan approval prior to commencement of construction, installation and operation of said processes.
4. Combustion processes that support processes subject to 310 CMR 7.03(25) are subject to regulatory standards found at 310 CMR 7.02, 310 CMR 7.03, or 310 CMR 7.26.
5. Cleaning, sterilization, disinfection, and other operations:
 - a. Cleaning, sterilization, disinfection, and other solutions which contain VOC shall be kept in tightly closed containers when not in active use and during transport and storage, and
 - b. The spent cleaning cloths and/or wipes used in conjunction with the cleaning and sterilization solutions shall be placed, after use, in tightly closed containers and collected for proper recycling or disposal.
6. Any person subject to this regulatory standard shall maintain records sufficient to demonstrate compliance with 310 CMR 7.03(25) for each calendar month. Records kept to demonstrate compliance with 310 CMR 7.03(25) shall be maintained on-site for five years and shall be made available to representatives of the Department upon request. For each process and operation, such records shall include, but not be limited to:
 - a. Gallons of VOC used;
 - b. Pounds of VOC used;
 - c. Gallons of individual and total HAP used; and
 - d. Pounds of individual and total HAP used.

(26) Rock Crushing and Processing Operations - Existing Equipment Replacement.

(a) Applicability on and after July 24, 2009. 310 CMR 7.03(26) shall apply to the replacement of equipment at a rock crushing and processing facility operating with a written plan approval from the Department under the provisions of 310 CMR 7.02.

7.03: continued

- (b) Definitions. When used in 310 CMR 7.03(26) the following terms shall mean:
1. Conveying Systems means a device for transporting materials from one piece of equipment or location to another piece of equipment or location.
 2. Crusher means a machine used to crush nonmetallic minerals into smaller pieces, and includes, but is not limited to, the following types: jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.
 3. Dust Suppression System means a water spray system designed to minimize fugitive emissions throughout the rock crushing and processing operation.
 4. Rock Crushing and Processing Equipment means a combination of equipment that is used to crush and sort nonmetallic minerals including, but not limited to, crushers, screening operators, conveying systems, dust suppression systems, feeders, and wash systems.
 5. Screening Operation means a device for separating material according to size by passing undersized material through one or more mesh surfaces (screens) in series, and retaining oversized material on the mesh surfaces.
- (c) Equipment Replacement. An owner or operator may replace rock crushing and processing equipment under the provisions of 310 CMR 7.03(26) provided that:
1. The rock crushing and processing equipment was previously approved by the Department in writing under the provisions of 310 CMR 7.02 and said approval is valid at the time of equipment replacement, and
 2. Equipment replacement will not increase overall processing capacity or emissions (including noise) from the rock crushing and processing operation, and
 3. The owner or operator complies with the provisions of 310 CMR 7.03(26) in its entirety, and
 4. The rock crushing and processing operation shall be equipped with a dust suppression system that will limit opacity to less than 10% at all time, and
 5. The rock crushing and processing operation will be operated in accordance with all applicable conditions and limitations contained in the Department's plan approval for the original equipment.
- (d) Testing. Within seven days of recommencement of operation after completion of equipment replacement, visible emission observations shall be conducted for the rock crushing and processing operations in accordance with 40 CFR 60: *Appendix A Method 9* to verify compliance with 310 CMR 7.03(26)(c)4.
- (e) Record Keeping. Records documenting any equipment replacement as provided in 310 CMR 7.03(26) and of visible emission observations as required by 310 CMR 7.03(26)(d) shall be maintained on-site in accordance with the provisions of 310 CMR 7.03(6).
- (f) Reporting. Replacement of equipment shall be reported to the Department in accordance with the provisions of 310 CMR 7.03(5).
- (g) Duty to Comply. Compliance with the provisions of 310 CMR 7.03(26) does not obviate the need to comply with 40 CFR 60 Subpart OOO if applicable.

7.04: U Fossil Fuel Utilization Facilities

((1) Reserved)

(2) U Smoke Density Indicator.

- (a) on or after June 1, 1990, no person shall cause, suffer, allow, or permit the burning of any grade oil or solid fuel in any fuel utilization facility having an energy input capacity rated by the Department equal to or greater than 40,000,000 Btu per hour, unless such facility is equipped with a smoke density sensing instrument and recorder which are properly maintained in an accurate operating condition, operates continuously and is equipped with an audible alarm to signal the need for combustion equipment adjustment or repair when the smoke density is equal to or greater than No. 1 of the Chart. Such smoke density equipment shall be available for inspection at reasonable times by a representative of the Department. Such inspection may include the review of recording charts which must be retained and made available for a period of one year from the date of use.
- (b) the Department may require any fuel utilization facility, other than those specified under the provision of 310 CMR 7.04 (2)(a) to be equipped with smoke density sensing devices and appurtenances if, in the opinion of the Department, such are deemed necessary.

7.04: continued

(c) On or after July 1, 2000 any person owning or operating a fuel utilization facility with an energy input capacity equal to or greater than 10,000,000 Btu per hour but less than 40,000,000 Btu per hour is no longer required to install or maintain a smoke density sensing instrument and recorder even if required in a previous plan approval. Applicability is based on the size of an individual fuel utilization emission unit.

(d) Notwithstanding the requirements of 310 CMR 7.04(2)(a) and (c), a new or modified fuel utilization facility may be required to install instrumentation to monitor opacity should it be subject to New Source Performance Standards contained at 40 CFR Part 60, Subparts D, Da, Db or Dc.

((3) Reserved)

(4) U Inspection, Maintenance and Testing.

(a) On and after December 31, 1977, no person shall cause, suffer, allow, or permit the operation of any fossil fuel utilization facility rated by the Department as having an energy input capacity equal to or greater than 3,000,000 Btu per hour unless said facility has been inspected and maintained in accordance with the manufacturers recommendations and tested for efficient operation at least once in each calendar year. The results of said inspection, maintenance, and testing and the date upon which it was performed shall be recorded and posted conspicuously on or near the facility. Unless otherwise required, 310 CMR 7.04(4)(a) shall not apply to stationary combustion turbines and stationary reciprocating engines.

(b) No person shall cause, suffer, allow, or permit the removal, alteration or shall otherwise render inoperative any air pollution control equipment which has been installed as a requirement of 310 CMR 7.00, other than for reasonable maintenance periods or unexpected and unavoidable failure of equipment.

(5) U Fuel Oil Viscosity. On or after July 1, 1978, no person shall cause, suffer, allow, or permit the burning of any grade residual oil in any fossil fuel utilization facility with an energy input capacity rated by the Department as equal to or greater than 250,000,000 Btu per hour unless said facility is equipped with an automatic viscosity controller that shall control the viscosity of the fuel oil to the burners. The automatic controller shall be of a type approved by the Department.

The Department may require a fossil fuel utilization facility with an energy input capacity rated by the Department as equal to or greater than 100,000,000 Btu per hour but less than 250,000,000 Btu per hour to be equipped with an automatic viscosity controller if, in the opinion of the Department, such is deemed necessary.

(6) U. No person shall cause, suffer, allow, or permit the installation or use of any material, article, machine, equipment, or contrivance which conceals an emission without reducing the total weight of emissions where such emission would constitute a violation of any applicable regulation.

(7) CM Prohibition of Unapproved Burners in the City of Worcester.

(a) Upon receipt of written notification from the Department, no person shall cause, suffer, allow, or permit the operation of a fossil fuel utilization facility having an energy input capacity greater than 3,000,000 Btu per hour located in the City of Worcester utilizing a burner or burners of a design not approved by the Department, without the approval of the Department pursuant to 310 CMR 7.00.

(b) 310 CMR 7.04(7)(a) shall not apply to those facilities having met any one of the following conditions:

1. demonstrated an ability to maintain compliance with applicable regulations;
2. demonstrated to the satisfaction of the Department that the fossil fuel utilization facility is used only as an emergency or standby unit; or
3. demonstrated to the satisfaction of the Department that utilization of distillate fuel oil in the fossil fuel utilization facility will not cause a violation 310 CMR 7.00.

(c) No person shall cause, suffer, allow, or permit the operation of any fossil fuel utilization facility subject to the provisions of 310 CMR 7.04(7)(a) unless said person has submitted a schedule to the Department on a form provided by the Department specifying the dates by which compliance with 310 CMR 7.04(7)(a) will be achieved. Compliance in all instances shall be achieved as expeditiously as practicable but in no case later than September 1, 1980.

7.04: continued

(8) CM Prohibition of Natural Draft in Fossil Fuel Utilization Facilities in the City of Worcester.

(a) Upon receipt of written notification from the Department, no person shall cause, suffer, allow, or permit the use of natural draft as a secondary air supply in a fossil fuel utilization facility having an energy input capacity greater than 3,000,000 Btu per hour located in the City of Worcester, without the approval of the Department pursuant to 310 CMR 7.00

(b) 310 CMR 7.04(8)(a) shall not apply to those facilities having met either of the following conditions:

1. demonstrated an ability to maintain compliance with applicable regulations; or
2. demonstrated to the satisfaction of the Department that the fossil fuel utilization facility is used only as an emergency or standby unit.

(c) No person shall cause, suffer, allow, or permit the operation of any fossil fuel utilization facility subject to the provisions of 310 CMR 7.04(8)(a) unless said person has submitted a schedule to the Department specifying the dates by which compliance with 310 CMR 7.04(8)(a) will be achieved. Compliance in all instances shall be achieved as expeditiously as practicable, but in no case later than September 1, 1980.

(9) Used Oil Fuel.

(a) Except as provided for in 310 CMR 7.04(9)(b) through (d), no person having control of a fossil fuel utilization facility shall cause, suffer, allow, or permit the burning therein of used oil fuel unless:

1. the Department has in writing approved the plans, specifications, Standard Operating Procedure, and maintenance procedure for the facility in which the used oil fuel is to be burned, and
2. the used oil fuel is burned in said facility in accordance with the plans, specifications, Standard Operating Procedure, and maintenance procedure as approved in writing by the Department, including all terms and conditions which the Department may include in such approval, and
3. a minimum combustion efficiency of 99.5% is achieved, and
4. the energy input capacity for each individual facility is equal to or greater than 3,000,000 Btu per hour.

(b) A person who, on July 1, 1986, was lawfully burning used oil fuel in a fossil fuel utilization facility other than a used oil fuel fired space heater may continue to do so

1. between that date and December 31, 1986 only if
 - a. a minimum combustion efficiency of 99.5% is achieved, and
 - b. the energy input capacity for each individual facility is equal to or greater than 3,000,000 Btu per hour, and
 - c. the activity is in compliance with all applicable provisions of 310 CMR 7.00, except that specific approval by the Department to burn used oil fuel in the fossil fuel utilization facility shall not be required during that time, and
 - d. the activity is in compliance with all applicable provisions of 310 CMR 30.099(16) and 310 CMR 30.200, including but not limited to the conditions set forth in 310 CMR 30.205, except that a recycling permit shall not be required during that time, and
2. after December 31, 1986 only if
 - a. such person has applied in writing to the Department for the Department's approval of the plans, specifications, Standard Operating Procedure, and maintenance procedure for the fossil fuel utilization facility in which the used oil fuel is to be burned, and
 - b. such application was received by the Department by no later than December 31, 1986, and
 - c. such application has not been denied by the Department, and
 - d. the activity is in compliance with all applicable provisions of 310 CMR 7.00, except that specific approval by the Department to burn used oil fuel in the fossil fuel utilization facility shall not be required while such application is pending, and
 - e. the activity is in compliance with all applicable provisions of 310 CMR 30.099(16) and 310 CMR 30.200, including but not limited to the conditions set forth in 310 CMR 30.205, except that a recycling permit shall not be required while the application referred to in 310 CMR 30.099(16) is pending, and

7.04: continued

- f. a minimum combustion efficiency of 99.5% is achieved, and
 - g. the energy input capacity for each individual facility is equal to or greater than 3,000,000 Btu per hour.
- (c) No person shall sell or distribute, or offer for sale or distribution, any used oil fuel fired space heater unless the energy input capacity of the space heater is equal to or less than 500,000 Btu per hour.
- (d) No person shall cause, suffer, allow, or permit the burning of used oil fuel in any space heater unless:
1. the energy input capacity of the space heater is equal to or less than 500,000 Btu per hour,
 2. the combustion gases are vented vertically to the ambient air so as to not cause or contribute to a condition of air pollution,
 3. the used oil fired space heater is integrally connected to a tank that supplies the used oil fuel to the space heater,
 4. the used oil fired space heater is operated and maintained in accordance with the manufacturers recommended operating and maintenance procedures, and the used oil fired space heater is not operated during the period from June 15th through September 15th,
 5. the used oil fuel is burned at the site of generation, or off the site of generation as a supplemental fuel source, which may include used oil fuel generated and transported by a very small quantity generator pursuant to 310 CMR 30.353, or used oil fuel generated by a household as described in 310 CMR 30.104(6);
 6. the used oil fuel is hazardous waste only because it is waste oil pursuant to 310 CMR 30.131, and has a flash point of 100°F or higher; and
 7. the burning of the used oil fuel in the used oil fuel fired space heater is done in compliance with all other applicable regulations and requirements of the Department, the local fire department and the Office of the Massachusetts State Fire Marshall.

7.05: U Fuels All Districts(1) Sulfur Content of Fuels. (except natural gas)(a) Maximum Sulfur Content of Fuel.

1. No person owning, leasing or controlling the operation of a fossil fuel utilization facility shall cause, suffer, allow or permit the burning therein of any liquid fossil fuel having a sulfur content in excess of that listed in 310 CMR 7.05(1)(a)1.: *Table 1* and in accordance with the timelines listed in 310 CMR 7.05(1)(a)1.: *Table 1*, and/or of any solid fossil fuel having a sulfur content in excess of that listed in 310 CMR 7.05(1)(a)1.: *Table 2*, except as provided in 310 CMR 7.05(1)(b).
2. On and after July 1, 2014, no person owning, leasing or controlling the operation of an indirect heat exchanger with an energy input capacity equal to or greater than 250 MMBtu per hour providing steam to a steam-electric generator that produces electrical energy for sale shall cause, suffer, allow or permit the burning therein of any residual fuel oil having a sulfur content in excess of 0.28 pounds per million Btu heat release potential (*i.e.*, 0.5% sulfur content by weight), except as provided in 310 CMR 7.05(1)(b).
3. Stationary Engines and Turbines. On and after July 1, 2007, no person owning, leasing or controlling a stationary engine or turbine subject to the requirements of 310 CMR 7.02(8)(i), 310 CMR 7.03(10), or 310 CMR 7.26(40) through (44) shall accept for delivery for burning any diesel or other fuel unless said fuel complies with the applicable U.S. Environmental Protection Agency sulfur limits for fuel pursuant to 40 CFR 80.29, 40 CFR 80.500, and 40 CFR 80.520(a) and (b) as in effect January 18, 2001.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.05: continued

310 CMR 7.05(1)(a)1.: <i>Table 1: Sulfur Content Limit of Liquid Fossil Fuel</i>				
District/Area	Fuel	Heat Release Potential, lb/MMBtu	Percent by Weight (parts per million, ppm)	Applicability Date
Statewide	Distillate Oil	0.17	0.3% (3,000)	Prior to July 1, 2014
Statewide	Distillate Oil	Not Applicable	0.05% (500)	July 1, 2014 through June 30, 2018
Statewide	Distillate Oil	Not Applicable	0.0015% (15)	on and after July 1, 2018
Berkshire APCD	Residual Oil	1.21	2.2%	June 23, 1975
Cities and Towns of Arlington, Belmont, Boston, Brookline, Cambridge, Chelsea, Everett, Malden, Medford, Newton Somerville, Waltham, and Watertown	Residual Oil	0.28	0.5%	October 1, 1970
Merrimack Valley APCD, (Except City of Lawrence and Towns of Andover, North Andover, and Methuen)	Residual Oil	1.21	2.2% (1.0%)	Prior to July 1, 2014
Merrimack Valley APCD	Residual Oil	0.55	1.0%	July 1, 2014 through June 30, 2018
Remainder of State	Residual Oil	0.55	1.0%	Prior to July 1, 2018
Statewide except Berkshire APCD	Residual Oil	0.28	0.5%	On and after July 1, 2018

7.05: continued

310 CMR 7.05(1)(a)1.: <i>Table 2</i> : Sulfur Content Limit of Solid Fossil Fuel			
District/Area	Fuel	Heat Release Potential, lb/MMBtu	Percent by Weight
Berkshire APCD and Merrimack Valley APCD, except City of Lawrence and Towns of Andover, North Andover, and Methuen	Coal	1.21	1.57%
Cities and Towns of Arlington, Belmont, Boston, Brookline, Cambridge, Chelsea, Everett, Malden, Medford, Newton Somerville, Waltham, and Watertown	Coal	0.28	0.36%
Remainder of State, including City of Lawrence and Towns of Andover, North Andover, and Methuen	Coal	0.55	0.72%

(b) Exceptions.

1. Any person with an existing approval issued by the Department that allows the burning of fossil fuel oil with a sulfur content in excess of the limits in 310 CMR 7.05(1)(a)1.: *Table 1* may burn such fuel in compliance with the Department's approval until July 1, 2014. Beginning on July 1, 2014, such person shall comply with the fuel oil sulfur content limits in 310 CMR 7.05(1)(a)1.: *Table 1*, except as provided in 310 CMR 7.05(1)(b)2. or 3.

2. Any person owning, leasing or controlling the operation of a fossil fuel utilization facility may burn any existing stock of fossil fuel oil at the facility, but shall not accept delivery of fuel with a sulfur content in excess of the limits in 310 CMR 7.05(1)(a)1.: *Table 1* on or after the applicable date(s) in 310 CMR 7.05(1)(a)1.: *Table 1*, except as provided in 310 CMR 7.05(1)(b)3.

3. The sulfur content limits in 310 CMR 7.05(1)(a)1.: *Table 1* and *Table 2* shall not apply to a facility whose owner or operator has applied for and received approval from the Department and EPA of a plan whereby use of a fuel with a sulfur content in excess of the limits in 310 CMR 7.05(1)(a)1.: *Table 1* and *Table 2* would cause no greater emissions of sulfur compounds into the ambient air than if the applicable sulfur content fuel in 310 CMR 7.05(1)(a)1.: *Table 1* and *Table 2* were used. The plan must be approved by the Department, in writing, and any conditions attached to the Department's approval must be agreed to by the applicant, in writing.

4. Approval granted under the provisions of 310 CMR 7.05(1)(b)1. or 3. may be revoked by the Department for cause or when in its opinion revocation is necessary to prevent or abate a condition of air pollution.

(2) U Use of Residual Fuel Oil or Hazardous Waste Fuel. No person owning, leasing or controlling an individual fuel utilization emission unit rated by the Department as having an energy input capacity of less than 3,000,000 Btu per hour shall cause, suffer, allow or permit the burning of any residual fuel oil or hazardous waste fuel therein.

7.05: continued

(3) Ash Content of Fuels (Except Natural Gas).

(a) No person shall cause, suffer, allow or permit the burning in the Commonwealth of any solid or solid/liquid mixture fossil fuel containing an ash content in excess of 4% by dry weight, except as provided in 310 CMR 7.05(3)(b) and (c).

(b) In CM, MV, and SM, fossil fuel utilization facilities having an energy input capacity rated by the Department of 250,000,000 or greater Btu per hour, may burn solid or solid/liquid mixture fossil fuel with an ash content in excess of 9% by dry weight, provided that:

1. An application is made to the Department in writing to use such fuel and any information as the Department may require is submitted;
2. The Department determines that the use of such fuel would not cause other applicable air pollution control regulations or ambient air quality standards to be violated; and
3. The use of such fuel has been approved, in writing, by the Department and the conditions of approval have been agreed to by the applicant, in writing. Such conditions of approval may include the installation, operation and maintenance of ambient air monitoring equipment by the applicant, in a manner specified by the Department.

(c) In MB, B and PV, all fossil fuel utilization facilities may burn solid or solid/liquid mixture fossil fuel with an ash content in excess of 9% by dry weight, provided that:

1. An application is made to the Department in writing to use such fuel and any information as the Department may require is submitted;
2. The Department determines that the use of such fuel would not cause other applicable air pollution control regulations or ambient air quality standards to be violated; and
3. The use of such fuel has been approved, in writing, by the Department and the conditions of approval have been agreed to by the applicant, in writing. Such conditions of approval may include the installation, operation and maintenance of ambient air monitoring equipment by the applicant, in a manner specified by the Department.

(4) Fuel Additives. No person owning, leasing or controlling a fuel utilization facility shall cause, suffer, allow or permit the use therein of any fuel additive except in accordance with the manufacturer's recommended specifications.

(5) Fuel Suppliers.

(a) No person shall ship or deliver in intrastate commerce to any person for burning or reshipment for burning, any fuels with a sulfur content in excess of those specified in 310 CMR 7.05(1)(a)1., except that such shipment may be provided when:

1. Use of such fuel has been approved by the Department in writing;
2. Such approval has been verified by the shipper; and
3. Record of such shipment shall be retained for two years and the record shall be made available to the Department for its review and inspection during customary business hours.

(b) Any person supplying in intrastate commerce for burning or for reshipment for burning, fuel oil of a grade No. 2 or greater or coal shall keep and maintain records showing the quantities of the fuels handled and analyses showing the Btu value, sulfur content, nitrogen content (required only for residual fuel oils), viscosity, and ash content of said fuels and make such records available to the Department for its review and inspection during customary business hours.

(c) Any person supplying residual fuel oil in intrastate commerce shall provide certification of the nitrogen content of the oil to its customers as determined by the applicable ASTM method or any other method approved by the Department and EPA.

(d) Shippers and distributors of fossil fuels shall provide evidence, to the satisfaction of customer-users, of the ash content of fuels supplied.

(6) All fuel analyses to be performed by or for distributors, suppliers or users of fuels, for purposes of 310 CMR 7.00, shall be performed in accordance with the applicable ASTM method or any other method approved by the Department and EPA.

(7) No person owning, leasing, or controlling the operation of a fossil fuel utilization facility shall cause, suffer, allow, or permit the burning therein of any quantity, batch, or lot of used oil fuel unless:

7.05: continued

(a) that quantity, batch, or lot of used oil fuel was generated and mixed at the site of said fossil fuel utilization facility by the person owning, leasing, or controlling the operation of said fossil fuel utilization facility in compliance with 310 CMR 30.201, or

(b) both of the following requirements are met:

1. said quantity, batch, or lot of used oil fuel was mixed in compliance with 310 CMR 30.201; and
2. the person owning, leasing, or controlling the operation of the fossil fuel utilization facility complied with 310 CMR 30.250.

(8) Except as provided in 310 CMR 7.05(9), no person owning, leasing, or controlling the operation of a fossil fuel utilization facility shall cause, suffer, allow, or permit the burning therein of any used oil fuel that does not meet the specifications set forth in 310 CMR 7.05(8): *Table 3*.

310 CMR 7.05(8): TABLE 3
STANDARDS FOR USED OIL FUEL

Constituent/Property	Allowable
Sulfur	As allowed pursuant to 310 CMR 7.05(1) for residual fuel oil
Total Halogens	4000 ppm or less
PCBs	Less than 50 ppm*
Higher Heating Value	120,000 or more Btu per gallon
Flash Point	100°F or more
Lead **	Less than 100 ppm
Arsenic **	5 ppm or less
Cadmium **	2 ppm or less
Chromium **	10 ppm or less

* The burning of PCBs in concentrations of 50 or more parts per million is prohibited unless done in compliance with 310 CMR 30.000.

** Does not apply to any facility equipped with air pollution control equipment that the Department determines, in writing: (1) is Best Available Control Technology (BACT) and (2) reduces emissions to a level equal to or less than would be emitted if a used oil fuel meeting the standard set forth in 310 CMR 7.05(8): *Table 3* were to be burned in compliance with 310 CMR 7.00 in a facility without BACT.

(9) 310 CMR 7.05(8) shall not apply to the burning of used oil fuel in a used oil fuel fired space heater provided that the requirements set forth in 310 CMR 7.04(9), 310 CMR 7.05(7)(a), and 310 CMR 30.250 are complied with.

7.06: U Visible Emissions

(1) U Stationary Sources Other than Incinerators.

(a) Smoke. No person shall cause, suffer, allow, or permit the emission of smoke which has a shade, density, or appearance equal to or greater than No. 1 of the Chart for a period, or aggregate period of time in excess of six minutes during any one hour, provided that at no time during the said six minutes shall the shade, density, or appearance be equal to or greater than No. 2 of the Chart.

7.06: continued

(b) Opacity. No person shall cause, suffer, allow or permit the operation of a facility so as to emit contaminant(s), exclusive of uncombined water or smoke subject to 310 CMR 7.06(1)(a) of such opacity which, in the opinion of the Department, could be reasonably controlled through the application of modern technology of control and a good Standard Operating Procedure, and in no case, shall exceed 20% opacity for a period or aggregate period of time in excess of two minutes during any one hour provided that, at no time during the said two minutes shall the opacity exceed 40%.

(c) Exception.

1. Visible Emission Limits. In lieu of the requirements of 310 CMR 7.06(1)(a) and 310 CMR 7.06(1)(b), a facility subject to 310 CMR 7.00: *Appendix C - Operating Permits* with boilers rated less than 500 million Btu per hour energy input capacity, may elect to comply with the following:

a. Except as provided in 310 CMR 7.06(1)(c)1.b.; 310 CMR 7.06(1)(c)1.c. and 310 CMR 7.06(1)(c)1.g., visible emissions shall not exceed 15 percent opacity during any six-minute block average.

b. During periods of start-up, shutdown, soot blowing, and other specified operating conditions, visible emissions from any boiler shall not exceed 27% opacity during any six-minute block average except that visible emissions may exceed 27% opacity for up to two six-minute block averages during the calendar quarter.

c. For a boiler equipped with a visible emission monitor with a numeric data reduction system that can printout individual block averages or output individual block averages to an electronic file, the Department will make a determination to approve or deny visible emissions during periods of startup, shutdown, soot blowing and other specified operating conditions to exceed 27% opacity for one-tenth of one percent of the total six-minute block averages during any calendar quarter, or six block averages per boiler per quarter, whichever is greater, provided visible emissions do not exceed 60% opacity during any six-minute block average.

i. At no time can visible emissions exceed 27% opacity for more than two six-minute block averages during a one-hour period and the one-hour block average opacity shall not exceed 27% opacity during the one-hour block period when a six-minute block averages exceeds 27% opacity.

ii. The one-hour average shall be based on a clock hour.

iii. Boilers may be approved to operate in accordance with the visible emission limitations provided by 310 CMR 7.06(1)(c)1.b. and 310 CMR 7.06(1)(c)1.c. during the same calendar quarter.

d. Compliance with visible emission limits shall be based upon a six-minute block average determined either

i. by the procedures set forth in Method 9, (as described in 40 CFR Part 60, Appendix A-4), or

ii. by a visible emission monitor required under a Plan Approval issued by the Department under 310 CMR 7.02, or

iii. at the request of a facility, by a visible emission monitor required under the Operating Permit and specified as such in the Approval of the Plan of Good Operating Practices under 310 CMR 7.06(1)(c).

e. Before a facility may operate in accordance with 310 CMR 7.06(1)(c) the facility must notify the Department in writing of such intention, develop and submit to the Department a plan of good operating practices, and receive notification from the Department that the plan has been approved;

f. Any facility operating pursuant to 310 CMR 7.06(1)(c) shall comply with a good operating practices plan as approved; and

g. When notified in writing at least five business days prior to scheduled shakedown activities, testing, and calibrations for the purpose of improving boiler performance, the Department may allow exemptions to 310 CMR 7.06(1)(c)1.a., 310 CMR 7.06(1)(c)1.b. and 310 CMR 7.06(1)(c)1.c. Such notification shall include a brief description of the activity, and its start time and anticipated end time. The Department may allow a shorter notification period upon request. The Department may deny or limit the frequency of such activities.

7.06: continued

2. Plan of Good Operating Practices. The plan of good operating practices shall, at a minimum:

- a. Be developed with recommendations from third party combustion systems experts;
- b. Describe how the application of modern technology of control, and practices for operating and maintaining the equipment, will minimize visible emissions;
- c. Describe any operating conditions other than startup, shutdown and soot blowing during which the facility proposes to take advantage of the exception in 310 CMR 7.06(1)(c);
- d. Propose the duration and frequency of startup, shutdown, soot blowing and any other specified conditions;
- e. Document the need for visible emission limitations greater than 15% opacity during startup, shutdown, soot blowing and any other specified operating conditions;
- f. Propose visible emission limitations that the facility will comply with during startup, shutdown, soot blowing and other specified operating conditions;
- g. Describe all necessary corrective action procedures and include schedules for implementing such procedures; and
- h. Propose record keeping and monitoring procedures sufficient to enable the Department to determine that visible emissions comply with the plan.

7.06: continued

3. Department Action.

- a. Upon completion of review, the Department shall either approve or disapprove the plan of good operating practices.
- b. The terms and conditions of an approved plan shall be incorporated into the facility's Operating Permit.
- c. A Department approval shall specify the visible emission limitations for each operating condition, (*i.e.* startup, shutdown, soot blowing and other specified operating conditions approved by the Department); and specify corresponding monitoring, record keeping and reporting requirements, and other conditions necessary to ensure compliance with the visible emission limitations contained in the approval.
- d. Modifications to those portions of an approved plan that are not incorporated into the facility's Operating Permit shall be maintained on-site and made available to Department representatives upon request. Modifications to an approved plan shall be submitted to the Department for review with the facility's Operating Permit renewal application. The Department may require modification of an approved plan.

4. Notice of Exceedances. Any facility operating pursuant to a Department approval issued under this exception shall notify the Department of any exceedance of a visible emission limitation in the time and manner required by the relevant permit deviation provisions in the facility's Operating Permit. Opacity excursions greater than 27% that qualify as allowed under 310 CMR 7.06(1)(c)1.b. and 310 CMR 7.06(1)(c)1.c. shall not be considered deviations under the operating permit.(2) From Incinerators.

- (a) No person shall cause, suffer, allow, or permit the emission of smoke from any incinerator which has a shade, density, or appearance equal to or greater than No. 1 of the Chart or exceeding 20% opacity at any time.
- (b) No person shall cause, suffer, allow or permit the operation of an incinerator so as to emit contaminant(s), exclusive of uncombined water or smoke subject to 310 CMR 7.06(2)(a) of such opacity which, in the opinion of the Department, could be reasonably controlled through the application of modern technology of control and a good Standard Operating Procedure.
- (c) No person shall cause, suffer, allow, or permit emissions from any incinerator of any particles that have a dimension equal to or greater than 100 microns.

(3) From Marine Vessels. Marine vessels shall be subject to the provisions of 310 CMR 7.06(1)(a) and 7.06(1)(b). 310 CMR 7.06(3) shall apply only in the Merrimack Valley Air Pollution Control District, Metropolitan Boston Air Pollution Control District, and the Southeastern Massachusetts Air Pollution Control District.(4) From Aircraft. After December 31, 1972, no person shall cause, suffer, allow, or permit the emission from an aircraft of smoke which has a shade, density, or appearance equal or greater than No. 2 of the Chart for a period of time in excess of ten seconds during landing, takeoff, or taxiing operations.(5) From Spark-ignited Internal Combustion Engines.

- (a) No person shall cause, suffer, allow, or permit emission of visible air contaminants, other than water, from internal combustion engines of:
 1. portable or stationary equipment, other than motor vehicles, for longer than ten consecutive seconds; or
 2. a motor vehicle after the vehicle has moved more than 100 feet from a place where the vehicle was stationary; or
 3. a motor vehicle, for more than five consecutive seconds, under any condition of cruising or acceleration.

(6) From Non-stationary Source Diesel Engines. No person shall cause, suffer, allow, or permit excessive emission of visible air contaminants, other than water, from a diesel engine.7.07: U Open Burning

- (1) No person shall cause, suffer, allow or permit the open burning of any combustible material.

7.07: continued

- (2) 310 CMR 7.07(1) shall not apply to:
 - (a) open burning for the purpose of combating or backfiring an existing fire by persons affiliated with an official fire fighting agency;
 - (b) open burning conducted primarily for cooking purposes, or
 - (c) open burning related to the operation of devices such as blowtorches and welding torches, for which no alternative source of heat can be used, provided that such devices do not cause a condition of air pollution.

- (3) Except during periods of adverse meteorological conditions as may be determined by the Department when direct or public notice thereof has been made by the Department through the news media, 310 CMR 7.07(1) shall not apply to open burning conducted for:
 - (a) training or research in fire protection or prevention with specific approval by the Department;
 - (b) activities associated with the normal pursuit of agriculture which have been determined by the Department as necessary and which include but are not limited to, open burning of blueberry patches for pruning purposes, dead raspberry stalks, fruit tree prunings, and infected beehives for disease control;
 - (c) open burning of brush and trees resulting from agricultural land clearing operations;

7.07: continued

(d) the disposal of fungus-infected elm wood provided that no suitable alternative method of disposal is available;

(e) the disposal of brush, cane, driftwood, and forestry debris excluding grass, hay, leaves, and stumps from January 15th to May 1st of each year. All such open burning shall be conducted:

1. on land proximate to the place of generation,
2. at a location greater than 75 feet from any dwelling, and
3. between ten o'clock A.M. and four o'clock P.M.

No such open burning shall apply to commercial or institutional land clearing for non-agricultural purposes.

Open burning under 310 CMR 7.07(3)(e) shall not be permitted in the Cities and Towns of Arlington, Belmont, Boston, Brookline, Cambridge, Chelsea, Chicopee, Everett, Fall River, Holyoke, Lawrence, Lowell, Malden, Medford, New Bedford, Newton, Somerville, Springfield, Waltham, Watertown, West Springfield, and Worcester, or where the Department has notified a city or town that:

1. open burning under this provision may cause or contribute to non-attainment of federal or state ambient air quality standards for particulate matter,
2. open burning under this provision may cause or contribute to a condition of air pollution, or
3. open burning under this provision is not permitted due to continued violations of the provisions for the proper conduct of such open burning. (Such action shall be taken only after said city or town has been given written notification of such violations and has in the opinion of the Department failed to take appropriate actions to prevent the continuance of such violations.)

Upon request of the Department the permitting authority of any City or Town shall notify the Department of the number of permits issued during any burning period.

(f) the disposal of combustible material with the approval of the Department and after demonstration to the satisfaction of the Department that no alternative suitable method of disposal is available;

(g) open burning as described in 310 CMR 7.07(3)(a) through 310 CMR 7.07(3)(f) must be conducted:

1. during periods of good atmospheric ventilation,
2. without causing a nuisance,
3. with smoke minimizing starters if starters or starting aids are used, and
4. under the provisions of a properly executed permit issued under the provisions of M.G.L. c. 48, § 13*

(4) Except as may be incidental to compliance with the provisions contained in 310 CMR 7.07(2) and 310 CMR 7.07(3) no person shall stack, place, or store combustible material in such manner as to cause or allow presumption by the Department that such material may be subject to reduction by open burning.

(5) Notwithstanding the provisions of 310 CMR 7.07(3), no person shall cause, suffer, allow or permit open burning at any refuse disposal facility other than an incinerator as described in M.G.L. c. 111, § 150A.

(6) 310 CMR 7.07(1) through 7.07(5) are subject to the enforcement provisions specified in 310 CMR 7.52.

* M.G.L. c. 48, § 13 provides in part:

1. such permits may not be granted for more than two days from the date of issue, and
2. a written record must be maintained for each permit including the date of permit issuance, name and address of the person receiving the permit including the location and type of materials to be burned, and
3. such records must be available for public inspection.

7.08: U Incinerators

(1) General.

- (a) No person shall cause, suffer, allow, or permit the construction or substantial reconstruction or alteration of any incinerator for which:
1. the design for construction or substantial reconstruction or alteration thereof, and
 2. the Standard Operating Procedure have not been approved by the Department in writing.
- (b) No person shall sell or distribute for sale any special incinerator or modular incinerator, for installation or use within the District, the design and Standard Operating Procedure for which have not been approved in writing by the Department or certification of said approval has not been given by the person selling or distributing the incinerator to the person to whom the sale or distribution is made.
- (c) No person shall cause, suffer, allow, or permit the burning of refuse or any other material in any incinerator in a manner that is not in conformance with a Standard Operating Procedure (for the incinerator) that has been approved by the Department in writing.
- (d) No person shall cause, suffer, allow, or permit the burning of refuse or any other material in any incinerator, other than a municipal incinerator, which is of a design that has not been approved by the Department in writing.
- (e) No person shall cause, suffer, allow, or permit the burning of refuse or any other material in an incinerator at a specific site location that, in the opinion of the Department, is likely to cause or contribute to a condition of air pollution and when the person responsible for the operation of the incinerator has been notified of said opinion.
- (f) 310 CMR 7.08(1)(c) and 7.08(1)(d) are subject to the enforcement provisions specified in 310 CMR 7.52, insofar as they pertain to domestic incinerators.
- (g) No person shall cause, suffer, allow, or permit emissions from any incinerator of any particles that have a dimension greater than 100 microns. (Be referred to 310 CMR 7.06(2).)
- (h) The approval, referred to in 310 CMR 7.08(1)(a) through (d), shall be obtained pursuant to 310 CMR 7.02(3) and 7.02(5).

(2) Municipal Waste Combustors.

- (a) Site Assignment. No person shall, allow, or permit the construction, substantial reconstruction, alteration or operation of a municipal waste combustor unit on a site which has not received a site assignment in accordance with M.G.L. c. 111, § 150A.
- (b) Purpose. The purpose of 310 CMR 7.08(2) is to provide emission limitations and compliance schedules for the control of certain designated pollutants from Municipal Waste Combustors in accordance with sections 111(d) and 129 of the Clean Air Act.
- (c) Definitions. The definitions found in 310 CMR 7.00 apply to 310 CMR 7.08(2) unless otherwise defined in 310 CMR 7.08(2). The following words and phrases shall have the following meanings as they appear in 310 CMR 7.08(2).

CALENDAR QUARTER means any consecutive three-month period (nonoverlapping) beginning on January 1st, April 1st, July 1st or October 1st.

CALENDAR YEAR means any period starting January 1st and ending on December 31st.

CHIEF FACILITY OPERATOR means the person in direct charge and control of the operation of a municipal waste combustor and who is responsible for daily on-site supervision, technical direction, management, and overall performance of the facility.

CLEAN WOOD means untreated wood or untreated wood products including clean untreated lumber, tree stumps (whole or chipped), and tree limbs (whole or chipped). Clean wood does not include yard waste, or construction, renovation, and demolition wastes (including, but not limited to, railroad ties and telephone poles).

CONTINUOUS BURNING means the continuous, semicontinuous, or batch feeding of municipal solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of municipal solid waste solely to provide thermal protection of the grate or hearth during a startup period, when municipal solid waste is not being fed to the grate, is not considered to be continuous burning.

CONTINUOUS EMISSION MONITORING SYSTEM means a monitoring system for continuously measuring the emissions of a pollutant from a municipal waste combustor unit.

7.08: continued

DIOXIN/FURAN means tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

dscm means dry standard cubic meter.

FIRST CALENDAR HALF means the period starting on January 1st and ending on June 30th in any year.

FOUR-HOUR BLOCK AVERAGE or 4-HOUR BLOCK AVERAGE means the average of all hourly emission concentrations when the affected facility is operating and combusting municipal solid waste, measured over a four-hour period of time from 12:00 A.M. to 4:00 A.M., 4:00 A.M. to 8:00 A.M., 8:00 A.M. to 12:00 P.M., 12:00 P.M. to 4:00 P.M., 4:00 P.M. to 8:00 P.M., or 8:00 P.M. to 12:00 A.M.

LARGE MUNICIPAL WASTE COMBUSTOR UNIT means a municipal waste combustor unit with a capacity greater than 250 tons/day of municipal solid waste.

MASS BURN REFRACTORY MUNICIPAL WASTE COMBUSTOR means a field-erected combustor that combusts municipal solid waste in a refractory wall furnace. Unless otherwise specified, this includes combustors with a cylindrical rotary refractory wall furnace.

MASS BURN WATERWALL MUNICIPAL WASTE COMBUSTOR means a field-erected combustor that combusts municipal solid waste in a waterwall furnace.

MATERIALS SEPARATION PLAN means a plan that identifies a program within a given service area, to separate mercury, other toxic components or toxic precursors from municipal solid waste prior to combustion in order to make the separated materials available for recycling and/or remove the toxic components or their toxic precursors for proper management. A materials separation plan shall include goals and timetables for attaining the goals. It may include, but is not limited to, such elements as: centralized drop-off facilities, buy-back or deposit-return incentives, curbside collection programs, financial incentives to municipalities in the service area for collection programs, technical assistance programs for municipalities, institutions and/or businesses within the service area, and personnel to support any such programs.

MAXIMUM DEMONSTRATED MUNICIPAL WASTE COMBUSTOR UNIT LOAD means the highest 4-hour arithmetic average municipal waste combustor unit load achieved during four consecutive hours during the most recent dioxin/furan stack test demonstrating compliance with the applicable limit for municipal waste combustor organics specified under 310 CMR 7.08(2)(f)(2): *Table 2*.

MAXIMUM DEMONSTRATED PARTICULATE MATTER CONTROL DEVICE TEMPERATURE means the highest four-hour arithmetic average flue gas temperature measured at the particulate matter control device inlet during four consecutive hours during the most recent dioxin/furan stack test demonstrating compliance with the applicable limit for municipal waste combustor organics specified under 310 CMR 7.08(2)(f)(2): *Table 2*.

MODIFICATION or MODIFIED MUNICIPAL WASTE COMBUSTOR UNIT means a municipal waste combustor unit to which changes have been made if the cumulative cost of the changes, over the life of the unit, exceed 50% of the original cost of construction and installation of the unit (not including the cost of any land purchased in connection with such construction or installation) updated to current costs; or any physical change in the municipal waste combustor unit or change in the method of operation of the municipal waste combustor unit which increases the amount of any air pollutant emitted by the unit for which standards have been established under the Clean Air Act, § 129 or § 11. Whether there is an increase in the amount of any air pollutant emitted by the municipal waste combustor unit shall be determined at 100% physical load capability and downstream of all air pollution control devices, with no consideration given for load restrictions based on permits or other nonphysical operational restrictions.

7.08: continued

MUNICIPAL SOLID WASTE or MUNICIPAL TYPE SOLID WASTE means household, commercial/retail, and/or institutional waste. Household waste includes material discarded by single and multiple residential dwellings, hotels, motels, and other similar permanent or temporary housing establishments or facilities. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar establishments or facilities. Institutional waste includes material discarded by schools, nonmedical waste discarded by hospitals, material discarded by nonmanufacturing activities at prisons and government facilities, and material discarded by other similar establishments or facilities. Household, commercial/retail, and institutional waste does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition waste (which includes, but is not limited to, railroad ties and telephone poles); clean wood; industrial process or manufacturing waste; medical waste; or motor vehicles (including motor vehicle parts or vehicle fluff). Household, commercial/retail, and institutional waste includes:

- (a) yard waste; and
- (b) refuse-derived fuel.

MUNICIPAL WASTE COMBUSTOR or MUNICIPAL WASTE COMBUSTOR UNIT OR UNIT means any setting or equipment that combusts solid, liquid, or gasified municipal solid waste including, but not limited to, field-erected incinerators (with or without heat recovery), modular incinerators (starved-air or excess-air), boilers (*i.e.*, steam generating units), furnaces (whether suspension-fired, grate-fired, mass-fired, air curtain incinerators, or fluidized bed-fired), and pyrolysis/combustion units. Municipal waste combustors units do not include pyrolysis/combustion units located at a plastics/rubber recycling unit as specified in 310 CMR 7.08(2). Municipal waste combustors do not include internal combustion engines, gas turbines, or other combustion devices that combust landfill gases collected by landfill gas collection systems.

The boundaries of a municipal solid waste combustor are defined as follows. The municipal waste combustor unit includes, but is not limited to, the municipal solid waste fuel feed system, grate system, flue gas system, bottom ash system, and the combustor water system. The municipal waste combustor boundary starts at the municipal solid waste pit or hopper and extends through:

- (a) The combustor flue gas system, which ends immediately following the heat recovery equipment or, if there is no heat recovery equipment, immediately following the combustion chamber;
- (b) The combustor bottom ash system, which ends at the truck loading station or similar ash handling equipment that transfers the ash to final disposal, including all ash handling systems that are connected to the bottom ash handling system; and
- (c) The combustor water system, which starts at the feed water pump and ends at the piping exiting the steam drum or superheater. The municipal waste combustor unit does not include air pollution control equipment, the stack, water treatment equipment, or the turbine generator set.

MUNICIPAL WASTE COMBUSTOR ACID GASES means all acid gases emitted in the exhaust gases from municipal waste combustor units including, but not limited to, sulfur dioxide and hydrogen chloride gases.

MUNICIPAL WASTE COMBUSTOR METALS means metals and metal compounds emitted in the exhaust gases from municipal waste combustor units.

MUNICIPAL WASTE COMBUSTOR ORGANICS means organic compounds emitted in the exhaust gases from municipal waste combustor units and includes tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

MUNICIPAL WASTE COMBUSTOR PLANT means one or more municipal waste combustor units at the same facility for which construction was commenced on or before September 20, 1994.

7.08: continued

MUNICIPAL WASTE COMBUSTOR UNIT CAPACITY means the maximum charging rate of a municipal waste combustor unit expressed in tons per day of municipal solid waste combusted, calculated according to the procedures under 40 CFR 60.58b(j) as last amended May 10, 2006. 40 CFR 60.58b(j) includes procedures for determining municipal waste combustor unit capacity for continuous and batch feed municipal waste combustors.

MUNICIPAL WASTE COMBUSTOR UNIT LOAD means the steam load of the municipal waste combustor unit measured as specified in 40 CFR 60.58b(i)(6) as last amended May 10, 2006.

PARTICULATE MATTER means total particulate matter emitted from municipal waste combustor units measured as specified in 40 CFR, Part 60: *Appendix A, Reference Method 5*.

PLASTICS/RUBBER RECYCLING UNIT means an integrated processing unit where plastics, rubber, and/or rubber tires are the only feed materials (incidental contaminants may be included in the feed materials) and they are processed into a chemical plant feedstock or petroleum refinery feedstock, where the feedstock is marketed to and used by a chemical plant or petroleum refinery as input feedstock. The combined weight of the chemical plant feedstock and petroleum refinery feedstock produced by the plastics/rubber recycling unit on a calendar quarter basis shall be more than 70% of the combined weight of the plastics, rubber, and rubber tires processed by the plastics/rubber recycling unit on a calendar quarter basis. The plastics, rubber, and/or rubber tire feed materials to the plastics/rubber recycling unit may originate from the separation or diversion of plastics, rubber, or rubber tires from MSW or industrial solid waste, and may include manufacturing scraps trimmings, and off-specification plastics, rubber, and rubber tire discards. The plastics, rubber, and rubber tire feed materials to the plastics/rubber recycling unit may contain incidental contaminants (*e.g.*, paper labels on plastic bottles, metal rings on plastic bottle caps, *etc.*)

POTENTIAL HYDROGEN CHLORIDE EMISSION CONCENTRATION means the hydrogen chloride emission concentration that would occur from combustion of municipal solid waste in the absence of any emission controls for municipal waste combustor acid gases.

POTENTIAL MERCURY EMISSION CONCENTRATION means the mercury emission concentration that would occur from combustion of municipal solid waste in the absence of any mercury emissions control.

POTENTIAL SULFUR DIOXIDE EMISSIONS means the sulfur dioxide emission concentration that would occur from combustion of municipal solid waste in the absence of any emission controls for municipal waste combustor acid gases.

RECONSTRUCTION means rebuilding a municipal waste combustor unit for which the reconstruction commenced after June 19, 1996, and the cumulative costs of the construction over the life of the unit exceed 50% of the original cost of construction and installation of the unit (not including any cost of land purchased in connection with such construction or installation) updated to current costs (current dollars).

REFRACTORY UNIT OR REFRACTORY WALL FURNACE means a combustion unit having no energy recovery (*e.g.*, *via* a waterwall) in the furnace (*i.e.*, radiant heat transfer section) of the combustor.

REFUSE-DERIVED FUEL means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. This includes all classes of refuse-derived fuel including, but not limited to, low-density fluff refuse-derived fuel, densified refuse-derived fuel and pelletized refuse-derived fuel.

REFUSE-DERIVED FUEL STOKER means a steam generating unit that combusts refuse-derived fuel in a semisuspension firing mode using air-fed distributors.

SECOND CALENDAR HALF means the period starting July 1st and ending on December 31st in any year.

7.08: continued

SHIFT SUPERVISOR means the person who is in direct charge and control of the operation of a municipal waste combustor and who is responsible for onsite supervision, technical direction, management, and overall performance of the facility during an assigned shift.

SMALL MUNICIPAL WASTE COMBUSTOR UNIT means a municipal waste combustor unit with a municipal waste combustor unit capacity greater than 39 tons per day but equal to or less than 250 tons per day of municipal solid waste.

STANDARD CONDITIONS means a temperature of 20°C and a pressure of 101.3 kilopascals.

TOTAL MASS DIOXIN/FURAN OR TOTAL MASS means the total mass of tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans, as determined using 40 CFR, Part 60: *Appendix A, Reference Method 23*.

TWENTY FOUR-HOUR DAILY AVERAGE OR 24-HOUR DAILY AVERAGE means either the arithmetic mean or geometric mean (as specified) of all hourly emission concentrations when the affected unit is operating and combusting municipal solid waste measured over a 24-hour period between 12:00 A.M. and the 12:00 A.M.

UNTREATED LUMBER means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Untreated lumber does not include wood products that have been painted, pigment-stained, or "pressure-treated". Pressure treating compounds include, but are not limited to, chromate copper arsenate, pentachlorophenol, and creosote.

WATERWALL FURNACE means a combustion unit having energy (heat) recovery in the furnace (*i.e.*, radiant heat transfer section) of the combustor.

YARD WASTE means grass, grass clippings, bushes, and shrubs that are generated by residential, commercial/retail, institutional, and/or industrial sources as part of maintenance activities associated with yards or other private or public lands. Yard waste does not include construction, renovation, and demolition wastes. Yard waste does not include clean wood.

(d) Designated Pollutants and Operating Practices. 310 CMR 7.08(2) establishes requirements for the following municipal waste combustor operating practices, pollutants, opacity and fugitive ash:

1. Operating Practices (Carbon Monoxide (CO), Flue Gas Temp., Load Level)
2. Metals (Mercury (Hg), Lead (Pb), Cadmium (Cd))
3. Particulate Matter (PM)
4. Opacity
5. Organics (Dioxin/Furan)
6. Acid Gases (Sulfur Dioxide (SO₂), Hydrogen Chloride (HCl))
7. Nitrogen Oxides (NO_x)
8. Fugitive Ash Emissions

(e) Applicability.

1. Large Municipal Waste Combustor Units. 310 CMR 7.08(2) applies in its entirety to any person who owns, leases, operates or controls a large municipal waste combustor unit. Applicable requirements and limitations contained in 310 CMR 7.08(2) shall not supersede, relax or eliminate any more stringent conditions or requirements (*e.g.*, emission limitation(s), testing, recordkeeping, reporting, or monitoring requirements) established by regulation or contained in a facility's previously issued source specific plan approval(s) or emission control plan(s).
2. Other Approvals or Permits - A plan approval under 310 CMR 7.02(2) is not required in order to implement the requirements for 310 CMR 7.08(2) unless construction, substantial reconstruction or alterations are planned at the facility which are not required under the requirements at 310 CMR 7.08(2). If the facility has a final operating permit pursuant to 310 CMR 7.00: *Appendix C*, the operating permit will be modified upon approval of the emission control plan, in accordance with the procedures in 310 CMR 7.00: *Appendix C(8)*. No additional application or fee is necessary to modify the operating permit at the same time the emission control plan is approved. If the facility does not have a final operating permit, the facility must amend its operating permit application to include the approved emission control plan.

7.08: continued

(f) Applicable Requirements.

1. Operating Practices.

a. No person subject to 310 CMR 7.08(2) shall:

i. cause, suffer, allow or permit the discharge into the atmosphere from a municipal waste combustor unit any gases that contain carbon monoxide in excess of the emission limits specified in 310 CMR 7.08(2)(f)2.: *Table 1*;

ii. cause, suffer, allow or permit a municipal waste combustor unit to operate at a load level greater than 110% of the maximum demonstrated municipal waste combustor unit load calculated in four-hour block arithmetic averages, measured during the most recent dioxin/furan compliance test in which compliance is achieved; and

iii. cause, suffer, allow or permit a municipal waste combustor unit to operate at a temperature, measured at the particulate matter control device inlet, exceeding 17°C (30°F) above the maximum demonstrated particulate matter control device temperature, calculated in four-hour block arithmetic averages, measured during the most recent dioxin/furan compliance test in which compliance is achieved.

b. During any nine-month dioxin/furan compliance test, quarterly mercury compliance test, or nine-month mercury compliance test, and the two weeks preceding each nine-month dioxin/furan compliance test, quarterly mercury compliance test, or nine-month mercury compliance test, municipal waste combustor unit load limit, average mass carbon feed rate limit and particulate matter control device temperature limitations are not applicable.

c. The requirements of 310 CMR 7.08(2)(f)1.a.ii. and iii. may be waived, if prior approval is granted by the Department, for the purposes of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance provided that there is an improvement in controlling air pollution, or advancing the state-of-the-art technology for controlling facility emissions.

2. Metals, Organics and Acid Gases. No person subject to 310 CMR 7.08(2) shall cause, suffer, allow or permit the discharge into the atmosphere from a municipal waste combustor unit any gases that contain metals, opacity, organics, particulate matter or acid gases in excess of the emission limits specified in 310 CMR 7.08(2)(f)2.: *Table 2*.

TABLE 1. MUNICIPAL WASTE COMBUSTOR OPERATING PRACTICES

Municipal Waste Combustor Technology	Carbon Monoxide Emissions Level (parts per million by volume) ^a	Averaging Time ^b
Mass Burn Waterwall	100	four-hour
Refuse-derived Fuel Stoker	200	24-hour

^a Measured at the combustor outlet in conjunction with a measurement of oxygen concentration, corrected to 7% oxygen, dry basis. Calculated as an arithmetic average.

^b Averaging times are four-hour block or 24-hour daily arithmetic averages.

7.08: continued

TABLE 2. EMISSION LIMITS FOR MUNICIPAL WASTE COMBUSTOR UNITS

Emission Limits For Large MWC Units ^a	
Particulate Matter (PM) Opacity	25 mg/dscm 10% (six-minute average)
<u>METALS:</u>	
Cadmium (Cd)	0.035 mg/dscm
Lead (Pb)	0.400 mg/dscm
Mercury (Hg)	0.028 mg/dscm - average of compliance tests conducted in any rolling 12-month period 0.050 mg/dscm - average of test runs in any quarterly or 9-month compliance test
<u>ACID GASES:</u>	
Sulfur Dioxide (SO ₂)	29 ppmv or 75% reduction by weight or volume, whichever is less stringent. Compliance is based on a 24-hour geometric mean.
Hydrogen Chloride (HCl)	29 ppmv or 95% reduction by weight or volume, whichever is less stringent.
<u>ORGANICS: (Total Mass)</u>	
Dioxin/Furan with Electrostatic precipitator (ESP)	35 ng/dscm
Dioxin/Furan with Fabric Filter (FF)	30 ng/dscm

^a Corrected to 7% oxygen (dry basis).

3. Nitrogen Oxides. No person subject to 310 CMR 7.08(2) shall cause, suffer, allow or permit the discharge into the atmosphere from a municipal waste combustor unit any gases that contain nitrogen oxides in excess of the emission limits specified in 310 CMR 7.08(2)(f)3.: *Table 3. Emission Reduction Credits (ERCs) generated under 310 CMR 7.00: Appendix B(3)* may be used to comply with the requirements contained in Table 3.

TABLE 3. NITROGEN OXIDES EMISSION LIMITS FOR LARGE MUNICIPAL WASTE COMBUSTOR UNITS

Municipal Waste Combustor Technology	NO _x Emission Limit (Parts per million by volume) ^b		Averaging Time ^b
	Until one year after issuance of ECP approval under 310 CMR 7.08(2)(j)1., but no later than March 9, 2020	Beginning one year after issuance of ECP approval under 310 CMR 7.08(2)(j)1., but no later than March 10, 2020	
Mass Burn Waterwall	205	150	24-hour
Refuse-derived Fuel Stoker	250	146	24-hour

^a Corrected to 7% oxygen, dry basis.

^b Averaging times are 24-hour daily arithmetic averages.

7.08: continued

4. Nitrogen Oxides Emission Averaging Plan. A person subject to 310 CMR 7.08(2) may elect to implement a nitrogen oxides emissions averaging plan for the units located at the same municipal waste combustor plant. Municipal waste combustor units subject to 40 CFR, Part 60, Subpart Ea or Eb shall not be included in the emissions averaging plan. The units included in the nitrogen oxides emissions averaging plan must be identified in the annual report specified in 310 CMR 7.08(2)(i), prior to implementing the averaging plan. The units at the plant included in the averaging plan may be redesignated each calendar year.

a. To implement an emissions averaging plan, the average daily (24-hour) nitrogen oxides emission concentration level for gases discharged from units included in the emissions averaging plan shall not exceed the limits specified in Table 4.

TABLE 4. NITROGEN OXIDES EMISSION LIMITS FOR UNITS INCLUDED IN AN EMISSIONS AVERAGING PLAN

Municipal Waste Combustor Technology	NO _x Emission Limit (Parts per million by volume) ^a	Averaging Time ^b
Mass Burn Waterwall	150	24-hour
Refuse-derived Fuel Stoker	146	24-hour

^a Corrected to 7% oxygen, dry basis.

^b Averaging times are 24-hour daily arithmetic averages.

b. Under an emissions averaging plan, the average daily nitrogen oxides emission limits specified in Table 4 shall be calculated using equation (1). Units that are offline shall not be included in calculating the average daily nitrogen oxides emission level.

$$No_{x24-hr} = \frac{\sum_{i=1}^h (NO_{xi})(S_i)}{\sum_{i=1}^h (S_i)} \quad (1)$$

where:

No_{x24-hr} = 24-hour daily average nitrogen oxides emission concentration level for the emissions averaging plan (ppmv, corrected to 7% oxygen).

No_{xi} = 24-hour daily average nitrogen oxides emission concentration level for unit i (ppmv, corrected to 7% oxygen).

S_i = maximum demonstrated municipal waste combustor unit load for unit i (pounds per hour steam or feedwater flow as determined in the most recent dioxin/furan performance test).

h = total number of units included in the daily emissions average.

c. For any day in which any unit included in an emissions averaging plan is offline, the owner or operator of the municipal waste combustor plant must still demonstrate compliance with the applicable limits specified in Table 4 according to either 310 CMR 7.08(2)(f)4.d., or 310 CMR 7.08(2)(f)4.e., f. and g.

d. Compliance with the applicable limits specified in Table 4 shall be demonstrated using the averaging procedure specified in 310 CMR 7.08(2)(f)4.b.

7.08: continued

5. Ammonia. No later than the dates specified in the emission control plan approval issued by the Department under 310 CMR 7.08(2)(j), any person subject to 310 CMR 7.08(2) utilizing ammonia or urea for NO_x control shall:
 - a. conduct ammonia optimization testing;
 - b. submit a report to the Department correlating NO_x emissions and ammonia slip;
 - c. propose an ammonia emissions limit that the Department will review and may modify before incorporating in the unit's approval, pursuant to the procedures in 310 CMR 7.08(2)(j)7.; and
 - d. if using an ammonia continuous emission monitoring system to demonstrate compliance, obtain, at a minimum, valid hourly averages based on at least two data points per hour, for at least 90% of the operating hours per calendar quarter and 95% of the operating hours per calendar year that the affected facility is combusting municipal solid waste.
6. Fugitive Ash. No person subject to 310 CMR 7.08(2) shall cause, suffer, allow or permit the discharge into the atmosphere of any visible emissions of combustion ash from an ash conveying system (including transfer points) in excess of 5% of the observation period (nine minutes per three-hour period). This emission limit does not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however the emission limit does apply to visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems. 310 CMR 7.08(2)(f)6. does not apply during maintenance and repair of ash conveying systems. Maintenance and repair of the ash conveying systems must be done in accordance with best management practices.
7. Operator Training and Certification. Any person subject to 310 CMR 7.08(2) shall implement the following municipal waste combustor operator training and certification requirements.
 - a. shall have each chief facility operator and shift supervisor obtain and maintain an Operator Certificate issued by the American Society of Mechanical Engineers (ASME).
 - b. shall not allow the municipal waste combustor unit to be operated at any time unless one of the following persons is on duty: A chief facility operator or a shift supervisor who has obtained an Operator Certificate. (A Provisional Certificate is acceptable provided the shift supervisor is scheduled to obtain an Operator Certificate in accordance with 310 CMR 7.08(2)(f). A provisionally certified operator who is newly promoted or recently transferred to a shift supervisor position or a chief facility operator position at the municipal waste combustion unit may perform the duties of the certified chief facility operator or certified shift supervisor without notice to, or approval by, the Department for up to six months before taking the ASME QRO certification exam.) If one of the persons listed above must leave the municipal waste combustor plant during his or her operating shift, a provisionally certified control room operator who is onsite at the municipal waste combustor plant may fulfill these requirements. Depending on the length of time that a certified chief facility operator and certified shift supervisor are away, the owner or operator of the affected facility must meet the following criteria:
 - i. When the certified chief facility operator and certified shift supervisor are both off site for 12 hours or less, and no other certified operator is on site, the provisionally certified control room operator may perform the duties of the certified chief facility operator or certified shift supervisor.
 - ii. When the certified chief facility operator and certified shift supervisor are off site for more than 12 hours, but for two weeks or less, and no other certified operator is on site, the provisionally certified control room operator may perform the duties of the certified chief facility operator or certified shift supervisor without notice to, or approval by, the Department. However, the owner or operator of the affected facility must record the period when the certified chief facility operator and certified shift supervisor are off-site and include that information in the annual report as specified under 310 CMR 7.08(2)(i)1.h.

7.08: continued

- iii. When the certified chief facility operator and certified shift supervisor are off site for more than two weeks, and no other certified operator is on site, the provisionally certified control room operator may perform the duties of the certified chief facility operator or certified shift supervisor without approval by the Department. However, the owner or operator of the affected facility shall notify the Department in writing no later than three working days after the two week period. This initial notification shall state the cause of the absence and the actions that are being taken by the owner or operator of the facility to ensure that a certified chief facility operator or certified shift supervisor is on site as expeditiously as practicable.
 - iv. When the certified chief facility operator and certified shift supervisor are off site for more than two weeks, and no other certified operator is on site, the owner or operator of the affected facility shall submit a status report and corrective action summary to the Department every four weeks, beginning four weeks following the initial notification, demonstrating that a good faith effort is being made to ensure that a certified chief facility operator or certified control room shift supervisor is on site. If the Department provides notice that the status report or corrective action summary is disapproved, the municipal waste combustor unit may continue operation for 90 days, but then must cease operation. If corrective actions are taken in the 90-day period such that the Department withdraws the disapproval, municipal waste combustor unit operation may continue.
 - c. shall have all chief facility operators, shift supervisors, and control room operators who have not obtained an Operator Certificate from ASME complete the National Technical Information Service - "EPA Municipal Waste Combustor Operating Course."
 - d. shall establish a training program to review the operating manual with each person who has responsibilities affecting the operation of an affected municipal waste combustor unit including, but not limited to, chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers. The operating manual shall address at a minimum the following:
 - i. A summary of all the applicable requirements in 310 CMR 7.08(2);
 - ii. Basic combustion theory applicable to a municipal waste combustor unit;
 - iii. Procedures for receiving, handling, and feeding municipal solid waste;
 - iv. Municipal waste combustor unit startup, shutdown, and malfunction procedures;
 - v. Procedures for maintaining proper combustion air supply levels;
 - vi. Procedures for operating the municipal waste combustor unit within the requirements established under 310 CMR 7.08(2);
 - vii. Procedures for responding to periodic upset or off-specification conditions;
 - viii. Procedures for minimizing particulate matter carryover;
 - ix. Procedures for handling ash;
 - x. Procedures for monitoring municipal waste combustor unit emissions; and
 - xi. Reporting and recordkeeping procedures.
 - e. shall make available to the Department for inspection upon request all the operating manual and records of training.
 - f. shall be in compliance with all training and certification requirements specified in 310 CMR 7.08(2)(f)7. by six months after the date of start up or August 21, 1999, whichever is later.
- 8. Materials Separation Plan.
 - a. within six months from the date that a Material Separation Plan Guidance Document ("guidance document") is provided by the Department, any person subject to 310 CMR 7.08(2) shall submit a materials separation plan for the removal of mercury-bearing products or other specific toxic components or toxic precursors as designated by the Department pursuant to 310 CMR 7.08(2)(f)8.e. The material separation plan shall be developed in accordance with the guidance document and shall detail the minimum requirements for compliance with the materials separation plan.

7.08: continued

b. Upon Department draft approval of the materials separation plan, the Department shall publish a notice of public comment in accordance with M.G.L. c. 30A detailing the proposed materials separation plan. The Department shall allow for a 30-day public comment period following the published notice. The Department will approve or deny the materials separation plan after the close of the public comment period. Following Department approval of the materials separation plan, the person subject to 310 CMR 7.08(2) must implement the materials separation plan.

c. Prior to the implementation of the materials separation plan, the person subject to 310 CMR 7.08(2) shall determine the uncontrolled mercury concentration in the flue gas for four consecutive quarters. The Department may require subsequent testing.

d. One year following the date of implementation of the materials separation plan and every year after, the person subject to 310 CMR 7.08(2) shall submit a progress report to the Department documenting the effective implementation of the materials separation plan. The Department may require modifications to the materials separation plan if necessary.

e. The Department may require that material separation plans address other specific toxic components or toxic precursors, provided that the Department first conducts a formal rulemaking pursuant to M.G.L. c. 30A to require persons subject to 310 CMR 7.08(2) to add such other toxic component or precursor to the material separation plan.

(g) Compliance and Performance Testing. Any person subject to 310 CMR 7.08(2) shall comply with the provisions of 40 CFR 60.58b: *Compliance and Performance Testing*, as last amended May 10, 2006, the provisions of which are hereby incorporated by reference. Compliance with the applicable requirements as set forth in 310 CMR 7.08(2)(f) shall be determined in accordance with 40 CFR 60.58b, except as provided under 310 CMR 7.08(2)(g)1., 2., 3., 5. and 6. The initial performance test must be completed within 180 days after the final compliance date.

1. Dioxin/Furan. Following the date of the initial performance test for dioxin/furans, any person subject to 310 CMR 7.08(2) shall conduct compliance tests for dioxin/furan emissions according to one of the schedules specified in 310 CMR 7.08(2)(g)1.a. through e.:

a. Following the date of the initial performance test, compliance testing for dioxin/furan emissions shall be conducted on all municipal waste combustor unit(s) on a nine-month basis; or

b. For municipal waste combustor unit(s) where all compliance tests for all unit(s) over a 27 month period indicate that dioxin/furan emissions are less than or equal to seven nanograms per dry standard cubic meter total mass (ng/dscm), corrected to 7% oxygen, the person subject to 310 CMR 7.08(2) may elect to conduct compliance tests for one unit every nine months. At a minimum, a compliance test for dioxin/furan emissions shall be conducted every nine months following the previous compliance test for one unit at the municipal waste combustor plant. Every nine months a different unit at the municipal waste combustor plant shall be tested, and the units at the plant shall be tested in sequence (*e.g.*, unit 1, unit 2, unit 3, as applicable). The person subject to 310 CMR 7.08(2) may continue to conduct compliance testing on only one unit per nine-month basis so long as the dioxin/furan emission limits remain less than or equal to 7 ng/dscm @ 7% O₂. If any nine-month compliance test indicates dioxin/furan emissions greater than the specified limit, compliance tests shall thereafter be conducted on all units at the plant every nine months until and unless all nine-month compliance test for all units at the plant over a 27-month period indicate dioxin/furan emissions less than or equal to the 7 ng/dscm @ 7% O₂.

c. Any person subject to 310 CMR 7.08(2) who elects to follow the compliance testing schedule specified in 310 CMR 7.08(2)(g)1.b., shall follow the procedures specified in 310 CMR 7.08(2)(i)1. for reporting the selection of this schedule.

d. Municipal waste combustor units where carbon injection (or equivalent) is used to comply with the dioxin/furan emission limits specified in 310 CMR 7.08(2)(f)2. or the dioxin/furan emission limit specified in 310 CMR 7.08(2)(g)1.b. shall follow the procedures specified in 40 CFR 60.58b(m) as last amended May 10, 2006, for measuring and calculating the eight-hour block average carbon (or equivalent) usage rate.

7.08: continued

- e. Any person subject to 310 CMR 7.08(2) electing continuous automated sampling of dioxin/furan emissions as an alternative to manual reference method sampling shall comply with the provisions of 40 CFR 60.58b(g)(10), 40 CFR 60.58b(p) and 40 CFR 60.58b(q), as last amended May 10, 2006.
2. Mercury. Following the date that the initial performance test for mercury is completed, compliance testing for mercury shall be conducted on all municipal waste combustor unit(s) on a quarterly basis. Compliance with the emissions limit specified in 310 CMR 7.08(2)(f)2. shall be based on the average of four quarterly compliance tests per rolling 12 months but shall not exceed 0.050 mg/dscm in any quarterly test. If compliance with the mercury emission limit has been achieved in each quarter for eight consecutive quarters, then the person subject to 310 CMR 7.08(2) may elect to perform compliance testing on a nine-month basis. Any municipal waste combustor unit(s) which cannot achieve compliance with the emission limitation in 310 CMR 7.08(2)(f)2. during the nine-month compliance test shall resume quarterly compliance testing as specified in 310 CMR 7.08(2)(g)2. Any person subject to 310 CMR 7.08(2) electing continuous monitoring of mercury emissions as an alternative to manual reference method sampling shall comply with the provisions of 40 CFR 60.58b(d)(4), 40 CFR 60.58b(n) and 40 CFR 60.58b(o) as last amended May 10, 2006. Any person subject to 310 CMR 7.08(2) electing continuous automated sampling of mercury emissions as an alternative to manual reference method sampling shall comply with the provisions of 40 CFR 60.58b(d)(4), 40 CFR 60.58b(p) and 40 CFR 60.58b(q) as last amended May 10, 2006.
3. Optimization Testing. Municipal waste combustor unit(s) which employ a carbon injection (or equivalent) mercury emission control system shall conduct optimization tests. These tests will determine the optimum feed rate for the mercury emissions control apparatus by determining the carbon (or equivalent) feed rate at which the emissions of mercury are equal to or less than the applicable limit at 310 CMR 7.08(2)(f)2. The optimization test shall be conducted as follows:
- The optimization tests shall be performed during the initial performance test, after a change in carbon (or equivalent), upon request by the Department, upon request by the person subject to 310 CMR 7.08(2) or annually if required under 310 CMR 7.08(2)(g)4.
 - If there are identical municipal waste combustor units at the municipal waste combustor plant, then optimization tests may be performed on one unit, and the resulting parameters applied to the other unit(s) which are identical to that unit at that plant.
 - Within 30 calendar days of the conclusion of any optimization test, any person subject to 310 CMR 7.08(2) shall submit to the Department for approval a proposed optimized carbon (or equivalent) feed rate which minimizes mercury emissions. An approvable feed rate is the feed rate such that a higher feed rate achieves insignificant additional reductions in mercury emissions compared to the amount of carbon (or equivalent) added. The carbon (or equivalent) feed rate approved by the Department shall be used to operate the carbon injection (or equivalent) mercury control system until the next optimization test is performed and the feed rate approved.
 - Any person owning or operating a municipal waste combustor unit where carbon injection (or equivalent) is used to comply with the mercury emission limits specified in 310 CMR 7.08(2)(f)2. or 310 CMR 7.08(2)(g)2. shall follow the procedures specified in 40 CFR 60.58b(m) as last amended May 10, 2006, for measuring and calculating the eight-hour block average carbon (or equivalent) usage rate.
4. (Reserved).
5. Continuous Emissions Monitoring Systems Data.
- (Reserved)
 - Carbon monoxide CEMS in accordance with 40 CFR Part 60: *Appendix B*, Performance Specification 4 will satisfy the requirements in 310 CMR 7.08(2)(g).
6. Compliance Testing Schedule. Any person subject to 310 CMR 7.08(2) shall conduct compliance testing for all designated pollutants every nine months for each municipal waste combustor unit(s). Compliance testing for dioxin/furan and mercury shall be as specified in 310 CMR 7.08(2)(g)1. and 2.

7.08: continued

7. Continuous Emissions Monitoring for Particulate Matter. In place of particulate matter testing with EPA Reference Method 5, any person subject to 310 CMR 7.08(2) may elect to install, calibrate, maintain, and operate a continuous emission monitoring system for monitoring particulate matter emissions discharged to the atmosphere and record the output of the system. Any person subject to 310 CMR 7.08(2) who elects to continuously monitor particulate matter emissions in place of testing shall comply with the requirements specified in 40 CFR 60.58b(c)(10)(i) through (xiv) as last amended May 10, 2006. Any person subject to 310 CMR 7.08(2) who elects to continuously monitor particulate matter emissions in place of testing is not required to complete performance testing for particulate matter and is not required to continuously monitor opacity as specified in 40 CFR 60.58b(c)(9) and (c)(8) as last amended May 10, 2006.
8. Continuous Emissions Monitoring for Cadmium and Lead. In place of cadmium and lead testing with EPA Reference Method 29, any person subject to 310 CMR 7.08(2) may elect to install, calibrate, maintain, and operate a continuous emission monitoring system for monitoring cadmium and lead emissions discharged to the atmosphere and record the output of the system according to the provisions of 40 CFR 60.58b(n) and (o) as last amended May 10, 2006.
9. Continuous Emissions Monitoring for Hydrogen Chloride. In place of hydrogen chloride testing with EPA Reference Method 26 or 26A, any person subject to 310 CMR 7.08(2) may elect to install, calibrate, maintain, and operate a continuous emission monitoring system for monitoring hydrogen chloride emissions discharged to the atmosphere and record the output of the system according to the provisions of 40 CFR 60.58b(n) and (o) as last amended May 10, 2006.
- (h) Recordkeeping. Any person subject to 310 CMR 7.08(2) shall comply with the recordkeeping requirements of 40 CFR 60.59b(d) as last amended May 10, 2006, the provisions of which are hereby incorporated by reference, and maintain records including, but not limited to, the information specified in 310 CMR 7.08(2)(h), as applicable, for each municipal waste combustor unit. All records shall be retained at the facility for at least five years.
1. The calendar date of each record.
 2. The emission concentrations and operating parameters measured using continuous monitoring systems. The measurements specified below shall be recorded and shall be available for submittal to the Department or for onsite review by an inspector:
 - a. All six-minute average opacity levels as specified under 40 CFR 60.58b(c) as last amended May 10, 2006, including the highest level measured.
 - b. All one hour average sulfur dioxide emission concentrations as specified under 40 CFR 60.58b(e) as last amended May 10, 2006.
 - c. All one hour average nitrogen oxides emission concentrations as specified under 40 CFR 60.58b(h) as last amended May 10, 2006.
 - d. All one hour average carbon monoxide emission concentrations, municipal waste combustor unit load measurements, and particulate matter control device inlet temperatures as specified under 40 CFR 60.58b(i) as last amended May 10, 2006.
 - e. All 24-hour daily geometric average sulfur dioxide emission concentrations and all 24-hour daily geometric average percent reductions in sulfur dioxide emissions as applicable, as specified under 40 CFR 60.58b(e) as last amended May 10, 2006, including the highest sulfur dioxide emission concentration level recorded.
 - f. All 24-hour daily arithmetic average nitrogen oxides emission concentrations, as specified under 40 CFR 60.58b(h) as last amended May 10, 2006, including the highest level recorded.
 - g. All four-hour block or 24-hour daily arithmetic average carbon monoxide emission concentrations, as applicable, as specified under 40 CFR 60.58b(I) as last amended May 10, 2006, including the highest level recorded.
 - h. All four-hour block arithmetic average municipal waste combustor unit load levels and particulate matter control device inlet temperature, as specified under 40 CFR 60.58b(i) as last amended May 10, 2006, including the highest level recorded.
 - i. As applicable, all one hour average and 24-hour daily (block) average particulate matter emissions concentrations, as specified under 40 CFR 60.58b(c) as last amended May 10, 2006, including the highest level recorded.

7.08: continued

- j. As applicable, all one hour average and 24-hour daily arithmetic average mercury, cadmium, lead or hydrogen chloride emissions concentrations, as specified under 40 CFR 60.58b(n), as last amended May 10, 2006, including the highest level recorded.
- k. As applicable, all integrated two-week dioxin/furan and integrated 24-hour mercury emissions concentrations, as specified under 40 CFR 60.58b(p), as last amended May 10, 2006, including the highest level recorded.
3. Identification of the calendar dates when any of the average emission concentrations or emission percent reductions, opacity levels, or operating parameters recorded under 310 CMR 7.08(2)(h)2. exceed the applicable limits, with detailed specific reasons for such exceedances and a description of corrective actions taken.
4. For municipal waste combustor units that apply carbon (or equivalent) for mercury or dioxin/furan control, the following records:
 - a. The average carbon (or equivalent) mass feed rate (in lbs/hr) estimated as required under 40 CFR 60.58b(m)(1)(i) as last amended May 10, 2006, during the initial mercury performance test and all subsequent mercury compliance tests, with supporting calculations.
 - b. The average carbon (or equivalent) mass feed rate (in lbs/hr) estimated for each hour of operation as required under 40 CFR 60.58b(m)(1)(ii) as last amended May 10, 2006, during the initial dioxin/furan performance test and all subsequent dioxin/furan compliance tests, with supporting calculations.
 - c. The average carbon (or equivalent) mass feed rate (in lbs/hr) estimated for each hour of operation as required under 40 CFR 60.58b(m)(3)(ii) as last amended May 10, 2006, with supporting calculations.
 - d. The total carbon (or equivalent) usage for each calendar quarter estimated as specified under 40 CFR 60.58b(m)(3) as last amended May 10, 2006, with supporting calculations.
 - e. The carbon (or equivalent) injection system operating parameter data for the parameter(s) that are the primary indicator(s) of carbon (or equivalent) feed rate, calculated as specified in 40 CFR 60.58b(m)(2) as last amended May 10, 2006.
5. Identification of the calendar dates and time periods for which the minimum number of hours of any of the data specified below have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken:
 - a. Sulfur dioxide emissions data.
 - b. Nitrogen oxides emissions data.
 - c. Carbon monoxide emissions data.
 - d. Municipal waste combustor unit load data, including particulate matter control device inlet temperature data.
 - e. For any person subject to 310 CMR 7.08(2) who elects to continuously monitor particulate matter, cadmium, lead, mercury or hydrogen chloride emissions instead of using EPA manual test methods, particulate matter, cadmium, lead, mercury or hydrogen chloride emissions data.
 - f. For any person subject to 310 CMR 7.08(2) who elects to use continuous automated sampling systems for dioxins/furans or mercury instead of EPA manual test methods, dates and times when the sampling systems were not operating or were not collecting a valid sample.
6. Identification of each occurrence that sulfur dioxide, nitrogen oxides and, as applicable, particulate matter, cadmium, lead, mercury, hydrogen chloride or dioxin/furan emissions data, or operational data (*e.g.*, carbon monoxide emissions, unit load, and particulate matter control device temperature) have been excluded from the calculation of average emission concentrations or parameters, along with detailed and specific reasons for excluding the data.

7.08: continued

7. The results of daily drift tests and quarterly accuracy determinations for sulfur dioxide, nitrogen oxides, and carbon monoxide continuous emission monitoring systems, as required under 40 CFR, Part 60: *Appendix F*, Procedure 1. For any person who elects to continuously monitor or sample instead of using EPA manual test methods, the results of daily drift tests and quarterly accuracy determinations for particulate matter as required under 40 CFR 60: *Appendix F*, Procedure 2, the results of all quality evaluations, such as daily drift tests and periodic accuracy determinations for cadmium, lead, mercury or hydrogen chloride, specified in the approved site-specific performance evaluation test plan required by 40 CFR 60.58b(o)(5) as last amended May 10, 2006, and all continuous automated dioxin/furan or mercury sampling systems quality evaluations specified in the approved site-specific performance evaluation test plan required by 40 CFR 60.58b(q)(5) as last amended May 10, 2006.
8. Identification of each occurrence of a start-up, shut-down or malfunction, including the specific reasons for each occurrence, date, time, and unit involved. Average emissions concentrations or percent reductions, or operating parameters recorded under 310 CMR 7.08(2)(h)2., shall be recorded during start-up, shut-down or malfunction.
9. The results of the initial performance tests and all subsequent compliance tests conducted to determine compliance with the particulate matter, opacity, cadmium, lead, mercury, dioxin/furan, hydrogen chloride, and fugitive ash emission limits shall be recorded along with supporting calculations and submitted to the Department within 90 days after each such test.
10. For the initial dioxin/furan performance test and all subsequent dioxin/furan compliance tests recorded under 310 CMR 7.08(2)(h)9., the maximum demonstrated municipal waste combustor load and maximum particulate matter control device temperature (for each particulate matter control device) shall be recorded along with supporting calculations.
11. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who are certified by ASME (Operator Certification and Provisional Certification), including the dates of initial and renewal certifications and documentation of current certification. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have completed the EPA municipal waste combustor operator training course if required. Records of when a certified operator is temporarily off site, pursuant to 310 CMR 7.08(2)(h)11.a. and b.
 - a. If the certified chief facility operator and certified shift supervisor are off-site for more than 12 hours, but for two weeks or less, and no other certified operator is on-site, record the dates that the certified chief facility operator and certified shift supervisor were off-site.
 - b. When all certified chief facility operators and certified shift supervisors are off-site for more than two weeks and no other certified operator is on-site, keep records of:
 - i. Time of day that all certified persons are off-site.
 - ii. The conditions that cause those people to be off-site.
 - iii. The corrective actions taken by the owner or operator of the affected facility to ensure a certified chief facility operator or certified shift supervisor is on-site as soon as practicable.
 - iv. Copies of the written reports submitted every four weeks that summarize the actions taken by the owner or operator of the affected facility to ensure that a certified chief facility operator or certified shift supervisor will be on-site as soon as practicable.
12. Records showing the names of the persons who have completed a review of the operating manual as required by 310 CMR 7.08(2)(f)7.d., including the date of the initial review and subsequent annual reviews.
13. For municipal waste combustor units that apply carbon (or equivalent) for mercury or dioxin/furan control:

7.08: continued

a. Identification of the calendar dates when the average carbon (or equivalent) mass feed rates recorded under 310 CMR 7.08(2)(h)4.c. were less than either of the hourly carbon feed rates estimated during compliance tests for mercury or dioxin/furan emissions and recorded under 310 CMR 7.08(2)(h)4.a. or b., with reasons for such feed rates and a description of corrective actions taken.

b. Identification of the calendar dates when the carbon injection (or equivalent) system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate (or equivalent) recorded under 310 CMR 7.08(2)(h)4.e., are below the level(s) estimated during the compliance tests as specified in 40 CFR 60.58b(m)(1)(i) and 60.58b(m)(1)(ii) as last amended May 10, 2006, with reasons for such occurrences and a description of corrective actions taken.

(i) Reporting Requirements. Any person subject to 310 CMR 7.08(2) shall submit an initial performance report as well as an annual report pursuant to 40 CFR 60.59b(g) as last amended May 10, 2006, the provisions of which are hereby incorporated by reference that includes, but is not limited to, the information specified in 310 CMR 7.08(2)(i)1., as applicable. Any person subject to 310 CMR 7.08(2) shall submit a semiannual report pursuant to 40 CFR 60.59b(h) as last amended May 10, 2006, the provisions of which are hereby incorporated by reference that includes, but is not limited to, the information specified in 310 CMR 7.08(2)(i)2. for any recorded pollutant or parameter that does not comply with the emission limits as set forth in 310 CMR 7.08(2). In meeting the reporting requirements of 310 CMR 7.08(2)(i)1. and 310 CMR 7.08(2)(i)2., any person subject to 310 CMR 7.08(2) shall report the information in a format determined by the Department that is designed to be understandable and informative to the public. The information shall be submitted in written format and electronic format.

1. Annual Reporting Requirements.^a The information specified in 310 CMR 7.08(2)(i)1.a. through h. shall be reported:

- a. 310 CMR 7.08(2)(h)2.a., e. through k. for the highest emission levels recorded.
- b. 310 CMR 7.08(2)(h)4.a. and b.
- c. 310 CMR 7.08(2)(h)5. and 6., including 40 CFR 60.59b(g)(1)(iv) and (v), as last amended May 10, 2006.
- d. 310 CMR 7.08(2)(h)8. through 10.
- e. Summary of 310 CMR 7.08(2)(i)1.a. through d. for the previous year.
- f. The performance evaluation of the continuous emission monitoring system using the applicable performance specifications in 40 CFR Part 60: *Appendix B*.
- g. A notification of intent to begin the reduced dioxin/furan compliance testing schedule specified in 310 CMR 7.08(2)(g)1.b. during the following calendar year.
- h. Documentation of periods when all certified chief facility operators and certified shift supervisors are off site for more than 12 hours.

2. Semi-annual Reporting Requirements.^b The information specified in 310 CMR 7.08(2)(i)2.a. through e. shall be reported:

- a. 310 CMR 7.08(2)(h)2.a., e. through k. for each date recorded in 310 CMR 7.08(2)(h)3.
- b. 310 CMR 7.08(2)(h)3.
- c. 310 CMR 7.08(2)(h)4.c.
- d. 310 CMR 7.08(2)(h)9.^c
- e. 310 CMR 7.08(2)(h)13.

^a Annual reports shall be submitted no later than February 15th of each year following the calendar year in which the data were collected.

^b Semiannual reports shall be submitted according to the schedule specified: (1) If data reported in accordance with section 310 CMR 7.08(2)(i)2. were collected during the first calendar half, then the report shall be submitted on or before August 1st following the first calendar half; (2) If data reported in section 310 CMR 7.08(2)(i)2. were collected during the second calendar half, then the report shall be submitted on or before February 15th following the second calendar half.

^c Include only the reports which document emission levels that were above the applicable requirements and the corrective actions taken.

7.08: continued

3. Reporting Requirements for Optional Continuous Monitoring and Continuous Automated Sampling. Any person subject to 310 CMR 7.08(2) electing continuous emissions monitoring for particulate matter, mercury, lead, cadmium or hydrogen chloride, or continuous automated sampling for dioxin/furan or mercury, in lieu of manual sampling, shall comply with the applicable notification requirements of 40 CFR 60.59b(m) and reporting requirements of 40 CFR 60.59b(n)(12) and 40 CFR 60.59b(o)(12), as last amended May 10, 2006.
- (j) Emission Control Plan.
1. General Applicability. Any person subject to 310 CMR 7.08(2) shall submit an emission control plan (ECP) application to the Department on or before September 9, 2018 on a form provided by the Department to include new or amended applicable requirements in 310 CMR 7.08(2)(f). All ECP applications are subject to fee regulations and approval timelines contained in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.
 2. Emission Control Plan Requirements. The requirements of the ECP are contained in the ECP application but at a minimum, the ECP shall contain sufficient information (e.g., control efficiency, specifications, standard operating and maintenance procedures) for any control equipment used to comply with 310 CMR 7.08.
 3. Compliance Demonstration. Any person subject to 310 CMR 7.08(2) must include in the ECP application an affirmative demonstration that any facility(ies) in Massachusetts owned and operated by such persons (or by an entity controlling, controlled, by or under common control with such person) that is subject to 310 CMR 7.00 and 310 CMR 19.00: *Solid Waste Management* is in compliance with, or on a Department approved compliance schedule to meet, all provisions of 310 CMR 7.00 and 310 CMR 19.00 and any plan approval, order, notice of noncompliance or permit issued thereunder;
 4. Public Comment on Emission Control Plans.
 - a. Upon receipt of an ECP application the Department will post a notice of public hearing. on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period. The public hearing will be held 30 days after the publication of the hearing notice. The Department shall allow for a 30-day public comment period following the published notice
 - b. After the public hearing and the close of the public comment period, the Department will review all of the information submitted and shall issue either a disapproval of the application or issue a draft emission control plan approval.
 - c. Upon issuance of the draft emission control plan approval, the Department shall:
 - i. Provide a 30-day period for submittal of public comment;
 - ii. Post on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period, the following:
 - a. Notice of availability of the Department's proposed decision to approve or deny the ECP application and information on how to submit public comment;
 - b. The Department's proposed decision to approve or deny the ECP application;
 - c. Information on how to access the administrative record for the Department's proposed decision to approve or deny the ECP application.
 - iii. Send a copy of the notice required under 310 CMR 7.08(2)(j)4.c.ii.a. to EPA.
 - d. After the close of the public comment period, the Department will issue a final approval or disapproval of the emission control plan.
 5. Additional Requirements. Additional requirements may be included in the approval if the Department determines that the emissions from a municipal waste combustor plant's unit(s) alone or cumulatively with other municipal waste combustor plant's unit(s) cause or contribute to a condition of air pollution or a violation of any other regulation. Such requirements include but are not limited to, emission limits on air contaminants, and additional stack testing or emission monitoring requirements.

7.08: continued

The Department may modify the ECP at any time if the Department determines that a municipal waste combustor plant's unit(s) alone or cumulatively with other municipal waste combustor plant's unit(s) cause or contribute to a condition of air pollution or a violation of any other regulation. Such modification must comply with the requirements in 310 CMR 7.08(2)(j)7.

6. Compliance Schedule. The ECP shall incorporate a compliance schedule that at a minimum contains the requirements in 310 CMR 7.08(2)(k).

7. Modification to the ECP.

a. If the Department proposes to modify a municipal waste combustor plant's emission control plan, the Department shall:

i. Provide a 30-day period for submittal of public comment;

ii. Post on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period, the following:

(i) Notice of availability of the Department's proposed decision to approve or deny the ECP modification and information on how to submit public comment;

(ii) The Department's proposed decision to approve or deny the ECP modification; and

(iii) Information on how to access the administrative record for the Department's proposed decision to approve or deny the ECP modification.

iii. Send a copy of the notice required under 310 CMR 7.08(2)(j)7.a.ii.a. to EPA.

b. After the close of the public comment period, the Department will issue a final approval or disapproval of the modified ECP.

(k) Schedule. Municipal waste combustor unit(s) subject to 310 CMR 7.08(2) shall be in full compliance with the applicable requirements of 310 CMR 7.08(2) after March 9, 2018, except:

1. Nitrogen oxides emission limits are to be complied with by the dates specified in 310 CMR 7.08(2)(f)3.: *Table 3*, and in no case later than March 10, 2020.

2. If a municipal waste combustor unit(s) cannot comply with the NO_x emission limit in 310 CMR 7.08(2)(f)3.: *Table 3*, the person subject to 310 CMR 7.08(2) may apply in the emission control plan application due under 310 CMR 7.08(2)(j) for a source specific alternative NO_x emission limit, not to exceed a 24-hour daily arithmetic average of 185 parts per million by volume, dry basis, corrected to 7% oxygen. Such emission control plan application must evaluate each of the following NO_x controls, where it may be applied, and its technological and economic feasibility.

a. low-NO_x burners;

b. close coupled and separated overfire air;

c. flue gas recirculation;

d. steam/water injection;

e. dry low-NO_x combustors;

f. fuel emulsification;

g. selective noncatalytic reduction (SNCR);

h. selective catalytic reduction (SCR);

i. nonselective catalytic reduction (NSCR);

j. use of emission reduction credits (ERCs) certified by the Department pursuant to 310 CMR 7.00: *Appendix B* (3), or pursuant to the interstate trading provisions at 310 CMR 7.00: *Appendix B(3)(f)*; and

k. other innovative technologies available to reduce NO_x.

(3) Commercial, Industrial, and Special Incinerators. No person shall cause, suffer, allow, or permit the construction or substantial reconstruction or alteration or thereafter the operation of a commercial, industrial, or special incinerator for which the site location has not been approved by the Department in writing.

(4) Hazardous Waste Incinerators.

(a) No person shall construct, reconstruct, alter, or modify or operate, or cause, suffer, allow or permit the construction, reconstruction alteration, modification, or operation of, any hazardous waste incinerator unless such construction, reconstruction, alteration, modification, or operation is in compliance with:

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.08: continued

1. 310 CMR 7.01, 7.08(4), and all other provisions of 310 CMR 7.00.
2. the terms of a Department approval granted pursuant to 310 CMR 7.00.
3. all applicable provisions of 310 CMR 30.000: *Hazardous Waste* and/or 314 CMR 8.00: *Supplemental Requirements for Hazardous Waste Management Facilities*.
4. the terms of a license or permit granted by the Department pursuant to 310 CMR 30.000: *Hazardous Waste* and/or 314 CMR 8.00: *Supplemental Requirements for Hazardous Waste Management Facilities*.
5. In addition, 310 CMR 7.08(2) is adopted pursuant to the authority granted by M.G.L. c. 111, § 150A.

7.08: continued

Noncompliance with any provision of 310 CMR 30.000, or of a license granted pursuant to 310 CMR 30.000, shall be deemed noncompliance with, and shall be subject to all applicable provisions, of M.G.L. c. 21C. Noncompliance with any provision of 314 CMR 8.00, or of a permit granted pursuant to 314 CMR 8.00, shall be deemed noncompliance with, and shall be subject to all applicable provisions of, M.G.L. c. 21, §§ 26 through 53. No approval granted by the Department shall affect the responsibility of the owner or operator to comply with all other applicable laws and regulations.

(b) No person shall construct, reconstruct, alter, modify, or operate or cause, suffer, allow or permit the construction, reconstruction, alteration, modification, or operation of, any hazardous waste incinerator unless the plans, specifications, proposed Standard Operating Procedure, and the Proposed Maintenance Procedure for such hazardous waste incinerator have been submitted to the Department for approval, and the Department has granted such approval in writing. The Department may prescribe a form and/or other application methods which shall be used by each person applying for such approval from the Department.

(c) Each application for approval to construct, reconstruct, alter, modify or operate a hazardous waste incinerator shall be in compliance with the requirements set forth in 310 CMR 30.001 through 30.099 (General Provisions, *e.g.*, Definitions; Requirements for Accurate, Timely and Complete Monitoring, Recordkeeping and Submittals to the Department; Notification Procedures; and Transition Provisions) and 30.800 (Licensing Requirements and Procedures) and shall:

1. be signed by the owner or operator of the hazardous waste incinerator;
2. be accompanied by site information, plans, descriptions, specifications, and drawings showing the design of the hazardous waste incinerator, the nature and amount of emissions, and the manner in which the hazardous waste incinerator will be operated and controlled;
3. specify waste feed(s), including, for each, the anticipated heating value, viscosity, description of the physical form of the waste, and identification and quantification of hazardous waste constituents listed in 310 CMR 30.160 by the use of analytical techniques specified in "Test Methods for Evaluating Solid Waste", United States Environmental Protection Agency SW-846, 1980;
4. include a detailed description of the hazardous waste incinerator, including at least the following:
 - a. the incinerator's model number and type, and the name of its manufacturer;
 - b. the linear dimensions of the incinerator unit and the cross sectional area of the combustion chamber(s);
 - c. the auxiliary fuel system (type/feed);
 - d. the capacity of the prime mover;
 - e. the automatic cutoff system(s);
 - f. the stack gas monitoring and pollution control equipment;
 - g. the design of the nozzle and burner;
 - h. the construction materials; and
 - i. each device for indicating and/or controlling temperature, pressure, and/or flow, including the location of each such device;
5. include the applicant's proposed standard operating procedure and proposed maintenance procedure, which shall include, but not be limited to, procedures for:
 - a. incinerator startup and operation prior to, during, and immediately following emission testing, and
 - b. long term incinerator operation, and
 - c. sampling and analysis of waste feeds, including the frequency thereof.

Such procedures shall include procedures for rapidly shutting down the waste feed and the incinerator, and controlling emissions, in the event of equipment malfunction. Such procedures shall, to the satisfaction of the Department, indicate that the incinerator will operate in compliance with the emission limitations set forth in 310 CMR 7.08(4);

7.08: continued

6. include a proposed emission test protocol for demonstrating compliance with 310 CMR 7.00 in general and in particular with the emission limitations set forth in 310 CMR 7.08(4)(h). This protocol shall include at least the following: sampling and analysis procedures and equipment, sample locations, frequency and duration of sampling, anticipated test dates, duration of testing, quantity of waste to be burned, range(s) of temperature(s), waste feed rate, combustion gas velocity, auxiliary fuel use, and all other parameters which may affect the performance of the incinerator;
 7. include whatever other information, plans, specifications, evidence, or documentation the Department may request; and
 8. bear the seal and signature of a professional engineer, registered in the Commonwealth pursuant to M.G.L. c. 112, on all engineering plans, specifications, and other material submitted in or with the application.
- (d) The Department may approve the construction, reconstruction, alteration, modification or operation of a hazardous waste incinerator only if the Department is persuaded that:**
1. emissions from the incinerator would not result in air quality exceeding the Massachusetts or National Ambient Air Quality Standards;
 2. emissions from the incinerator would not result in noncompliance with 310 CMR 7.01 or any other provision of 310 CMR 7.00.
 3. a proposed incinerator to be constructed in a non-attainment area would not have a potential to emit equal to or greater than 100 tons per year of the contaminant upon which the non-attainment status is based (*e.g.*, particulate matter, sulfur oxides, nitrogen oxides, volatile organic compounds, or carbon monoxide), unless the incinerator is in compliance with the requirements of 310 CMR 7.00: *Appendix A*(1) through (6), Emission Offsets and Non-attainment Review;
 4. a proposed modification of an incinerator in a non-attainment would not produce a significant increase in emissions of the contaminant upon which the non-attainment status is based (*e.g.*, particulate matter, sulfur oxides, nitrogen oxides, volatile organic compounds, or carbon monoxide), unless the incinerator is in compliance with the requirements of 310 CMR 7.00: *Appendix A*(1) through (6), Emissions Offsets and Non-attainment Review; and
 5. a proposed incinerator subject to 310 CMR 7.00: *Appendix A*(1) through (6) (a major source or major modification) would not have total allowable emissions which, when added to allowable emissions from:
 - a. existing facilities in the pertinent regions, and
 - b. new or modified sources in the pertinent region, which sources are not major emitting facilities, would, by the time that the incinerator is to commence operation, exceed the total emissions from existing sources allowed under the applicable SIP (prior to the application for such permit to construct or modify) by such an amount as to be inconsistent with "reasonable further progress" as defined in the Massachusetts State Implementation Plan (SIP).
- (e) The Department may impose any reasonable condition upon an approval, including, but not limited to:
1. compliance with record-keeping requirements set forth in 310 CMR 30.542;
 2. limitations on waste feed;
 3. waste feed rates;
 4. operating conditions during start-up, prior to, and during emissions testing;
 5. long term operating conditions;

** In addition to the requirements contained herein, major new sources of air contaminants and major modifications of existing sources located in attainment areas may be subject to Prevention of Significant Deterioration (PSD) regulations at 40 CFR 52.21. Effective July 1, 1982, the Department implemented the PSD program in accordance with the Department's "Procedures for Implementing Federal Prevention of Significant Deterioration Regulations". As of March 3, 2003, the federal PSD regulations are administered by the U.S. Environmental Protection Agency.

7.08: continued

6. requiring the hazardous waste incinerator to be provided with:
 - a. sampling ports of such size, number, and location as the Department may require, and safe access to each port, and
 - b. instrumentation to monitor and record emission data;
 7. quantitative analysis of the scrubber water, if any, the ash residues, and other residues, if any, for the purpose of estimating the fate of the trial POHCs; and
 8. any other sampling and/or testing equipment.
- (f) The Department may revoke an approval if:
1. construction is not begun within four years from the date of issuance of the approval; or
 2. during construction, work is suspended for two years; or
 3. there is any other lawful cause.
- (g) For each hazardous waste incinerator whose construction was not completed prior to October 15, 1983, all provisions of 310 CMR 7.08(4) shall take effect on October 15, 1983. For each hazardous waste incinerator whose construction was completed prior to October 15, 1983:
1. all provisions of 310 CMR 7.08(4)(a) through (g) shall take effect on October 15, 1983; and
 2. within nine calendar months after the date on which a license application is required to be submitted to the Department pursuant to 310 CMR 30.099(6), either:
 - a. comply with 310 CMR 7.08(4)(b), (c), and (h) through (l), or
 - b. persuade the Department that more time is needed to comply with 310 CMR 7.08(4)(h) through (l), and submit to the Department a proposed plan and schedule for such compliance. Said plan and schedule are subject to review and approval by the Department and shall provide for compliance with 310 CMR 7.08(4)(b), (c) and (h) through (l) as expeditiously as practicable, and in any event no later than 24 months after the date on which a license application is required to be submitted to the Department pursuant to 310 CMR 30.099(6). Such proposed plan and schedule shall be submitted in compliance with all applicable requirements set forth in 310 CMR 7.08 and in 310 CMR 30.000 and/or 314 CMR 8.00.
- (h) Except as provided in 310 CMR 7.08(4)(g), no person owning, leasing, or controlling the operation of any hazardous waste incinerator shall cause, suffer, allow, or permit emissions therefrom in excess of the following emission limitations:
1. for each waste feed, a hazardous waste incinerator shall achieve a destruction and removal efficiency (DRE) of 99.99% for each Principal Organic Hazardous Constituent (POHC) designated in the Department's approval. DRE shall be determined for each POHC from the following equation:

$$\text{DRE} = \frac{(\text{W in} - \text{W out})}{\text{W in}} \times 100\%$$

Where:

- W in = Mass feed rate of one POHC in the waste stream feeding the incinerator, and
- W out = Mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere;
2. For a hazardous waste incinerator with the potential to emit hydrogen chloride (HCl) at a rate equal to or greater than four pounds per hour, such HCl emissions shall be limited to no greater than the larger of either four pounds per hour or 1% of the HCl in the combustion gas prior to entering any air pollution control equipment;
 3. Particulate emissions from a hazardous waste incinerator shall not exceed 0.08 grains per dry standard cubic foot when corrected for the amount of oxygen in the stack gas according to the formula:

7.08: continued

$$P_c = P_M \times \frac{14}{21-Y}$$

Where:

P_c = the corrected concentration of particulate matter.

P_m = the measured concentration of particulate matter, and

Y = the measured concentration (percent by volume, dry) of oxygen in the stack gas.

4. Emissions of products of incomplete combustion (PICs) shall be limited to the degree necessary to comply with 310 CMR 7.01.

(i) For the purposes of demonstrating compliance with the emission limitations contained in 310 CMR 7.08(4)(h), compliance with other requirements of 310 CMR 7.00, or compliance with the terms of any approval granted pursuant to 310 CMR 7.00, each person owning, leasing, or controlling the operation of a hazardous waste incinerator shall conduct or have conducted performance tests, including, without limitation, sampling and analysis of waste and exhaust emissions, in accordance with the requirements set forth in 310 CMR 7.00, including, without limitation, the following requirements:

1. For a newly constructed, substantially reconstructed, or altered incinerator, such performance tests shall be conducted as soon as possible as determined by the Department, but in no case later than 720 hours of operation or 120 calendar days, whichever comes first, after the initial introduction into the incinerator of each waste feed specified in a Department approval.

2. For a hazardous waste incinerator for which the Department is of the opinion that performance tests are necessary, such performance tests shall be conducted within 90 days of written notification from the Department that such tests are required, or within such other deadline as the Department may specify in said written notification, and

3. shall include an analysis demonstrating that the emissions of products of incomplete combustion (PICs) are in compliance with 310 CMR 7.01. Such analysis of PICs shall include the identification and quantification of no less than the five PICs that occur in the highest concentration in the flue gas stream. The Department may require that additional analysis be performed including, but not limited to, specifying particular compounds to be identified and quantified.

(j) Performance tests in compliance with 310 CMR 7.08(4)(i) shall be conducted in accordance with methods as approved by the Department and in conformance with 310 CMR 7.13. The sampling and analysis of waste shall in all cases be done by a person knowledgeable therein, and shall be done in the presence of a representative of the Department whenever such is deemed necessary by the Department. The results of all such tests shall:

1. be recorded and the records placed in the operating log in compliance with 310 CMR 30.542, and

2. be submitted to the Department in accordance with 310 CMR 30.807 no later than 90 days after completion of the actual testing or within such other deadline as the Department may prescribe in writing.

(k) No person shall cause, suffer, allow, or permit the operation of any hazardous waste incinerator that is not equipped with instrumentation which is properly maintained in an accurate operating condition and operated continuously to indicate and record the:

1. carbon monoxide and oxygen levels in the stack exhaust gas,

2. waste feed and supplementary fuel rates,

3. combustion temperature, and

4. combustion gas velocity.

The instrumentation and its installation shall be as approved by the Department in accordance with 310 CMR 7.08(4).

7.08: continued

- (l) No person shall cause, suffer, allow, or permit the operation of any hazardous waste incinerator unless said operation is in conformance with the following:
1. During start-up and shutdown, hazardous waste shall not be fed into the incinerator unless the incinerator is operating within the conditions of operation as specified in the Department's approval; and
 2. Fugitive emissions from the combustion zone shall be controlled by:
 - a. keeping the combustion zone totally sealed against fugitive emissions; or
 - b. maintaining a combustion zone pressure lower than atmospheric pressure; or
 - c. an alternative means of fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure as approved by the Department; and
 3. Each hazardous waste incinerator shall be equipped with a functioning system to automatically cease operation of the incinerator when change(s) in waste feed, incinerator design, or operating conditions exceed limits as designated in a Department approval. Each such systems, and each alarm associated therewith, shall be tested at least weekly to verify operability; and
 4. At least once each day during which it is operated, each hazardous waste incinerator and associated equipment (*e.g.* pumps, valves, conveyors, and pipes) shall be subjected to thorough visual inspection for leaks, spills, fugitive emissions, and signs of tampering; and
 5. All monitoring and inspection data shall be recorded and the records shall be placed in the operating log required by 310 CMR 30.542.
- (m) No incinerator for the burning of polyhalogenated aromatic hydrocarbons shall be constructed, substantially reconstructed, altered, or operated except in compliance with the following requirements:
1. Polyhalogenated aromatic hydrocarbons may be burned only after the Department has expressly and in writing approved the burning of such material, and only to the extent and only while such approval is in effect. The application to the Department for such approval shall expressly state that approval is sought to burn polyhalogenated aromatic hydrocarbons.
 2. The burning of polyhalogenated aromatic hydrocarbons shall achieve a destruction and removal efficiency, as determined pursuant to 310 CMR 7.08(4)(h)1., of 99.9999% for each POHC, based on burning materials more difficult to burn than tetra-, penta-, and hexachloro-rodibenzo-p-dioxin and dibenzofurans.

7.09: U Dust, Odor, Construction, and Demolition

- (1) No person having control of any dust or odor generating operations such as, but not limited to asphalt batching plants, asphalt roofing materials manufacturing plants, asphalt blowing plants, foundries, chemical products manufacturing plants, incinerators, fuel utilization facilities, petroleum products manufacturing plants, aggregate manufacturing plants, food preparation or processing facilities, wood products plants, dry cleaning establishments, paint and varnish manufacturing plants, paper manufacturing plants, leather manufacturing plants, concrete batching plants, metal coating and treating plants, land clearing operations, construction work, dump operations, agricultural operations and street sweeping shall permit emissions therefrom which cause or contribute to a condition of air pollution.
- (2) No person responsible for any construction or demolition of an industrial, commercial, or institutional building or residential building with 20 or more dwelling units, shall cause, suffer, allow, or permit emissions therefrom which cause or contribute to a condition of air pollution. Said person shall notify the Department in writing ten working days prior to the initiation of said construction or demolition operation. The ten working day advance notice period will be waived in the event of emergency demolition necessary to prevent a public health or safety hazard.

7.09: continued

- (3) No person responsible for an area where construction or demolition has taken place shall cause, suffer, allow, or permit particulate emissions therefrom to cause or contribute to a condition of air pollution by failure to seed, pave, cover, wet, or otherwise treat said area to prevent excessive emissions of particulate matter.
- (4) No person shall cause, suffer, allow, or permit the handling, transportation, or storage of any material in a manner that results or may result in emissions therefrom which cause or contribute to a condition of air pollution.
- (5) No persons responsible for any construction or demolition of a structure that contains friable asbestos material shall fail to comply with 310 CMR 7.09(2) and 310 CMR 7.02. (National Emission Standards for Hazardous Pollutants)
- (6) No person shall cause, suffer, allow, or permit the operation of mechanized street sweeping equipment that is not equipped with a suitable dust collection or dust suppression system which is maintained in good operating condition and is operated continuously while the street sweeping equipment is in use to prevent conditions of air pollution.
- (7) 310 CMR 7.09(1) through 7.09(4) and 7.09(6) are subject to the enforcement provisions specified in 310 CMR 7.52.

7.10: U Noise

- (1) No person owning, leasing, or controlling a source of sound shall willfully, negligently, or through failure to provide necessary equipment, service, or maintenance or to take necessary precautions cause, suffer, allow, or permit unnecessary emissions from said source of sound that may cause noise.
- (2) 310 CMR 7.10(1) shall pertain to, but shall not be limited to, prolonged unattended sounding of burglar alarms, construction and demolition equipment which characteristically emit sound but which may be fitted and accommodated with equipment such as enclosures to suppress sound or may be operated in a manner so as to suppress sound, suppressible and preventable industrial and commercial sources of sound, and other man-made sounds that cause noise.
- (3) 310 CMR 7.10(1) shall not apply to sounds emitted during and associated with:
 - (a) parades, public gatherings, or sporting events, for which permits have been issued provided that said parades, public gatherings, or sporting events in one city or town do not cause noise in another city or town;
 - (b) emergency police, fire, and ambulance vehicles;
 - (c) police, fire, and civil and national defense activities;
 - (d) domestic equipment such as lawn mowers and power saws between the hours of 7:00 A.M. and 9:00 P.M.
- (4) 310 CMR 7.10(1) is subject to the enforcement provisions specified in 310 CMR 7.52.

7.11: U Transportation Media

- (1) Motor Vehicles.
 - (a) All motor vehicles registered in the Commonwealth shall comply with pertinent regulations of the Registry of Motor Vehicles relative to exhaust and sound emissions.
 - (b) No person shall cause, suffer, allow, or permit the unnecessary operation of the engine of a motor vehicle while said vehicle is stopped for a foreseeable period of time in excess of five minutes. 310 CMR 17.11 shall not apply to:
 1. vehicles being serviced, provided that operation of the engine is essential to the proper repair thereof, or

7.11: continued

2. vehicles engaged in the delivery or acceptance of goods, wares, or merchandise for which engine assisted power is necessary and substitute alternate means cannot be made available, or
 3. vehicles engaged in an operation for which the engine power is necessary for an associated power need other than movement and substitute alternate power means cannot be made available provided that such operation does not cause or contribute to a condition of air pollution.
- (c) 310 CMR 7.11(1)(b) is subject to the enforcement provisions specified in 310 CMR 7.52.
- (2) Diesel Trains.
- (a) No person owning or operating a diesel powered locomotive shall cause, suffer, allow, or permit said locomotive to be operated in a manner such as to cause or contribute to a condition of air pollution.
 - (b) No person shall cause, suffer, allow, or permit the unnecessary foreseeable idling of a diesel locomotive for a continuous period of time longer than 30 minutes. 310 CMR 7.00 shall not apply to diesel locomotives being serviced provided that idling is essential to the proper repair of said locomotive and that such idling does not cause or contribute to a condition of air pollution.
 - (c) 310 CMR 7.11(2)(a) and 7.11(2)(b) are subject to the enforcement provisions specified in 310 CMR 7.52.
- (3) Aircraft. No person owning or operating an airport shall cause, suffer, allow, or permit routine warmups, testing, or other operation of aircraft while on the ground, in such a manner as to cause or contribute to a condition of air pollution, outside of the property lines of the airport, that in the opinion of the Department are unreasonable and feasibly preventable.
- (4) Marine Vessels. No person owning, operating, or having control of a seagoing vessel while it is in the District shall cause, suffer, allow, or permit, aboard said vessel, tube blowing or soot removal activities that cause or contribute to a condition of air pollution. 310 CMR 7.11 shall apply only in the Merrimack Valley Air Pollution Control District, Metropolitan Boston Air Pollution Control District, and the Southeastern Massachusetts Air Pollution Control District.

7.12: U Source Registration

- (1) Applicability.
- (a) 310 CMR 7.12 applies to any owner/operator of a facility if such facility meets any of the criteria in 310 CMR 7.12(1)(a)1. through 11.
 1. Has a facility-wide maximum energy input capacity in BTU/hour from fuel utilization facilities equal to or greater than the following size thresholds:

a. All Fuels	40,000,000;
b. Residual Fuel Oil	10,000,000;
c. Solid Fuel	3,000,000;
d. Used Oil Fuel	3,000,000; or
e. Landfill Gas	3,000,000.
 2. Has a maximum energy input capacity in Btu/hour from any fuel utilization facility emission unit that combusts natural gas, propane, butane, or distillate oil equal to or greater than the 10,000,000 Btu/hour.
 3. Has non-combustion federal potential¹ to emit (facility-wide) equal to or greater than:

a. Particulate Matter	two tons per year;
b. Oxides of Sulfur	2.5 tons per year;
c. Organic Material	ten tons per year;
d. Nitrogen Dioxide	4.4 tons per year; or
e. Hazardous Air Pollutants	ten tons of any individual HAP per year or 25 tons of total HAPs per year.

¹ Non-combustion potential emissions excludes emissions from motor vehicles, incinerators and products of combustion from fuel utilization facilities.

7.12: continued

4. Is or contains a hazardous waste incinerator, regardless of size.
 5. Is or contains an incinerator with the capacity to reduce 50 pounds per hour or more of waste.
 6. Is or contains an emission unit or process that is subject to a National Emission Standard for Hazardous Air Pollutants (NESHAP) or subject to a Maximum Achievable Control Technology (MACT) standard defined at 40 CFR Part 61 and Part 63, for which the Department has received delegation from EPA.
 7. Is or contains a stationary reciprocating internal combustion engine (except for emergency or standby engines) with a maximum energy input capacity of 3,000,000 Btu per hour or greater (burning any fuel).
 8. Is required to submit a Source Registration as a condition of a plan approval or operates under a Restricted Emission Status (RES) pursuant to 310 CMR 7.02(9) or 7.02(10) issued since January 1, 1990. The owner/operator of a facility required by a plan approval, issued prior to January 1, 1990, to submit an annual Source Registration is no longer required to do so unless such facility meets one of the other applicability criteria in 310 CMR 7.12 or a more recent Department approval requires submittal of a Source Registration.
 9. Is a facility for which the owner/operator has received a request from the Department to submit a Source Registration.
 10. Is a facility subject to 310 CMR 7.00: *Appendix C* in the previous calendar year.
 11. Had actual emissions equal to or greater than 0.5 tons of lead, 25 tons of NO_x, or 25 tons of VOC in the previous calendar year.
- (b) Any owner/operator of a facility that becomes subject to 310 CMR 7.12 that was not previously subject to 310 CMR 7.12 shall notify the Department by January 31st of the calendar year immediately following the calendar year in which the facility became subject to 310 CMR 7.12.
- (c) Any owner/operator of a facility subject to 310 CMR 7.26(20) through (29) need not submit a Source Registration pursuant to 310 CMR 7.12 unless otherwise required to report pursuant to 310 CMR 7.12(1)(a)9. or such facility meets any of the applicability criteria in 310 CMR 7.12(1)(a)(11).
- (2) Schedule.
- (a) Except as provided in 310 CMR 7.12(2)(b), a Responsible Official of a facility shall sign and submit a Source Registration to the Department every year by the date indicated below:
1. May 1st for a facility subject to 310 CMR 7.00: *Appendix C* in the previous calendar year;
 2. June 1st for a facility that:
 - a. has an RES permit issued by the Department pursuant to 310 CMR 7.02(9);
 - b. had actual emissions of lead equal to or greater than 0.5 tons in the previous calendar year, or actual emissions of NO_x or VOC equal to or greater than 25 tons per year in the previous calendar year;
 - c. emits an air contaminant subject to a NESHAP or is subject to a MACT standard defined at 40 CFR Part 61 and Part 63, for which the Department has received delegation from EPA;
 - d. is required, as a condition of a plan approval issued by the Department since January 1, 1990, to submit a Source Registration annually.
- (b) If a facility is not subject to the annual reporting schedule in 310 CMR 7.12(2)(a), a Responsible Official shall sign and submit a Source Registration to the Department by April 1st once every three years.
- (3) Source Registration Contents.
- (a) An owner/operator shall provide information in the Source Registration as specified in a format provided by the Department including, but not limited to:
1. A complete description of the facility, including a description of process and combustion equipment, facility operating hours and operating schedule, and raw materials and fuels used at the facility. Once a facility is subject to 310 CMR 7.12, all emission units and processes at the facility shall be included in the Source Registration even if, individually, certain emission units and processes may not meet the applicability thresholds of 310 CMR 7.00. Emission units that are "insignificant activities" under 310 CMR 7.00: *Appendix C*(5)(i) need not be included;

7.12: continued

2. Detailed emissions estimates for all criteria and hazardous air pollutants emitted at the facility;
 3. An Emission Statement summarizing and certifying actual annual emissions and peak ozone season day emissions of volatile organic compounds and oxides of nitrogen;
 4. A description of air pollution control equipment and capture and control efficiencies of said equipment;
 5. Calculations and assumptions used to support calculations of emissions such as annual fuel process rate, and peak ozone season daily process rate; and
 6. Certification of accuracy to ensure that the information contained in the Source Registration is accurate and complete to the best knowledge of the Responsible Official signing the submittal pursuant to 310 CMR 7.01.
- (b) Where such format is part of an electronic data system operated by the Department, the owner/operator shall submit the Source Registration using the electronic data system.
- (c) Copies of Source Registration and other information supplied to the Department, to comply with 310 CMR 7.12 shall be retained by the facility owner/operator for five years from the date of submittal.
- (4) Verification of Information. The Department may inspect a facility at any time for the purpose of verifying information contained in Source Registration.

7.13: U Stack Testing

- (1) Any person owning, leasing, operating or controlling a facility for which the Department has determined that stack testing is necessary to ascertain compliance with the Department's regulations or design approval provisos shall cause such stack testing:
- (a) to be conducted by a person knowledgeable in stack testing,
 - (b) to be conducted in accordance with procedures contained in a test protocol which has been approved by the Department,
 - (c) to be conducted in the presence of a representative of the Department when such is deemed necessary, and

NON-TEXT PAGE

7.13: continued

(d) to be summarized and submitted to the Department with analyses and report within such time as agreed to in the approved test protocol.

(2) Any person having control of a facility, relative to which the Department determines that stack testing (to ascertain the mass emission rates of air contaminants emitted under various operating conditions) is necessary for the purposes of regulation enforcement or determination of regulation compliance, shall cooperate with the Department to provide:

- (a) entrance to a location suitable for stack sampling;
- (b) sampling ports at locations where representative samples may be obtained;
- (c) staging and ladders to support personnel and equipment for performing the tests;
- (d) a suitable power source at the sampling location for the operation of sampling equipment; and
- (e) such other reasonable facilities as may be requested by the Department.

7.14: U Monitoring Devices and Reports

(1) Upon request by the Department through direct communication or public notice, any person who owns or operates a stationary emission source of a category and class specified by the Department:

- (a) shall install, maintain, and use emission monitoring devices, of a design and installation approved by the Department; and
- (b) shall make periodic reports to the Department on the nature and amounts of emissions from said source which the Department shall review and correlate for its use in emissions control and exhibit for public information.

(2) Any person who owns or operates an emission source as described in 40 CFR, Part, 51, Appendix P, as amended, shall comply with the minimum requirements for continuous emission monitoring, recording, and reporting as set forth therein for opacity, nitrogen oxides emissions, sulfur dioxide emissions, and oxygen or carbon dioxide.

(3) The monitoring and recording required in 310 CMR 7.14(2) shall begin by August 6, 1988.

7.15: U Asbestos

(1) Definitions. The definitions set forth at 310 CMR 7.00 apply to 310 CMR 7.15, unless otherwise defined in 310 CMR 7.15(1). The following words and phrases shall have the following meanings as they appear in 310 CMR 7.15. If a term is defined both in 310 CMR 7.00 and in 310 CMR 7.15(1), then the definition in 310 CMR 7.15(1) applies for purposes of 310 CMR 7.15.

ADEQUATELY WET or ADEQUATELY WETTED means fixing or coating with water (or water to which a surfactant has been added), amended water or a remover-encapsulant, so as to prevent a friable condition and visible emissions. Material shall be considered adequately wetted where it has been fixed or coated with water (or water to which a surfactant has been added), amended water or a remover-encapsulant, so as to prevent a friable condition and visible emissions.

AHERA means the Asbestos Hazard Emergency Response Act, 15 U.S.C. 2646 *et seq.*, and the regulations promulgated thereunder, including 40 CFR Part 763.

AMENDED WATER means water to which a wetting agent has been added.

ASBESTOS means all asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthophyllite, actinolite, and tremolite, and any other asbestiform minerals designated as asbestos by EPA in 40 CFR 61.141.

7.15: continued

ASBESTOS ABATEMENT ACTIVITY means the removal, encapsulation, demolition, renovation, enclosure, repair, disturbance, handling, transportation, storage, or disposal of asbestos-containing material or asbestos-containing waste material or any other activity involving asbestos-containing material or asbestos-containing waste material that has the potential to result in a condition of air pollution. ASBESTOS ABATEMENT ACTIVITY does not include survey, sampling, analysis, monitoring, or visual inspection activities.

ASBESTOS ANALYTICAL SERVICES means services provided by a person certified by the Commonwealth pursuant to 453 CMR 6.08: *Certification and Other Requirements for Asbestos Analytical Services* which include, but are not limited to, the counting or enumeration of asbestos fibers in the air (air monitoring analysis) and the identification and quantification of asbestos in materials (bulk sample analysis) in connection with any asbestos hazard assessment, facility inventory, exposure measurement, abatement activity or associated activity.

ASBESTOS-CONTAINING MATERIAL (ACM) means any material containing 1% or more asbestos as determined by a laboratory using protocols set forth in the *Method for the Determination of Asbestos in Bulk Building Materials* found in EPA report EPA/600/R-93/116, or another method as directed by the Department. ASBESTOS-CONTAINING MATERIAL (ACM) includes, but is not limited to, sprayed-on and troweled-on materials applied to ceilings, walls, and other surfaces; insulation on pipes, boilers, tanks, ducts, and other equipment, structural and non-structural members; tiles; asphalt roofing or siding materials; or asbestos-containing paper.

ASBESTOS-CONTAINING WASTE MATERIAL (ACWM) means any ACM removed during a demolition or renovation project and anything contaminated with asbestos in the course of a demolition or renovation project including, but not limited to, asbestos waste from control devices, bags or containers that previously contained asbestos, contaminated clothing, materials used to enclose the work area during the demolition or renovation operation, and demolition or renovation debris. ASBESTOS-CONTAINING WASTE MATERIAL (ACWM) shall also include ACM on and/or in facility components that are inoperable or have been taken out of service and any ACM that is damaged or deteriorated to the point where it is no longer attached as originally applied or is no longer serving the intended purpose for which it was originally installed.

ASBESTOS CONTRACTOR means any person who has a valid license issued by the Commonwealth pursuant to 453 CMR 6.05: *Licensure of Asbestos Contractors* for the purpose of entering into or engaging in asbestos abatement activity.

ASBESTOS INSPECTOR means any person certified by the Commonwealth pursuant to 453 CMR 6.07: *Certification of Consultants* who identifies, assesses the condition of, or collects pre-abatement samples of ACM.

ASBESTOS PROJECT MONITOR means any person certified by the Commonwealth pursuant to 453 CMR 6.07: *Certification of Consultants* who:

- (a) Collects air and bulk samples and performs visual inspections for the purpose of determining asbestos project completion;
- (b) Collects environmental asbestos air samples for the purpose of assessing present or future potential for exposure to airborne asbestos; or
- (c) Functions as the on-site representative of the facility owner or other persons by overseeing the activities of the asbestos contractor.

ASBESTOS SURVEY REPORT means a written report resulting from a thorough inspection using EPA approved procedures and methods, or an alternate asbestos inspection method that has received prior written approval from the Department, to determine whether materials or structures to be worked on, renovated, removed or demolished (including materials on the outside of structures) contain asbestos.

7.15: continued

BULK LOADING means the placement of unconfined ACWM in a vehicle or container, such as a roll-off, dumpster or truck in *lieu* of packaging the ACWM in individual leak tight containers.

CONTAINERIZE means to place into sealed containers which will prevent leakage of solids, including dust, and liquids.

DEMOLITION, for the purposes of 310 CMR 7.15, means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

DISTURBANCE means a physical disruption of the matrix of an ACM which predisposes the material to release fibers or to generate asbestos-containing dust or debris.

DUMPING GROUND, for the purpose of 310 CMR 7.15, means a facility or place used for the disposal of ACWM from one or more sources which is not established or maintained pursuant to a valid site assignment and permit in accordance with M.G.L. c. 111, § 150A, 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities* or 310 CMR 19.000: *Solid Waste Management*.

EMERGENCY RENOVATION OPERATION means a renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. EMERGENCY RENOVATION OPERATION includes operations necessitated by nonroutine failures of equipment.

ENCAPSULATION means the application of a coating or liquid sealant to ACM to reduce the tendency of the material to release fibers.

ENCLOSURE means the covering or wrapping of friable ACM in, under or behind air-tight barriers.

FACILITY means any dumping ground, or any installation, structure, building establishment or ship, and associated equipment.

FRIABLE means material that, when dry, can be crumbled, shattered, pulverized or reduced to powder by hand pressure.

FRIABLE ASBESTOS-CONTAINING MATERIAL (FRIABLE ACM) means any ACM, that, when dry, can be crumbled, shattered, pulverized or reduced to powder by hand pressure or any non-friable ACM that has been subjected to sanding, grinding, cutting, or abrading or has been crumbled, shattered or pulverized by mechanical means such as, but not limited to, the use of excavators, bulldozers, heavy equipment, or power and/or hand tools.

GLOVE BAG or GLOVEBAG means a manufactured plastic bag-type of enclosure with built-in gloves, which is placed with an air-tight seal around a facility component which permits ACM in or on the facility component to be removed without releasing asbestos fibers into the atmosphere.

HEPA FILTRATION means high efficiency particulate air filtration capable of filtering 0.3 micron particles with 99.97% efficiency.

INCIDENTAL MAINTENANCE PROJECT OR WORK means any asbestos abatement activity conducted in accordance with the applicable work practice standards set forth in 310 CMR 7.15 and which involves the removal or disturbance of:

- (a) 100 square feet or less of asbestos-containing floor tile and related asbestos-containing mastics; and/or
- (b) 32 square feet or less of asbestos-containing gypsum wallboard and/or joint compound.

7.15: continued

LEAK-TIGHT means a condition under which solids, including dust and liquids, cannot escape or spill out of a container.

NON-FRIABLE means material that, when dry, cannot be crumbled, shattered, pulverized or reduced to powder by hand pressure.

NON-FRIABLE ASBESTOS-CONTAINING MATERIAL (NON-FRIABLE ACM) means any ACM that, when dry, cannot be crumbled, shattered, pulverized or reduced to powder by hand pressure and that has not been subjected to sanding, grinding, cutting, or abrading and has not been crumbled, shattered, or pulverized by mechanical means such as, but not limited to, the use of excavators, bulldozers, heavy equipment, or power and/or hand tools.

OSHA means the Occupational Safety and Health Administration of the United States Department of Labor.

OWNER-OCCUPIED, SINGLE-FAMILY RESIDENCE means any single unit building containing space for uses such as living, sleeping, preparation of food, and eating that is used by a single family which owns the property both prior to and after renovation or demolition. OWNER-OCCUPIED, SINGLE-FAMILY RESIDENCE includes houses, mobile homes, trailers, detached garages, houseboats, and houses with a "mother-in-law apartment" or "guest room". OWNER-OCCUPIED, SINGLE-FAMILY RESIDENCE does not include rental property, multiple-family buildings, mixed use commercial/residential buildings or structures used for fire training exercises.

OWNER/OPERATOR means any person who:

- (a) has legal title, alone or with others, of a facility or dumping ground;
- (b) has the care, charge, or control of a facility or dumping ground, or
- (c) has control of an asbestos abatement activity including, but not limited to, contractors and subcontractors.

RENOVATION, for the purposes of 310 CMR 7.15, means altering a facility or one or more facility components in any way, including the stripping or removal of ACM from a facility component. Operations in which load-supporting structural members are wrecked or taken out are "demolitions".

SAMPLING means the process of obtaining portions of materials suspected of containing asbestos, including the taking of bulk portions of materials for analysis to determine composition, and the collection of air for the purposes of measuring the presence of asbestos.

SURVEY means any pre-demolition or pre-renovation activity undertaken at a facility for the purpose of determining the presence, location, amount, and condition of ACM or material assumed to contain asbestos. Activities including, but not limited to, the following do not meet the requirements for a survey pursuant to 310 CMR 7.15:

- (a) Inspections performed by employees or agents of federal, state or local government solely for the purpose of determining compliance with applicable statutes or regulations; or
- (b) Inspections, surveillance and testing conducted for the purpose of compliance with AHERA.

7.15: continued

SUSPECT ASBESTOS-CONTAINING MATERIAL means products that have a reasonable likelihood of containing asbestos based upon their appearance, composition and use. SUSPECT ASBESTOS-CONTAINING MATERIAL includes, but is not limited to, non-fiberglass insulation (e.g. pipe, boiler, duct work, etc.), cement/transite shingles, vinyl floor and wall tiles, vinyl sheet flooring, plaster, cement/transite pipes, cement sheets (corrugated and decorative), ceiling tiles, cloth vibration dampers or ductwork, spray-on fire proofing, mastic (flooring or cove base adhesive or damp proofing), and asphalt roofing or siding materials (shingles, roofing felts, tars, etc.).

VISIBLE DEBRIS means any visually detectable particulate residue, such as dust, dirt or other extraneous material which may or may not contain asbestos.

WASTE SHIPMENT RECORD means the shipping document, required to be originated and signed by the owner/operator, used to track and substantiate the disposition of ACWM.

WORK AREA means the area or location where any asbestos abatement activity or incidental maintenance work is being performed, including but not limited to: areas used for accessing the location where asbestos abatement, asbestos-associated project work or incidental work is being performed; areas used for the storage of equipment or removed materials related to asbestos abatement activity; and other areas of a facility or location in which the Department determines that such asbestos abatement activity has been or may be an actual or potential cause of a condition of air pollution.

WORK PRACTICE STANDARDS means the standards, procedures or actions for the removal, enclosure or encapsulation of asbestos, or for the demolition, renovation, maintenance or repair of facilities containing asbestos.

WORKING DAY means any day that the Massachusetts Department of Environmental Protection is open for business.

(2) Applicability.

(a) 310 CMR 7.15 applies to any persons engaged in asbestos abatement activities or associated activities or actions set forth in 310 CMR 7.15(3), and to activities associated with such asbestos abatement activities, including, but not limited to, notifications, surveys, visual inspections, and recordkeeping.

(b) Nothing in 310 CMR 7.15 shall relieve any person from complying with all other applicable federal, state and local laws and regulations, including, but not limited to, 42 U.S.C.A. § 7412 (the Clean Air Act) and 40 CFR, Part 61, Subpart M (the Asbestos National Emission Standard for Hazardous Air Pollutants); and M.G.L. c. 149, §§ 6A through 6F (statutes authorizing the Department of Labor Standards to regulate asbestos) and 453 CMR 6.00: *The Removal, Containment or Encapsulation of Asbestos*.

(3) Prohibitions.

(a) No person shall:

1. Violate or cause, suffer, allow or permit a person to violate any requirement set forth in 310 CMR 7.15; or
2. Cause, suffer, allow, or permit any asbestos abatement activity which causes or contributes to a condition of air pollution; or
3. Cause, suffer, allow, or permit any asbestos abatement activity which poses an actual or potential threat to human health, safety and welfare or to the environment.

(b) No person shall prevent access to ACM for subsequent removal.

(c) No person shall spray ACM on any facility or facility component.

(d) No person shall apply an encapsulant to severely damaged or deteriorated ACM.

(e) No person shall install or reinstall asbestos-containing insulating material on a facility or facility component or install or reinstall a facility component that contains asbestos-containing insulating material.

7.15: continued

(f) No person shall abandon or leave inoperable or out-of-service facility components that contain ACM, that are not in compliance with 310 CMR 7.15(3)(g), and are located above ground or have been exposed by excavation on-site. Inoperable or out-of-service facility components containing ACM and located underground do not need to be removed unless they are disturbed or uncovered by excavation.

(g) No person shall fail to maintain ACM that is located above ground, in a facility or that is uncovered by excavation, in good condition and serving the intended purpose for which it was originally installed.

(h) No person shall make, or cause any other person to make, any false, inaccurate, incomplete or misleading statement(s) in any notification or any other record or report submitted to or required by the Department pursuant to 310 CMR 7.15. Each owner/operator of a facility subject to any asbestos abatement activity shall notify the Department in writing immediately, but in no event more than 24 hours after the discovery of any false, inaccurate, incomplete, or misleading statement(s) in any such notification or other record or report submitted to or required by the Department pursuant to 310 CMR 7.15.

(4) Survey Requirements. With the exception of the owner of an Owner-occupied, Single-family Residence who performs asbestos abatement activities at the owner's residence involving solely non-friable ACM, the owner/operator of a facility or facility component that contains suspect ACM shall, prior to conducting any demolition or renovation, employ or engage an asbestos inspector to thoroughly inspect the facility or facility component, or those parts thereof where the demolition or renovation will occur, to identify the presence, location, amount and condition of any ACM or suspect ACM and to prepare a written asbestos survey report. The survey shall identify and assess suspect ACM located in all areas that will be breached or otherwise affected by demolition or renovation activities including, but not limited to, wall cavities, areas above ceilings and under/between multiple layers of flooring. Public and private utility owners/operators of underground cement pipes in their system networks shall comply with the provisions of 310 CMR 7.15(12A)(b) in lieu of 310 CMR 7.15(4).

(a) The written asbestos survey report shall describe the demolition or renovation operation to be undertaken and identify the types, amounts, condition and locations of all ACM present. The written asbestos survey report shall also include the following:

1. The date(s) of the survey of the facility;
2. The printed name, business address, business telephone number, certification number and signature of the asbestos inspector who conducted the survey and prepared the report; and
3. A description of the manner used to determine the sampling locations.

(b) The written asbestos survey report shall also contain an inventory of the exact locations of the ACM or suspect ACM from which samples were collected, analytical results of all samples taken, the date(s) such samples were collected, the name(s) of the persons who provided asbestos analytical services, and a blueprint, site map, diagram or written description of the facility and locations(s) thereof subject to demolition or renovation. This documentation shall clearly identify each location subject to demolition and/or renovation and the corresponding footage (square and/or linear) of any ACM or suspect ACM in each location.

(c) Any suspect ACM that is not sampled and tested for the presence of asbestos must be handled and disposed of as if it were ACM and must be identified as ACM in the asbestos survey report.

(d) The owner/operator of a facility or facility component shall maintain a copy of the written asbestos survey report available at the facility for review by or submittal to the Department upon request at all times during the asbestos abatement activities and shall preserve and maintain such report at the facility for at least two years following the completion of said activities. If the facility is unstaffed or in the event that the facility is demolished, the owner/operator shall preserve and maintain the written asbestos survey report at its regular place of business.

(5) Removal Requirements. The owner/operator of a facility or facility component shall:

(a) Remove and dispose of any ACM in accordance with 310 CMR 7.15, prior to conducting any demolition and/or any renovation thereof; and

(b) Remove or encapsulate any friable ACM that has been or will be exposed or created as a result of any demolition or renovation, in accordance with 310 CMR 7.15(7).

7.15: continued

(6) Notification Requirements. Unless specifically exempted under the provisions of 310 CMR 7.15(6)(f), or if notification is being made under the terms of an approved facility blanket notification pursuant to 310 CMR 7.15(6)(j), the owner/operator of a facility or facility component shall notify the Department and obtain Department authorization prior to conducting any asbestos abatement activity, as follows:

(a) Each owner/operator shall ensure that a fully completed asbestos notification form, including any applicable fee, is received by the Department at least ten working days prior to the commencement of the asbestos abatement activity;

(b) An asbestos notification form shall be deemed accepted by the Department unless the person submitting said asbestos notification form is notified in writing by the Department of deficiencies in the asbestos notification form within ten calendar days of the Department's receipt of said form;

(c) The Department's acceptance of said asbestos notification form shall constitute the Department's authorization for the asbestos abatement activity described in the asbestos notification form to be conducted in compliance with all applicable provisions of 310 CMR 7.15;

(d) The start date on the asbestos notification form shall encompass the time required for set-up of the area where such asbestos abatement activity will occur, including any pre-cleaning and installation of polyethylene sheeting required by 310 CMR 7.15(7)(c); and

(e) Notification shall be made only by use of the Department approved asbestos notification form, and shall include all required information, be accompanied by the applicable fee, and be legible. An incomplete or illegible notification form will not be accepted and any asbestos abatement activity described therein will not be deemed authorized by the Department or in compliance with 310 CMR 7.15.

(f) Notification Exemptions. The following activities shall not be subject to the notification requirements of 310 CMR 7.15(6)(a) through (e):

1. Notification Exemption for Exterior Asbestos-containing Cementitious Shingles, Sidings and Panels. The removal or disturbance of 100 square feet or less of exterior asbestos-containing cementitious shingles, sidings and panels, provided that the applicable requirements of 310 CMR 7.15(12) are met.

2. Notification Exemption for Asbestos Incidental Maintenance Projects or Work. The removal or disturbance of asbestos-containing floor tile, and asbestos mastics or asbestos-containing gypsum wallboard/joint compound systems, provided that the applicable requirements of 310 CMR 7.15(13) are met.

3. Notification Exemption for Owner of Owner-occupied, Single-family Residence. The owner of an Owner-occupied, Single-family Residence who performs asbestos abatement activities at the owner's residence involving solely non-friable ACM; provided that the abatement activity does not cause the non-friable ACM to become friable ACM and provided that the asbestos abatement activity is not required to be conducted by a Licensed Contractor pursuant to 453 CMR 6.00: *The Removal, Containment or Encapsulation of Asbestos*. This exemption does not apply to the removal or disturbance of greater than 100 square feet of exterior asbestos-containing cementitious shingles, siding and panels.

(g) Notification Revision Procedures. Notification date changes shall be made as follows:

1. The original start date on a notification form that has been submitted to and accepted by the Department in compliance with 310 CMR 7.15(6)(a) and (b) may be revised (*i.e.* moved forward or postponed), and asbestos abatement activity may start on said revised date provided that a revised notification form is received and accepted by the Department at least ten working days prior to the new start date for the asbestos abatement activity and provided that the revision is properly submitted to and accepted by the Department prior to the start date for the asbestos abatement activity listed on the original notification form.

2. If the asbestos abatement activity will end earlier than the end date listed on the original notification form, the Department must receive a revised notification form identifying the change no later than 24 hours prior to the revised end date for the activity.

3. The asbestos abatement activity end date set forth in the original notification form may be extended to allow additional time to complete the specific asbestos abatement activity identified on the original notification. In such cases, the person who submitted the original notification form shall revise the original notification form and specify a new end date provided that the end date specified in the original notification form has not passed.

7.15: continued

4. If asbestos abatement activities are not continuous and will occur at intermittent times within the notified asbestos abatement work period identified on the notification form, the person who submitted the original notification shall inform the applicable Department regional office in writing, via fax, email or hand delivery, of the specific dates and times when the asbestos abatement activities will suspend and resume. The person who submitted the original notification form shall provide the Department with such notice a maximum of 24 hours following suspension of work and a minimum of 24 hours prior to resuming asbestos abatement activities.
- (h) Multiple Building Abatements. Separate notification forms shall be submitted to and accepted by the Department at least ten working days in advance of any asbestos abatement activity for each building and/or structure in which asbestos abatement activities will occur.
- (i) Waiver of the Advance Notification Period.
1. The Department may approve, at its sole discretion, a waiver of the ten working day advance notification period under the following circumstances and situations:
 - a. demolition of a facility under an order of a state or local government agency issued because the facility is structurally unsound and in danger of imminent collapse; or
 - b. an emergency renovation operation.
 2. Requests for approval of an advance notification waiver shall be made to the applicable Department regional office.
 3. When approved by the Department, the waiver shall apply only to the ten working day advance notification period. All other requirements of 310 CMR 7.15 shall continue to fully apply to asbestos abatement activities for which such notification waiver has been approved.
 4. If the Department approves such a waiver, the person receiving the waiver shall provide notification regarding all asbestos abatement activities to the Department on the Department approved asbestos notification approval form (ANF 001) within 24 hours of commencement of the asbestos abatement activities, including set-up or on-site preparation activities.
- (j) Facility Blanket Notification. An owner/operator may apply to the Department for approval of a blanket notification covering multiple asbestos abatement projects for limited maintenance projects involving less than ten linear feet of ACM on pipe or 25 square feet of ACM on other facility components at a facility; or for large scale planned asbestos abatement projects at a facility; or for work in individual contiguous utility system networks owned by public or private utilities involving up to 25 linear feet of ACM on pipe or up to 60 square feet of ACM on other facility components at a facility.
1. Blanket notification applications shall be submitted on Department approved forms, shall include all required information and any additional information requested by the Department, shall be accompanied by the appropriate fee, and shall be legible.
 2. Blanket notification approvals may be granted for a period not to exceed 12 months at the Department's discretion and when granted the terms of the approval shall be facility-specific.
 3. The Department's receipt and acceptance of a blanket notification application shall not constitute approval thereof. The Department will issue a written approval or denial of the application at its discretion.
 4. Individual notifications shall be submitted to the Department before the start of each project or project segment thereof conducted under an approved Facility Blanket notification. The approval of an application for a Facility Blanket notification shall have the effect of waiving the ten working days advance notification period for each individual project or project segment conducted under said Facility Blanket approval. However, each approval of an application for a Facility Blanket notification shall establish an advance notification period that shall apply to the individual project(s) or project segment(s) conducted under that specific approval.
- (7) General Asbestos Abatement Work Practice Standards. Unless otherwise exempted under 310 CMR 7.15(9), 310 CMR 7.15(10), 310 CMR 7.15(11), 310 CMR 7.15(12) or 310 CMR 7.15(13), the owner/operator of a facility or facility component where any asbestos abatement activity is conducted shall ensure that the work practice standards listed below are followed.

7.15: continued

- (a) No Visible Emissions. No visible emissions shall be discharged to the outside air during the collection, processing, packaging, or transporting of any ACM or ACWM.
- (b) Required Use of Asbestos Contractors. Except as allowed by 453 CMR 6.14(1)(a): *Exception to Licensing Requirement for Entities Conducting Response Actions in their Own Facilities*, only asbestos contractors licensed pursuant to 453 CMR 6.00: *The Removal, Containment or Encapsulation of Asbestos* shall carry out asbestos abatement activities.
- (c) Work Area Preparation Requirements to prevent emissions to the ambient air.
1. Shutdown of HVAC Systems. The facility heating, ventilation and air conditioning (HVAC) systems in the work area shall be shut down, locked out and isolated.
 2. Removal of Moveable Objects. All moveable objects shall be removed from the work area prior to commencement of asbestos abatement work. Items to be reused which may have been contaminated with asbestos shall be decontaminated by HEPA vacuuming or wet cleaning prior to their being removed from the work area.
 3. Covering of Non-moveable Objects. All non-moveable or fixed objects remaining within the work area shall be wrapped or covered with six mil (minimum) plastic sheeting and completely sealed with duct tape or the equivalent.
 4. Isolation of Work Area. Prior to the commencement of any asbestos abatement activity, the work area shall be isolated in accordance with the requirements of 310 CMR 7.15(7)(c)4. to prevent emissions to the ambient air. The work area shall be isolated by sealing all openings including, but not limited to, windows, doors, ventilation openings, drains, grills, and grates with six mil thick (minimum) plastic sheeting and duct tape or the equivalent. For asbestos abatement activities defined at 310 CMR 7.15(1), large openings such as open doorways, elevator doors, and passageways shall be first sealed with solid construction materials, such as plywood over studding, which shall constitute the outermost boundary of the asbestos work area. All cracks, seams and openings in such solid construction materials shall be caulked or otherwise sealed, so as to prevent the movement of asbestos fibers out of the work area.
 5. Covering of Floor and Wall Surfaces. Except as listed in 310 CMR 7.15(7)(c)5.a. through c., floor and wall surfaces shall be covered with plastic sheeting. All seams and joints shall be sealed with duct tape or the equivalent. Floor covering shall consist of at least two layers of six mil thick plastic sheeting, with the edges upturned to cover at least the bottom 12 inches of the adjoining wall(s). Wall covering shall consist of a minimum of two layers of four mil thick plastic sheeting. Wall covering shall extend from ceiling to floor and overlap the upturned floor coverings without protruding onto the floor. Duct tape or the equivalent shall be used to seal the seams in the plastic sheeting at the wall-to-floor joints.
 - a. Exception to Covering Requirement Where Surfaces Are Impervious. Compliance with 310 CMR 7.15(7)(c)5. is not required where floors and walls are covered by ceramic tile or other impervious materials that are free from holes, drains, cracks, fissures or other openings and which may be thoroughly decontaminated by washing at the conclusion of the work, provided that such action does not result in the passage of asbestos fibers from the work area.
 - b. Exception to Covering Requirement for Abatement Surfaces. Compliance with 310 CMR 7.15(7)(c)5. is not required for those floor, ceiling and wall surfaces from which asbestos coverings are removed.
 - c. Exception to Wall Surface Covering Requirement Where Glovebags Are Used. Covering of wall is optional for asbestos abatement activities where glovebags are used as the sole means of removal or repair, provided that the work area is isolated in accordance with 310 CMR 7.15(7)(c)4., that all moveable objects in the work area are removed in accordance with 310 CMR 7.15(7)(c)2., that immovable objects remaining in the work area are covered in accordance with 310 CMR 7.15(7)(c)3., and that all other relevant requirements of 310 CMR 7.15(7)(c)1. through 4. are met. Where glovebags are used, the floor of the work area shall be covered with a minimum of one layer of six mil thick plastic sheeting.
 6. Covering of Ceiling Surfaces. Ceiling surfaces within the work area shall be covered with a minimum of two layers of four mil thick plastic sheeting or shall be cleaned and decontaminated by wet wiping and HEPA-vacuuming in accordance with 310 CMR 7.15(7)(f)4.

7.15: continued

(d) Equipment Decontamination Requirements. No equipment, supplies or materials (except properly containerized waste material) shall be removed from an asbestos work area, unless such equipment, supplies or materials have been thoroughly cleaned and are free of asbestos debris. Where decontamination is not feasible, such materials shall be wrapped in a minimum of two layers of six mil thick polyethylene sheeting with all joints, seams and overlaps sealed with duct tape or equivalent, or containerized in a metal, plastic or fiber drum with a locking lid. Said wrapped equipment, supplies or materials shall be labeled as being ACWM prior to removal from the work area. HEPA vacuums shall be emptied of contents prior to removal from the work area. Air filtration devices shall have used pre-filters removed and replaced with fresh filters prior to removal from the work area. Used HEPA filters and pre-filters shall be disposed of as ACWM.

(e) Requirements for Work Area Ventilation System.

1. A HEPA-filtered work area ventilation system shall be used to maintain a reduced atmospheric pressure of at least -0.02 column inches of water pressure differential within the contained work area.

2. The HEPA system shall be in operation at all times from the commencement of the asbestos project until the requirements of 310 CMR 7.15(8) have been met.

3. The ventilation equipment utilized shall be of sufficient capacity to provide a minimum of four air changes per hour and shall be equipped with an operating alarm system capable of indicating when the unit is not working properly, and utilizing a clean filter specified for that unit and capable of filtering 0.3 micron particles with 99.97 % efficiency.

a. No later than June 20, 2017 the operating alarm system shall be an audible and visual alarm system capable of indicating the unit is working properly, and utilizing a clean filter specified for that unit and capable of filtering 0.3 micron particles with 99.97 % efficiency.

4. The HEPA system units shall be operated in accordance with Appendix J of *EPA Guidance Document EPA 560/5-85-024*.

5. Make-up air entering the work area shall pass through the decontamination system.

6. Exhaust air shall be HEPA-filtered before being discharged outside of the work area.

a. Exhaust air tubes or ducts associated with the work area ventilation system shall be free of leaks.

b. Whenever feasible, exhaust air shall be discharged to the outside of the building. If access to the outside is not available, exhaust air may be discharged to an area within the building, but in no case shall exhaust air be discharged into any occupied areas of the building or into any areas of the building which contain exposed or damaged asbestos.

7. Exception to Work Area Ventilation System Requirement Where Glovebags Are Used. Compliance with 310 CMR 7.15(7)(e) is not required for asbestos abatement activities where glovebags are used as the sole means of abatement removal or repair.

(f) Removal and Cleanup Requirements. Removal of ACM from facility components shall be conducted within the work area at the site of origin as described in 310 CMR 7.15(7)(f)1. through 5.

1. Wetting of ACM. Prior to removal, all ACM shall be adequately wetted with amended water. Amended water shall not be applied in amounts that will cause run-off or leakage of the water from the work area. Once removed, ACM shall be kept adequately wet until and after it is placed into containers pursuant to 310 CMR 7.15(15).

2. Removal of ACM Being Removed as Units or in Sections. Facility component(s), covered or coated with ACM, being removed as units or in sections, shall be adequately wetted, carefully lowered to the floor level as units or sections and abated within the work area.

3. Containerization of ACWM. All ACWM within the work area shall be promptly cleaned up and placed into leak-tight containers as described in 310 CMR 7.15(7)(f)3.a. through c. Containerized ACWM shall be removed from the work area at least once per shift and stored in secured, totally enclosed vehicles or containers that are designed, constructed, and operated to prevent spills, leaks, or emissions in accordance with 310 CMR 7.15(15) through (17).

7.15: continued

- a. ACM and ACWM not containing components with sharp edges shall be containerized in two plastic bags (six mil minimum thickness each bag, one inside the other) or in leak-proof metal, plastic or plastic lined drums with locking lids.
 - b. ACM and ACWM with sharp-edge components shall be contained in leak-proof metal, plastic or plastic-lined drums with locking lids or plastic lined boxes.
 - c. Large components removed intact shall be wrapped in a minimum of two layers of six mil thick polyethylene sheeting with all joints and seams sealed with duct tape or equivalent, and labeled as ACWM prior to removal from the contained work area.
4. Clean-up. Following an asbestos abatement activity, all contaminated surfaces within the work area shall be decontaminated using HEPA-vacuuuming or wet cleaning techniques. All equipment and materials used and all surfaces from which ACM has been removed shall be decontaminated. An inch of soil shall be removed from dirt floors and disposed of as ACWM. Clean-up shall be to the level of no visible debris.
5. Removal of Work Area Barriers and Work Area Ventilation Systems. The conditions described in 310 CMR 7.15(7)(f)5.a through c. shall be maintained until such time as the visual inspection requirements of 310 CMR 7.15(8) are met:
- a. all work area barriers remain in place;
 - b. work area ventilation systems (if required) remain in operation; and
 - c. all other work practice standards established by 310 CMR 7.15 are met.

(8) Visual Inspection Requirements. With the exception of the owner of an Owner-occupied, Single-family Residence who performs asbestos abatement activities at the owner's residence involving solely non-friable ACM, in addition to the specific asbestos abatement work practice standards set forth at 310 CMR 7.15(7), upon completion of an asbestos abatement activity, the owner/operator shall ensure that the following visual inspection procedures are performed for all asbestos abatement activities. The visual inspection shall be performed only by an asbestos project monitor. Public and private utility owners/operators of underground asbestos cement pipes in their system networks shall comply with the provisions of 310 CMR 7.15(12A)(d) in lieu of 310 CMR 7.15(8).

- (a) An asbestos project monitor shall inspect all surfaces within the work area for visible debris.
- (b) Should any visible debris be found in the work area, it shall be repeatedly cleaned by the asbestos contractor in accordance with 310 CMR 7.15 until there is no visible debris.

(9) Requirements for Asbestos Glovebag Operations. The owner/operator of a facility or facility component where asbestos abatement activities involving glovebag operations are conducted shall ensure that the following requirements are met:

- (a) For activities that disturb friable ACM, no visible emissions shall be discharged to the outside air during the collection, processing, packaging or transporting of any ACM or ACWM.
- (b) Glovebags shall be used only on those facility components for which they are specifically designed and they shall not be modified for use on any other type of facility component. Glovebags shall be constructed of six mil thick (minimum) plastic sheeting and be seamless at the bottom.
- (c) Glovebags shall be used only once and shall not be moved along the facility component from where they are initially applied.
- (d) The work area shall be isolated in accordance with 310 CMR 7.15(7)(c)5.c. and cleaned of visible debris by wet wiping or HEPA-vacuuuming prior to installation of the glovebag.
- (e) Glovebags shall be installed so as to form an airtight covering around the facility components on which they are to be used. Any friable ACM in the immediate area of glovebag installation shall be wrapped and sealed in two layers of six mil (0.006 inch) thick plastic sheeting or otherwise maintained intact prior to glovebag installation. All openings in the glovebag shall be sealed against leakage with duct tape or the equivalent material.
- (f) ACM shall be adequately wetted with amended water prior to its removal and shall be maintained in an adequately wet condition inside the glovebag.
- (g) Any ACM that has been exposed as a result of the glovebag operation shall be removed, encapsulated or enclosed so as to prevent the leakage of asbestos fibers prior to the removal of the glovebag.

7.15: continued

(h) All surfaces inside the glovebag from which ACM has been removed and the upper portions of the glovebag itself shall be cleaned free of visible debris prior to removal of the glovebag.

(i) Debris shall be isolated in the bottom of the glovebag by twisting the bag so as to form a closure in the middle. This closure shall then be taped around with duct tape or the equivalent. Air in the glovebag shall be exhausted with a HEPA vacuum cleaner prior to its removal.

(j) Following removal from the facility component, the glovebag and its contents shall be containerized in accordance with 310 CMR 7.15(15) and 310 CMR 19.000: *Solid Waste Management*.

(10) Requirements for the Removal of Asbestos-containing Asphaltic Roofing and Siding Materials.

(a) If the requirements of 310 CMR 7.15(10) are followed, asbestos-containing asphaltic roofing and siding may be disposed of in any landfill permitted by the Department to accept solid waste pursuant to 310 CMR 19.000: *Solid Waste Management*. If the asbestos-containing asphaltic roofing and siding are not handled in accordance with 310 CMR 7.15(10) or if the Department has determined that asbestos fibers may be released during handling, removal or disposal, then the materials shall be disposed of in a landfill that has obtained a special waste permit to accept asbestos wastes or is managing such wastes in accordance with 310 CMR 19.061: *Special Waste*.

(b) Roof level heating and ventilation air intakes shall be isolated by covering the intakes with six mil thickness plastic sheeting prior to the start of the removal work.

(c) Asphaltic shingles and felts shall be removed intact to the greatest extent feasible.

(d) Asphaltic shingles and felts that are not intact, or will be rendered non-intact, shall be adequately wet during removal.

(e) Where cutting machines are used in the removal of asphaltic shingles and felts, said cutting machines shall be equipped with a HEPA vacuum to capture dust produced by the cutting process. Cutting machines that are not equipped with a HEPA vacuum to capture dust produced by the cutting process shall only be used inside a work area for which containment sufficient to prevent visible emissions of fugitive dust to the ambient air has been established.

(f) Where cutting machines are used in the removal of asphaltic shingles and felts, the material shall be adequately wetted throughout the cutting process.

(g) Dust produced by power roof cutters operating on aggregate surfaces shall be removed by HEPA-vacuums. Dust produced by power roof cutters operating on non-aggregate, smooth surfaces shall be removed by HEPA-vacuums or wet wiping along the cut line.

(h) Asbestos-containing shingles or felts shall not be dropped or thrown to the ground. Unless the material is carried or passed to the ground by hand, it shall be lowered to the ground by crane or hoist or transferred in dust-tight chutes.

(i) Intact asphaltic shingles and felts shall be lowered to the ground prior to the end of each work shift. Non-intact asphaltic shingles and felts shall be kept adequately wet at all times while on the roof. Non-intact asphaltic shingles and felts shall be placed in an impermeable waste bag (six mil thickness) or wrapped in plastic sheeting (minimum six mil thickness), sealed with duct tape or the equivalent and lowered to the ground prior to the end of each work shift.

(j) For activities that disturb friable ACM, no visible emissions shall be discharged to the outside air during the collection, processing, packaging or transporting of any ACM or ACWM.

(11) Requirements for Window Painting and/or Repair Work That Result in the Disturbance of Asbestos-containing Glazing and/or Caulking Compounds.

(a) A work area defined at 310 CMR 7.15(1) shall be established that extends outward from the exterior side of the building or facility where the window painting and/or repair work that will result in disturbance of asbestos-containing glazing and/or caulking compounds is to take place. Said work area shall be large enough to encompass all areas where dust, debris or waste generated during the operation are expected to accumulate and areas where there is a reasonable possibility that airborne levels of asbestos could be elevated, as well as any area occupied by equipment.

7.15: continued

- (b) Windows, doors and other openings on the side of the building where the window repair/painting work that will result in disturbance of asbestos-containing glazing and/or caulking compounds is occurring shall be closed while the work is occurring and air conditioners on the same side of the building shall be turned off.
- (c) Tarpaulin or plastic sheeting shall be spread on the ground under the window(s) being painted or repaired. Said tarpaulin or plastic sheeting shall extend away from the edge of the building and to either side of the work area a sufficient distance to catch any debris generated by the work operation. Tarpaulin or sheeting shall be cleaned of accumulated debris no later than the end of each work shift.
- (d) If the entire sash is to be removed during painting or repair operations, window openings shall be sealed on the inside of the building with six mil thickness polyethylene sheeting in a manner sufficient to prevent leakage of dust or debris to interior spaces. Where less than an entire sash is to be replaced, covering and sealing of interior surfaces of the sash that encompasses the area of the panes being worked on may be performed in *lieu* of sealing the entire sash.
- (e) Prior to commencing removal or repair of asbestos-containing glazing compound or caulk, the exterior and interior window well and sash areas shall be pre-cleaned by HEPA-vacuuuming and/or wet wiping.
- (f) Asbestos-containing glazing compound and caulk shall be adequately wet with amended water prior to removal or repair. All pieces or particles of glazing compound and caulk shall be removed using a HEPA vacuum and/or using a wet wipe collection method.
- (g) The work area, including ground covers and equipment, shall be cleaned of visible debris at the end of each workday.
- (h) Upon completion of the removal of the asbestos-containing glazing compound and/or caulk, the sash and sill areas shall again be cleaned by HEPA-vacuuuming and/or wiped with a wet sponge or cloth. Polyethylene sheeting (where used) shall be removed from the interior of the window and disposed of as ACWM in accordance with 310 CMR 7.15(15) through (18), and the window well shall be cleaned by HEPA-vacuuuming and/or wet wiping.
- (i) All equipment utilized in the work operation shall be cleaned of visible dust and debris by HEPA-vacuuuming and/or wet wiping prior to removal from the work area. Wet wipes shall be managed as ACWM.
- (j) The tarpaulin or plastic sheeting below the window(s) shall be cleaned of visible dust and debris by HEPA-vacuuuming and/or wet wiping. Dry sweeping shall not be allowed. Ground covers that are free of visible debris and dust may be reused or disposed as solid waste in accordance with 310 CMR 19.000: *Solid Waste Management*.
- (k) Barrier tape may be disposed as solid waste in accordance with 310 CMR 19.000: *Solid Waste Management*.
- (l) If disposable protective clothing is used, it shall be disposed as ACWM in accordance with 310 CMR 7.15(15) through (18).
- (m) Wetted window caulking and glazing and other ACM shall be collected and sealed into a six mil plastic bag that is placed in a leak-tight container for disposal as ACWM in accordance with 310 CMR 7.15(15) through (18).
- (n) If an entire sash is to be removed and disposed of as ACWM, then the adequately wetted sash shall be removed intact, wrapped in a minimum of two layers of six mil thick polyethylene sheeting with all joints and seams sealed with duct tape.
- (o) At the conclusion of the work, the work site shall be inspected for paint dust or chip debris and asbestos-containing glazing compound or caulk. The work area shall be re-cleaned until no such debris is found.
- (p) All waste shall be labeled as ACWM prior to removal from the work area.
- (q) Visual inspection of the work area required by 310 CMR 7.15(8) shall be conducted by a person who has completed the asbestos operations and maintenance projects worker training specified in 453 CMR 6.00: *The Removal, Containment or Encapsulation of Asbestos*.
- (r) For activities that disturb friable ACM, no visible emissions shall be discharged to the outside air during the collection, processing, packaging, or transporting of any ACM or ACWM.
- (12) Requirements for Exterior Asbestos-containing Cementitious Shingles, Siding and Panels.
- (a) Asbestos cement shingles, siding and panels shall not be broken, sanded, sawed or drilled at any time during removal or subsequent handling.

7.15: continued

- (b) Tarpaulin or plastic sheeting shall be spread on the ground under the areas where the shingles, siding or panels are being removed. Said tarpaulin or plastic sheeting shall extend away from the edge of the building and to either side of the work area a sufficient distance to catch any debris generated by the work operation. Tarpaulin or sheeting shall be cleaned of accumulated debris no later than the end of each work shift.
- (c) Openings on the side of the building where the asbestos abatement activities are taking place shall be closed or sealed with polyethylene sheeting and duct taped in a manner sufficient to prevent leakage of dust or debris to interior spaces.
- (d) Nails securing shingles shall be cut or pulled to allow intact shingle removal. Cementitious asbestos-containing shingles, siding and panels shall be removed whole and intact to the greatest extent feasible. Methods likely to break shingles, siding or panels during removal shall not be used.
- (e) Each panel, siding or shingle shall be adequately wetted with amended water prior to removal.
- (f) Shingles, siding or panels shall be carefully lowered to the ground in a manner to avoid breakage.
- (g) Removed shingles, siding or panels and associated debris shall be containerized in leak-proof metal, plastic or plastic-lined drums or boxes or wrapped with double thickness plastic sheeting (six mil minimum thickness each layer) sealed with duct tape no later than the end of each work shift.
- (h) Uncontained asbestos cement shingles, siding or panels shall not be bulk loaded into a truck, dumpster or trailer for storage, transport or disposal.
- (i) For activities that disturb friable ACM, no visible emissions shall be discharged to the outside air during the collection, processing, packaging or transporting of any ACM or ACWM.

(12A) Requirements for Underground Asbestos-cement Pipe.(a) Applicability.

1. The requirements of 310 CMR 7.15(12A)(b) and (d) shall apply only to repair and replacement of underground asbestos-cement pipe that is owned and/or operated by public and private utilities (*e.g.*, pipes conveying drinking water, sanitary sewage, storm water, electricity, and gas). Repair and replacement of all other underground cement pipe shall comply with the survey requirements at 310 CMR 7.15(4) and the visual inspection requirements of 310 CMR 7.15(8) if the pipe is found to be ACM.
 - a. Public and private utility owners/operators of underground asbestos-cement pipe covered by 310 CMR 7.15(12A) shall comply with all the requirements of 310 CMR 7.15(12A)(b) in *lieu* of 310 CMR 7.15(4), Survey Requirements.
 - b. Public and private utility owners/operators of underground asbestos-cement pipe shall comply with all the requirements of 310 CMR 7.15(12A)(d) in *lieu* of 310 CMR 7.15(8), Visual Inspection Requirements.
2. All owners/operators shall comply with all the requirements of 310 CMR 7.15(12A)(c) in *lieu* of 310 CMR 7.15(7)(c) and (e), General Asbestos Abatement Work Practice Standards, when conducting asbestos abatement activity involving underground asbestos-cement pipe.
3. All owners/operators shall comply with all other requirements of 310 CMR 7.15 when conducting asbestos abatement activity involving underground asbestos-cement pipe.

(b) Survey.

1. The public and private utility owner/operator shall thoroughly inspect the facility, facility component or any part thereof where the demolition or renovation will occur, to identify the presence, location and amount of any asbestos-cement pipe. If the pipe is not identified as asbestos-cement pipe, the owner/operator shall comply with 310 CMR 7.15(4). The thorough inspection shall be satisfied by one of the following:
 - a. As-built plans or other documents, reviewed by the owner/operator, identifying whether particular underground cement pipe or parts thereof that may be affected by a repair or replacement project is asbestos-cement pipe, provided that the documentation has been updated to reflect any repairs or alterations; or

7.15: continued

b. Visual identification conducted by a person who meets the requirements of 310 CMR 7.15(12A)(b)2. through their field observations of the underground asbestos-cement pipe to be worked on including, but not limited to, the manufacturer's brand-label markings indicating transite material or the source of the pipe; or

c. A presumption by the owner/operator that the underground cement pipe is asbestos-cement pipe.

2. The survey in 310 CMR 7.15(12A)(b)1.b. shall be conducted by a person who has successfully completed a training course that has been approved in writing by the Department of Labor Standards, that specifically addresses, at a minimum, underground asbestos-cement pipe and the survey requirements in 310 CMR 7.15(12A)(b).

3. The person conducting the survey shall document in writing, in a format prescribed by the Department, the method used to determine whether the cement pipe to be worked on is an ACM including, but not limited to, identification of specific documents, the specific features of the pipe that were visually observed and/or other information that was relied upon to make said determination. Owners/operators shall keep such documentation at their regular place of business for two years from the date of the survey and provide it to the Department upon request.

(c) Specific Work Practice Requirements for Underground Asbestos-cement Pipe. Owners/operators shall ensure the work practice standards listed below are followed:

1. Asbestos-cement pipe shall be handled in a manner that will minimize the risk of making it friable ACM or releasing asbestos dust into the environment.

2. At the start of work involving asbestos-cement pipe, owners/operators shall ensure that:

a. The asbestos-cement pipe shall be exposed with minimal disturbance.

b. Mechanical excavation shall not be used within six inches of the asbestos-cement pipe.

c. The soil within six inches of the asbestos-cement pipe shall be uncovered by hand or with a shovel.

d. Once the pipe has been exposed, an assessment shall be made before proceeding to determine whether the asbestos-cement pipe is damaged, cracked or broken to determine whether the requirements of 310 CMR 7.15(12A)(c)3. or 4. apply to the asbestos abatement activity.

3. If the assessment shows that the asbestos-cement pipe is intact and not deteriorated:

a. Place six mil (0.006 inch) thick polyethylene sheeting under the asbestos-cement pipe to prevent soil contamination.

Adequately wet the asbestos-cement pipe with amended water using surfactant or liquid soap before and during removal to avoid creating airborne dust.

b. Separate the asbestos-cement pipe at the nearest coupling (bell or compression fitting).

c. Slide the asbestos-cement pipe apart at the joints (no saw cutting) or use other methods that do not cause the asbestos-cement pipe to break, become friable ACM or otherwise create the potential to release asbestos fibers.

d. Containerizing the wet asbestos-cement pipe and other debris from the abatement in accordance with 310 CMR 7.15(7)(f)(3) may be done in the trench or adjacent to the trench.

e. If the trench is filled with water, the placement of polyethylene sheeting is not required.

4. If the asbestos-cement pipe is deteriorated or is not intact, or when the use of mechanical breakage with saws, snap or blade cutting, and/or tapping is necessary:

a. Place six mil (0.006 inch) thick polyethylene sheeting under the asbestos-cement pipe to prevent soil contamination.

b. Adequately wet asbestos-cement pipe with amended water where cutting or breaking will occur.

c. Saw cutting of asbestos-cement pipe shall only be conducted with a HEPA-shrouded vacuum attachment or wet cutting equipment, unless it is conducted within a small enclosure that isolates the area in which the saw cutting is being conducted to prevent the release of asbestos fibers to ambient air.

7.15: continued

d. Wrap wet asbestos-cement pipe in two layers of six mil polyethylene sheeting, seal with duct tape and label (this may be done either in the trench or adjacent to the trench).

5. For activities that disturb friable ACM, no visible emissions shall be discharged to the outside air during the collection, processing, packaging or transporting of any ACM or ACWM.

(d) Visual Inspection. The final visual inspection shall be satisfied by complying with the following requirements:

1. The visual inspection shall be performed by a person who has successfully completed a training course, approved in writing by the Department of Labor Standards, that specifically addresses, at a minimum, underground asbestos-cement pipe and the requirements of the visual inspection in 310 CMR 7.15(12A)(d).

2. The person conducting the final visual inspection shall:

a. Inspect the work area to ensure there was no visible debris remaining:

i. In the excavation trench;

ii. In soil excavated from the trench;

iii. In the surrounding area adjacent to the trench after the removal of the asbestos-cement pipe, and

iv. On any tools used during the removal/repair/replacement activities.

b. Ensure that all ACWM has been removed for proper storage/disposal.

3. The person who conducted the final visual inspection shall sign and date the documentation of the final inspection, in a format provided by the Department, as evidence that the inspection was performed and that the condition of "no remaining visible debris" was met. Owners/operators shall keep such documentation at their regular place of business for two years from the date of final visual inspection and provide it to the Department upon request.

(13) Work Practice Standards for Asbestos Incidental Maintenance Projects or Work. The owner/operator of a facility or facility component where an incidental maintenance project or work is conducted, as defined by 310 CMR 7.15(1), involving the removal or disturbance of asbestos-containing floor tile, or asbestos-containing gypsum wallboard/joint compound systems shall ensure that the following general work practice standards are met.

(a) General Work Practice Standards for Incidental Maintenance Projects or Work.

1. Barriers shall be constructed, as necessary, to insure that asbestos-containing dust released during work activities is contained within the work area. Glove bags, HEPA-shrouded tools and mini-enclosures are permitted in *lieu* of constructed barriers.

2. ACM shall be adequately wetted with amended water before it is disturbed, and it shall be kept adequately wet throughout the asbestos abatement activities until containerized in accordance with 310 CMR 7.15(7)(f)3.

3. Where ACM is being removed, it shall be removed in an intact state to the greatest extent feasible.

4. Where power tools are used to cut, chip or abrade an ACM, said power tools shall be equipped with HEPA-filtered local exhaust attachments specifically manufactured for the tools being used.

5. Any friable ACM exposed as a result of the asbestos abatement activities shall be removed or, if in suitable condition, encapsulated.

6. HEPA-vacuuming or wet cleaning shall be used to decontaminate the work area and any equipment used in the work operation until all surfaces are free of visible debris. The use of compressed air or dry-sweeping is prohibited.

7. HEPA vacuums shall be emptied and decontaminated in accordance with 310 CMR 7.15(7)(d).

8. All surfaces within the work area shall be visually inspected for dust, debris and other particulates residue in accordance with 310 CMR 7.15(8). The work area shall be repeatedly cleaned until there is no visible debris.

(b) Requirements for the Removal of Asbestos Floor Tile as Incidental Maintenance Projects or Work. Any person conducting an incidental maintenance project or work involving the removal of floor tile and related mastics shall presume that said materials contain asbestos, unless the results from an asbestos bulk analysis or manufacturer's specifications indicate otherwise.

7.15: continued

1. General Requirements:
 - a. Asbestos floor tile and related mastics being removed shall not be sanded, dry-swept, dry-scraped, drilled, sawed, abrasive-blasted, mechanically chipped or pulverized during said removal work.
 - b. All furniture and other movable objects shall be removed from the work area before removal begins. All non-movable objects in the work area shall be wrapped or covered with four mil (0.004 inch minimum) plastic sheeting. Plastic sheet coverings shall be completely sealed with duct tape or the equivalent.
 - c. The entire floor surface from which asbestos floor tile is to be removed shall be vacuumed with a HEPA vacuum prior to removal of the floor tile.
 2. Specific Requirements for Removal of Asbestos Floor Tile. In addition to the General Requirements of 310 CMR 7.15(13)(b)1., the following specific requirements for the removal of asbestos floor tile shall also be followed:
 - a. Floor tiles shall be adequately wetted with amended water prior to removal and kept adequately wet throughout the removal process.
 - b. Floor tiles shall be individually removed by prying upward with hand scrapers or similar hand-held tools in a manner which minimizes breakage. Removal with spud-bars, ice scrapers or similar implements is prohibited. Where tiles do not readily release from underlying mastic, the removal tool may be struck with a hammer to facilitate release. Floor tiles shall be removed in an intact state to the extent feasible.
 - c. Tile surfaces may be heated with a heat gun or other heat source to soften the adhesive and facilitate tile removal. Where heat is used to facilitate removal, the wetting of tile specified in 310 CMR 7.15(13)(b)2.a. may be delayed until after release of the tile from the floor surface.
 - d. Removed floor tiles and ACWM within the work area shall be promptly cleaned up and containerized while still adequately wet. Containerized ACM shall be removed from the work area at least once each working shift. Waste not containing components with sharp edges shall be containerized in two plastic bags (six mil minimum thickness each bag, one inside the other) or in metal, plastic or fiber drums with locking lids. Floor tile with sharp edges and sharp-edged components likely to puncture the plastic bags specified above shall be contained in leak-proof metal, plastic or plastic lined drums or boxes.
 - e. Following containerization of floor tile and associated debris, the floor surface shall be HEPA-vacuumed while still wet and then allowed to dry.
 - f. Immediately after drying, the floor surface shall be HEPA-vacuumed again before the visual inspection required by 310 CMR 7.15(8) is performed.
- (c) Specific Requirements for the Removal or Repair of Asbestos-containing Gypsum Wallboard and/or Joint Compound. Any person conducting an incidental maintenance project or work involving the removal of gypsum wallboard and/or joint compound shall presume that said materials contain asbestos unless the results from an asbestos bulk analysis or manufacturer's specifications indicate otherwise.
1. Where removal of sections of gypsum wallboard and/or joint compound is required, said sections shall be removed intact to the greatest extent feasible.
 2. Where gypsum wallboard and/or joint compound must be cut to allow removal or refitting of sections, only the minimum number of cuts necessary to accomplish said removal or refitting shall be permitted.
 3. Manually-operated tools or power tools fitted with HEPA-filtered vacuum attachments shall be used for the cutting or resurfacing of asbestos-containing gypsum wallboard and/or joint compound.
 4. Where manually-operated tools are used for the cutting or resurfacing of gypsum wallboard and/or joint compound, the area being cut shall be adequately wetted with amended water during the cutting operation.
 5. Dry sanding of asbestos-containing gypsum wallboard and/or joint compound during refinishing operations is prohibited; only wet sanding is permitted.
 6. Where holes of ½ inch or less in diameter are to be drilled through asbestos gypsum wallboard and/or joint compound, the area encompassing the hole shall be covered with a sufficient quantity of shaving foam to catch the generated chips and dust. Where holes of greater than ½ inch are to be drilled, the area being drilled shall be adequately wetted with amended water during the drilling operation.

7.15: continued

(14) Nontraditional Asbestos Abatement Work Practice Approvals.

(a) A person may apply to the Department to utilize Nontraditional Asbestos Abatement Work Practices that result in the need to deviate from section(s) of 310 CMR 7.15 if one or more of the following circumstances or situations occur:

1. Demolition of a facility under an order of a state or local government agency issued because the facility is structurally unsound and in danger of imminent collapse;
2. Where ACM or ACWM was not accessible for testing and was, therefore, not discovered until after demolition began and, as a result of the demolition, the material cannot be safely removed;
3. Where asbestos abatement activity is conducted as part of an emergency renovation operation;
4. Where asbestos abatement activity is conducted to clean up and decontaminate a facility or portion of a facility as a result of:
 - a. asbestos abatement activities not conducted in compliance with 310 CMR 7.15, or
 - b. ACM deterioration that, if not immediately attended to, presents a safety or public health hazard;
5. For a facility that is being renovated, where wetting would unavoidably damage equipment or present a safety hazard; or
6. Bulk loading ACM and/or ACWM.

(b) A Nontraditional Asbestos Abatement Work Practice Approval, if granted, shall apply to a specific facility or facility component and shall be nontransferable.

(c) The Department shall, in its sole discretion, only grant a Nontraditional Asbestos Abatement Work Practice Approval, to the extent and for the duration of time during which the Department is persuaded that the activities allowed by the approval will:

1. result in no discharge of visible emissions to the outside air;
2. keep ACM and ACWM adequately wet until it is placed and sealed into containers pursuant to 310 CMR 7.15(15);
3. comply with all other applicable requirements of 310 CMR 7.15; and
4. be consistent with the requirements of the laws and regulations cited in 310 CMR 7.15(2)(b).

(d) Any person applying for a Nontraditional Asbestos Abatement Work Practice Approval shall submit an application to the Department on a Department approved form. The application shall include:

1. a description of the need and justification for each requirement of 310 CMR 7.15 for which a deviation is sought;
2. a description of each nontraditional work practice proposed;
3. a demonstration that the deviations from 310 CMR 7.15 and alternatives proposed will not cause any visible emissions to the outside air and will not pose significant risk to public health, safety or the environment;
4. all required information specified in the application form; and
5. any additional information requested by the Department.

(e) The application shall be accompanied by the applicable fee and shall be legible. An incomplete or illegible application will not be accepted or approved and shall not constitute compliance with 310 CMR 7.15.

(15) Asbestos-containing Waste Material Packaging Requirements. The owner/operator of a facility or facility component where any asbestos abatement activity is conducted shall comply with the following:

- (a) Adequately wet ACWM obtained from air cleaning equipment or from removal operations.
- (b) While adequately wet, containerize and seal the ACWM in leak-tight containers.
- (c) Label the containers with the following information printed in letters of sufficient size and contrast so as to be readily visible and legible:

7.15: continued

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

Prior to June 1, 2015, the containers may be labeled with the following information in lieu of the labeling requirements above:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

(d) In addition to the warning label requirement specified in 310 CMR 7.15(15)(c), each individual container and/or package of ACWM shall be labeled prior to being transported off the site of generation with the name of the waste generator, the location at which the waste was generated, and the date of generation.

(e) Bulk-loading of ACWM is not permitted without the Department's prior approval of a Nontraditional Asbestos Abatement Work Practice Application.

(16) Asbestos-containing Waste Material Transport Requirements.

(a) All ACWM shall be containerized pursuant to 310 CMR 7.15(15) prior to being transported.

(b) All ACWM shall be transported in totally enclosed vehicles or containers that are designed, constructed, and operated to prevent spills, leaks, or emissions.

(c) All ACWM shall be transported in conformance with 40 CFR Part 61 and applicable US Department of Transportation, OSHA and state and local regulations.

NON-TEXT PAGE

7.15: continued

(17) Asbestos-containing Waste Material Storage and Disposal Requirements.

(a) The owner/operator of a facility or facility component where any asbestos abatement activity is conducted shall ensure that all ACWM generated from any asbestos abatement activity is properly disposed of at a landfill approved to accept such material. If within Massachusetts, such sites must be operated in accordance with 310 CMR 19.000: *Solid Waste Management*. If outside Massachusetts, such sites must be operated in accordance with applicable state and federal asbestos and landfill laws and regulations of the receiving state.

(b) ACWM shall be stored only at:

1. A location that is an approved refuse transfer station facility permitted or that is managing such wastes in accordance with 310 CMR 19.061: *Special Waste*; and/or
2. The site of generation of the ACWM while the asbestos abatement activity is ongoing and for up to 30 calendar days after completion of the asbestos abatement activity and the visual inspection requirements of 310 CMR 7.15(8) are met.

(c) No person shall dispose of ACWM at a location that is not a landfill approved to accept such material. If within Massachusetts, such sites must be operated in accordance with 310 CMR 19.000: *Solid Waste Management*. If outside Massachusetts, such sites must be operated in accordance with applicable state and federal asbestos and landfill laws and regulations of the receiving state.

(d) Intact and unbroken vinyl asbestos tile that is not coated with asbestos-containing mastic may be disposed of in any landfill permitted by the Department to accept solid waste pursuant to 310 CMR 19.000: *Solid Waste Management*.

(18) Waste Shipment Records and Reports.

(a) All ACWM shall be shipped via asbestos waste shipment records on a Department approved form that includes, but is not limited to, the following information:

1. The name, address and telephone number of the owner/operator of the facility or dumping ground where asbestos abatement activities have occurred;
2. The quantity and type (friable or non-friable) of the ACWM in cubic meters (cubic yards) and a description of the container used for shipment;
3. The name, address and telephone number of the person who conducted any asbestos abatement activity;
4. The name and telephone number of the disposal site operator;
5. The name and physical location of the disposal site;
6. The date transported;
7. The name, address, and telephone number of the transporter(s);
8. Certification by the owner/operator of the facility or dumping ground where asbestos abatement activities have occurred/where asbestos waste was generated that the contents of each shipment have been characterized, packaged, marked and labeled in accordance with 310 CMR 7.15;
9. Signature of each transporter confirming the contents of each shipment are in all respects in the proper condition for transport according to applicable international, federal, state and local regulations;
10. Signature by the receiving disposal facility confirming that:
 - a. the quantity of ACWM listed on the waste shipment record is the same as the quantity accepted for disposal; and
 - b. it holds appropriate permits and/or authorizations to accept for disposal ACWM described on waste shipment records; and
11. Such other information as the Department requires.

(b) If a copy of the waste shipment record, signed by the owner/operator of the designated disposal site, is not received by the owner/operator of the facility or dumping ground where asbestos abatement activities have occurred/where the ACWM was generated within 35 days of the date the waste leaves the site of origin, the owner/operator of the facility or dumping ground where the asbestos abatement activities have occurred and/or where the ACWM was generated shall contact the transporter and/or operator of the designated disposal site to determine the status of the waste shipment.

(c) The owner/operator of the facility or dumping ground where the asbestos abatement activities have occurred and/or where the ACWM was generated shall report, in writing, to the Department if a copy of the waste shipment record, signed by the owner/operator of the designated waste disposal site, is not received by the owner/operator of the facility or dumping ground where the asbestos abatement activities have occurred and/or where the

7.15: continued

ACWM was generated within 45 days of the date the waste was accepted by the initial transporter. The report shall include the following information:

1. A copy of the waste shipment record for which a confirmation of delivery was not received; and
 2. A cover letter signed by the owner/operator of the facility or dumping ground explaining the efforts taken to locate the asbestos waste shipment records in accordance with 310 CMR 7.15. Compliance with the foregoing reporting requirements shall not be construed to relieve the owner/operator of the facility or dumping ground of the obligation to maintain waste shipment records in accordance with 310 CMR 7.15.
- (d) The owner/operator of the facility or dumping ground where the asbestos abatement activities have occurred and/or where the ACWM was generated shall report, in writing, to the Department if the waste shipment record is modified after the date the waste is accepted by the initial transporter. The report shall include a description of the amendment or modification together with copies of the waste shipment record before and after amendment or modification.
- (e) The owner/operator of the facility or dumping ground where the asbestos abatement activities have occurred and/or where the ACWM was generated, the transporter, and the owner/operator of the designated waste disposal site shall retain a copy of all waste shipment records, including a copy of the waste shipment record signed by the owner/operator of the designated waste disposal site, for at least two years. All such parties shall furnish upon request, and make available for inspection by Department personnel, all records required under 310 CMR 7.15(18).

(19) General Enforcement Provisions. In addition to the Department's enforcement authority under M.G.L. c. 111, §§ 142A through O, M.G.L. c. 21A § 16 and other applicable laws and regulations, the provisions of 310 CMR 7.15 are subject to the enforcement provisions of 310 CMR 7.52.

7.16: U Reduction of Single Occupant Commuter Vehicle Use

- (1) Commencing with the effective date of 310 CMR 7.16 each affected facility (except as provided below) shall diligently and expeditiously implement and thereafter continuously maintain the following mandatory measures which are designed to achieve a goal of reducing the number of single occupant commuter vehicles customarily commuting daily to each employment facility as of its base date by 25% or as adjusted pursuant to 310 CMR 7.16(7):
- (a) making available to commuters any pass program offered by the area transit authority, if any commuter to the facility uses the public transit facilities of such Authority as part of his daily commuting trip, including making all administrative arrangements for commuters to purchase the pass and thereby participate in the pass program and encouraging commuters to participate by such means as publicizing the availability of the pass program and the cost advantages thereof.
 - (b) posting in a conspicuous place or places the schedules, rates and routes of every bus which serves the facility including the services offered by the area transit authority and any privately or publicly operated services which may exist in the immediate vicinity of the employer.
 - (c) providing incentives for bicycle commuting such as secure locking facilities and removal of restrictive rules against bicycle usage at the facility.
 - (d) negotiating with authorities in charge of bus lines serving the facility for improved service to the facility, including providing information on the location and density of employees' residences and commuting times to be used for route planning by local transit authorities.
 - (e) conducting a carpooling program (either alone or in cooperation with neighboring facilities) which:
 1. matches on a regularly recurring basis (not less often than once every 12 months) the names, addresses, and suitable contact information of all commuters who commute in single-occupant commuter vehicles or carpool to a facility or group of neighboring facilities and who express interest in carpooling, so that such commuters with similar daily travel patterns are informed and aware of each other for the purpose of forming carpools;

7.16: continued

2. continuously publicizes the advantages of carpooling, both in terms of savings of fuel and money and any incentive in effect at the facility;
 3. creates incentives for carpool formation by providing persons who carpool with first call on available parking space or spaces which are closest to entrances to the facility; and,
 4. provides information for carpooling program to prospective and new employees, and offers new employees the opportunity to participate in such program.
- (f) In the case of an employment facility with 1,000 or more employees, implementing a vanpool program which shall include the following elements:
1. The employer shall:
 - a. cooperate with a non-profit third-party vanpool program and offer their employees the opportunity to participate in such a program; or
 - b. post in a conspicuous place and regularly notify all employees of an outstanding offer to acquire (by purchase, lease or otherwise), insure and make available to any group of at least ten employees a van for their use as a vanpool. Such offer, a copy of which shall be sent to the Secretary at the time of the employer's first updated report, shall include the procedures by which vanpools are offered and the conditions upon which the offer is contingent, including acceptance by the prospective driver of the responsibility for providing regular service, training backup drivers, and arranging vehicle maintenance, and acceptance by each other member of the prospective group of responsibility for payment of a *pro rata* share of all direct costs (such as rental charge, licensing costs, insurance, tolls, fuel and repair) and indirect costs (such as depreciation and interest on borrowed funds) of the operation and maintenance of the vehicle.
 - c. notify the Secretary when it is learned that ten or more employees are interested in forming a vanpool.
 2. The employer shall analyze and continuously publicize the advantages of vanpooling, including any resulting cost savings, convenience and any incentives in effect at the facility. Such incentives shall include providing persons who vanpool with first call on available parking spaces or spaces which are closest to entrances to the facility.
 3. Matching for the vanpool program should be coordinated with the carpool matching program, to facilitate the formation of vanpools.

Upon reaching such a 25% goal, as stated at the beginning of 310 CMR 7.16, such employer shall thereafter continue such a program in such a manner as to aim at maintaining the ratio of single-occupant commuter vehicles to total commuters customarily arriving at its facility at or below the ratio referred to in 310 CMR 7.16(4)(e). If an employer or educational institution reaches and thereafter maintains said goal by implementing less than all the measures in 310 CMR 7.16(1), it shall not be subject to a requirement to implement the remainder of such measures.

Commencing with the effective date of 301 CMR 7.00 smaller employers shall also cooperate with MASSPOOL in its efforts to promote and organize multi-employer ridesharing activities.

7.16: continued

(2) MB. The base date and the date for submittal of the base date report for all existing affected facilities shall be as provided in 40 CFR 52.1161, June 12, 1975. 310 CMR 7.00 established the base date for all existing affected facilities as October 1, 1975, except as provided below, and required a facility with more than 250 commuters to submit at least a base date report to the Secretary on October 15, 1975. The base date for an affected facility which becomes subject to the requirements of 310 CMR 7.16 upon its effective date shall be October 15, 1979, except as provided below. Each employer with a base date of October 15, 1979 shall submit to the Secretary their base data report for each affected facility by November 15, 1979. The base date for an affected facility which attains an employment level of 250 or more employees after the effective date of 310 CMR 7.16 shall be the date six months after it reaches such a level, except as provided below, and its base date report shall be due on the next date not more than six months later than is specified for any report or updated report by any existing facility. Where an employer or educational institution can establish to the satisfaction of the Secretary that a facility had commenced measures to reduce the number of single-occupant commuter vehicles customarily arriving daily at an earlier date, the Secretary may approve the use of such earlier date as the base date for such facility. In lieu of establishing the actual number of such vehicles on such earlier date, an employer or educational institution may assume for the purpose of 310 CMR 7.16(2) that prior to such earlier date 20% of all commuters to such facility who arrived by motor vehicle other than mass transit customarily arrived by means other than single-occupant commuter vehicles.

(3) PV. The base date for all existing affected facilities shall be June 15, 1977, except as provided below. By June 30, 1977 each employer with a base date of June 15, 1977 shall submit to the Secretary their base date report for each affected facility. The base date for an affected facility which becomes subject to the requirements of 310 CMR 7.16 upon its effective date shall be October 15, 1979, except as provided below. Each employer with a base date of October 15, 1979 shall submit to the Secretary their base date report for each affected facility by November 15, 1979. The base date for an affected facility which attains an employment level of 250 or more employees after the effective date of 310 CMR 7.00 shall be the date six months after it reaches such a level, except as provided below, and its base date report shall be due on the next date not more than six months later than is specified for any report or updated report by an existing facility. Where an employer or educational institution can establish to the satisfaction of the Secretary that a facility had commenced measures to reduce the number of single-occupant commuter vehicles customarily arriving daily at an earlier date, the Secretary may approve the use of such earlier date as the base date for such facility. In lieu of establishing the actual number of such vehicles on such earlier date, an employer or educational institution may assume for the purpose of 310 CMR 7.16(3) that prior to such earlier date 20% of all commuters to such facility who arrived by motor vehicle other than mass transit customarily arrived by means other than single-occupant commuter vehicles.

(4) B, CM, MV, SM. The base date for all existing affected facilities shall be October 15, 1979, except as provided below. By November 15, 1979, each employer shall submit to the Secretary their base date report for each affected facility. The base date for an employment facility which attains an employment level of 150 or more employees after the effective date of 310 CMR 7.16 shall be the date six months after it reaches such a level, except as provided below, and its base date report shall be due on the next date not more than six months later than is specified for any report or updated report by an existing facility. Where an employer or educational institution can establish to the satisfaction of the Secretary that a facility had commenced measures to reduce the number of single-occupant commuter vehicles customarily arriving daily at an earlier date, the Secretary may approve the use of such earlier date as the base date for such facility. In lieu of establishing the actual number of such vehicles on such earlier date, an employer or educational institution may assume for the purpose of 310 CMR 7.16(4) that prior to such earlier date 20% of all commuters to such facility who arrived by motor vehicle other than mass transit customarily arrived by means other than single-occupant commuter vehicles.

7.16: continued

Each base date report shall be current and include:

- (a) The number of commuters who take any means of transportation to such facility as of its base date.
- (b) The number of single-occupant commuter vehicles customarily used daily by commuters to the facility, the number of commuters who customarily carpool in a private vehicle carrying two or more occupants, the number of commuters who customarily vanpool in a vehicle carrying eight or more occupants, the number of commuters who customarily commute by any means of public transportation, the number of employees who customarily commute by any other means of travel (taxi, bicycle, *etc.*).
- (c) The total number of vehicles customarily used daily by commuters to the facility as of the base date.
- (d) The percentage which the current number of daily commuters in single-occupant vehicles is of all daily commuters to the facility.
- (e) The percentage derived by taking $\frac{3}{4}$ of the percentage calculated in 310 CMR 7.16(4)(d). This percentage will serve as the program goal for individual employers defined as the ratio of single-occupant commuter vehicles to total daily commuters to the facility.
- (f) The number of van type vehicles with eight or more commuters customarily arriving at the facility.
- (g) The type of carpool matching program with a description of materials currently being used.
- (h) The level of participation achieved in the most recent program, including the number of data cards distributed, and returned, the number of matching lists distributed and the number of commuters in newly formed carpools.
- (i) The type of incentives offered, including parking, flexi-hours and others.
- (j) The promotional strategies used to encourage ridesharing with copies of relevant materials excluding those supplied by MASSPOOL.
- (k) The number of vans sponsored.
- (l) The number of participants currently enrolled in a prepaid transit pass program, if applicable.

(5) U. Each affected employer shall annually update its base date report by means of a report containing:

- (a) Updated information called for in 310 CMR 7.16(2) through 7.16(4).
- (b) The net change in percentage points between the percentage reported under 310 CMR 7.16(4)(e) as of the base date and that under 310 CMR 7.16(4)(d) as of the date of the current report.
- (c) The net change in percentage points between the percentage reported under 310 CMR 7.16(4)(d) as of the last reporting period and the date of the current report.
- (d) A detailed description of all measures which have been taken to reduce the number of single-occupant commuter vehicles to the facility and the commuter response to such measures.

The first such annual updated report for affected employers in the Metropolitan Boston Air Pollution Control District and the Pioneer Valley Air Pollution Control District shall be due on November 15, 1979, and successively each 12 months. The first such annual updated report for affected employers in the Berkshire Air Pollution Control District, Central Massachusetts Air Pollution Control District, Merrimack Valley Air Pollution Control District, and Southeastern Massachusetts Air Pollution Control District shall be due on November 15, 1980, and successively each 12 months.

(6) U. Each employer submitting reports required by 310 CMR 7.16(5) shall cause such reports to be signed as follows:

- (a) In the case of a corporation, by a principal executive officer of at least the level of vice president, or his duly authorized representative, if such representative is responsible for the overall operation of the facility covered by the reports.
- (b) In the case of a partnership, by a general partner.
- (c) In the case of a sole proprietorship, by the proprietor.
- (d) In the case of an unincorporated association, by the president or the chairman thereof.

7.16: continued

(e) In the case of municipal, state, or other public facility, by either a principal executive officer, ranking elected official, or other fully authorized employee.

Each employer submitting reports required by 310 CMR 7.16(5) shall retain for at least three years all supporting documents and data upon which each such report was based. Each report submitted pursuant to 310 CMR 7.16(5) shall be accompanied by an adequate explanation of the methodology used to gather, complete and analyze the data, the assumptions used in that analysis, and samples of the forms used to elicit the underlying information from commuters at the facility.

(7) U. Where the total number of commuters to a particular facility is changed due to fluctuation in employment between the base date and the date of any report under 310 CMR 7.16(5) such fact shall be reported at the time of the submission of such report. The goal of the employer having such a change is to attain and maintain the ratio of commuters customarily arriving at facility daily in single-occupant commuter vehicles to total commuters indicated by 310 CMR 7.16(4)(e).

(8) U. If an employer does not meet and thereafter at all times maintain the reduction specified under 310 CMR 7.16(2) through 7.16(4) in connection with each report under 310 CMR 7.16(5) it shall, upon written notification of the Secretary, submit a description of any remedial actions which it intends to take to meet the requirements of 310 CMR 7.16(2) through 7.16(4).

(9) U. If an employer in good faith diligently and expeditiously implements and thereafter continuously maintains those measures set forth in 310 CMR 7.16(2) through 7.16(4) as are applicable to it, it shall not be subject to any enforcement action even though it may fail to achieve the 25% goal referred to in 310 CMR 7.16(1).

(10) U. Within 60 days after the receipt of the periodic reports required under 310 CMR 7.16(5), the Secretary shall submit to the Department a summary of the information contained in such reports, including:

- (a) A list of all employers in the order of the percentage reduction achieved between the base dates and the date of the required report.
- (b) The total reduction between the respective base dates and the date of the required reports of the number of single-occupant vehicles customarily used to arrive at all facilities for which reports were filed.
- (c) A list of employers that have not complied with the provisions of 310 CMR 7.16.

7.18: U Volatile and Halogenated Organic Compounds

(1) U Applicability and Handling Requirements.

(a) 310 CMR 7.18 shall apply in its entirety to persons who own, lease, operate or control any facility which emits volatile organic compounds (VOC).

(b) For purposes of 310 CMR 7.18, except for 310 CMR 7.18(30), VOC shall include both VOC as defined in 310 CMR 7.00 and Halogenated Organic Compounds (HOC) as defined in 310 CMR 7.00.

(c) On or after July 1, 1980 any person owning, leasing, operating, or controlling a facility regulated under 310 CMR 7.18, shall store and dispose of volatile organic compounds in a manner which will minimize evaporation to the atmosphere. Proper storage shall be in a container with a tight fitting cover. Proper disposal shall include incineration in an incinerator approved by the Department, transfer to another person licensed by the Department to handle VOC, or any other equivalent method approved by the Department.

(d) Any person who owns, leases, operates, or controls a facility which is or becomes subject to 310 CMR 7.18, except for those persons solely subject to 310 CMR 7.18(30) unless the facility is a CTG-affected facility as defined in 310 CMR 7.18(30)(b), shall continue to comply with all requirements of 310 CMR 7.18, even if emissions from the subject facility no longer exceed applicability requirements of 310 CMR 7.18.

(e) Any person not regulated by 310 CMR 7.18, prior to August 15, 1989 shall achieve compliance with the applicable section(s) of 310 CMR 7.18 by August 15, 1990.

7.18: continued

- (f) Any person who, since January 1, 1990, obtains a plan approval for an emission unit under 310 CMR 7.02 where said approval establishes BACT or LAER to be no less stringent than RACT for a facility size and type as defined in 310 CMR 7.18 shall comply with the BACT or LAER established in the plan approval, and is not subject to RACT standards of 310 CMR 7.18 as may otherwise be applicable, until the applicable RACT standards of 310 CMR 7.18 become more stringent than the BACT or LAER established in the plan approval, at which point the person shall become subject to the updated RACT standards.
- (g) Any person who complies with 310 CMR 7.03 in lieu of obtaining a plan approval for an emission unit under 310 CMR 7.02 shall comply with applicable RACT requirements of 310 CMR 7.18 when such requirements become more stringent than those in 310 CMR 7.03.
- (h) Any person who complies with 310 CMR 7.26 shall comply with applicable RACT requirements of 310 CMR 7.18 when such requirements become more stringent than those in 310 CMR 7.26.

(2) U Compliance with Emission Limitations.

- (a) Any person subject to 310 CMR 7.18 shall maintain continuous compliance with all requirements of 310 CMR 7.18. Except as provided for in 310 CMR 7.18(2)(b) and (g), compliance is based on the control method selected to meet the applicable emission limitations specified in 310 CMR 7.18, and EPA test methods as codified in 40 CFR Part 60, or other methods approved by the Department and EPA, and are as follows:

<u>Compliance or Control Method</u>	<u>EPA Reference Test Method (or other as indicated)</u>	<u>Test Method Sampling Duration</u>
Volatile organic compound leak detection	21	as specified in Test Method
Coatings, Inks and Related Materials Formulation	24, 24A	instantaneous grab sample
Exhaust measurement except carbon adsorption	18	as specified in Test Method
	25, 25A, 25B, California Air Resources Board (CARB) Method 100	three hours (as three, one hour runs)
Carbon adsorption	18	as specified in Test Method
	25 or other as appropriate	the length on the adsorption cycle or 24 hours, whichever is less.

- (b) Any person proposing to comply with the requirements of 310 CMR 7.18 by emissions averaging is subject to the requirements of 310 CMR 7.00: *Appendix B(4)*.
- (c) Any person regulated under 310 CMR 7.18(14), (15), or (16), who cannot comply with the emission limitations contained therein through the use of add-on controls and/or low/no solvent coatings, shall apply to the Department by January 1, 1987 for an alternative emission limitation which reflects the application of source specific Reasonably Available Control Technology. Any alternative emission limitation provided for by 310 CMR 7.18 must also be approved by EPA. An applicant for an alternative RACT shall:
 1. demonstrate to the Department that it is not technologically and economically feasible for that person to comply with the applicable emission limitation; and
 2. determine an emission limitation which reflects the application of Reasonably Available Control Technology;
 Any person granted such an emission limitation shall:
 3. re-evaluate, on a biennial basis (every two years), the emission limitation to reflect current application of Reasonably Available Control Technology and to confirm that the RACT emission limitation contained in 310 CMR 7.18(14) through (16) is still technologically and economically infeasible.
- (d) The Department encourages any person owning, leasing, operating, or controlling a facility regulated under 310 CMR 7.18 to reduce the emissions of volatile organic compounds through the use of compounds which present less of a burden to the air, water and land, and which do not increase public health impacts.

7.18: continued

(e) Any person owning, leasing, operating, or controlling a facility using air pollution capture and control equipment to comply with 310 CMR 7.18 shall continuously monitor and maintain records on the following parameters:

1. for a thermal incinerator; the combustion temperature measured in °F;
2. for a catalytic incinerator: the exhaust gas temperature (°F), the temperature rise across the catalyst bed (°F), and the date the catalyst was most recently replaced or changed;
3. for a condenser or refrigeration system; the inlet temperature of the cooling medium (°F), and the exhaust gas temperature (°F);
4. for a carbon adsorbers; the pressure drop across the adsorber, and the exhaust gas VOC concentration;
5. for emissions capture and control equipment not otherwise listed; any requirements specified by the Department in any approval(s) or order(s).

(f) Exemption for Coatings Used in Small Amounts. For any person who owns, leases, operates or controls a facility with coating line(s) subject to 310 CMR 7.18, except for 310 CMR 7.18(30), the emissions of VOC from any coatings used in small amounts at that facility are exempt from the emission limitations of the particular section, provided the person satisfies the following conditions:

1. the total amount of all coatings exempted does not exceed 55 gallons on a rolling 12-month period at the facility; and,
2. the person notifies the Department that this exemption is being used 30 days prior to its first use; and
3. the person identifies in such notice the coatings which will be covered by this exemption; and,
4. the person complies with the recordkeeping and testing requirements of the particular section.

(g) Daily Weighted Averaging. Any person who owns, leases, operates or controls a coating line subject to 310 CMR 7.18, with the exception of coating lines subject to 310 CMR 7.18(24) or (28), may comply with the VOC emission limitations of the applicable section of 310 CMR 7.18 through the use of a daily-weighted average on an individual coating line, provided the person meets the following conditions:

1. the daily-weighted average for each coating line, each day, complies with the applicable emission limitation in 310 CMR 7.18 with no cross-line averaging allowed; and,
2. the coating line using a daily-weighted average to determine compliance does not use any emissions capture and control equipment for the compliance determination; and,
3. prior to being used, the exact method of measuring and determining compliance on a daily-weighted average basis is approved by the Department in an emissions control plan submitted under 310 CMR 7.18(20); and,
4. records kept to determine compliance on a daily-weighted average basis are kept at the facility for a period of five years, and made available to the Department or EPA on request; and,
5. the daily-weighted average for each coating line, with the exception of coating lines subject to 310 CMR 7.18(26) is calculated according to the following equation:

$$VOC_w = \frac{\sum_{i=1}^n V_i C_i}{V_T}$$

where:

- VOC_w = the daily-weighted average VOC content of the coatings used each day on each coating line in units of pounds of VOC per gallon of solids as applied;
- n = the number of different coatings applied, each day on a coating line;
- V_i = the volume of solids as applied for each coating, each day, on each coating line, in units of gallons of solids as applied;
- C_i = the VOC content for each coating, each day, on each coating line in units of pounds of VOC per gallons of solids as applied; and

7.18: continued

- V_T = the total volume of solids as applied, each day on each coating line.
 6. For coating lines subject to 310 CMR 7.18(26): *Textile Finishing*, the daily weighted average for each coating line is calculated according to the following equation:

$$VOC_{WM} = \frac{\sum_{i=1}^n M_i C_i}{M_T}$$

where:

- VOC_{WM} = the daily-weighted average VOC content of the coatings used each day on each coating line in units of pounds of VOC per pound of solids, as applied;
 n = the number of different coatings applied each day on a coating line;
 M_i = the mass of solids as applied for each coating, each day, on each coating line, in units of pounds of solids as applied;
 C_i = the VOC content of the coatings used, each day, on each coating line in units of pounds of VOC per pounds of solids, as applied;
 M_T = the total mass of solids as applied, each day on each coating line.

Coating usage may be averaged, providing the units in the equation are the same as the units that are used in the section of 310 CMR 7.18 that applies to the coatings included in the daily average. Only coatings subject to the same emissions standard may be averaged together.

(h) Emission Reduction Credits (ERCs). Any facility may comply, either in part or entirely, with the applicable emission standard contained in 310 CMR 7.18 through the use of emission reduction credits (ERCs) certified by the Department pursuant to 310 CMR 7.00: *Appendix B(3)*, provided that the requirements of 310 CMR 7.00: *Appendix B(3)(e)* are met prior to use of said ERCs.

(3) U Metal Furniture Surface Coating.

(a) Applicability.

1. On or after January 1, 1980, and prior to March 9, 2020, no person who owns, leases, operates, or controls a metal furniture surface coating line, which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds (VOC), shall cause, suffer, allow or permit emissions in excess of the requirements of 310 CMR 7.18(3)(d)1. Such person shall also comply with 310 CMR 7.18(3)(g) through (i).
2. On or after March 9, 2020, any person who owns, leases, operates, or controls metal furniture surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with 310 CMR 7.18(3)(c), (d)2., (e), and (g) through (i).
3. On or after March 9, 2018, any person who owns, leases, operates, or controls metal furniture surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with the work practices of 310 CMR 7.18(3)(f) for coating and cleaning operations.

(b) Exemptions.

1. The requirements of 310 CMR 7.18(3)(d)2. and 3. do not apply to:
 - a. stencil coatings;
 - b. safety-indicating coatings;
 - c. solid-film lubricants;
 - d. electric-insulating and thermal-conducting coatings;
 - e. touch-up coatings;
 - f. repair coatings; or
 - g. coating application utilizing hand-held aerosol cans.
2. The requirements of 310 CMR 7.18(3)(e) do not apply to:
 - a. touch-up coatings;
 - b. repair coatings; or
 - c. coating application utilizing hand-held aerosol cans.

7.18: continued

(c) Extensions. Any person subject to 310 CMR 7.18(3)(a)2. may apply in writing to the Department for a nonrenewable extension of the implementation deadline in 310 CMR 7.18(3)(a)2. by complying with 310 CMR 7.18(3)(g). The Department will consider a nonrenewable extension of the deadline in 310 CMR 7.18(3)(a)2. for persons applying under 310 CMR 7.18(3)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):

1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;
2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I, and 310 CMR 50.50 through 50.63;
3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and
4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(3)(d).

(d) Reasonably Available Control Technology Requirements.

1. Any person subject to 310 CMR 7.18(3)(a)1. shall not exceed a limitation of 5.1 pounds of VOC per gallon of solids applied.
2. Any person subject to 310 CMR 7.18(3)(a)2. shall limit VOC emissions by using only coatings having a VOC content no greater than the emission limitations listed in Tables 310 CMR 7.18(3)(d)2.a. (low-VOC coatings to meet the mass of VOC per volume of coating less water and exempt compounds, as-applied, limits) or b. (low-VOC coatings or a combination of coatings and add-on control equipment on a coating unit to meet the mass of VOC per volume of coating solids limits) or by complying with the requirement in 310 CMR 7.18(3)(d)3. If a coating can be classified in more than one coating category in 310 CMR 7.18(3)(d)2., then the least stringent coating category limitation shall apply.

Table 310 CMR 7.18(3)(d)2.a. RACT Emission Limitations for Metal Furniture Surface Coating				
	Mass of VOC per volume of coating less water and exempt compounds, as applied			
	Baked		Air-dried	
Coating Category	kg/l coating	lb/gal coating	kg/l coating	lb/gal coating
General, One Component	0.275	2.3	0.275	2.3
General, Multi-component	0.275	2.3	0.340	2.8
Extreme High Gloss	0.360	3.0	0.340	2.8
Extreme Performance	0.360	3.0	0.420	3.5
Heat Resistant	0.360	3.0	0.420	3.5
Metallic	0.420	3.5	0.420	3.5
Pretreatment Coatings	0.420	3.5	0.420	3.5
Solar Absorbent	0.360	3.0	0.420	3.5

Table 310 CMR 7.18(3)(d)2.b. RACT Emission Limitations for Metal Furniture Surface Coating				
	Mass of VOC per volume of coating solids, as applied			
	Baked		Air-dried	
Coating Category	kg/l solids	lb/gal solids	kg/l solids	lb/gal solids
General, One Component	0.40	3.3	0.40	3.3
General, Multi-component	0.40	3.3	0.55	4.5
Extreme High Gloss	0.61	5.1	0.55	4.5
Extreme Performance	0.61	5.1	0.80	6.7
Heat Resistant	0.61	5.1	0.80	6.7
Metallic	0.80	6.7	0.80	6.7
Pretreatment Coatings	0.80	6.7	0.80	6.7
Solar Absorbent	0.61	5.1	0.80	6.7

7.18: continued

3. Any person may achieve an overall VOC control efficiency of at least 90% by weight using add-on air pollution capture and control equipment instead of complying with the requirements of 310 CMR 7.18(3)(d)2.
 - (e) Application Methods. Unless complying with 310 CMR 7.18(3)(a)2. by means of 310 CMR 7.18(3)(d)3., all coatings shall be applied using one or more of the following:
 1. electrostatic spray application;
 2. HVLP spray;
 3. flow coat;
 4. roller coat;
 5. dip coat, including electrodeposition;
 6. airless spray;
 7. air-assisted airless spray; or
 8. a coating application method capable of achieving a transfer efficiency equivalent to or greater than that achieved by HVLP, as approved by EPA.
 - (f) Work Practices for Coating and Cleaning Operations. Any person subject to 310 CMR 7.18(3) shall comply with the work practices of 310 CMR 7.18(31)(e).
 - (g) Plan and Extension Submittal Requirements.
 1. Any person subject to 310 CMR 7.18(3)(a)1. or 2. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(3)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).
 2. Any person subject to 310 CMR 7.18(3)(a)2. who chooses to apply for an extension under 310 CMR 7.18(3)(c) shall comply with 310 CMR 7.18(20).
 - (h) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(3)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:
 1. identity, quantity, formulation and density of coating(s) used;
 2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
 3. solids content of any coating(s) used;
 4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
 5. quantity of product processed, if necessary to determine emissions; and
 6. any other requirements specified by the Department in any approval(s) or order(s) issued to the person.
 - (i) Testing Requirements. Any person subject to 310 CMR 7.18(3)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(3). Testing shall be conducted in accordance with EPA Method 24 or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. EPA Method 25A shall be used when:
 1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;
 2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
 3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.
- (4) U Metal Can Surface Coating.
- (a) On or after January 1, 1980, no person who owns, leases, operates, or controls a metal can coating line, which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds (VOC), shall cause, suffer, allow or permit emissions therefrom in excess of the emission limitations set forth in 310 CMR 7.18(4)(b).

7.18: continued

(b) Emission Limitations Metal Can Surface Coating.

Emission Source	Emission Limitation in pounds of volatile organic compounds per gallon of solids applied
Sheet base coat (exterior and interior and exterior overvarnish)	4.5
Two-piece can exterior (basecoat and overvarnish)	4.5
Two and Three-piece can (interior body spray)	9.8
Two-piece can exterior end (spray or roll coat)	9.8
Three-piece can side seam spray	21.8
End sealing compound	7.4

(c) Any person subject to 310 CMR 7.18(4)(a) shall maintain continuous compliance at all times. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance shall not include any considerations of transfer efficiency.

(d) Any person subject to 310 CMR 7.18(4)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed;
6. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.

(e) Persons subject to 310 CMR 7.18(4)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(5) U Large Appliance Surface Coating.(a) Applicability.

1. On or after January 1, 1980, and prior to March 9, 2020, no person who owns, leases, operates, or controls a large appliance surface coating line, which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds (VOC), shall cause, suffer, allow or permit emissions in excess of the requirements of 310 CMR 7.18(5)(d)1. Such person shall also comply with 310 CMR 7.18(5)(g) through (i).
2. On or after March 9, 2020, any person who owns, leases, operates, or controls large appliance surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with 310 CMR 7.18(5)(c), (d)2., (e), and (g) through (I).

7.18: continued

3. On or after March 9, 2018, any person who owns, leases, operates, or controls large appliance surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with the work practices of 310 CMR 7.18(5)(f) for coating and cleaning operations.

(b) Exemptions.

1. The requirements of 310 CMR 7.18(5)(d)2. and 3. do not apply to:

- a. stencil coatings;
- b. safety-indicating coatings;
- c. solid-film lubricants;
- d. electric-insulating and thermal-conducting coatings;
- e. touch-up coatings;
- f. repair coatings; or
- g. coating application utilizing hand-held aerosol cans.

2. The requirements of 310 CMR 7.18(5)(e) do not apply to:

- a. touch-up coatings;
- b. repair coatings; or
- c. coating application utilizing hand-held aerosol cans.

(c) Extensions. Any person subject to 310 CMR 7.18(5)(a)2. may apply in writing to the Department for a nonrenewable extension of the implementation deadline in 310 CMR 7.18(5)(a)2. by complying with 310 CMR 7.18(5)(g). The Department will consider a nonrenewable extension of the deadline in 310 CMR 7.18(5)(a)2. for persons applying under 310 CMR 7.18(5)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):

1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;
2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I, and 310 CMR 50.50 through 50.63;
3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and
4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(5)(d).

(d) Reasonably Available Control Technology Requirements.

1. Any person subject to 310 CMR 7.18(5)(a)1. shall not exceed a limitation of 4.5 pounds of VOC per gallon of solids applied.

2. Any person subject to 310 CMR 7.18(5)(a)2. shall limit VOC emissions by using only coatings having a VOC content no greater than the emission limitations listed in Tables 310 CMR 7.18(5)(d)2.a. (low-VOC coatings to meet the mass of VOC per volume of coating less water and exempt compounds, as-applied, limits) or b. (low-VOC coatings or a combination of coatings and add-on control equipment on a coating unit to meet the mass of VOC per volume of coating solids limits) or by complying with the requirement in 310 CMR 7.18(5)(d)3. If a coating can be classified in more than one coating category in 310 CMR 7.18(5)(d)2., then the least stringent coating category limitation shall apply.

7.18: continued

Table 310 CMR 7.18(5)(d)2.a. RACT Emission Limitations for Large Appliance Surface Coating				
Mass of VOC per volume of coating less water and exempt compounds, as applied				
Coating Category	Baked		Air - Dried	
	kg/l coating	lb/gal coating	kg/l coating	lb/gal coating
General, One Component	0.275	2.3	0.275	2.3
General, Multi-Component	0.275	2.3	0.340	2.8
Extreme High Gloss	0.360	3.0	0.340	2.8
Extreme Performance	0.360	3.0	0.420	3.5
Heat Resistant	0.360	3.0	0.420	3.5
Metallic	0.420	3.5	0.420	3.5
Pretreatment Coatings	0.420	3.5	0.420	3.5
Solar Absorbent	0.360	3.0	0.420	3.5

Table 310 CMR 7.18(5)(d)2.b. RACT Emission Limitations for Large Appliance Surface Coating				
Mass of VOC per volume of coating solids, as applied				
Coating Category	Baked		Air - Dried	
	kg/l solids	lb/gal solids	kg/l solids	lb/gal solids
General, One Component	0.40	3.3	0.40	3.3
General, Multi-Component	0.40	3.3	0.55	4.5
Extreme High Gloss	0.61	5.1	0.55	4.5
Extreme Performance	0.61	5.1	0.80	6.7
Heat Resistant	0.61	5.1	0.80	6.7
Metallic	0.80	6.7	0.80	6.7
Pretreatment Coatings	0.80	6.7	0.80	6.7
Solar Absorbent	0.61	5.1	0.80	6.7

3. Any person may achieve an overall VOC control efficiency of at least 90% by weight using add-on air pollution capture and control equipment instead of complying with the requirements of 310 CMR 7.18(5)(d)2.
- (e) Application Methods. Unless complying with 310 CMR 7.18(5)(a)2. by means of 310 CMR 7.18(5)(d)3., all coatings shall be applied using one or more of the following:
1. electrostatic spray application;
 2. HVLP spray;
 3. flow coat;
 4. roller coat;
 5. dip coat, including electrodeposition;
 6. airless spray;
 7. air-assisted airless spray; or
 8. a coating application method capable of achieving a transfer efficiency equivalent to or greater than that achieved by HVLP, as approved by EPA.
- (f) Work Practices for Coating and Cleaning Operations. Any person subject to 310 CMR 7.18(5) shall comply with the work practices of 310 CMR 7.18(31)(e).
- (g) Plan and Extension Submittal Requirements.
1. Any person subject to 310 CMR 7.18(5)(a)1. or 2. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(5)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).
 2. Any person subject to 310 CMR 7.18(5)(a)2. who chooses to apply for an extension under 310 CMR 7.18(5)(c) shall comply with 310 CMR 7.18(20).
- (h) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(5)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:
1. identity, quantity, formulation and density of coating(s) used;

7.18: continued

2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
 3. solids content of any coating(s) used;
 4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
 5. quantity of product processed, if necessary to determine emissions; and
 6. any other requirements specified by the Department in any approval(s) or order(s) issued to the person.
- (i) Testing Requirements. Any person subject to 310 CMR 7.18(5)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(5). Testing shall be conducted in accordance with EPA Method 24 or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. EPA Method 25A shall be used when:
1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;
 2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
 3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.
- (6) U Magnet Wire Insulation Surface Coating.
- (a) On or after January 1, 1980, no person who owns, leases, operates, or controls a magnet wire insulation coating line, which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds, shall cause, suffer, allow or permit emissions therefrom in excess of 2.2 pounds of volatile organic compounds per gallon of solids applied.
- (b) Any person subject to 310 CMR 7.18(6)(a) shall maintain continuous compliance at all times. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance shall not include any considerations of transfer efficiency.
- (c) Any person subject to 310 CMR 7.18(6)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:
1. identity, quantity, formulation and density of coating(s) used;
 2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
 3. solids content of any coating(s) used;
 4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
 5. quantity of product processed;
 6. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.
- (d) Persons subject to 310 CMR 7.18(6)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.
- (7) U Automobile Surface Coating. (Reserved)
- (8) U Solvent Metal Degreasing.
- (a) Cold Cleaning Degreasing. On or after September 6, 2009, no person owning, operating, leasing or controlling any solvent metal degreasing facility which utilizes a cold cleaning degreaser (that is able to contain more than one liter of solvent) shall cause, suffer, allow or permit emissions of volatile organic compounds therefrom unless they comply with the requirements in 310 CMR 7.18(8)(a)1. through 3.

7.18: continued

1. The solvent used in a cold cleaning degreaser shall have a vapor pressure that does not exceed 1.0 mm Hg measured at 20°C. This requirement shall not apply to any of the following:
 - a. cold cleaning degreasers used in special and extreme solvent metal cleaning;
 - b. cold cleaning degreasers for which the owner or operator has received Department approval of a demonstration that compliance with the requirement to use a solvent with a vapor pressure of 1.0 mm Hg or less at 20°C will result in unsafe operating conditions;
 - c. cold cleaning degreasers that are located in a permanent total enclosure having control equipment that is designed and operated with an overall VOC control efficiency of 90% or greater; and
 - d. cold cleaning degreasers used in the cleaning of high precision products for which the owner or operator has received Department and EPA approval.
 2. Any leaks shall be repaired immediately, or the degreaser shall be shut down.
 3. The following requirements shall apply unless the cold cleaning degreaser is a sink-like work area with a remote solvent reservoir with an open drain area less than 100 square centimeters:
 - a. Each cold cleaning degreaser is equipped with a cover that is designed to be easily operated with one hand;
 - b. Each cold cleaning degreaser is equipped to drain clean parts so that, while draining, the cleaned parts are enclosed for 15 seconds or until dripping ceases, whichever is longer;
 - c. Each cold cleaning degreaser is designed with:
 - i. a freeboard ratio of 0.75 or greater; or
 - ii. a water blanket (only if the solvent used is insoluble in and heavier than water); or
 - iii. an equivalent system of air pollution control which has been approved by the Department and EPA;
 - d. The covers of each cold cleaning degreaser are closed whenever parts are not being handled in the degreaser, or when the degreaser is not in use; and
 - e. The drafts across the top of each cold cleaning degreaser are minimized such that when the cover is open the degreaser is not exposed to drafts greater than 40 meters per minute (1.5 miles per hour), as measured between one and two meters upwind at the same elevation as the tank lip.
- (b) Vapor Degreasing. On or after December 31, 1980 no person owning, leasing operating or controlling a solvent metal degreasing facility which utilizes a vapor degreaser shall cause, suffer, allow or permit emissions therefrom unless:
1. each vapor degreaser is equipped with a cover designed to be easily operated in manner which will not disturb the vapor zone; and
 2. each vapor degreaser is covered except when work loads are being loaded, unloaded or degreased in the degreaser; and
 3. each vapor degreaser is equipped with the following safety switches which are maintained and operated in accordance with the recommendations of the manufacturer:
 - a. a switch designed to shut off the heating source for the sump if the condenser coolant is either not circulating, or the solvent vapor level has risen above the primary coil; and
 - b. a switch designed to shut off the spray pump if the solvent vapor level drops more than ten centimeters (four inches) below the lowest condensing coil; and
 4. at least one of the following devices has been installed on each vapor degreaser, and that device is maintained and operated in accordance with the recommendations of the manufacturer:
 - a. a freeboard ratio equal to or greater than 0.75 and, a power cover, if the degreaser opening is greater than one square meter (ten square feet); or,
 - b. a refrigerated chiller; or,
 - c. an enclosed design whereby the cover is open only when the dry part is entering or exiting the vapor degreaser; or

7.18: continued

- d. an adsorption system with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/vapor area (determined when the degreaser's cover is open) which exhausts less than 25 parts per million of solvent by volume averaged over one complete adsorption cycle or 24 hours whichever is less; or,
 - e. any other device, demonstrated to have a control efficiency equal to or greater than any of the above, approved by the Department and EPA; and,
5. solvent carry out from each vapor degreaser is minimized by:
 - a. racking parts to allow for complete drainage; and,
 - b. moving parts in and out of the degreaser at less than 3.3 meters per minute (11 feet per minute); and,
 - c. holding the parts in the vapor zone for 30 seconds or until condensation ceases, whichever is longer; and,
 - d. tipping out any pools of solvent on the cleaned parts before removal from the vapor zone; and,
 - e. allowing parts to dry within the degreaser for 15 seconds or until visually dry, whichever is longer; and,
 6. no porous or absorbent material, such as, but not limited to cloth, leather, wood or rope is placed in the vapor degreaser; and,
 7. less than half of the degreaser's open top area is occupied with a workload; and,
 8. each degreaser is operated so that the vapor level does not drop more than ten centimeters (four inches) when the workload is removed from the vapor zone; and,
 9. operators always spray within the vapor zone; and,
 10. liquid leaks in each vapor degreaser are repaired immediately, or the degreaser is shut down; and,
 11. each degreaser is operated so as to prevent water from being visually detected in the solvent exiting the water separator; and,
 12. each degreaser is located and operated in such a manner that it is not exposed to drafts greater than 40 meters per minute (131 feet per minute) as measured between one and two meters upwind at the same elevation as the tank lip, nor is it provided with an exhaust ventilation system which exceeds 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of vapor degreaser open area, unless such an exhaust ventilation system is necessary to meet OSHA requirements; and,
 13. the cover is located below the lip exhaust, if the vapor degreaser is equipped with a lip exhaust.
- (c) Conveyorized Degreasing. On or after December 31, 1980 no person who owns, leases, operates or controls a solvent metal degreasing facility which utilizes a conveyorized degreaser shall cause, suffer, allow or permit emissions therefrom, unless:
1. at least one of the following devices has been installed on each conveyorized degreaser with an air/vapor interface greater than 21.5 square feet, and that device is maintained and operated in accordance with the recommendations of the manufacturer:
 - a. a refrigerated chiller; or,
 - b. an adsorption system with ventilation greater than or equal to 15 cubic meters per minute per square meter (50 cubic feet per minute per square foot) of air/vapor area (determined when the degreaser's downtime covers are open) which exhausts less than 25 parts per million of solvent by volume averaged over one complete adsorption cycle or 24 hours whichever is less; or,
 - c. any other device, demonstrated to have a control efficiency equal to or greater than any of the above, approved by the Department and EPA; and,
 2. each conveyorized degreaser is designed and operated to prevent cleaned parts from carrying out the solvent liquid or vapor, for example equipping the degreaser with a drying tunnel or rotating (tumbling) basket; and
 3. each conveyorized degreaser is equipped with the following safety switches which are maintained and operated in accordance with the recommendations of the manufacturer:
 - a. a switch designed to shut off the heating source for the sump if the condenser coolant is either not circulating, or if the solvent vapor level has risen above the primary coil; and

7.18: continued

- b. a switch designed to shut off the spray pump or the conveyor if the solvent vapor level drops more than ten centimeters (four inches) below the lowest condensing coil; and
 4. the openings of each conveyORIZED degreaser are minimized during operation such that average clearance at the entrances and exits of the degreaser between the workloads and the edge of the degreaser opening is less than ten centimeters (four inches) or 10% of the width of the opening; and,
 5. covers are placed over the entrances and exits of each conveyORIZED degreaser immediately after the conveyors and exhausts are shut down, and the covers are left in place until just prior to start-up; and,
 6. solvent carry out from each conveyORIZED degreaser is minimized by:
 - a. racking parts to allow for complete drainage; and,
 - b. maintaining the vertical conveyor speed at less than 3.3 meters per minute (11 feet per minute); and,
 7. leaks in each conveyORIZED degreaser are repaired immediately, or the degreaser is shutdown; and,
 8. each conveyORIZED degreaser is operated so as to prevent water from being visually detected in solvent exiting the water separator; and,
 9. no conveyORIZED degreaser is provided with an exhaust ventilation system which exceeds 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of vapor degreaser open area, unless such an exhaust ventilation system is necessary to meet OSHA requirements; and,
- (d) Aqueous Cleaning: any aqueous cleaner in which all the following conditions are satisfied is exempt from the requirements of 310 CMR 7.18(8)(a) through (c):
1. All organic material in the cleaning fluid is water soluble; and
 2. The cleaning fluid contains no more than 5% by weight organic material, excluding soaps.
- (e) On or after December 31, 1980 any person subject to 310 CMR 7.18(8)(a), (b), or (c) shall operate any solvent metal degreaser using procedures which minimize evaporative emissions and prohibit spills from the use of said degreaser. Such procedures include but are not limited to:
1. notification to operators of the performance requirements that must be practiced in the operation of the degreaser, including the permanent and conspicuous posting of labels in the vicinity of the degreaser detailing performance requirements; and
 2. storage of waste degreasing solvent in closed containers, and disposal or transfer of waste degreasing solvent to another party, in a manner such that less than 20% of the waste degreasing solvent by weight can evaporate into the atmosphere; and
 3. where applicable, supplying a degreasing solvent spray which is a continuous fluid stream (not a fine, atomized or shower type spray) at a pressure which does not exceed ten pounds per square inch as measured at the pump outlet, and use any such spray within the confines of the degreaser, except for cleaning of high precision products, for which such person has received Department and EPA approval to use spray operations with non-continuous fluid stream or pressure greater than ten pounds per square inch, provided that such person shall:
 - a. Limit the amount of solvent consumed in such spray operations at the premises to less than 3,000 gallons in any 12-month period, excluding solvent captured and recycled on-site;
 - b. Use a solvent with a VOC content less than 7.7 pounds per gallon in such operations; and
 - c. Prepare and maintain records sufficient to demonstrate compliance with 310 CMR 7.18(8)(e)3.a. and b. Records to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request.
- (f) Any person subject to 310 CMR 7.18(8)(a), (b), or (c) shall maintain instantaneous and continuous compliance at all times.

7.18: continued

(g) Any person subject to 310 CMR 7.18(8)(a), (b), (c) or (d) shall prepare and maintain daily records sufficient to demonstrate continuous compliance. Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of solvent(s) used;
2. quantity, formulation and density of all waste solvent(s) generated;
3. actual operational and performance characteristics of the degreaser and any appurtenant emissions capture and control equipment, if applicable; and
4. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.

(h) Persons subject to 310 CMR 7.18(8) shall, upon request by the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with a method approved by the Department and EPA.

(9) U Cutback Asphalt.

(a) On or after May 1, 1982, no person using asphalt shall cause, suffer, allow or permit the use or application of cutback asphalt for paving purposes.

(b) 310 CMR 7.18(9)(a) shall not apply to any of the following:

1. Cutback asphalt usage from October 1 through April 30.
2. Cutback asphalt used as a penetrating prime coat.
3. Storage or stockpiling of patching mixes used in pavement maintenance for a time period greater than one month.
4. Cutback asphalt of which less than 5% by weight of the total solvent evaporates at a temperature up to and including 500°F as determined by ASTM Method D402, Distillation of Cutback Asphalt Products.

(c) Any person subject to 310 CMR 7.18(9)(a) shall demonstrate continuous compliance consistent with an instantaneous averaging period.

(d) Persons using cutback asphalt shall keep records to satisfy the requirements of 310 CMR 7.18(9)(c) and said records shall be made available to representatives of the Department and EPA upon request. Such records shall include, but are not limited to:

1. quantity and formulation of any cutback asphalt used;
2. name and address of the supplier, date of purchase and date of use of any cutback asphalt; and
3. any other requirements specified by the Department in any order(s) issued to the person, if applicable.

(e) Persons subject to 310 CMR 7.18(9)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with ASTM Method D-244, or by other methods approved by the Department and EPA.

(10) U Metal Coil Coating.

(a) On or after July 1, 1980, no person who owns, leases, operates, or controls a metal coil coating line, which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds, shall cause, suffer, allow or permit emissions therefrom in excess of 4.0 pounds of volatile organic compounds per gallon of solids.

(b) Any person subject to 310 CMR 7.18(10)(a) shall maintain continuous compliance at all times. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance shall not include any considerations of transfer efficiency.

(c) Any person subject to 310 CMR 7.18(10)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;

7.18: continued

3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed; and
6. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.

(d) Persons subject to 310 CMR 7.18(10)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(11) Surface Coating of Miscellaneous Metal Parts and Products.(a) Applicability.

1. On or after December 31, 1982, no person who owns, leases, operates, or controls a miscellaneous metal parts and products surface coating lines, which has the potential to emit equal to or greater than ten tons per year of volatile organic compounds (VOC), shall cause, suffer or permit emissions of volatile organic compounds in excess of the emission limitations set forth in 310 CMR 7.18(11)(d)1. Such person shall also comply with 310 CMR 7.18(11)(g) through (i).
2. On or after March 9, 2020, any person who owns, leases, operates, or controls miscellaneous metal parts and products surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with 310 CMR 7.18(11)(c), (d)2. and 3., (e), and (g) through (i).
3. On or after March 9, 2020, any person who owns, leases, operates, or controls plastic parts surface coating operations and miscellaneous metal parts and products surface coating operations and related cleaning operations within the same facility, which in total emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with 310 CMR 7.18(11)(c), (d)2. and 3., (e), and (g) through (i). The plastic parts surface coating operations are subject to 310 CMR 7.18(21).
4. On or after March 9, 2018, any person who owns, leases, operates, or controls plastic parts surface coating operations and miscellaneous metal parts and products surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with the work practices of 310 CMR 7.18(11)(f) for coating and cleaning operations.

(b) Exemptions.

1. Any facility which has not, since January 1, 1991 emitted, before the application of any air pollution control equipment, one ton or more of volatile organic compounds in any one calendar month, or ten or more tons of volatile organic compounds in any consecutive 12 month time period is exempt from the emissions limitations of 310 CMR 7.18(11)(d)1.
2. The miscellaneous metal parts and products coatings requirements of 310 CMR 7.18(11)(d)2. and 3. and (e) do not apply to:
 - a. stencil coatings;
 - b. safety-indicating coatings;
 - c. solid-film lubricants;
 - d. electric-insulating and thermal-conducting coatings;
 - e. magnetic data storage disk coatings;
 - f. plastic extruded onto metal parts to form a coating;
 - g. powder coating; or
 - h. coating application utilizing hand-held aerosol cans.

7.18: continued

3. The requirements of 310 CMR 7.18(11)(e) do not apply to:
 - a. touch-up coatings;
 - b. repair coatings; or
 - c. texture coatings.
4. The requirements of 310 CMR 7.18(11)(e) do not apply to pleasure craft surface coating operations when applying extreme high-gloss coatings.
5. The requirements of 310 CMR 7.18(11)(d)2. and 3., (e), and (f) do not apply to aerospace manufacturing and rework operations. Aerospace manufacturing and rework operations shall remain subject to the emission limitations set forth in 310 CMR 7.18(11)(d)1.

(c) Extensions. Any person subject to 310 CMR 7.18(11)(a)2. or 3. may apply in writing to the Department for a nonrenewable extension of the implementation deadline in 310 CMR 7.18(11)(a)2. or 3. by complying with 310 CMR 7.18(11)(g). The Department will consider a nonrenewable extension of the deadline in 310 CMR 7.18(11)(a)2. or 3. for persons applying under 310 CMR 7.18(11)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):

1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;
2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I, and 310 CMR 50.50 through 50.63;
3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and
4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(11)(d).

(d) Reasonably Available Control Technology Requirements.

1. If more than one emission limitation applies to any specific coating, then the coating shall comply with the least stringent.

Table 310 CMR 7.18(11)(d)1. Emission Limitations Surface Coating of Miscellaneous Metal Parts and Products	
Emission Source	Emission Limitation* Pounds of VOC per gallon of solids applied
Clear Coatings	10.3
Coating line that is air-dried or forced warm-air dried at temperatures up to 90°C	6.7
Extreme Performance Coating	6.7
All other coatings and coating lines	5.1

*If more than one emission limitation above applies to a specific coating, then the least stringent emission limitation shall be applied.

2. Any person subject to 310 CMR 7.18(11)(a)2. or 3. shall limit VOC emissions by using only coatings having a VOC content no greater than the emission limitations listed in Tables 310 CMR 7.18(11)(d)2.a., c. and d. (low-VOC coatings to meet the mass of VOC per volume of coating less water and exempt compounds, as-applied, limits) or b. and c. (low-VOC coatings or a combination of coatings and add-on control equipment on a coating unit to meet the mass of VOC per volume of coating solids limits), or by complying with the requirement in 310 CMR 7.18(11)(d)3. If a coating can be classified in more than one coating category in 310 CMR 7.18(11)(d), then the least stringent coating category limitation shall apply.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.18: continued

Table 310 CMR 7.18(11)(d)2.a. RACT Emission Limitations for Surface Coating of Miscellaneous Metal Parts and Products				
	Mass of VOC per volume of coating less water and exempt compounds, as applied			
	Air-Dried		Baked	
Coating Category	kg/l coating	lb/gal coating	kg/l coating	lb/gal coating
General, One-component	0.34	2.8	0.28	2.3
General, Multi-component	0.34	2.8	0.28	2.3
Camouflage	0.42	3.5	0.42	3.5
Electric Insulating Varnish	0.42	3.5	0.42	3.5
Etching Filler	0.42	3.5	0.42	3.5
Extreme High-gloss	0.42	3.5	0.36	3.0
Extreme Performance	0.42	3.5	0.36	3.0
Heat-Resistant	0.42	3.5	0.36	3.0
High Performance Architectural	0.74	6.2	0.74	6.2
High Temperature	0.42	3.5	0.42	3.5
Metallic	0.42	3.5	0.42	3.5
Military Specification	0.34	2.8	0.28	2.3
Mold-seal	0.42	3.5	0.42	3.5
Pan Backing	0.42	3.5	0.42	3.5
Prefabricated Architectural One & Multi-component	0.42	3.5	0.28	2.3
Pretreatment Coatings	0.42	3.5	0.42	3.5
Repair and Touch-up	0.42	3.5	0.36	3.0
Silicone-Release	0.42	3.5	0.42	3.5
Solar-Absorbent	0.42	3.5	0.36	3.0
Vacuum-metallizing	0.42	3.5	0.42	3.5
Drum Coating - New - Exterior	0.34	2.8	0.34	2.8
Drum Coating - New - Interior	0.42	3.5	0.42	3.5
Drum Coating - Reconditioned - Exterior	0.42	3.5	0.42	3.5
Drum Coating - Reconditioned - Interior	0.50	4.2	0.50	4.2

Table 310 CMR 7.18(11)(d)2.b. RACT Emission Limitations for Surface Coating of Miscellaneous Metal Parts and Products				
	Mass of VOC per volume of coating solids, as applied			
	Air-Dried		Baked	
Coating Category	kg/l solids	lb/gal solids	kg/l solids	lb/gal solids
General, One-component	0.54	4.52	0.40	3.35
General, Multi-component	0.54	4.52	0.40	3.35
Camouflage	0.80	6.67	0.80	6.67
Electric Insulating Varnish	0.80	6.67	0.80	6.67
Etching Filler	0.80	6.67	0.80	6.67
Extreme High-gloss	0.80	6.67	0.61	5.06
Extreme Performance	0.80	6.67	0.61	5.06
Heat-Resistant	0.80	6.67	0.61	5.06
High Performance Architectural	4.56	38.0	4.56	38.0
High Temperature	0.80	6.67	0.80	6.67
Metallic	0.80	6.67	0.80	6.67
Military Specification	0.54	4.52	0.40	3.35
Mold-Seal	0.80	6.67	0.80	6.67
Pan Backing	0.80	6.67	0.80	6.67
Prefabricated Architectural One & Multi-component	0.80	6.67	0.40	3.35
Pretreatment Coatings	0.80	6.67	0.80	6.67
Repair and Touch-up	0.80	6.67	0.80	6.67
Silicone-release	0.80	6.67	0.80	6.67
Solar-absorbent	0.80	6.67	0.61	5.06
Vacuum-metallizing	0.80	6.67	0.80	6.67
Drum Coating - New - Exterior	0.54	4.52	0.54	4.52
Drum Coating - New - Interior	0.80	6.67	0.80	6.67
Drum Coating - Reconditioned - Exterior	0.80	6.67	0.80	6.67
Drum Coating - Reconditioned - Interior	1.17	9.78	1.17	9.78

7.18: continued

Table 310 CMR 7.18(11)(d)2.c. RACT Emission Limitations for Pleasure Craft Surface Coatings				
Coating Category	Mass of VOC per volume of coating less water and exempt compounds, as applied		Mass of VOC per volume of coating solids, as applied	
	kg/l coating	lb/gal coating	kg/l solids	lb/gal solids
Extreme High Gloss Topcoat	0.60	5.0	1.87	15.6
High Gloss Topcoat	0.42	3.5	0.80	6.7
Pretreatment Wash Primers	0.78	6.5	6.67	55.6
Finish Primer/Surfacer	0.42	3.5	0.80	6.7
High Build Primer Surfacer	0.34	2.8	0.55	4.6
Aluminum Substrate Antifoulant Coating	0.56	4.7	1.53	12.8
Antifouling Sealer/Tie Coat	0.42	3.5	0.80	6.7
Other Substrate Antifoulant Coating	0.40	3.4	0.75	6.3
All other pleasure craft surface coatings for metal or plastic	0.42	3.5	0.80	6.7

Table 310 CMR 7.18(11)(d)2.d. RACT Emission Limitations for Motor Vehicle Materials		
Coating Category	Mass of VOC per volume of coating less water and exempt compounds, as applied	
	kg/l coating	lb/gal coating
Motor vehicle cavity wax; Motor vehicle sealer; Motor vehicle deadener; Motor vehicle underbody coating; Motor vehicle trunk interior coating	0.65	5.4
Motor vehicle bedliner; Motor vehicle gasket/gasket sealing material	0.20	1.7
Motor vehicle lubricating wax/compound	0.70	5.8

3. Any person may achieve an overall VOC control efficiency of at least 90% by weight using add-on air pollution capture and control equipment instead of complying with the requirements of 310 CMR 7.18(11)(d)2.
- (e) Application Methods. Unless complying with 310 CMR 7.18(11)(a)2. or 3. by means of 310 CMR 7.18(11)(d)3., all coatings shall be applied using one or more of the following:
1. electrostatic spray application;
 2. HVLP spray;
 3. flow coat;
 4. roller coat;
 5. dip coat, including electrodeposition;
 6. airless spray;
 7. air-assisted airless spray; or
 8. a coating application method capable of achieving a transfer efficiency equivalent to or greater than that achieved by HVLP, as approved by EPA.
- (f) Work Practices for Coating and Cleaning Operations. Any person subject to 310 CMR 7.18(11) shall comply with the work practices of 310 CMR 7.18(31)(e).
- (g) Plan and Extension Submittal Requirements.
1. Any person subject to 310 CMR 7.18(11)(a)1., 2., or 3. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(11)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).
 2. Any person subject to 310 CMR 7.18(11)(a)2. or 3. who chooses to apply for an extension under 310 CMR 7.18(11)(c) shall comply with 310 CMR 7.18(20).
- (h) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(11)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

7.18: continued

1. identity, quantity, formulation and density of coating(s) used;
 2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
 3. solids content of any coating(s) used;
 4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
 5. quantity of product processed, if necessary to determine emissions; and
 6. any other requirements specified by the Department in any approval(s) or order(s) issued to the person.
- (i) Testing Requirements. Any person subject to 310 CMR 7.18(11)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(11). Testing shall be conducted in accordance with EPA Method 24 or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. If acceptable to the Department and EPA, manufacturer's formulation data may be used to demonstrate compliance with coating VOC content limitations. In the case of a dispute, the VOC content determined using the EPA Method shall prevail, unless a person is able to demonstrate to the Department and EPA that the manufacturer's formulation data are correct. EPA Method 25A shall be used when:
1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;
 2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
 3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.
- (12) U Packaging Rotogravure and Packaging Flexographic Printing.
- (a) Applicability.
1. On or after January 1, 1994, and before March 9, 2020, no person who owns, leases, operates or controls packaging rotogravure printing lines, which have the potential to emit equal to or greater than 50 tons per year of volatile organic compounds (VOC) shall cause, suffer, allow or permit the operation of said lines unless the requirements of 310 CMR 7.18(12)(d)1. and (f) through (h) are met.
 2. On or after March 9, 2020, any person who owns, leases, operates or controls a packaging rotogravure printing line or packaging flexographic printing line, which has the potential to emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 25 tons per rolling 12-month period of VOC shall comply with 310 CMR 7.18(12)(c), (d)2., and (f) through (h) at that printing line.
 3. On or after March 9, 2018, any person who owns, leases, operates, or controls packaging rotogravure printing operations or packaging flexographic printing operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with 310 CMR 7.18(12)(e), (g) and (h).
- (b) Exemptions. The requirements of 310 CMR 7.18(12)(a)2. do not apply provided the person obtains and complies with a federally enforceable emission limitation which restricts the potential emissions of the printing line to below 25 tons per year.
- (c) Extensions.
1. Any person subject to 310 CMR 7.18(12)(a)2. may apply in writing to the Department for a non-renewable extension of the implementation deadline in 310 CMR 7.18(12)(a)2. by complying with 310 CMR 7.18(12)(f). The Department will consider a non-renewable extension of the deadline in 310 CMR 7.18(12)(a)2. for persons applying under 310 CMR 7.18(12)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):
 - a. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;
 - b. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I and 310 CMR 50.50 through 50.63;

7.18: continued

- c. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and
 - d. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(12)(d).
- (d) Reasonably Available Control Technology Requirements.
1. Packaging Rotogravure Printing Lines.
 - a. The volatile portion of the ink, as applied to the substrate contains 25.0% or less by volume of volatile organic compounds and 75.0% or more by volume of water; or,
 - b. The ink (less water) as it is applied to the substrate contains 60.0% by volume or more non-volatile materials; or,
 - c. The owner or operator installs and operates:
 - i. A carbon adsorption system which reduces the volatile organic emissions by at least 90.0% by weight; or,
 - ii. an incinerator system which oxidizes at least 90.0% by weight of the volatile organic compounds emitted; or,
 - iii. an alternative volatile organic compound emission reduction system demonstrated to have at least 90.0% reduction efficiency by weight; and,
 - iv. A capture system must be used in conjunction with any emission control systems installed pursuant to 310 CMR 7.18(12)(d)1.c.i. through iii. The design and operation of said capture system must be consistent with good engineering practice and is required to provide for an overall reduction in volatile organic compound emissions of at least 65.0% where packaging rotogravure process is employed.
 2. Packaging Rotogravure and Packaging Flexographic Printing Lines. Any person subject to 310 CMR 7.18(12)(a)2. shall limit VOC emissions by complying with one or more of 310 CMR 7.18(12)(d)2.a. or b.
 - a. Capture and Control Requirements.
 - i. A press first installed prior to March 14, 1995 and controlled by an add-on air pollution control device whose first installation date was prior to March 9, 2019 shall achieve at least 65.0% overall control by weight of the VOC emitted.
 - ii. A press first installed prior to March 14, 1995 and controlled by an add-on air pollution control device whose first installation date was on or after March 9, 2019 shall achieve at least 70.0% overall control by weight of the VOC emitted.
 - iii. A press first installed on or after March 14, 1995 and controlled by an add-on air pollution control device whose first installation date was prior to March 9, 2019 shall achieve at least 75.0% overall control by weight of the VOC emitted.
 - iv. A press first installed on or after March 14, 1995 and controlled by an add-on air pollution control device whose first installation date was on or after March 9, 2019 shall achieve at least 80.0% overall control by weight of the VOC emitted.
 - b. VOC Content Limit. The volatile portion of inks, coatings and adhesives shall contain no more than either 0.8 kg VOC/kg solids applied or 0.16 kg VOC/kg material applied. The VOC content limitations may be met by averaging the VOC content of materials used on a single press (*i.e.*, within a line).
- (e) Work Practices and Emission Limitations for Printing and Cleaning Operations.
1. Any person subject to 310 CMR 7.18(12) shall comply with the work practices of 310 CMR 7.18(31)(e).
 2. Any person subject to 310 CMR 7.18(12) shall only use cleanup solutions that have a VOC composite partial pressure equal to or less than 25 mm Hg at 20°C (68°F).
- (f) Plan and Extension Submittal Requirements.
1. Any person subject to 310 CMR 7.18(12)(a)1. or 2. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(12)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).

7.18: continued

2. Any person subject to 310 CMR 7.18(12)(a)2. who chooses to apply for an extension under 310 CMR 7.18(12)(c) shall comply with 310 CMR 7.18(20).

(g) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(12)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on-site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of ink(s), coating(s) and adhesive(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any ink(s), coating(s) and adhesive(s) used;
4. actual operational and emissions characteristics of the printing line and any appurtenant emissions capture and control equipment;
5. quantity of product processed, if necessary to determine emissions; and
6. any other requirements specified by the Department in any approval(s) or order(s) issued to the person.

(h) Testing Requirements. Any person subject to 310 CMR 7.18(12)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(12). Testing shall be conducted in accordance with EPA Method 24, Method 24A or Method 25 as described in CFR Title 40 Part 60, EPA Methods 204 and 204A through F of CFR Title 40 Part 51 Appendix M or by other methods approved by the Department and EPA. EPA Method 25A shall be used when:

1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;
2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

((13) Reserved)

(14) U Paper, Film, and Foil Surface Coating.

(a) Applicability.

1. On or after December 31, 1982, no person who owns, leases, operates, or controls a paper, film, or foil surface coating line which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds (VOC) shall cause, suffer, allow or permit emissions in excess of the requirements of 310 CMR 7.18(14)(d)1. Such person shall also comply with 310 CMR 7.18(14)(f) through (h).
2. On or after March 9, 2020, any person who owns, leases, operates, or controls a paper, film, or foil surface coating line, which has the potential to emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 25 tons per rolling 12-month period of VOC shall comply with 310 CMR 7.18(14)(c), (d)2., and (f) through (h) at that coating line.
3. On or after March 9, 2018, any person who owns, leases, operates, or controls paper, film, or foil surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with the work practices of 310 CMR 7.18(14)(e) for coating and cleaning operations.
4. 310 CMR 7.18(14) does not apply to coating application on or in-line with any offset lithographic, screen, letterpress, flexographic, rotogravure, or digital printing press.

(b) Exemptions. The requirements of 310 CMR 7.18(14)(a)2. do not apply provided the person obtains and complies with a federally enforceable emission limitation which restricts the potential emissions of the coating line to below 25 tons per year.

7.18: continued

(c) Extensions. Any person subject to 310 CMR 7.18(14)(a)2. may apply in writing to the Department for a non-renewable extension of the implementation deadline in 310 CMR 7.18(14)(a)2. by complying with 310 CMR 7.18(14)(f). The Department will consider a non-renewable extension of the deadline in 310 CMR 7.18(14)(a)2. for persons applying under 310 CMR 7.18(14)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):

1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;
2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I and 310 CMR 50.50 through 50.63;
3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and
4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(14)(d).

(d) Reasonably Available Control Technology Requirements.

1. Any person subject to 310 CMR 7.18(14)(a)1. shall not exceed a limitation of 4.8 pounds of VOC per gallon of solids applied.
2. Any person subject to 310 CMR 7.18(14)(a)2. shall limit VOC emissions by complying with one or more of 310 CMR 7.18(14)(d)2.a., b., or c.
 - a. Achieve an overall VOC control efficiency of at least 90% by weight using add-on air pollution capture and control equipment at that coating line.
 - b. A paper, film, or foil coating line that is not a pressure sensitive tape and label coating line shall comply with:
 - i. a VOC content of no greater than 0.40 pounds of VOC per pound of solids applied at that coating line; or
 - ii. a VOC content of no greater than 0.08 pounds of VOC per pound of coating at that coating line; or
 - iii. a combination of VOC content and add-on air pollution capture and control equipment to achieve an overall VOC control efficiency of at least 90% by weight; or
 - iv. within line averaging to achieve compliance with 310 CMR 7.18(14)(d)2.b.i. or ii.
 - c. A paper, film, or foil coating line that is a pressure sensitive tape and label coating line shall comply with:
 - i. a VOC content of no greater than 0.20 pounds of VOC per pound of solids applied at that coating line; or
 - ii. a VOC content of no greater than 0.067 pounds of VOC per pound of coating at that coating line; or
 - iii. a combination of VOC content and add-on air pollution capture and control equipment to achieve an overall VOC control efficiency of at least 90% by weight; or
 - iv. within line averaging to achieve compliance with 310 CMR 7.18(14)(d)2.c.i. or ii.

(e) Work Practices for Coating and Cleaning Operations. Any person subject to 310 CMR 7.18(14) shall comply with the work practices of 310 CMR 7.18(31)(e).

(f) Plan and Extension Submittal Requirements.

1. Any person subject to 310 CMR 7.18(14)(a)1. or 2. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(14)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).
2. Any person subject to 310 CMR 7.18(14)(a)2. who chooses to apply for an extension under 310 CMR 7.18(14)(c) shall comply with 310 CMR 7.18(20).

7.18: continued

(g) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(14)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed, if necessary to determine emissions; and
6. any other requirements specified by the Department in any approval(s) or order(s) issued to the person.

(h) Testing Requirements. Any person subject to 310 CMR 7.18(14)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(14). Testing shall be conducted in accordance with EPA Method 24 or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. EPA Method 25A shall be used when:

1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;
2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

(15) U Fabric Surface Coating.

(a) On or after December 31, 1982, unless granted an extension by the Department until January 1, 1987, no person who owns, leases, operates, or controls a fabric surface coating line, which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds, shall cause, suffer, allow or permit emissions therefrom in excess of 4.8 pounds of volatile organic compounds per gallon of solids applied.

(b) Any person subject to 310 CMR 7.18(15)(a) shall maintain continuous compliance at all times. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance shall not include any considerations of transfer efficiency.

(c) Any person subject to 310 CMR 7.18(15)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed; and
6. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.

(d) Persons subject to 310 CMR 7.18(15)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

7.18: continued

(16) U Vinyl Surface Coating.

(a) On or after December 31, 1982, unless granted an extension by the Department until January 1, 1987, no person who owns, leases, operates, or controls a vinyl coating line, which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds shall cause allow or permit emissions therefrom in excess of 7.8 pounds of volatile organic compounds per gallon of solids applied.

NON-TEXT PAGE

7.18: continued

(b) Any person subject to 310 CMR 7.18(16)(a) shall maintain continuous compliance at all times. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance shall not include any considerations of transfer efficiency.

(c) Any person subject to 310 CMR 7.18(16)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed; and
6. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.

(d) Persons subject to 310 CMR 7.18(16)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(17) Reasonable Available Control Technology.

(a) Applicability. 310 CMR 7.18(17) applies to any person who owns, leases, operates or controls any facility which has the potential to emit, before the application of air pollution control equipment, equal to or greater than 25 tons per year of volatile organic compounds, not including VOC emissions exempted under 310 CMR 7.18(17)(b).

(b) Emissions Exemptions. Emissions of volatile organic compounds from any facility which are subject to any of the following requirements are not included when determining the potential to emit, before application of air pollution control equipment, for purposes of 310 CMR 7.18(17)(a):

1. emissions of volatile organic compounds which are subject to regulation by other sections of 310 CMR 7.18, excluding 310 CMR 7.18(1), 310 CMR 7.18(2) and 310 CMR 7.18(20); or,
2. emissions of volatile organic compounds for which standards have been issued by EPA pursuant to Section 112 of the Act, from equipment subject to regulation under 40 CFR Part 61 (NESHAPS); or,
3. emissions of volatile organic compounds from equipment which, since January 1, 1990, have been reviewed and approved as Best Available Control Technology or Lowest Achievable Emission Rate imposed in an approval containing specific emission limits or work practice standards issued under a federally-enforceable regulation; or,
4. emissions of volatile organic compounds from the incomplete combustion of any material, except where the material is heated, burned, combusted or otherwise chemically changed under oxygen deficient conditions by design.
5. emissions of volatile organic compounds resulting from operations which are subject to regulation under 310 CMR 7.24.
6. emissions of volatile organic compounds from operations which since 1990 have been constructed and operated in accordance with the exemptions in 310 CMR 7.03.

(c) Reasonably Available Control Technology Requirements.

1. Unless granted a non-renewable extension by the Department under 310 CMR 7.18(17)(e), no person subject to 310 CMR 7.18(17)(a) shall cause, suffer, allow or permit emissions from the facility in excess of an emission rate achievable through the implementation of reasonably available control technology as required in an emission control plan approved under 310 CMR 7.18(20)(e), according to the following schedule:
 - a. On or after December 31, 1986 for any facility with the potential to emit equal to or greater than 100 tons per year of VOC, before the application of air pollution control equipment;

7.18: continued

b. On or after January 1, 1994 for any facility with the potential to emit before application of air pollution control equipment, equal to or greater than 50 tpy, but less than 100 tpy, and which, since 1/1/90 has had actual emissions, before the application of air pollution control equipment, greater than 50 tons per year in any one calendar year;

c. On or after May 31, 1995 for any facility with the potential to emit, before application of air pollution control equipment, equal to or greater than 50 tpy, but less than 100 tpy, and which since 1/1/90 has had actual emissions, before the application of air pollution control equipment, less than or equal to 50 tons per year in any one calendar year;

d. If the Administrator makes a determination under Section 182(g)(3) of the Clean Air Act (CAA) that Massachusetts has failed to meet a milestone, then by May 31, 1997 or two years after the determination, whichever is later, for any facility with the potential to emit, before application of air pollution control equipment equal to or greater than 25 tpy, but less than 50 tpy, and which since 1/1/90 have had actual emissions, before the application of air pollution control equipment, greater than or equal to 25 tons per year in any one calendar year;

e. If the Administrator makes a determination under Section 182(g)(3) of the Clean Air Act (CAA) that Massachusetts has failed to meet a milestone, then by May 31, 1999 or four years after the determination, whichever is later, for any facility with the potential to emit, before application of air pollution control equipment equal to or greater than 25 tpy, but less than 50 tpy, and which since 1/1/90 have had actual emissions, before the application of air pollution control equipment, less than 25 tons per year in any one calendar year;

(d) Plan Submittal Requirements. Any person subject to 310 CMR 7.18(17)(a) must have the RACT emission limit approved by the Department in an emissions control plan approved under 310 CMR 7.18(20), and must submit such plan 180 days prior to the applicable implementation deadline in 310 CMR 7.18(17)(c). The Department must also submit the plan to the EPA for approval as a revision to the Massachusetts State Implementation Plan. However, any person subject to 310 CMR 7.18(17)(a) only if HOC emissions are included in the applicability determination (i.e. the facility's VOC emissions are less than the applicability threshold) is not required to have their emission control plan approved as a revision to the Massachusetts State Implementation Plan.

(e) Extensions.

1. Any person required to implement RACT according to the schedule in 310 CMR 7.18(17)(c) may apply in writing to the Department for a non-renewable extension of the implementation deadline in 310 CMR 7.18(17)(c). The person must apply to the Department for the non-renewable extension at the same time the person submits the emission control plan required by 310 CMR 7.18(20).

2. The Department will consider allowing a non-renewable extension from the original implementation deadline in 310 CMR 7.18(17)(c) which extension will not exceed one calendar year, provided the emission control plan submitted for approval under 7.18(20), meets the following criteria in addition to those of 310 CMR 7.18(20):

a. the emission control plan proposes to reduce emissions through toxics use reduction techniques defined in M.G.L. c. 21I; and,

b. the toxics use reduction techniques contained in the emission control plan are approved by a Toxics Use Reduction Planner certified under M.G.L. c. 21I; (this may be an employee at the facility who is certified as Toxics Use Reduction Planner); and,

c. implementation of the plan will achieve a minimum emission reduction of 85% from the actual emissions reported under 310 CMR 7.18(20)(c)4 through toxics use reduction techniques, as calculated on a mass of VOC emitted per gallon of solids as applied or per unit of production basis; and,

7.18: continued

d. the emission control plan also contains contingency measures to reduce emissions by 90%, as calculated on a mass of VOC emitted per gallon of solids as applied or per unit of production basis, which measures automatically take effect if the emissions reductions achieved through toxics use reduction techniques do not equal 85%, as calculated on a mass of VOC emitted per gallon of solids as applied or per unit of production basis.

3. Notwithstanding the above, no facility subject to the requirements of 310 CMR 7.18(17) prior to February 1, 1993, shall be eligible for any extension of the compliance deadline set forth in 310 CMR 7.18(17)(c)1.a.

(f) Continuous Compliance. Any person required to implement RACT according to the schedule in 310 CMR 7.18(17)(c) shall maintain continuous compliance at all times. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance may include considerations of transfer efficiency provided that the baseline transfer efficiency and transfer efficiency test method are detailed in the emission control plan as approved by the Department and EPA.

(g) Recordkeeping Requirements. Any person required to implement RACT according to the schedule in 310 CMR 7.18(17)(c) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved emission control plan (310 CMR 7.18(20) or upon request. Such records shall include, but not be limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed;
6. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(h) Testing Requirements. Any person required to implement RACT according to the schedule in 310 CMR 7.18(17)(c) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(17). Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(18) Polystyrene Resin Manufacture.

(a) On or after December 31, 1986, no person who owns, leases, operates, or controls a continuous process polystyrene resin manufacturing plant or facility which emits, before any application of air pollution control equipment, in excess of 15 pounds per day of volatile organic compounds, shall cause, suffer, allow or permit emissions from the material recovery section in excess of 0.12 pounds of volatile organic compounds per 1,000 pounds of product.

(b) Any person subject to 310 CMR 7.18(18)(a) shall maintain continuous compliance at all times. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a).

(c) Any person subject to 310 CMR 7.18(18)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for three years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved compliance plan or upon request. Such records shall include, but are not limited to:

1. properties of the inlet emission stream including temperature, pressure, flow rate and composition;

7.18: continued

2. properties of the inlet coolant including type, temperature and pressure;
 3. quantity of product produced;
 4. actual operational and emission characteristics of the manufacturing process and any appurtenant emissions capture and control equipment; and
 5. any other requirements specified by the Department in any approval(s) and/or order(s) issued to the person.
- (d) Persons subject to 310 CMR 7.18(18)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with EPA Method 2 and Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(19) Synthetic Organic Chemical Manufacture.

- (a) Each person owning, leasing, or controlling the operation of a synthetic organic chemical manufacturing facility shall monitor quarterly the following components in VOC service with an organic detection instrument: each pump in light liquid service; each compressor; each valve in both gas and light liquid service; and each pressure relief valve in gas service.
- (b) Each owner or operator shall monitor:
1. each pressure relief valve within 24 hours after it has vented to the atmosphere;
 2. within 24 hours of discovery a component which sight, smell, or sound indicates might be leaking;
 3. any component that appears to be leaking, on the basis of sight, smell, or sound, including flanges, connections, and equipment in heavy liquid service should be repaired with 15 days of the date the leak is detected.
- (c) Each owner or operator shall use a VOC detection instrument and monitoring method in accordance with EPA Reference Method 21, as described in: 40 CFR part 60 Appendix A.
- (d) From the date a leaking component is detected, each owner or operator shall:
1. affix within one hour a weatherproof and readily visible tag to the component, bearing an identification number and the date. This tag shall remain in place until the component is repaired.
 2. repair the leaking component within 15 days; or
 3. repair the leaking component at or before the next scheduled unit turnaround if not able to do so within 15 days.
- (e) Each owner or operator shall visually inspect all pumps in light liquid service weekly.
- (f) Except for pressure relief valves, an owner or operator shall seal all open-ended valves which are in contact with process fluid on one side of the seat and open to the atmosphere on the other side of the seat. The open-ended valves shall be sealed with one of the following: a second valve, blind flange, cap, or plug. The sealing device may be removed only when a sample is being taken or during maintenance operations.
- (g) Each owner or operator shall record in an inspection log the following information for each leaking component found:
1. the tag identification number;
 2. the type of component;
 3. the date on which the leak was detected for the component;
 4. the date on which the component was repaired;
 5. identification of those leaking components which cannot be repaired until unit turnaround and the reason why repair must be delayed;
 6. the test methods;
 7. the result of inspection or monitoring;
 8. the type of repair;
 9. chemical name used in component;
 10. name of individual responsible for repairs;
 11. date of next unit turnaround if there is a delay in repair;
 12. results of weekly visual leak inspections.

A copy of the inspection log shall be retained at the plant for a minimum of two years after the date on which the report for the inspection period was prepared and shall make the log available to the Department upon request.

7.18: continued

(h) Each owner or operator shall submit to the Department a quarterly report describing the results of the monitoring program required by 310 CMR 7.18(19). As a minimum, this report should include:

1. the number and types of components that were located during the previous monitoring period but were not repaired.
2. the number and types of components inspected, the number and types of leaking components found, the number and types of components repaired, and the time elapsed before each repair was effected.
3. the number of components not repaired within 15 days and the reason why there was a delay.

(i) Any owner or operator of a facility subject to 310 CMR 7.18(19) shall:

1. submit to the Department, a leak detection and repair program by June 1, 1987. This program shall contain, as a minimum, a list of process components, a copy of the log book format, and a description of the proposed monitoring equipment.
2. submit the first quarterly report required by 310 CMR 7.18(19)(i) by December 1, 1987 or within 120 days of the date the owner or operator first becomes subject to 310 CMR 7.18(19).

(j) The Department shall receive notice in writing ten days prior to the scheduled monitoring so that the Department has the opportunity to observe the monitoring procedure as described in 310 CMR 7.18(19)(a) and (b).

(k) The Department will review and make determination on requests for exemptions to 310 CMR 7.18(19) in the following categories:

1. components that are considered unsafe to monitor because of extreme temperatures, pressures, at a height of more than two meters above a permanent support surface, or for other reasons are exempt from quarterly monitoring if the owner requests a waiver from the Department and monitors at least once a year.
2. SOCOMI facilities handling less than 980 tons per year (890 Mg/yr) of VOC.
3. To implement a skip period monitoring program the owner or operator will begin with a quarterly leak detection and repair program for valves. If the desired "good performance level" of 2% or less of valves leaking was attained for valves in gas service and light liquid service for five consecutive quarters, then three of the subsequent quarterly leak detection and repair periods for these valves could be skipped. All valves would be monitored again during the fourth quarter. This would permit a process unit which has consistently demonstrated it is meeting the "good performance level" to monitor valves in gas service and valves in light liquid service annually instead of quarterly. If an inspection showed that the "good performance level" was not being achieved, then quarterly inspections of valves would be reinstated until a "good performance level" was being achieved for five consecutive quarters. At that time the skip period inspection would be resumed. Only valves are allowed to be monitored at skip period intervals; all other equipment components would not skip monitoring intervals and would be subject to their required quarterly monitoring.

(20) Emission Control Plans for Implementation of Reasonably Available Control Technology.

(a) General Applicability and Submittal Requirements. Any person who owns, leases, operates or controls a facility that becomes subject to 310 CMR 7.18 and who is required to submit an emission control plan pursuant to 310 CMR 7.18 after January 1, 1992, shall submit an emission control plan to the Department for review and approval by the Department prior to implementation of RACT. In addition, an emission control plan is required to amend an emissions averaging plan issued pursuant to 310 CMR 7.18(2)(b) or (g), or an approval issued under 310 CMR 7.18(2)(h).

1. The emission control plan must be submitted to the Department within 180 days of the date the facility or part of a facility first meets the applicability requirements of 310 CMR 7.18, or the date of promulgation for that section of 310 CMR 7.18, whichever is latest.
2. An emission control plan is not required if all operations at the facility for which an approval under 310 CMR 7.18(20) would otherwise be required:

7.18: continued

- a. are installed in accordance with:
 - i. a plan approval issued pursuant to 310 CMR 7.02(4) or (5) that meets the standards/limits of 310 CMR 7.18;
 - ii. the requirements contained in 310 CMR 7.03; or
 - iii. the requirements of 310 CMR 7.26, or
- b. are exempt from filing for plan approval pursuant to 310 CMR 7.02(2)(b), except for 310 CMR 7.02(2)(b)32. This exemption does not apply to construction, substantial reconstruction, or alteration required to comply with the requirements of 310 CMR 7.18.

(b) Other Applicability and Submittal Requirements. Any person subject to 310 CMR 7.18, when so required by the Department in writing, shall submit an emission control plan to the Department for review and approval by the Department.

(c) Emission Control Plan Requirements. The emission control plan must detail how RACT will be implemented at the facility which is subject to 310 CMR 7.18. Each plan submitted under 310 CMR 7.18(20) shall, at a minimum, include the following:

1. a list and description of all the equipment at the facility which has the potential to emit VOC, including any associated plan approvals, dates of installation, any subsequent alterations, etc.;
2. a list of all the VOC emitting equipment at the facility for which the emission control plan is being submitted;
3. the potential to emit, before application of air pollution control equipment, before implementation of RACT, on a daily and annual basis, of all VOC emitting equipment for which the emission control plan is being submitted;
4. the actual emissions before implementation of RACT on a daily and annual basis of all VOC emitting equipment for which the emission control plan is being submitted;
5. if applicable, the designs, specifications and standard operating and maintenance procedures for any VOC emissions capture and control system used to implement RACT;
6. if applicable, the designs and specifications of any low-VOC emitting processes or reformulations used to implement RACT;
7. the testing, monitoring, recordkeeping and reporting procedures used to demonstrate compliance with the applicable sections of 310 CMR 7.18;
8. a schedule for the implementation of RACT at the facility by the deadline contained in the applicable section of 310 CMR 7.18, including provisions for demonstrating to the Department periodic increments of progress;
9. any other information required by the Department, and;
10. the signature of a responsible official.

(d) Additional Requirements for Demonstration of RACT. An emission control plan submitted by any person who owns, leases, operates or controls a facility or part of a facility subject to 310 CMR 7.18(2)(c) or (17), must meet the following requirements, in addition to those of 310 CMR 7.18(20)(c).

1. The plan must contain a demonstration and description of the RACT emission limit(s) for this facility or part of a facility; and,
2. any information necessary to support the demonstration made in 310 CMR 7.18(20)(d)1., such as technological and economic considerations, industry surveys, customer considerations, etc.

(e) Approval of an Emission Control Plan by the Department.

1. For persons not subject to 310 CMR 7.18(2)(b), (c), or (17), the Department shall, within the timetables established in 310 CMR 4.10, issue a final approval or disapproval of the ECP.
2. For persons subject to 310 CMR 7.18(2)(b), (c), or (17) for each ECP application where the information submitted subject to 310 CMR 7.18(20)e.2. is sufficient to support both the determination of RACT and the proposed schedule; the Department shall:
 - a. Provide a 30-day period for submittal of public comment;
 - b. Post on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period, the following:
 - i. Notice of availability of the Department's proposed decision to approve or deny the ECP application and information on how to submit public comment;
 - ii. The Department's proposed decision to approve or deny the ECP application;

7.18: continued

iii. Information on how to access the administrative record for the Department's proposed decision to approve or deny the ECP application.

c. Send a copy of the notice required under 310 CMR 7.18(20)(e)2.b.i. to EPA.

(f) Prohibition. No emissions reductions or any other actions taken at any facility or part of a facility will constitute implementation of RACT at that facility, unless those emission reductions or other actions are part of an emission control plan approved by the Department.

(g) Additional requirements may be included in the emission control plan approval to ensure that emissions from the unit(s) subject to RACT will not cause or contribute to a condition of air pollution or a violation of any other regulation. Such requirements include, but are not limited to, emissions limits on other air contaminants, and additional stack testing or emissions monitoring requirements.

(21) Surface Coating of Plastic Parts.(a) Applicability.

1. On or after March 9, 2020, any person who owns, leases, operates, or controls plastic parts surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of volatile organic compounds (VOC) per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with 310 CMR 7.18(21)(c) through (e) and (g) through (i).

2. On or after March 9, 2020, any person who owns, leases, operates, or controls plastic parts surface coating operations and miscellaneous metal parts and products surface coating operations and related cleaning operations within the same facility, which in total emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with 310 CMR 7.18(21)(c) through (e) and (g) through (i). The miscellaneous metal parts and products surface coating operations are subject to 310 CMR 7.18(11).

3. On or after March 9, 2018, any person who owns, leases, operates, or controls plastic parts surface coating operations and miscellaneous metal parts and products surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with the work practices of 310 CMR 7.18(21)(f) for coating and cleaning operations.

(b) Exemptions.

1. The plastic parts coatings requirements of 310 CMR 7.18(21)(d)1. and 2. do not apply to:

- a. touch-up and repair coatings;
- b. stencil coatings applied on clear or transparent substrates;
- c. clear or translucent coatings;
- d. coatings applied at a paint manufacturing facility while conducting performance tests on the coatings;
- e. reflective coating applied to highway cones;
- f. mask coatings that are less than 0.5 millimeter thick (dried) and the area coated is less than 25 square inches;
- g. EMI/RFI shielding coatings; or
- h. heparin-benzalkonium chloride (HBAC)-containing coatings applied to medical devices, provided that the total usage of all such coatings does not exceed 100 gallons per rolling 12-month period, per facility.

2. The automotive/transportation coatings requirements of 310 CMR 7.18(21)(d)1.b. and 2., and the business machine coatings requirements of 310 CMR 7.18(21)(d)1.c. and 2., do not apply to:

- a. texture coatings;
- b. vacuum metallizing coatings;
- c. gloss reducers;
- d. texture topcoats;
- e. adhesion primers;
- f. electrostatic preparation coatings;

7.18: continued

- g. resist coatings; or
- h. stencil coatings.

3. The requirements of 310 CMR 7.18(21)(e) do not apply to airbrush operations using five gallons or less per rolling 12-month period of coating at a plastic parts coating operation.
4. The requirements of 310 CMR 7.18(21)(e) do not apply to pleasure craft surface coating operations when applying extreme high-gloss coatings.
5. The requirements of 310 CMR 7.18(21)(d) and (e) do not apply to powder coatings or coating application utilizing hand-held aerosol cans.
6. The requirements of 310 CMR 7.18(21)(d), (e), and (f) do not apply to aerospace manufacturing and rework operations.

(c) Extensions. Any person subject to 310 CMR 7.18(21)(a)1. or 2. may apply in writing to the Department for a nonrenewable extension of the implementation deadline in 310 CMR 7.18(21)(a)1. or 2. by complying with 310 CMR 7.18(21)(g).

The Department will consider a nonrenewable extension of the deadline in 310 CMR 7.18(21)(a)1. or 2. for persons applying under 310 CMR 7.18(21)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20), meets the following criteria in addition to those of 310 CMR 7.18(20):

1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;
2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I, and 310 CMR 50.50 through 50.63;
3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and
4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(21)(d).

(d) RACT Emissions Limitations.

1. Any person subject to 310 CMR 7.18(21)(a)1. or 2. shall limit VOC emissions by using only coatings having a VOC content no greater than the emission limitations listed in Tables 310 CMR 7.18(21)(d)1.a. through e. (low-VOC coatings to meet the mass of VOC per volume of coating less water and exempt compounds, as-applied, limits, or low-VOC coatings or a combination of coatings and add-on control equipment on a coating unit to meet the mass of VOC per volume of coating solids limits) or by complying with the requirement in 310 CMR 7.18(21)(d)2. If a coating can be classified in more than one coating category in 310 CMR 7.18(21)(d), then the least stringent coating category limitation shall apply.

Table 310 CMR 7.18(21)(d)1.a. RACT Emission Limitations for Surface Coating of Miscellaneous Plastic Parts				
Coating Category	Mass of VOC per volume of coating less water and exempt compounds, as applied		Mass of VOC per volume of coating solids, as applied	
	kg/l coating	lb/gal coating	kg/l solids	lb/gal solids
General, One Component	0.28	2.3	0.40	3.35
General, Multi-component	0.42	3.5	0.80	6.67
Electric Dissipating Coatings and Shock-free Coatings	0.80	6.7	8.96	74.7
Extreme Performance (two-pack)	0.42	3.5	0.80	6.67
Military Specification (one-pack)	0.34	2.8	0.54	4.52
Military Specification (two-pack)	0.42	3.5	0.80	6.67
Metallic	0.42	3.5	0.80	6.67
Mold-seal	0.76	6.3	5.24	43.7
Multi-colored Coatings	0.68	5.7	3.04	25.3
Optical Coatings	0.80	6.7	8.96	74.7
Vacuum-metallizing	0.80	6.7	8.96	74.7

7.18: continued

Table 310 CMR 7.18(21)(d)1.b. RACT Emission Limitations for Automotive/Transportation Coatings ¹				
Coating Category	Mass of VOC per volume of coating less water and exempt compounds, as applied		Mass of VOC per volume of coating solids, as applied	
	kg/l coating	lb/gal coating	kg/l solids	lb/gal solids
High Bake Coatings - Interior and Exterior Parts				
Flexible Primer	0.54	4.5	1.39	11.58
Non-flexible Primer	0.42	3.5	0.80	6.67
Basecoat	0.52	4.3	1.24	10.34
Clear Coat	0.48	4.0	1.05	8.76
Non-Basecoat/Clear Coat	0.52	4.3	1.24	10.34
Low Bake/Air-dried coatings- Exterior Parts				
Primers	0.58	4.8	1.66	13.80
Basecoat	0.60	5.0	1.87	15.59
Clear Coat	0.54	4.5	1.39	11.58
Non-basecoat/Clear Coat	0.60	5.0	1.87	15.59
Low Bake/Air-dried Coatings - Interior Parts	0.60	5.0	1.87	15.59
Touchup and Repair Coatings	0.62	5.2	2.13	17.72

¹For automotive coatings which are red, yellow, and black, except touch-up and repair coatings, the limitation is determined by multiplying the appropriate limitation in Table 310 CMR 7.18(21)(d)1.b. by 1.15.

Table 310 CMR 7.18(21)(d)1.c. RACT Emission Limitations for Business Machine Coatings				
Coating Category	Mass of VOC per volume of coating less water and exempt compounds, as applied		Mass of VOC per volume of coating solids, as applied	
	kg/l coating	lb/gal coating	kg/l solids	lb/gal solids
Primers	0.35	2.9	0.57	4.80
Topcoat	0.35	2.9	0.57	4.80
Texture Coat	0.35	2.9	0.57	4.80
Fog Coat ¹	0.26	2.2	0.38	3.14
Touchup and Repair	0.35	2.9	0.57	4.80

¹ A fog coat shall not be applied at a thickness of more than 0.5 mils of coating solids.

Table 310 CMR 7.18(21)(d)1.d. RACT Emission Limitations for Pleasure Craft Surface Coatings				
Coating Category	Mass of VOC per volume of coating less water and exempt compounds, as applied		Mass of VOC per volume of coating solids, as applied	
	kg/l coating	lb/gal coating	kg/l solids	lb/gal solids
Extreme High Gloss Topcoat	0.60	5.0	1.87	15.6
High Gloss Topcoat	0.42	3.5	0.80	6.7
Pretreatment Wash Primers	0.78	6.5	6.67	55.6
Finish Primer/Surfacer	0.42	3.5	0.80	6.7
High Build Primer Surfacer	0.34	2.8	0.55	4.6
Aluminum Substrate Antifoulant Coating	0.56	4.7	1.53	12.8
Antifouling Sealer/Tie Coat	0.42	3.5	0.80	6.7
Other Substrate Antifoulant Coating	0.40	3.4	0.75	6.3
All other pleasure craft surface coatings for metal or plastic	0.42	3.5	0.80	6.7

7.18: continued

Table 310 CMR 7.18(21)(d)1.e. RACT Emission Limitations for Motor Vehicle Materials		
Coating Category	Mass of VOC per volume of coating less water and exempt compounds, as applied	
	kg/l coating	lb/gal coating
Motor vehicle cavity wax; Motor vehicle sealer; Motor vehicle deadener; Motor vehicle underbody coating; Motor vehicle trunk interior coating	0.65	5.4
Motor vehicle bedliner; Motor vehicle gasket/gasket sealing material	0.20	1.7
Motor vehicle lubricating wax/compound	0.70	5.8

2. Any person may achieve an overall VOC control efficiency of at least 90% by weight using add-on air pollution capture and control equipment instead of complying with the requirements of 310 CMR 7.18(21)(d)1.

(e) Application Methods. Unless complying with 310 CMR 7.18(21)(a)1. or 2. by means of 310 CMR 7.18(21)(d)2., all coatings shall be applied using one or more of the following:

1. electrostatic spray application;
2. HVLP spray;
3. flow coat;
4. roller coat;
5. dip coat, including electrodeposition;
6. airless spray;
7. air-assisted airless spray; or
8. a coating application method capable of achieving a transfer efficiency equivalent to or greater than that achieved by HVLP, as approved by EPA.

(f) Work Practices for Coating and Cleaning Operations. Any person subject to 310 CMR 7.18(21) shall comply with the work practices of 310 CMR 7.18(31)(e).

7.18: continued

(g) Plan and Extension Submittal Requirements.

1. Any person subject to 310 CMR 7.18(21)(a)1. or 2. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(21)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).

2. Any person subject to 310 CMR 7.18(21)(a)1. or 2. who chooses to apply for an extension under 310 CMR 7.18(21)(c) shall comply with 310 CMR 7.18(20).

(h) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(21)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed, if necessary to determine emissions; and
6. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(i) Testing Requirements. Any person subject to 310 CMR 7.18(21)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(21). Testing shall be conducted in accordance with EPA Method 24 or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. If acceptable to the Department and EPA, manufacturer's formulation data may be used to demonstrate compliance with coating VOC content limitations. In the case of a dispute, the VOC content determined using the EPA Method shall prevail, unless a person is able to demonstrate to the satisfaction of the Department and EPA that the manufacturer's formulation data are correct. EPA Method 25A shall be used when:

1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;
2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

(22) Leather Surface Coating.

(a) Applicability. 310 CMR 7.18(22) applies in its entirety to any person who owns, leases, operates or controls leather surface coating line(s) which in total have the potential to emit, before the application of air pollution control equipment, equal to or greater than 50 tons per year of volatile organic compounds.

(b) Reasonably Available Control Technology Requirements. On or after January 1, 1994, unless exempted by 310 CMR 7.18(22)(c) or granted a non-renewable extension by the Department under 310 CMR 7.18(22)(d), no person subject to 310 CMR 7.18(22)(a) shall cause, suffer, allow or permit emissions from any leather surface coating line in excess of 27.4 lbs VOC/gallon of solids as applied.

(c) Exemptions. The requirements of 310 CMR 7.18(22)(b) do not apply to:

1. a. any person subject to 310 CMR 7.18(22)(a) who is able to demonstrate to the Department that, since January 1, 1990, the leather surface coating line(s) have not, in total, emitted, before the application of air pollution control equipment, greater than or equal to 50 tons per year of volatile organic compounds; and
 - b. provided the person obtains and complies with a federally enforceable emission limit which restricts the potential emissions to below 50 tons per year; and
 - c. provided the person complies with of 310 CMR 7.18(22)(h).
2. any person subject to 310 CMR 7.18(22)(a) who, according to the Department, has complied with 310 CMR 7.18(17) prior to January 1, 1993.

7.18: continued

(d) Extensions.

1. Any person subject to 310 CMR 7.18(22)(b) may apply in writing to the Department for a non-renewable extension of the implementation deadline. The person must apply to the Department for the non-renewable extension at the same time the person submits the emission control plan required by 310 CMR 7.18(20).

a. the emission control plan proposes to reduce emissions through toxics use reduction techniques as defined in M.G.L. c. 21I; and,

b. the toxics use reduction techniques contained in the emission control plan are approved by a Toxics Use Reduction Planner certified under M.G.L. c. 21I; (this may be an employee at the facility who is certified as Toxics Use Reduction Planner); and,

c. implementation of the plan must meet the emission limitations of 310 CMR 7.18(22)(b) or achieve a 85% emissions reduction, whichever is greater, through toxics use reduction techniques, as calculated on a mass of VOC emitted per gallons of solids as applied or per unit of production; and,

d. the emission control plan must also contain contingency measures to meet the RACT emission limitation in 310 CMR 7.18(22)(b); such measures must automatically take effect if the emissions reductions through toxics use reduction techniques do not satisfy 310 CMR 7.18(22)(b).

(e) Plan Submittal Requirements. Any person who owns, leases, operates or controls a leather surface coating line(s) subject to 310 CMR 7.18(22)(a) must submit an emissions control plan, and have the plan approved by the Department under 310 CMR 7.18(20).

(f) Continuous Compliance. Any person who owns, leases, operates or controls a leather surface coating line(s) subject to 310 CMR 7.18(22)(a) shall maintain continuous compliance at all times with their approved emissions control plan. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance may include considerations of transfer efficiency provided that the baseline transfer efficiency is equal to or greater than 65%, and the transfer efficiency test method is detailed in the emission control plan (310 CMR 7.18(20)) approved by the Department.

(g) Recordkeeping Requirements. Any person who owns, leases, operates or controls a leather surface coating line(s) subject to 310 CMR 7.18(22)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved emission control plan (310 CMR 7.18(20) or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed;
6. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(h) Testing Requirements. Any person who owns, leases, operates or controls a leather surface coating line(s) subject to 310 CMR 7.18(22)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(22). Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(23) Wood Products Surface Coating.

(a) Applicability. 310 CMR 7.18(23) applies in its entirety to any person who owns, leases, operates or controls wood products surface coating line(s) which in total have the potential to emit, before the application of air pollution control equipment, equal to or greater than 50 tons per year of volatile organic compounds.

7.18: continued

(b) Reasonably Available Control Technology Requirements. On or after January 1, 1994, unless exempted by 310 CMR 7.18(23)(c) or granted a non-renewable extension by the Department under 310 CMR 7.18(23)(d), no person subject to 310 CMR 7.18(23)(a) shall cause, suffer, allow or permit emissions from any wood products surface coating line in excess of the emission limitations set forth in 310 CMR 7.18(23)(e).

(c) Exemptions. The requirements of 310 CMR 7.18(23)(b) do not apply to:

1. a. any person subject to 310 CMR 7.18(23)(a) who is able to demonstrate to the Department that, since January 1, 1990, the wood products surface coating line(s) have not, in total, emitted, before the application of air pollution control equipment, greater than or equal to 50 tons per year of volatile organic compounds; and
 - b. provided the person obtains and complies with a federally enforceable emission limit which restricts the potential emissions to below 50 tons per year; and
 - c. provided the person complies with of 310 CMR 7.18(23)(i).
2. any person subject to 310 CMR 7.18(23)(a) who, according to the Department, has complied with 310 CMR 7.18(17) prior to January 1, 1993.

(d) Extensions.

1. Any person subject to 310 CMR 7.18(23)(b) may apply in writing to the Department for a non-renewable extension of the implementation deadline in 310 CMR 7.18(23)(b). The person must apply to the Department for the non-renewable extension at the same time the person submits the emission control plan required by 310 CMR 7.18(20) and (23)(e).
2. The Department will consider a non-renewable extension of the deadline in 310 CMR 7.18(23)(b) until no later than January 1, 1995, provided the emission control plan submitted for approval 310 CMR 7.18(20), meets the following criteria in addition to those of 310 CMR 7.18(20):

- a. the emission control plan proposes to reduce emissions through toxics use reduction techniques as defined in M.G.L. c. 21I; and,
- b. the toxics use reduction techniques contained in the emission control plan are approved by a Toxics Use Reduction Planner certified under M.G.L. c. 21I; (this may be an employee at the facility who is certified as Toxics Use Reduction Planner); and,
- c. implementation of the plan must meet the emission limitations of 310 CMR 7.18(23)(e) or achieve a 85% reduction in emissions, whichever is greater, through toxics use reduction techniques, as calculated on a mass of VOC emitted per gallon of solids as applied or per unit of production; and,
- d. the emission control plan must also contain contingency measures to meet RACT emission limitations of 310 CMR 7.18(23)(e); such measures must automatically take effect if the emissions reductions achieved through toxics use reduction techniques do not satisfy 310 CMR 7.18(23)(e).

(e) RACT Emissions Limitations. Any person subject to 310 CMR 7.18(23)(b) shall comply with the emissions limitations in Table 310 CMR 7.18(23)(e)1. If more than one emission limitation applies then, the coating must comply with the least stringent emission limitation.

Table 310 CMR 7.18(23)(e)1.

RACT Emission Limitations for Surface Coating of Wood Products

Emission Source	Emission Limitation (lbs VOC/gal solids as applied)
Semitransparent stain	89.4
Wash coat	35.6
Opaque stain	13.0
Sealer	23.4
Pigmented coat	15.6
Clear topcoat	23.4

7.18: continued

(f) Plan Submittal Requirements. Any person who owns, leases, operates or controls a wood products surface coating line(s) subject to 310 CMR 7.18(23)(a) must submit an emissions control plan, and have the plan approved by the Department under 310 CMR 7.18(20).

(g) Continuous Compliance. Any person who owns, leases, operates or controls a wood products surface coating line(s) subject to 310 CMR 7.18(23)(a) shall maintain continuous compliance at all times with their approved emissions control plan. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a). Demonstrations of compliance may include considerations of transfer efficiency provided that the baseline transfer efficiency is greater than 65%, and the transfer efficiency test method is detailed in the emission control plan (310 CMR 7.18(20)) approved by the Department.

(h) Recordkeeping Requirements. Any person who owns, leases, operates or controls a wood products surface coating line(s) subject to 310 CMR 7.18(23)(a) shall prepare and maintain daily records sufficient to demonstrate compliance consistent with the applicable averaging time as stated in 310 CMR 7.18(2)(a). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved emission control plan (310 CMR 7.18(20)) or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of coating(s) used;
2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
3. solids content of any coating(s) used;
4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
5. quantity of product processed;
6. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(i) Testing Requirements. Any person who owns, leases, operates or controls a wood products surface coating line(s) subject to 310 CMR 7.18(23)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(23). Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(24) Flat Wood Paneling Surface Coating.(a) Applicability.

1. On or after January 1, 1994, and prior to March 9, 2020, 310 CMR 7.18(24)(d)1. and (f) through (h) apply to any person who owns, leases, operates or controls a flat wood paneling surface coating line(s) which emits, before the application of air pollution control equipment, equal to or greater than 15 pounds per day of volatile organic compounds (VOC).
2. On and after March 9, 2020, any person who owns, leases, operates, or controls flat wood paneling surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with 310 CMR 7.18(24)(c), (d)2., and (f) through (h).
3. On or after March 9, 2018, any person who owns, leases, operates, or controls flat wood paneling surface coating operations and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with the work practices of 310 CMR 7.18(24)(e) for coating and cleaning operations.

(b) Exemptions.

1. The requirements of 310 CMR 7.18(24)(d)1. do not apply to:
 - a. any person subject to 310 CMR 7.18(24)(a)1. who is able to demonstrate to the Department that, since January 1, 1990, the flat wood paneling surface coating line(s) have not, in total, emitted, before the application of air pollution control equipment, greater than or equal to 15 pounds per day of volatile organic compounds; and

7.18: continued

- b. provided the person obtains and complies with a federally enforceable emission limit which restricts the potential emissions to below 15 pounds per day; and
- c. provided the person complies with the requirements of 310 CMR 7.18(24)(h).
- 2. The requirements of 310 CMR 7.18(24) do not apply to any person subject to 310 CMR 7.18(24)(a)1. who, according to the Department, has complied with 310 CMR 7.18(17) prior to January 1, 1993.
- (c) Extensions. Any person subject to 310 CMR 7.18(24)(a)2. may apply in writing to the Department for a nonrenewable extension of the implementation deadline in 310 CMR 7.18(24)(a)2. by complying with 310 CMR 7.18(24)(f). The Department will consider a nonrenewable extension of the deadline in 310 CMR 7.18(24)(a)2. for persons applying under 310 CMR 7.18(24)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):
 - 1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;
 - 2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I, and 310 CMR 50.50 through 50.63;
 - 3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and
 - 4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(24)(d).
- (d) Reasonably Available Control Technology Requirements.
 - 1. Any person subject to 310 CMR 7.18(24)(a)1. shall comply with the emissions limits in Table 310 CMR 7.18(24)(d)1. If more than one emission limitation applies then the coating must comply with the least stringent emission limitation.

Table 310 CMR 7.18(24)(d)1. RACT Emission Limitations for Flat Wood Paneling Surface Coating	
Emission Source	Emission Limitation (lbs VOC/1000 square feet coated)
Printed hardwood panels and thin particleboard panels	6.0
Natural finish hardwood plywood panels	12.0
Class II finish on hardboard panels	10.0

- 2. Any person subject to 310 CMR 7.18(24)(a)2. shall limit VOC emissions by using only coatings having a VOC content no greater than the emission limitations in Table 310 CMR 7.18(24)(d)2. (low-VOC coatings to meet the mass of VOC per volume of coating less water and exempt compounds, as-applied, limits, or low-VOC coatings or a combination of coatings and add-on control equipment on a coating unit to meet the mass of VOC per volume of coating solids limits) or by complying with the requirement in 310 CMR 7.18(24)(d)3.

Table 310 CMR 7.18(24)(d)2. RACT Emission Limitations for Flat Wood Paneling Surface Coating				
Surface Coatings Applied to the Following Flat Wood Paneling Categories	Mass of VOC per volume of coating less water and exempt compounds, as applied		Mass of VOC per volume of coating solids, as applied	
	lb/gal coating	grams/l coating	lb/gal solids	grams/l solids
Printed interior panels made of hardwood, plywood, or thin particleboard; Natural finish hardwood plywood panels; Class II finish on hardboard panels; Tileboard; Exterior siding	2.1	250	2.9	350

7.18: continued

3. Any person may achieve an overall VOC control efficiency of at least 90% by weight using add-on air pollution capture and control equipment instead of complying with the requirements of 310 CMR 7.18(24)(d)2.
 - (e) Work Practices for Coating and Cleaning Operations. Any person subject to 310 CMR 7.18(24) shall comply with the work practices of 310 CMR 7.18(31)(e).
 - (f) Plan and Extension Submittal Requirements.
 1. Any person subject to 310 CMR 7.18(24)(a)1. or 2. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(24)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).
 2. Any person subject to 310 CMR 7.18(24)(a)2. who chooses to apply for an extension under 310 CMR 7.18(24)(c) shall comply with 310 CMR 7.18(20).
 - (g) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(24)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved emission control plan pursuant to 310 CMR 7.18(20) or upon request. Such records shall include, but are not limited to:
 1. identity, quantity, formulation and density of coating(s) used;
 2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;
 3. solids content of any coating(s) used;
 4. actual operational and emissions characteristics of the coating line and any appurtenant emissions capture and control equipment;
 5. quantity of product processed, if necessary to determine emissions; and
 6. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.
 - (h) Testing Requirements. Any person subject to 310 CMR 7.18(24)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(24). Testing shall be conducted in accordance with EPA Method 24 or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. EPA Method 25A shall be used when:
 1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;
 2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
 3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.
- (25) Offset Lithographic Printing and Letterpress Printing.
- (a) Applicability.
 1. On or after January 1, 1994, any person who owns, leases, operates or controls a facility with offset lithographic presses which, in total, have the potential to emit, before the application of air pollution control equipment, equal to or greater than 50 tons per year of volatile organic compounds (VOC) shall comply with 310 CMR 7.18(25)(d) through (k) and (m) through (p). On or after March 9, 2020 any person subject to 310 CMR 7.18(25)(a)1. shall comply with 310 CMR 7.18(25)(l) and is no longer subject to 310 CMR 7.18(25)(e) or (f).
 2. On or after March 9, 2020, any person who owns, leases, operates or controls a heatset web offset lithographic printing press or a heatset web letterpress printing press, which has the potential to emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 25 tons per rolling 12 month period of VOC from petroleum heatset inks, shall comply with 310 CMR 7.18(25)(d), (l) and (n) through (p).
 3. On or after March 9, 2020, any person who owns, leases, operates or controls offset lithographic printing operations and related cleaning operations, which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with 310 CMR 7.18(25)(d), (g) through (k), (o), and (p).

7.18: continued

4. On or after March 9, 2018, any person who owns, leases, operates or controls offset lithographic printing operations and related cleaning operations, or letterpress printing operations and related cleaning operations, which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12-month period shall comply with 310 CMR 7.18(25)(m).
- (b) Reasonably Available Control Technology Requirements. [Reserved.]
- (c) Exemptions.
1. The requirements of 310 CMR 7.18(25)(a)1., with the exception of 310 CMR 7.18(25)(l), do not apply to:
 - a. i. any person subject to 310 CMR 7.18(25)(a)1. who is able to demonstrate to the Department that, since January 1, 1990, the offset lithographic presses have not, in total, emitted, before the application of air pollution control equipment, greater than or equal to 50 tons per year of volatile organic compounds; and
 - ii. provided the person obtains and complies with a federally enforceable emission limit which restricts the potential emissions of the offset lithographic presses to below 50 tons per year; and,
 - iii. provided the person complies with 310 CMR 7.18(25)(k), (m), and (p).
 - b. any person subject to 310 CMR 7.18(25)(a)1. who, according to the Department, has complied with 310 CMR 7.18(17) prior to January 1, 1993.
 2. The requirements of 310 CMR 7.18(25)(a)2. do not apply provided:
 - a. the person obtains and complies with a federally enforceable emission limitation which restricts the potential emissions of the heatset press to below 25 tons per year;
 - b. the person is using the heatset press for book printing; or
 - c. the person is using a heatset press with a maximum web width of 22 inches or less.
 3. The requirements of 310 CMR 7.18(25)(a)3. do not apply provided:
 - a. the person is using a press that has a total fountain solution reservoir of less than one gallon; or
 - b. the person is using a press that is sheet-fed and has a maximum sheet size of 11 by 17 inches or smaller.
 4. Any person subject to 310 CMR 7.18(25)(a)1. or 4. may use up to 110 gallons per rolling 12-month period of cleaning materials that do not meet 310 CMR 7.18(25)(m)2.
- (d) Extensions.
1. Any person subject to 310 CMR 7.18(25)(a)2. or 3. may apply in writing to the Department for a non-renewable extension of the implementation deadline in 310 CMR 7.18(25)(a)2. or 3. by complying with 310 CMR 7.18(25)(n).
 2. The Department will consider a non-renewable extension of the deadline in 310 CMR 7.18(25)(a)2. or 3. for persons applying under 310 CMR 7.18(25)(d) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):
 - a. Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;
 - b. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I and 310 CMR 50.50 through 50.63;
 - c. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and,
 - d. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(25)(l) for persons subject to 310 CMR 7.18(25)(a)2. and 310 CMR 7.18(25)(g) through (k) for persons subject to 310 CMR 7.18(25)(a)3.
- (e) Heatset Offset Lithographic Requirements. Any person subject to 310 CMR 7.18(25)(a)1. who owns, leases, operates, or controls a heatset offset lithographic printing press which is equipped with an air pollution control device used to reduce VOC emissions, and which device was installed on or before November 1, 1992 shall either:

7.18: continued

1. reduce VOC emissions from the dryer exhaust vent by 85% weight; or,
 2. maintain a maximum exhaust VOC concentration of 20 parts per million by volume (ppmv) of non-methane hydrocarbons as carbon in the control device exhaust, whichever is less stringent.
- (f) Heatset Offset Lithographic Requirements. Any person subject to 310 CMR 7.18(25)(a)1. who owns, leases, operates, or controls a heatset offset lithographic printing press which is equipped with an air pollution control device used to reduce VOC emissions, and which device was installed after November 1, 1992 shall either:
1. reduce VOC emissions from the dryer exhaust vent by 90% weight; or,
 2. maintain a maximum exhaust VOC concentration of 20 parts per million by volume (ppmv) of non-methane hydrocarbons as carbon in the control device exhaust, whichever is less stringent.
- (g) Sheet-fed Offset Lithographic Requirements. Any person subject to 310 CMR 7.18(25)(a)1. or 3. who owns, leases, operates, or controls a sheet-fed offset lithographic press, and who uses alcohol in the fountain solution, shall:
1. maintain a VOC concentration of 5% or less by weight, as applied, in the fountain solution; or,
 2. maintain a VOC concentration of 8% or less by weight, as applied, in the fountain solution, and refrigerate the fountain solution to a temperature below 60°F.
- (h) Heatset Web-fed Offset Lithographic Requirements. Any person subject to 310 CMR 7.18(25)(a)1. or 3., who owns, leases, operates, or controls a heatset web-fed offset lithographic press which uses alcohol in the fountain solution, shall:
1. Maintain a VOC concentration of 1.6% or less by weight, as applied, in the fountain solution; or,
 2. Maintain a VOC concentration of 3% or less by weight, as applied, in the fountain solution, and refrigerate the fountain solution to a temperature below 60°F.
- (i) Non-heatset Web-fed Offset Lithographic Printing Requirements. Any person subject to 310 CMR 7.18(25)(a)1. or 3., who owns, leases, operates, or controls a non-heatset web-fed offset lithographic printing press, shall use zero percent alcohol in the fountain solution, and shall maintain a total VOC concentration in the fountain solution of 2.5% or less by weight.
- (j) Alcohol Substitute Requirements. Any person subject to 310 CMR 7.18(25)(a)1. or 3., who owns, leases, operates, or controls an offset lithographic press with fountain solution with alcohol substitutes, containing a concentration of VOC in the fountain solution at 3.0% by weight or less, shall be considered in compliance with the VOC emission limitations for fountain solutions contained in 310 CMR 7.18(25).
- (k) Fountain Solution Mixing Requirements. Any person subject to 310 CMR 7.18(25), who owns, leases, operates, or controls an offset lithographic press shall keep the fountain solution mixing tanks covered, except for necessary operator access.
- (l) Heatset Web Offset Lithographic Printing Press and Heatset Web Letterpress Printing Press Requirements. Any person subject to 310 CMR 7.18(25)(a)2. who owns, leases, operates, or controls a heatset web offset lithographic printing press or a heatset web letterpress printing press, shall comply with 310 CMR 7.18(25)(l)1.a. or b. or 310 CMR 7.18(25)(l)2.
1. Press control requirements.
 - a. A heatset dryer controlled by an air pollution control device whose first installation date was prior to March 9, 2020 shall achieve at least 90% VOC control efficiency by weight.
 - b. A heatset dryer controlled by an air pollution control device whose first installation date was on or after March 9, 2020 shall achieve at least 95% VOC control efficiency by weight.
 2. The maximum control device exhaust VOC concentration shall be 20 parts per million by volume dry basis (ppmvd) of VOC as hexane.
- (m) Work Practices and Emission Limitations for Printing and Cleaning Operations. Any person subject to 310 CMR 7.18(25), who owns, leases, operates, or controls an offset lithographic press or letterpress printing press, and who uses cleaning solutions containing VOC to wash ink from the blanket or other accessible press components shall meet the following criteria:
1. Any person subject to 310 CMR 7.18(25) shall comply with the work practices of 310 CMR 7.18(31)(e).
 2. Any person subject to 310 CMR 7.18(25) shall only use cleanup solutions that either:

7.18: continued

- a. do not exceed 70% by weight VOC; or
 - b. have a VOC composite partial pressure of ten mmHg or less at 20°C (68°F)
- (n) Plan and Extension Submittal Requirements.
- 1. Any person subject to 310 CMR 7.18(25)(a)1., 2. or 3. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(25)(e), (f), or (l) shall submit an emission control plan in accordance with 310 CMR 7.18(20).
 - 2. Any person subject to 310 CMR 7.18(25)(a)2. or 3. who chooses to apply for an extension under 310 CMR 7.18(25)(d) shall comply with 310 CMR 7.18(20).
- (o) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(25)(a) shall prepare and maintain records sufficient to demonstrate compliance with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept onsite for five years and shall be made available to representatives of the Department or EPA upon request. Such records shall include, but are not limited to:
- 1. Identity, formulation (as determined by the manufacturer's formulation data), density, and quantity for each VOC containing material used, including but not limited to:
 - a. alcohol;
 - b. alcohol substitutes;
 - c. fountain concentrate;
 - d. printing Ink; and
 - e. cleaning Solution.
 - 2. For heatset offset lithographic printing presses and heatset offset letterpress printing presses using emissions control equipment, the recordkeeping requirements specified in 310 CMR 7.18(2)(e);
 - 3. For offset lithographic printing presses the percent of VOC by weight in the fountain solution as monitored whenever new fountain solution is mixed, alcohol is added to the fountain solution;
 - 4. For offset lithographic printing presses subject to the refrigeration requirements of 310 CMR 7.18(25)(g) or (h), the temperature of the fountain solution as recorded on a once per shift basis;
 - 5. Total VOC content of each material used for each printing press subject to 310 CMR 7.18(25) (sum of 310 CMR 7.18(25)(o)1.a. through e.);
 - 6. Total VOC content of all materials used for all printing presses subject to 310 CMR 7.18(25) (sum of 310 CMR 7.18(25)(o)5. for all printing presses); and,
 - 7. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.
- (p) Testing Requirements. Any person subject to 310 CMR 7.18(25)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(25). Testing shall be conducted in accordance with EPA Method 24, Method 25 or Method 25A as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. EPA Method 25A shall be used when:
- 1. An exhaust concentration of less than or equal to 50 parts per million by volume (ppmv) as carbon is required to comply with the applicable limitation;
 - 2. The inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
 - 3. The high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.
- (26) Textile Finishing.
- (a) Applicability. 310 CMR 7.18(26) applies in its entirety to any person who owns, leases, operates or controls a textile finishing facility which has the potential to emit, before the application of air pollution control equipment, equal to or greater than 50 tons per year of volatile organic compounds.

NON-TEXT PAGE

7.18: continued

- (b) Reasonably Available Control Technology Requirements. On or after January 1, 1994, unless exempted by 310 CMR 7.18(26)(c), or granted a non-renewable extension by the Department under 310 CMR 7.18(26)(d), no person subject to 310 CMR 7.18(26)(a) shall cause, suffer, allow or permit emissions of volatile organic compounds in excess of the emission limitations set forth in 310 CMR 7.18(26)(e).
- (c) Exemptions. The requirements of 310 CMR 7.18(26)(b) do not apply to:
1. a. any person subject to 310 CMR 7.18(26)(a) who is able to demonstrate to the Department that, since January 1, 1990, the textile finishing facility has not emitted, before the application of air pollution control equipment, greater than or equal to 50 tons per years of volatile organic compounds; and
 - b. provided the person and complies with a federally enforceable emission limit which restricts the potential emissions to below 50 tons per year; and,
 - c. provided the person complies with 310 CMR 7.18(26)(i).
 2. any person subject to 310 CMR 7.18(26)(a) who, according to the Department, has complied with 310 CMR 7.18(17) prior to January 1, 1993.
- (d) Extensions.
1. Any person subject to 310 CMR 7.18(26)(a) may apply in writing to the Department for a non-renewable extension of the implementation deadline. The person must apply to the Department for the extension at the same time the person submits the emission control plan required by 310 CMR 7.18(20).
 2. The Department will consider a non-renewable extension of the deadline in 310 CMR 7.18(26)(a) until no later than January 1, 1995, provided the emission control plan submitted for approval meets the following criteria in addition to those of 310 CMR 7.18(20):
 - a. the emission control plan proposes to reduce emissions through toxics use reduction techniques as defined in M.G.L. c. 21I; and,
 - b. the toxics use reduction techniques contained in the emission control plan are approved by a Toxics Use Reduction Planner certified under M.G.L. c. 21I; (this may be an employee at the facility who is certified as Toxics Use Reduction Planner); and,
 - c. implementation of the plan must meet the emission limitations of 310 CMR 7.18(26)(e) or achieve an 85% emissions reduction, whichever is greater, through toxics use reduction techniques, as calculated on a mass of VOC emitted per gallon of solids as applied or per unit of production; and,
 - d. the emission control plan must also contain contingency measures to meet the RACT emission limits of 310 CMR 7.18(26)(e); such measures must automatically take effect if the emissions reductions achieved through toxics use reduction techniques do not satisfy 310 CMR 7.18(26)(e) or achieve an 85% reduction.
- (e) RACT Emission Limitations.
1. No person who owns, leases, operates, or controls a rotary screen or roller printing press subject to 7.18(26)(a) shall use a print paste formulation containing greater than 0.5 pound of VOC per pound of solids, as applied.
 2. No person who owns, leases, operates, or controls a final finish application line subject to 7.18(26)(a) shall use a finish formulation containing greater than 0.5 pound VOC per pound of solids, as applied.
- (f) Plan Submittal Requirement. Any person subject to 310 CMR 7.18(26)(a) must submit an emission control plan, and have the plan approved by the Department under 310 CMR 7.18(20).
- (g) Continuous Compliance. Any person subject to 310 CMR 7.18(26)(a) shall maintain continuous compliance at all times with their approved emission control plan. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a).
- (h) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(26)(a) shall maintain records sufficient to demonstrate compliance. Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department or EPA upon request. Such records shall include, but are not limited to:

7.18: continued

1. identity, quantity, formulation, solids content, and density of VOC containing materials used, including but not limited to:
 - a. print pastes
 - b. dyeing formulations
 - c. finishing formulations
 - d. clean up solvents;
 2. actual operational and emissions characteristics of the textile finishing process equipment and any appurtenant emissions capture and control equipment;
 3. quantity of textile processed; and
 4. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.
- (i) Testing Requirements. Any person subject to 310 CMR 7.18(26)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(26). Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.
- (27) Coating Mixing Tanks.
- (a) Applicability. On or after January 1, 1994, no person who owns, leases, operates, or controls a coating mixing tank which emits, before the application of air pollution control equipment, 15 pounds of volatile organic compounds per day shall cause, suffer, allow or permit emissions therefrom, unless the person complies with the standards set forth in 310 CMR 7.18(27)(b) and (c).
 - (b) Portable Coating Mixing Tank Requirements.
 1. Any person subject to 310 CMR 7.18(27)(a) shall keep any portable coating mixing tanks which emits, before application of air pollution control equipment, 15 pounds per day of volatile organic compounds, covered with a lid or other method approved by the Department, except to add ingredients, take samples, or perform maintenance.
 2. A lid used to comply with 310 CMR 7.18(27)(b)1. shall:
 - a. extend at least 0.5 inch beyond the outer rim of the tank or be attached to the rim of the tank; and,
 - b. be maintained so that when in place, the lid maintains contact with the rim of the portable coating mixing tank for at least 90% of the rim's circumference; and,
 - c. if necessary, have an opening to allow for insertion of a mixer shaft, which opening shall be covered after insertion of the mixer, except to allow adequate clearance for the mixer shaft.
 - (c) Stationary Coating Mixing Tank Requirements.
 1. Any person subject to 310 CMR 7.18(27)(a) shall keep any stationary coating mixing tank, which emits, before application of air pollution control equipment, 15 pounds per day of volatile organic compounds, covered with a lid or other method approved by the Department, except to add ingredients, take samples, or perform maintenance.
 2. A lid used to comply with 310 CMR 7.18(27)(c)1. shall:
 - a. extend at least 0.5 inch beyond the outer rim of the tank or be attached to the rim of the tank; and,
 - b. be maintained so that when in place, the lid maintains contact with the rim of the portable coating mixing tank for at least 90% of the rim's circumference; and,
 - c. if necessary, have an opening to allow for insertion of a mixer shaft, which opening shall be covered after insertion of the mixer, except to allow adequate clearance for the mixer shaft.
 - (d) Plan Submittal Requirement. Any person subject to 310 CMR 7.18(27)(a), who is:
 1. not subject to any other section of 310 CMR 7.18, excluding 310 CMR 7.18(1) and (2); and,
 2. who owns, leases, operates or controls a coating mixing tank facility with the potential to emit 50 tons per year of VOC, must submit an emission control plan, and have the plan approved by the Department under 310 CMR 7.18(20). Any person subject to 310 CMR 7.18(27)(a) who does not meet the two above conditions, is not required to submit an emission control plan for approval under 310 CMR 7.18(20).

7.18: continued

(e) Continuous Compliance. Any person subject to 310 CMR 7.18(27)(a) shall maintain continuous compliance at all times.

(f) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(27)(a) shall maintain records sufficient to demonstrate compliance. Records kept to demonstrate compliance shall be kept on site for five years, and shall be made available to representatives of the Department or EPA upon request. Such records shall include, but are not limited to:

1. the date and description of any repair or replacement of a mixing tank lid.
2. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(28) Automotive Refinishing.

(a) Applicability. 310 CMR 7.18(28) applies to any person who sells, offers for sale, or manufactures automotive refinishing coatings for sale in Massachusetts, or who owns, leases, operates or controls an automotive refinishing facility.

(b) Reasonably Available Control Technology (RACT) Requirements.

1. On or after August 1, 1995, no person subject to 310 CMR 7.18(28)(a) who manufactures automotive refinishing coatings, shall manufacture automotive refinishing coatings for sale in Massachusetts which, when prepared for use according to the manufacturer's instructions, contain VOC in excess of the limitations set forth in 310 CMR 7.18(28)(c).

2. On or after August 1, 1995, no person subject to 310 CMR 7.18(28)(a) who manufactures automotive refinishing coatings, shall manufacture automotive refinishing coating for sale in Massachusetts unless the person complies with 310 CMR 7.18(28)(d) and (k).

3. No person shall sell or offer for sale any automotive refinishing coating manufactured after August 1, 1995, unless the coating satisfies the VOC limitations and labeling requirements specified in 310 CMR 7.18(28)(c) and (d), respectively.

4. On or after August 1, 1995, no person who owns, leases, operates, or controls an automotive refinishing facility shall refinish a vehicle or any part thereof unless the person complies with the standards set forth in 310 CMR 7.18(28)(e) through (h), and any coatings used, which are manufactured after August 1, 1995, satisfy the requirements specified in 310 CMR 7.18(28)(c) and (d).

(c) RACT Emission Limits. No person subject to 310 CMR 7.18(28)(a) shall manufacture for sale in Massachusetts, sell, offer for sale, or apply coatings in Massachusetts which exceed the VOC emission limitations in Table 7.18(28)(c), expressed as pounds of VOC per gallon of coating and grams of VOC per liter of coating, excluding water and exempt solvents. If a coating requires the addition of a reducer, hardener, or other additive, in some combination, the manufacturer's recommended amount(s) of reducer, hardener, or other additive added must not cause the coating, as applied, to exceed the applicable VOC limitation.

TABLE 7.18(28)(c)

RACT Emission Limitations for Automotive Refinishing Products

Coating Type	VOC Emission Limitation	
	grams/liter	lbs/gal
Pretreatment Wash Primer	780	6.5
Primer/Primer Surfacer	575	4.8
Primer Sealer	550	4.6
Single-stage Topcoat	600	5.0
Two-stage Topcoat	600	5.0
Three or Four-Stage Topcoat	620	5.2
Specialty Coating	840	7.0

(d) Labeling Requirements. No person subject to 310 CMR 7.18(28)(a) shall manufacture for sale in Massachusetts, sell, offer for sale, or apply automotive refinishing coatings manufactured after August 1, 1995 in Massachusetts unless:

7.18: continued

1. the containers for all subject automotive refinishing coatings display the month and year on which the contents were manufactured, or a batch number or code which indicates whether the contents were manufactured after August 1, 1995. The manufacturer shall supply an explanation of each code to the Department by August 1, 1995, and thereafter, 30 days before the use of any new code; and
 2. the manufacturer provides written instructions for the preparation of all subject automotive refinishing coatings on containers, packaging, or in accompanying literature which includes, but is not limited to, data sheets and wall charts.
 3. the facility owner or operator maintains, in the automotive refinishing facility, the manufacturer's written instructions for the preparation of all subject coatings.
- (e) Alternative Control Requirements. The emission limitations in 310 CMR 7.18(28)(c) shall not apply to any person who owns, leases, operates, or controls an automotive refinishing facility who installs and operates an emissions control system which has received written approval after submitting an emission control plan pursuant to 310 CMR 7.18(20). No such approval shall be issued unless the VOC emissions from coating use at such facility are determined to be less than or equal to those limits specified in Table 7.18(28)(c).
- (f) Good Housekeeping Requirements. In order to minimize solvent evaporation, any person subject to 310 CMR 7.18(28)(a), who owns, leases, operates, or controls an automotive refinishing facility shall:
1. use a surface preparation product containing less than or equal to 1.67 pounds of VOC per gallon of product as applied, including water to clean non-plastic surfaces; and,
 2. use a surface preparation product containing less than or equal to 6.5 pounds of VOC per gallon as applied, to clean plastic surfaces, and,
 3. ensure that rags used during surface preparation or other solvent cleaning operations, fresh and spent solvent, coatings, and sludge are stored in tightly closed containers and are disposed of or recycled properly.
- (g) Equipment Requirements. Any person who is subject to 310 CMR 7.18(28)(a), who owns, leases, operates, or controls an automotive refinishing facility shall comply with the following requirements in addition to 310 CMR 7.18(28)(c) through (f).
1. Coatings must be applied using one of the following methods:
 - a. High Volume Low Pressure (HVLP) spray equipment, operated and maintained in accordance with the manufacturer's recommendations;
 - b. Electrostatic application equipment, operated and maintained in accordance with the manufacturer's recommendations;
 - c. Any other coating application method approved by the Department in writing.
 2. Spray guns must be cleaned in a device that:
 - a. minimizes solvent evaporation during the cleaning, rinsing, and draining operations;
 - b. recirculates solvent during the cleaning operation so that the solvent is reused; and,
 - c. collects spent solvent so that it is available for proper disposal or recycling.
- (h) Training Requirements. Any person who owns, leases, operates, or controls an automotive refinishing facility shall ensure that, on and after November 1, 1995, all spray equipment operators have received training and instruction in the proper operation and maintenance of the spray equipment and spray equipment cleaning device.
- (i) Prohibition of Specification. A person shall not solicit or require for use or specify the application of a coating on a vehicle, or part thereof, if such use or application results in a violation of the provisions of 310 CMR 7.00. The prohibition of 310 CMR 7.18 shall apply to all written or oral contracts under the terms of which any coating which is subject to the provisions of 310 CMR 7.00 is to be applied to any automotive or part thereof within Massachusetts.
- (j) Continuous Compliance. Any person subject to 310 CMR 7.18(28)(a) shall maintain continuous compliance at all times with applicable sections. Compliance averaging times will be met in accordance with the requirements of 310 CMR 7.18(2)(a).
- (k) Compliance Certification Requirements. Each manufacturer of automotive refinishing coatings subject to 310 CMR 7.18(28)(a) shall submit to the Department by August 1, 1995, and biennially thereafter, or when requested in writing by the Department, a document which certifies that each coating is in compliance with 310 CMR 7.00. The document shall include, at a minimum for each surface preparation product or coating to be manufactured after August 1, 1995, the following:

7.18: continued

1. Signature of the responsible official and the name and title of the designated contact person;
 2. Maximum VOC content, including water, of surface preparation products;
 3. Coating brand name and category;
 4. Coating mixing instructions as stated on the container or in literature supplied with the coating;
 5. Maximum VOC content of the coating after mixing according to manufacturer's instructions;
 6. Any other requirements specified by the Department.
- (l) Testing Requirements. Any person subject to 310 CMR 7.18(28)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(28). Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.
- (m) Good Neighbor Requirements. Any person subject to 310 CMR 7.18(28)(a) who owns, leases, operates, or controls an automotive refinishing facility shall prevent emissions of particulates or odors to the ambient air which create a nuisance or condition of air pollution.
- (n) The provisions of 310 CMR 7.18(28)(m) are subject to the enforcement provisions specified in 310 CMR 7.52.
- (o) Exemptions.
1. The requirements of 310 CMR 7.18(28)(b) do not apply to:
 - a. stencil coatings.
 - b. coatings that are sold in nonrefillable aerosol containers.
 2. The requirements of 310 CMR 7.18(28)(g) do not apply to touch-up coatings.
- (p) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(28)(a) must maintain purchase records of coatings and surface preparation products on a monthly basis. The purchase records must be summarized and include:
1. each coating category, coating or coating component, and surface preparation product as identified on the container,
 2. the quantity of each coating, and surface preparation product, and
 3. the VOC content (pounds per gallon) of each coating, and surface preparation product, after mixing according to the manufacturer's instructions.
- Records kept to demonstrate compliance must be kept on site for three years, and must be made available to representatives of the Department upon request.

(29) Bakeries.

- (a) Applicability: 310 CMR 7.18(29) applies in its entirety to any person who owns, leases, operates or controls any bakery which has the potential to emit, before the application of air pollution control equipment, equal to or greater than 50 tons per year of volatile organic compounds.
- (b) Reasonably Available Control Technology Requirements: On or after May 31, 1995, unless exempted under 310 CMR 7.18(29)(c) or (d), no person subject to 310 CMR 7.18(29)(a) shall cause, suffer, allow or permit emissions from any bakery oven unless in compliance with the requirements set forth in 7.18(29)(e).
- (c) Exemption for Small Bakeries: The requirements of 310 CMR 7.18(29) do not apply to:
1. any person who is able to demonstrate to the Department that, since January 1, 1990, the bakery has not emitted, before the application of air pollution control equipment, greater than or equal to 50 tons per year of volatile organic compounds; and
 2. provided the person obtains a permit restriction from the Department under 310 CMR 7.02(9) which restricts potential emissions to below 50 tons per year.
- (d) Exemption for Small Ovens: Any individual baking oven (at an applicable facility) which has not emitted since January 1, 1990, before application of air pollution control equipment, greater than or equal to 25 tons of VOC in any calendar year, is exempt from the requirements of 310 CMR 7.18(29)(e) and (f).
- (e) RACT Requirement: Unless exempted under 310 CMR 7.18(29)(c), no person subject to 310 CMR 7.18(29) shall operate a baking oven unless VOC emissions from such oven are reduced 81% by weight.

7.18: continued

(f) Plan Submittal Requirement: Any person who owns, leases, operates or controls a bakery subject to the requirements of 310 CMR 7.18(29)(e) must submit an emission control plan and have the plan approved by the Department in accordance with the schedule and requirements of 310 CMR 7.18(20), except that bakeries subject to 310 CMR 7.18(29)(e) at the time of promulgation shall submit an emission control plan by April 15, 1995.

(g) Recordkeeping Requirements: Any person operating a bakery applicable to 310 CMR 7.18(29) shall maintain records of operations necessary to demonstrate compliance. Such records shall be retained in the owner's or operator's files for a period of not less than five years and should include, but are not limited to:

1. Monthly records to determine emissions from each oven. Using the formula in EPA's "Alternative Control Technology Document for Bakery Oven Emissions", dated December 1992, or other formula approved by the Department and EPA, such records would include:

- a. formula number;
- b. initial bakers yeast as percent of flour;
- c. total yeast action time;
- d. yeast spike as percent of flour;
- e. spike time;
- f. ethanol emission factor (lbs/ton);
- g. production (tons of bread baked);
- h. total ethanol emissions (tons).

2. Hourly (or continuous) records of control equipment operating parameters such as temperature, pressure drop or other applicable parameters to assure continuous compliance.

(h) Testing Requirements: Any person who owns, leases, operates or controls a bakery subject to 310 CMR 7.18(29) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(29). Testing shall be conducted in accordance with EPA Methods 25, 25A, and/or 18 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

(30) Adhesives and Sealants.

(a) Applicability.

1. Except as provided in 310 CMR 7.18(30)(a)2. through 5., 310 CMR 7.18(30) applies to:

- a. any person who, on or after January 1, 2015, manufactures any adhesive, sealant, adhesive primer, or sealant primer for use in Massachusetts;
- b. any person who, on or after September 1, 2015, sells, supplies, or offers for sale any adhesive, sealant, adhesive primer, or sealant primer for use in Massachusetts; and
- c. any person who, on or after May 1, 2016, uses, applies, or solicits the use or application of any adhesive, sealant, adhesive primer, or sealant primer in Massachusetts.

2. 310 CMR 7.18(30) shall not apply to the use or application of any adhesive, sealant, adhesive primer, or sealant primer by the homeowner(s), renter(s), or other resident(s) at a private residence for personal use and not for a fee, compensation, or other financial gain.

3. 310 CMR 7.18(30) shall not apply to the manufacture, sale, supplying, or offering for sale of an adhesive, sealant, adhesive primer, or sealant primer provided that:

- a. the adhesive, sealant, adhesive primer, or sealant primer is intended exclusively for shipment and use or application outside of Massachusetts;
- b. the manufacturer or distributor keeps records demonstrating that the adhesive, sealant, adhesive primer, or sealant primer is intended exclusively for shipment and use or application outside of Massachusetts; and
- c. the manufacturer or distributor has taken reasonable precautions to assure that the adhesive, sealant, adhesive primer, or sealant primer is not sold, supplied, or offered for sale for use or application within Massachusetts.

4. 310 CMR 7.18(30) shall not apply to the manufacture, sale, supplying, offering for sale, or the use or application of the following:

7.18: continued

- a. adhesives, sealants, adhesive primers, and sealant primers that are subject to 310 CMR 7.25(12), Consumer Products;
 - b. adhesives and sealants that contain less than 20 grams of VOC per liter of adhesive, or sealant, less water and less exempt compounds, as applied;
 - c. adhesives used in tire repair operations, provided the label of the adhesive states: "For Tire Repair Only"; and
 - d. adhesives and adhesive primers, used in printing operations that are subject to 310 CMR 7.03(15), Non-heatset Offset Lithographic Printing; 310 CMR 7.03(19), Flexographic, Gravure, Letterpress and Screen Printing; 310 CMR 7.18(12), Packaging Rotogravure and Packaging Flexographic Printing; 310 CMR 7.18(25), Offset Lithographic Printing and Letterpress Printing; and 310 CMR 7.26(20) through (29), Environmental Results Program: Lithographic, Gravure, Letterpress, Flexographic and Screen Printing.
5. 310 CMR 7.18(30) shall not apply to the manufacture, sale, supplying, or offering for sale of the following:
- a. cyanoacrylate adhesives;
 - b. adhesives, sealants, adhesive primers, or sealant primers that are used in assembly, repair and manufacture of aerospace or undersea-based weapon systems components;
 - c. adhesives, sealants, adhesive primers, or sealant primers that are used in manufacture of medical equipment;
 - d. adhesives, sealants, adhesive primers, or sealant primers that are used in plaque laminating operations in which adhesives are used to bond clear, polyester acetate laminate to wood with lamination equipment installed prior to July 1, 1992; and
 - e. adhesives, sealants, adhesive primers, or sealant primers that are supplied or sold by the manufacturer or distributor in containers with a net volume of 16 fluid ounces or less, or a net weight of one pound or less. Plastic cement welding adhesives are excluded from this exemption.
- (b) Definitions. Terms used in 310 CMR 7.18(30) are defined at 310 CMR 7.00: *Definitions* or in 310 CMR 7.18(30)(b). Where a term is defined in both 310 CMR 7.00: *Definitions* and in 310 CMR 7.18(30)(b), the definition in 310 CMR 7.18(30)(b) shall apply.

ACRYLONITRILE-BUTADIENE-STYRENE OR ABS WELDING ADHESIVE means any adhesive intended by the manufacturer to weld acrylonitrile-butadiene-styrene pipe, which is made by reacting monomers of acrylonitrile, butadiene and styrene.

ADHESIVE means any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.

ADHESIVE PRIMER means any product intended by the manufacturer for application to a substrate, prior to the application of an adhesive, to enhance the bonding process.

AEROSOL ADHESIVE means an adhesive packaged as an aerosol product in which the spray mechanism is permanently housed in a non-refillable can designed for handheld application without the need for ancillary hoses or spray equipment.

AEROSPACE COMPONENT means the fabricated part, assembly of parts or completed unit of any aircraft, helicopter, missile, or space vehicle, including passenger safety equipment.

ARCHITECTURAL SEALANT OR PRIMER means any sealant or sealant primer intended by the manufacturer to be applied to stationary structures, including mobile homes and their appurtenances. Appurtenances to a stationary structure include, but are not limited to: hand railings, cabinets, bathroom and kitchen fixtures, fences, rain gutters and downspouts, and windows.

AUTOMOTIVE GLASS ADHESIVE PRIMER means an adhesive primer labeled by the manufacturer to be applied to automotive glass prior to installation of the glass using an adhesive/sealant.

CARB means the California Air Resources Board.

CERAMIC TILE INSTALLATION ADHESIVE means any adhesive intended by the manufacturer for use in the installation of ceramic tiles.

7.18: continued

CHLORINATED POLYVINYL CHLORIDE PLASTIC or CPVC PLASTIC means a polymer of the vinyl chloride monomer that has undergone a post-polymerization chlorination process to increase the chlorine content of the PVC polymer beyond its base chlorine content of 57%. CPVC plastic is normally identified with a CPVC marking.

CHLORINATED POLYVINYL CHLORIDE WELDING ADHESIVE or CPVC WELDING ADHESIVE means an adhesive labeled for welding of chlorinated polyvinyl chloride plastic.

CLEANUP SOLVENT means a VOC-containing material used to remove a loosely held uncured (*i.e.*, not dry to the touch) adhesive or sealant from a substrate, or a VOC-containing material used to clean equipment used in applying a material.

COMPUTER DISKETTE JACKET MANUFACTURING ADHESIVE means any adhesive intended by the manufacturer to glue the fold-over flaps to the body of a vinyl computer diskette jacket.

CONTACT ADHESIVE means an adhesive that:

- (a) is designed for application to two surfaces to be bonded together; and
- (b) is allowed to dry before the two surfaces are placed in contact with each other; and
- (c) forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other; and
- (d) does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces. Contact adhesive does not include rubber cements that are primarily intended for use on paper substrates. Contact adhesive also does not include vulcanizing fluids that are designed and labeled for tire repair only.

CONTROL TECHNIQUES GUIDELINES or CTG means the Control Techniques Guidelines issued by EPA for Miscellaneous Industrial Adhesives, EPA-453/R-08-005, and published in the Federal Register on October 7, 2008.

COVE BASE means a flooring trim unit, generally made of vinyl or rubber, having a concave radius on one edge and a convex radius on the opposite edge that is used in forming a junction between the bottom wall course and the floor or to form an inside corner.

COVE BASE INSTALLATION ADHESIVE means any adhesive intended by the manufacturer to be used for the installation of cove base or wall base on a wall or vertical surface at floor level.

CTG-AFFECTED FACILITY means a facility in which total actual uncontrolled VOC emissions from all Miscellaneous Industrial Adhesive Application Processes, including related cleaning activities, are equal to or greater than 6.8 kg/day (15 lb/day) or an equivalent level such as 3 tons per 12-month rolling period.

CYANOACRYLATE ADHESIVE means any adhesive with a cyanoacrylate content of at least 95% by weight.

DISTRIBUTOR means any person to whom an adhesive, adhesive primer, sealants, or sealant primer is sold or supplied for the purpose of resale or distribution in commerce, except that manufacturers, retailers, and consumers are not distributors.

DRY WALL INSTALLATION means the installation of gypsum dry wall to studs or solid surfaces using an adhesive formulated for that purpose.

EXEMPT COMPOUND means an organic compound that is excluded from the definition of volatile organic compound in 310 CMR 7.00.

FIBERGLASS means a material consisting of extremely fine glass fibers.

FLEXIBLE VINYL means non-rigid polyvinyl chloride plastic.

7.18: continued

INDOOR FLOOR COVERING INSTALLATION ADHESIVE means any adhesive intended by the manufacturer for use in the installation of wood flooring, carpet, resilient tile, vinyl tile, vinyl backed carpet, resilient sheet and roll, or artificial grass. Adhesives used to install ceramic tile and perimeter bonded sheet flooring with vinyl backing onto a non-porous substrate, such as Flexible Vinyl, are excluded from this category.

LAMINATE means a product made by bonding together two or more layers of material.

LOW-SOLIDS ADHESIVE, SEALANT OR PRIMER means any product that contains 120 grams or less of solids per liter of material.

MANUFACTURER means any person who manufactures, processes, imports, assembles, produces, packages, repackages, or re-labels a product.

MARINE DECK SEALANT or MARINE DECK SEALANT PRIMER means any sealant or sealant primer labeled for application to wooden marine decks.

MEDICAL EQUIPMENT MANUFACTURING means the manufacture of medical devices, such as, but not limited to, catheters, heart valves, blood cardioplegia machines, tracheostomy tubes, blood oxygenators, and cardiatory reservoirs.

METAL TO URETHANE/RUBBER MOLDING OR CASTING ADHESIVE means any adhesive intended by the manufacturer to bond metal to high density or elastomeric urethane or molded rubber materials, in heated molding or casting processes.

MISCELLANEOUS INDUSTRIAL ADHESIVE APPLICATION PROCESS means a process used at an industrial manufacturing or repair facility that is subject to the Control Technique Guidelines (CTG) as defined in 310 CMR 7.18(30).

MULTIPURPOSE CONSTRUCTION ADHESIVE means any adhesive intended by the manufacturer for use in the installation or repair of various construction materials, including but not limited to drywall, subfloor, panel, fiberglass reinforced plastic (FRP), ceiling tile and acoustical tile.

NONMEMBRANE ROOF INSTALLATION/REPAIR ADHESIVE means any adhesive intended by the manufacturer for use in the installation or repair of non-membrane roofs including, but not limited to, plastic or asphalt roof cement, asphalt roof coating and cold application cement. Nonmembrane roof installation/repair adhesive does not include adhesive intended by the manufacturer for use in the installation or repair of prefabricated single-ply flexible roofing membrane.

OUTDOOR FLOOR COVERING INSTALLATION ADHESIVE means any adhesive intended by the manufacturer for use in the installation of floor covering that is not in an enclosure and that is exposed to ambient weather conditions during normal use.

PANEL INSTALLATION means the installation of plywood, pre-decorated hardboard (or tileboard), fiberglass reinforced plastic, and similar pre-decorated or non-decorated panels to studs or solid surfaces using an adhesive formulated for that purpose.

PERIMETER BONDED SHEET FLOORING INSTALLATION means the installation of sheet flooring with vinyl backing onto a nonporous substrate using an adhesive designed to be applied only to a strip of up to four inches wide around the perimeter of the sheet flooring.

PLASTIC means any synthetic material chemically formed by the polymerization of organic (carbon-based) substances. Plastics are usually compounded with modifiers, extenders, and/or reinforcers and are capable of being molded, extruded, cast into various shapes and films or drawn into filaments.

7.18: continued

PLASTIC CEMENT WELDING ADHESIVE means any adhesive intended by the manufacturer for use to dissolve the surface of plastic to form a bond between mating surfaces. Plastic cement welding adhesive does not include ABS welding, PVC welding, or CPVC welding adhesives.

PLASTIC CEMENT WELDING ADHESIVE PRIMER means any primer intended by the manufacturer for use to prepare plastic substrates prior to bonding or welding.

PLASTIC FOAM means foam constructed of plastics.

PLASTICIZER means a material, such as a high boiling point organic solvent, that is incorporated into a vinyl to increase its flexibility, workability, or distensibility, as determined by the applicable ASTM International test method or any other method approved by the Department and EPA.

POLYVINYL CHLORIDE PLASTIC or PVC PLASTIC means a polymer of the chlorinated vinyl monomer, which contains at least 57% chlorine.

POLYVINYL CHLORIDE WELDING ADHESIVE or PVC WELDING ADHESIVE means any adhesive intended by the manufacturer for use in the welding of PVC plastic pipe.

POROUS MATERIAL means a substance that has tiny openings, often microscopic, in which fluids may be absorbed or discharged, including, but not limited to, wood, paper and corrugated paperboard. For the purposes of 310 CMR 7.18(30), porous material does not include wood.

REACTIVE ADHESIVE means adhesive systems composed, in part, of volatile monomers that react during the adhesive curing reaction, and, as a result, do not evolve from the film during use. These volatile components instead become integral parts of the adhesive through chemical reaction. At least 70% of the liquid components of the system, excluding water, react during the process.

REACTIVE DILUENT means a liquid that is a VOC during application and one in that, through chemical and/or physical reactions, such as polymerization, 20% or more of the VOC becomes an integral part of a finished material.

REINFORCED PLASTIC COMPOSITE means a composite material consisting of plastic reinforced with fibers.

ROADWAY SEALANT means any sealant intended by the manufacturer for application to streets, highways and other similar surfaces, including, but not limited to, curbs, berms, driveways, and parking lots.

RUBBER means any natural or manmade rubber substrate, including, but not limited to, styrene-butadiene rubber, polychloroprene (neoprene), butyl rubber, nitrile rubber, chlorosulfonated polyethylene, and ethylene propylene diene terpolymer.

SCAQMD means the South Coast Air Quality Management District of the State of California.

SEALANT means any material with adhesive properties that is formulated primarily to fill, seal, waterproof or weatherproof gaps or joints between two surfaces. Sealants include caulks.

SEALANT PRIMER means any product intended by the manufacturer for application to a substrate, prior to the application of a sealant, to enhance the bonding process.

SHEET RUBBER LINING INSTALLATION means the process of applying sheet rubber liners by hand to metal or plastic substrates to protect the underlying substrate from corrosion or abrasion. These operations also include laminating sheet rubber to fabric by hand.

SINGLE-PLY ROOF MEMBRANE means a prefabricated single sheet of compounded synthetic material such as ethylene propylene diene monomer, polyvinyl chloride, thermal polyolefin, or ketone ethylene ester that is applied in a single layer to a building roof.

7.18: continued

SINGLE-PLY ROOF MEMBRANE ADHESIVE PRIMER means any primer intended by the manufacturer for use to clean and promote adhesion of the single-ply roof membrane seams or splices prior to bonding.

SINGLE-PLY ROOF MEMBRANE INSTALLATION AND REPAIR ADHESIVE means any adhesive intended and labeled by the manufacturer for use in the installation or repair of single-ply roof membrane. Installation includes, at a minimum, attaching the edge of the membrane to the edge of the roof and applying flashings to vents, pipes and ducts that protrude through the membrane. Repair includes, but is not limited to, gluing the edges of torn membrane together, attaching a patch over a hole and reapplying flashings to vents, pipes, or ducts installed through the membrane.

SINGLE-PLY ROOF MEMBRANE SEALANT means any sealant intended by the manufacturer for application to single-ply roof membrane.

SOLVENT means organic compounds that are used as diluents, thinners, solvers, viscosity reducers, cleaning agents or other related uses.

STRUCTURAL GLAZING ADHESIVE means any adhesive intended by the manufacturer to apply glass, ceramic, metal, stone, or composite panels to exterior building frames.

SUBFLOOR INSTALLATION means the installation of subflooring material over floor joists, including the construction of any load bearing joists. Subflooring is covered by a finish surface material.

SURFACE PREPARATION SOLVENT means any VOC containing material used to remove dirt, oil and other contaminants from a substrate prior to the application of a primer, adhesive, or sealant.

THIN METAL LAMINATING ADHESIVE means any adhesive intended by the manufacturer for use in bonding multiple layers of metal to metal or metal to Plastic in the production of electronic or magnetic components in which the thickness of the bond line(s) is less than 0.25 mils.

TIRE REPAIR means a process that includes expanding a hole, tear, fissure or blemish in a tire casing by grinding or gouging, applying adhesive, and filling the hole or crevice with rubber.

TIRE RETREAD ADHESIVE means any adhesive intended by the manufacturer for application to the back of pre-cure tread rubber and to the casing and cushion rubber. Tire retread adhesive may also be used to seal buffed tire casings to prevent oxidation while the tire is being prepared for a new tread.

TRAFFIC MARKING TAPE means pre-formed reflective film intended by the manufacturer for application to streets, highways and other traffic-related surfaces, including, but not limited to curbs, berms, driveways and parking lots.

TRAFFIC MARKING TAPE ADHESIVE PRIMER means any primer intended by the manufacturer for application to surfaces prior to installation of traffic marking tape.

UNDERSEA-BASED WEAPONS SYSTEMS COMPONENTS means parts or completed units of any portion of a missile launching system used on undersea ships.

WATERPROOF RESORCINOL GLUE means a two-part resorcinol-resin-based adhesive designed for applications where the bond line must be resistant to conditions of continuous immersion in fresh or salt water.

7.18: continued

(c) VOC Emission Requirements.

1. Except as provided in 310 CMR 7.18(30)(a) and (d), on and after January 1, 2015, no person shall manufacture for sale in Massachusetts any adhesive, sealant, adhesive primer, or sealant primer that contains VOCs in excess of the applicable VOC content limits specified in 310 CMR 7.18(30)(c): *Table 1* and *Table 2*. The VOC content limits specified in 310 CMR 7.18(30)(c): *Table 1* and *Table 2* apply to adhesives, sealants, adhesive primers, and sealant primers as applied.
2. Except as provided in 310 CMR 7.18(30)(a) and (d), on and after September 1, 2015, no person shall sell, supply, or offer for sale in Massachusetts any adhesive, sealant, adhesive primer, or sealant primer that contains VOCs in excess of the applicable VOC content limits specified in 310 CMR 7.18(30)(c): *Table 1* and *Table 2*. The VOC content limits specified in 310 CMR 7.18(30)(c): *Table 1* and *Table 2* apply to adhesives, sealants, adhesive primers, and sealant primers as applied.
3. Except as provided in 310 CMR 7.18(30)(a), (c)7., and (d), on and after May 1, 2016, no person shall use, apply, or solicit the use or application of any adhesive, sealant, adhesive primer, or sealant primer in Massachusetts that contains VOCs in excess of the applicable VOC content limits specified in 310 CMR 7.18(30)(c): *Table 1* and *Table 2*. The VOC content limits specified in 310 CMR 7.18(30)(c): *Table 1* and *Table 2* apply to adhesives, sealants, adhesive primers, and sealant primers as applied.
4. The VOC content limits in 310 CMR 7.18(30)(c): *Table 1* and *Table 2* shall apply as follows:
 - a. If an adhesive is used that is subject to a specific VOC content limit for such adhesive in 310 CMR 7.18(30)(c): *Table 1*, such specific limit shall apply rather than an adhesive-to-substrate limit specified in 310 CMR 7.18(30)(c): *Table 2*.
 - b. If an adhesive is used to bond dissimilar substrates together, the VOC limit for the applicable substrate category in 310 CMR 7.18(30)(c): *Table 2* with the highest VOC content shall be the limit for such use.
5. No person subject to 310 CMR 7.18(30) shall:
 - a. use any surface preparation solvent that contains a VOC content equal to or greater than 70 grams per liter of material except as provided in 310 CMR 7.18(30)(c)5.b. for single-ply roofing;
 - b. use any surface preparation solvent with a VOC composite vapor pressure, excluding water and exempt compounds, equal to or greater than 45 millimeter mercury (mm Hg) at 20°C for application of single-ply roofing;
 - c. use any material with a VOC composite vapor pressure equal to or greater than 45 mm Hg at 20°C for the removal of adhesives, sealants, adhesive primers, or sealant primers from any surface except as provided in 310 CMR 7.18(30)(c)5.d.;
 - d. remove any adhesive, sealant, adhesive primer, or sealant primer from the parts of spray gun equipment unless the operation is performed:
 - i. in an enclosed cleaning system, or equivalent cleaning system, which minimizes solvent evaporation during the cleaning, rinsing, and draining operations; and, collects the spent solvent in a container with a tight-fitting cover so that it is available for reuse, recycling, or proper disposal; or
 - ii. using a solvent with a VOC content less than or equal to 70 grams of VOC per liter of material; or
 - iii. when soaking parts containing dried adhesive, in a closed container that remains closed except when adding or removing parts, and using a solvent with a composite vapor pressure that does not exceed 9.5 mm Hg at 20°C excluding water and exempt compounds.
6. At a CTG-affected facility, any person subject to the requirements in 310 CMR 7.18(30)(c): *Table 1* and *Table 2* shall utilize one of the following application methods in applying an adhesive, sealant, adhesive primer, or sealant primer:
 - a. electrostatic spray;
 - b. HVLP spray;
 - c. flow coat;
 - d. roll coat or hand application, including non-spray application methods similar to hand or mechanically powered caulking gun, brush, or direct hand application;

7.18: continued

- e. dip coat (including electrodeposition);
 - f. airless spray;
 - g. air-assisted airless spray;
 - h. any adhesive application method capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spraying.
7. Any person using or applying an adhesive, sealant, adhesive primer, or sealant primer may comply with 310 CMR 7.18(30)(c)3. and 5. by using add-on air pollution control equipment provided that the following requirements are met:
- a. the VOC emissions from the use of all adhesives, sealants, adhesive primers, or sealant primers that exceed the applicable limits in 310 CMR 7.18(30)(c): *Table 1* and *Table 2*, and all surface preparation solvents and cleanup solvents are reduced by an overall capture and control efficiency of at least 85%, by weight;
 - b. compliance with the requirements for emissions capture and control equipment is demonstrated according to 310 CMR 7.18(2)(e);
 - c. operation records sufficient to demonstrate compliance with the requirements of 310 CMR 7.18(30)(c)7. are maintained as required by 310 CMR 7.18(30)(e); and
 - d. an emission control plan (ECP), pursuant to 310 CMR 7.18(20), is submitted to the Department for approval.
8. Any person using or applying adhesives, sealants, adhesive primers, and sealant primers, shall comply with the following work practices:
- a. store all VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, and VOC-containing materials used for surface preparation, cleaning, and rework in closed containers;
 - b. ensure that mixing and storage containers used for VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, and VOC-containing materials used for surface preparation, cleaning and rework are kept closed at all times except when depositing or removing these materials;
 - c. minimize spills of VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, and VOC-containing materials used for surface preparation, cleaning, and rework;
 - d. convey VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, and VOC-containing materials used for surface preparation, cleaning, and rework from one location to another in closed containers or pipes;
 - e. minimize VOC emissions from cleaning of application, storage, mixing, and conveying equipment by ensuring that:
 - i. equipment cleaning is performed without atomizing the cleanup solvent; and
 - ii. all spent solvent is captured in closed containers; and
 - f. store and dispose of all absorbent materials, such as cloth or paper, that are contaminated with VOC-containing adhesives, sealants, adhesive primers, sealant primers, process-related waste materials, or VOC-containing materials used for surface preparation, cleaning, and rework in non-absorbent containers that shall be kept closed except when placing materials in or removing materials from the container.
9. No person shall solicit, require the use of, or specify the use or application of any adhesive, sealant, adhesive primer, or sealant primer if such use or application results in a violation of any provision of 310 CMR 7.18(30)(c). The prohibition of 310 CMR 7.18(30)(c)9. shall apply to all contracts under which any adhesive, sealant, adhesive primer, or sealant primer is to be used at any location in Massachusetts.

7.18: continued

310 CMR 7.18(30)(c): Table 1
VOC Content Limits for Adhesives, Sealants, Adhesive Primers, and Sealant Primers

Adhesive, Sealant, Adhesive Primer or Sealant Primer Category	VOC Content Limit as Applied (grams/liter*)
ADHESIVES ABS Welding Ceramic Tile Installation Computer Diskette Jacket Manufacturing Contact Cove Base Installation CPVC Welding Indoor Floor Covering Installation Metal to Urethane/Rubber Molding or Casting Multipurpose Construction Nonmembrane Roof Installation/Repair Outdoor Floor Covering Installation Perimeter Bonded Sheet Vinyl Flooring Installation Plastic Cement Welding (Non ABS) PVC Welding Sheet Rubber Lining Installation Single-ply Roof Membrane Installation/Repair Structural Glazing Thin Metal Laminating Tire Retread Waterproof Resorcinol Glue	4.00130850250e+59
SEALANTS Architectural Marine Deck Nonmembrane Roof Installation/Repair Roadway Single-ply Roof Membrane Other	250760300250450450
ADHESIVE PRIMERS Automotive Glass Plastic Cement Welding Single-ply Roof Membrane Traffic Marking Tape Other	700650250150250
SEALANT PRIMERS Non-porous Architectural Porous Architectural Marine Deck Other	250775760750

* The VOC content is determined as the weight of volatile compounds, less water and exempt compounds, as specified in 310 CMR 7.18(30)(f): *Compliance Procedures and Test Methods*.

7.18: continued

**310 CMR 7.18(30)(c): Table 2
VOC Content Limit for Adhesives Applied to Particular Substrates**

Substrate Category	VOC Content Limit as Applied (grams/liter*)
Flexible Vinyl Fiberglass Metal Porous Material Reinforced Plastic Composite Rubber Wood Other Substrates	2502003012020026000000

* The VOC content is determined as the weight of volatile compounds, less water and exempt compounds, as specified in 310 CMR 7.18(30)(f): *Compliance Procedures and Test Methods*.

(d) Exemptions.

1. 310 CMR 7.18(30)(c)1. and 2. shall not apply to the manufacture, sale, supplying, or offering for sale of an adhesive, sealant, adhesive primer, or sealant primer provided that:
 - a. the adhesive, sealant, adhesive primer, or sealant primer is for use in a facility that utilizes add-on air pollution control equipment to achieve compliance pursuant to 310 CMR 7.18(30)(c)7.; and
 - b. the manufacturer, distributor, seller, supplier and person offering for sale keep records demonstrating that the adhesive, sealant, adhesive primer, or sealant primer is intended for use in a facility that utilizes add-on air pollution control equipment to achieve compliance pursuant to 310 CMR 7.18(30)(c)7.
2. 310 CMR 7.18(30) shall not apply to the manufacture, sale, supplying, offering for sale, or use of adhesives, sealants, adhesive primers, and sealant primers being tested or evaluated in any research and development, quality assurance, or analytical laboratory, except that the requirements of 310 CMR 7.18(30)(c)8. and (e)2. shall apply.
3. 310 CMR 7.18(30) shall not apply to the use or application of:
 - a. cyanoacrylate adhesives, except that the requirements of 310 CMR 7.18(30)(c)8. shall apply;
 - b. adhesives, sealants, adhesive primers, and sealant primers that are sold or supplied by the manufacturer or distributor in containers with a net volume of 16 fluid ounces or less, or a net weight of one pound or less, except that the requirements of 310 CMR 7.18(30)(c)8. shall apply. This exemption shall not apply to plastic cement welding adhesives.
 - c. adhesives, sealants, adhesive primers, and sealant primers that are used in the assembly, repair, and manufacture of aerospace or undersea-based weapon systems components, except that the requirements of 310 CMR 7.18(30)(c)8. shall apply;
 - d. adhesives, sealants, adhesive primers, and sealant primers that are used in the manufacture of medical equipment, except that the requirements of 310 CMR 7.18(30)(c)8. shall apply; and
 - e. adhesives, sealants, adhesive primers, and sealant primers in plaque laminating operations in which adhesives are used to bond clear, polyester acetate laminate to wood with lamination equipment installed prior to July 1, 1992, except that the requirements of 310 CMR 7.18(30)(c)8. shall apply.
4. 310 CMR 7.18(30)(c)3. and 5. shall not apply to the use or application of adhesives, sealants, adhesive primers, and sealant primers at a facility in which the total facility-wide VOC emissions from all adhesives, sealants, adhesive primers, and sealant primers used are less than 200 pounds per calendar year, or an equivalent volume.

Any person claiming this exemption shall maintain sufficient monthly operational records in accordance with 310 CMR 7.18(30)(e) to demonstrate compliance with this exemption.

7.18: continued

5. 310 CMR 7.18(30)(c)3. and 5. shall not apply to the use or application of adhesives, sealants, adhesive primers, and sealant primers at a facility in which the facility-wide total volume of adhesives, sealants, adhesive primers, sealant primers, cleanup solvents, and surface preparation solvents does not exceed 55 gallons per calendar year. Any person claiming this exemption shall maintain sufficient monthly operational records in accordance with 310 CMR 7.18(30)(e) to demonstrate compliance with this exemption.
- (e) Recordkeeping Requirements.
1. Each person subject to 310 CMR 7.18(30) shall maintain records demonstrating compliance with 310 CMR 7.18(30), including, but not limited to, the following information:
 - a. for the manufacturer of any adhesive, sealant, adhesive primer, or sealant primer:
 - i. for each product, the product name, product category according to 310 CMR 7.18(30)(c): *Table 1*, and *Table 2.*, the VOC content of each product as supplied, and the type of product application;
 - ii. the volume of each product sold in Massachusetts in containers with a net volume greater than 16 fluid ounces or a net weight of more than one pound;
 - iii. all records required pursuant to 310 CMR 7.18(30)(d)1.b.; and
 - iv. all records pertaining to compliance testing pursuant to 310 CMR 7.18(30)(h);
 - b. for any person who sells, supplies, or offers for sale any adhesive, sealant, adhesive primer, or sealant primer:
 - i. for each product, the product name, product category according to 310 CMR 7.18(30)(c): *Table 1*, and *Table 2.*, the VOC content of each product as supplied, and the type of product application;
 - ii. the volume of each product sold in Massachusetts in containers with a net volume greater than 16 fluid ounces or a net weight of more than one pound;
 - iii. all records required pursuant to 310 CMR 7.18(30)(d)1.b.; and
 - iv. any information required pursuant to 310 CMR 7.18(30)(e)2., if applicable;
 - c. for any person who uses, or applies any adhesive, sealant, adhesive primer, or sealant primer:
 - i. a data sheet or materials list that provides the material name, product category according to 310 CMR 7.18(30)(c): *Table 1*, and *Table 2.*, manufacturer identification, the VOC content of each product as supplied, and type of material application;
 - ii. a list of each adhesive, sealant, adhesive primer, sealant primer, cleanup solvent, and surface preparation solvent in use and in storage;
 - iii. a list of reducers, catalysts, or other components used and the as applied mix ratio;
 - iv. the final VOC content of any adhesive, sealant, adhesive primer, or sealant primer as applied;
 - v. the VOC content and vapor pressure, of any cleanup solvents, surface preparation solvents, reducers and catalysts, and VOC-containing materials used in the preparation, application, rework, and cleaning processes related to use or application of any adhesive, sealant, adhesive primer, or sealant primer;
 - vi. the monthly volume of each adhesive, sealant, adhesive primer, sealant primer, cleanup solvent, and surface preparation solvent used;
 - vii. for any person who complies with 310 CMR 7.18(30)(c)3. and 5. through the use of add-on air pollution control equipment, the key operating parameters for the control equipment, including but not limited to, the following information:
 - (i) the volume used per day of cleanup solvents, surface preparation solvents, and each adhesive, sealant, adhesive primer, and sealant primer that is subject to a VOC content limit specified in 310 CMR 7.18(30)(c): *Table 1* and *Table 2*; and

7.18: continued

- (ii) all records sufficient to demonstrate compliance with requirements specified in 310 CMR 7.18(30)(c)7., (2)(e), and (20);
 - viii. all records pertaining to compliance testing pursuant to 310 CMR 7.18(30)(h); and
 - ix. the monthly total facility-wide VOC emissions from all adhesives, sealants, adhesive primers, and sealant primers used or applied at any facility where a person is claiming an exemption pursuant to 310 CMR 7.18(30)(d)4.
2. For adhesives, sealants, adhesive primers, and sealant primers exempted under 310 CMR 7.18(30)(d)2., the person supplying the adhesives, sealants, adhesive primers, or sealant primers to the research and development, quality assurance, or analytical laboratory for testing or evaluation shall maintain records of all such materials supplied, including, but not limited to, the product name, the product category of the material, type of application, the VOC content of each material, and the volume of products supplied to the research and development, quality assurance, or analytical laboratory for testing or evaluation.
 3. All records required to demonstrate compliance with 310 CMR 7.18(30) shall be maintained for three years from the date such record is created and shall be made available to the Department upon request.
- (f) Compliance Procedures And Test Methods.
1. VOC content (grams per liter and percent by weight) shall be determined according to the following calculations:
 - a. For adhesives, sealants, adhesive primers, and sealant primers that do not contain reactive diluents, grams of VOC per liter of material, less water and exempt compounds, shall be calculated according to the following equation:

$$\text{Grams of VOC per liter of material} = (W_s - W_w - W_e) / (V_m - V_w - V_e)$$

Where:

- W_s = weight of volatile compounds, in grams
- W_w = weight of water, in grams
- W_e = weight of exempt compounds, in grams
- V_m = volume of material, in liters
- V_w = volume of water, in liters
- V_e = volume of exempt compounds, in liters

7.18: continued

b. For adhesives, sealants, adhesive primers, and sealant primers that contain reactive diluents, the VOC content of the material is determined after curing. The grams of VOC per liter of material, less water and exempt compounds, shall be calculated according to the following equation:

$$\text{Grams of VOC per liter of material} = (W_{rs} - W_{rw} - W_{re}) / (V_{rm} - V_{rw} - V_{re})$$

Where:

W_{rs} = weight of volatile compounds not consumed during curing, in grams

W_{rw} = weight of water not consumed during curing, in grams

W_{re} = weight of exempt compounds not consumed during curing, in grams

V_{rm} = volume of material not consumed during curing, in liters

V_{rw} = volume of water not consumed during curing, in liters

V_{re} = volume of exempt compounds not consumed during curing, in liters

c. For clean-up solvents, surface preparation solvents, low-solids adhesives, low-solids sealants, low-solids adhesive primers, and low-solids sealant primers, grams of VOC per liter of material shall be calculated according to the following equation:

$$\text{Grams of VOC per liter of material} = (W_s - W_w - W_e) / V_m$$

Where:

W_s = weight of volatile compounds, in grams

W_w = weight of water, in grams

W_e = weight of exempt compounds, in grams

V_m = volume of material, in liters

d. Percent VOC by weight shall be calculated according to the following equation:

$$\% \text{ VOC by weight} = (W_v / W) \times 100$$

Where:

W_v = weight of VOCs, in grams

W = weight of material, in grams

2. The following tests and procedures shall be used to determine the properties of adhesives, sealants, adhesive primers, sealant primers, cleanup solvents, and surface preparation solvents, and any component thereof for the purpose of compliance verification with 310 CMR 7.18(30):

a. Except as provided in 310 CMR 7.18(30)(f)2.c., and d., the VOC and solids content of all non-aerosol adhesives, adhesive primers, sealants, sealant primers, surface preparation solvents, and cleanup solvents shall be determined using U.S. EPA Reference Method 24, as identified in 40 CFR 60: *Appendix A*, or SCAQMD Method 304. The procedure for reactive adhesives in Appendix A of the NESHAP for surface coating of plastic parts (40 CFR Part 63, Subpart PPPP) shall be used to determine the VOC content of reactive adhesives.

7.18: continued

- b. The volatile organic content of exempt compounds shall be determined using the applicable ASTM International test method or any other method approved by the Department and EPA
- c. The VOC content of any plastic cement welding adhesive or plastic cement welding primer shall be determined using SCAQMD Method 316A.
- d. The amount of the VOC that becomes an integral part of the finished materials shall be determined using SCAQMD Method 316A.
- e. The composite vapor pressure of organic compounds in surface preparation solvents and cleanup solvents shall be determined by quantifying the amount of each compound in the blend using the applicable ASTM International gas chromatographic analysis test method for organics and for water content, or any other method approved by the Department and the EPA, and the following equation:

$$P_{pc} = \frac{\sum_{i=1}^n (W_i)(Vp_i)/Mw_i}{[(W_w/Mw_w) + \sum_{i=1}^n (W_e/Mw_e) + \sum_{i=1}^n (W_i/Mw_i)]}$$

Where:

- P_{pc} = VOC composite partial pressure at 20 C, in mm Hg
- W_i = Weight of the "i"th VOC compound, in grams, as determined by the applicable ASTM International test method or any other method approved by the Department and EPA
- W_w = Weight of water, in grams as determined by the applicable ASTM International test method or any other method approved by the Department and EPA
- W_e = Weight of the "i"th exempt compound, in grams, as determined by the applicable ASTM International test method or any other method approved by the Department and the EPA
- Mw_i = Molecular weight of the "i"th VOC compound, in grams per g-mole, as given in chemical reference literature
- Mw_w = Molecular weight of water, 18 grams per g-mole
- Mw_e = Molecular weight of the "i"th exempt compound, in grams per g-mole, as given in chemical reference literature
- Vp_i = Vapor pressure of the "i"th VOC compound at 20°C, in mm Hg, as determined by 310 CMR7.18(30)(e)2.f.

- f. The vapor pressure of each single component compound may be determined from the applicable ASTM International test method, or any other method approved by the Department and EPA, or may be obtained from any of the following sources:
 - i. the most recent edition of *The Vapor Pressure of Pure Substances*, Boublik, Fried, and Hala; Elsevier Scientific Publishing Company, New York;
 - ii. the most recent edition of *Perry's Chemical Engineer's Handbook*, McGraw-Hill Book Company;
 - iii. the most recent edition of *CRC Handbook of Chemistry and Physics*, Chemical Rubber Publishing Company;
 - iv. the most recent edition of *Lange's Handbook of Chemistry*, John Dean, editor, McGraw-Hill Book Company;
 - v. additional sources approved by the SCAQMD or other California air districts.
- 3. If air pollution control equipment is used to meet the requirements of 310 CMR 7.18(30), the owner or operator shall make the following determinations:

7.18: continued

- a. The measurement of capture efficiency shall be conducted and reported in accordance with the EPA Technical Document, *Guidelines for Determining Capture Efficiency*, issued January 9, 1995; and
- b. The control efficiency shall be determined in accordance with U.S. EPA Methods 25, 25A, 25B or CARB Method 100.

(g) Container Labeling.

- 1. The manufacturer of an adhesive, sealant, adhesive primer, or sealant primer subject to 310 CMR 7.18(30) shall display the following information on the product container or label:
 - a. a statement of the manufacturer's recommendation regarding thinning, reducing, or mixing of the product, except that:
 - i. this requirement does not apply to the thinning of a product with water; and
 - ii. if thinning of the product prior to use is not necessary, the recommendation must specify that the product is to be applied without thinning;
 - b. the maximum or the actual VOC content of the product in accordance with 310 CMR 7.18(30)(f), as supplied, displayed in grams of VOC per liter of product; and
 - c. the maximum or the actual VOC content of the product in accordance with 310 CMR 7.18(30)(f), which includes the manufacturer's maximum recommendation for thinning, as applied, displayed in grams of VOC per liter of product.

(h) Compliance Testing Requirements.

- 1. The manufacturer of an adhesive, adhesive primer, sealant, or sealant primer subject to 310 CMR 7.18(30) shall determine compliance with the VOC content requirements of 310 CMR 7.18(30) in accordance with 310 CMR 7.18(30)(f).
- 2. Any person who uses or applies an adhesive, adhesive primer, sealant, or sealant primer subject to 310 CMR 7.18(30) shall determine compliance with the VOC content requirements of 310 CMR 7.18(30) according to the following:
 - a. manufacturer's labeling and product technical data information; or
 - b. testing in accordance with provisions of 310 CMR 7.18(30)(f).
- 3. Any person utilizing an air pollution control device shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(30)(c)7.
- 4. Any person utilizing a spray gun system shall, upon request of the Department, perform or have performed tests to evaluate the spray gun cleaning system.

(31) U Industrial Cleaning Solvents.(a) Applicability.

- 1. On or after March 9, 2020, any person who owns, leases, operates or controls a facility which emits, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of volatile organic compounds (VOC) per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period from industrial cleaning solvents shall comply with 310 CMR 7.18(31)(c), (d), and (f) through (h).
- 2. On or after March 9, 2018, any person who owns, leases, operates, or controls a facility which emits, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period from industrial cleaning solvents shall comply with the work practices of 310 CMR 7.18(31)(e) for cleaning operations.

(b) Exemptions.

- 1. The requirements of 310 CMR 7.18(31)(d) do not apply to:
 - a. industrial cleaning solvent usage otherwise subject to an emission limitation in 310 CMR 7.03, 7.18, 7.25 or 7.26;
 - b. stripping of cured coatings, cured ink, or cured adhesives;
 - c. cleaning of the following:
 - i. solar cells;
 - ii. laser hardware;
 - iii. scientific instruments;
 - iv. high-precision optics; and
 - v. digital printing operations.

7.18: continued

- d. cleaning conducted as part of the following:
 - i. performance laboratory tests on coatings, adhesives, or inks;
 - ii. research and development programs;
 - iii. laboratory tests in quality assurance laboratories, excluding commercial laboratories that provide laboratory services for third parties; and
 - iv. quality assurance / quality control cleaning activities in manufacturing processes;
- e. cleaning of paper-based gaskets and clutch assemblies where the rubber is bonded to metal by means of an adhesive;
- f. cleaning operations in printing pre-press areas, including the cleaning of film processors, color scanners, plate processors, film cleaning, and plate cleaning;
- g. medical device and pharmaceutical manufacturing operations;
- h. cleaning of application equipment used to apply coatings on satellites and radiation effect coatings;
- i. touch-up cleaning performed on printed circuit boards where surface mounted devices have already been attached;
- j. cleaning of ultraviolet or electron beam adhesive application;
- k. coating, ink, resin, and adhesive manufacturing.

2. The work practice in 310 CMR 7.18(31)(e)5. does not apply to the cleaning of the nozzle tips of automated spray equipment systems.

3. The requirements of 310 CMR 7.18(31) do not apply to cleaning operations associated with aerospace manufacturing and rework operations, including operations subject to the requirements of 40 CFR part 63 subpart GG, National Emissions Standards for Aerospace Manufacturing and Rework Facilities.

(c) Extensions. Any person subject to 310 CMR 7.18(31)(a)1. may apply in writing to the Department for a nonrenewable extension of the implementation deadline in 310 CMR 7.18(31)(a)1. by complying with 310 CMR 7.18(31)(f). The Department will consider a nonrenewable extension of the deadline in 310 CMR 7.18(31)(a)1. for persons applying under 310 CMR 7.18(31)(c) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):

- 1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 310 CMR 50.48 is submitted as part of the emission control plan;
- 2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I, and 310 CMR 50.50 through 50.63;
- 3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and
- 4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(31)(d).

(d) Reasonably Available Control Technology Requirements. Any person subject to 310 CMR 7.18(31) shall limit VOC emissions by complying with one or more of the requirements in 310 CMR 7.18(31)(d)1., 2., or 3.

- 1. VOC Content Limitation. Use industrial cleaning solvents that have a VOC content no greater than the emission limitations listed in Table 310 CMR 7.18(31)(d)1. If an operation can be classified in more than one industrial cleaning solvent operation category in Table 310 CMR 7.18(31)(d)1., then the least stringent category limitation shall apply.

Table 310 CMR 7.18(31)(d)1. RACT Emission Limitations for Industrial Cleaning Solvent Operations		
Industrial Cleaning Solvent Operation Category	VOC content limitation as applied	
	pounds/gallon	grams/liter
Electrical and electronic components	0.83	100
Electronic or electrical cables	3.32	400
Product cleaning during manufacturing process, or repair and maintenance cleaning	0.42	50
Surface preparation for coating or ink application		
Cleaning not otherwise specified		

7.18: continued

2. Vapor Pressure Limitation. Use industrial cleaning solvents that have a VOC composite partial pressure equal to or less than eight mm Hg at 20°C (68°F).

3. Add-on Air Pollution Capture and Control Equipment. Achieve an overall VOC control efficiency of at least 85% by weight using add-on air pollution capture and control equipment.

(e) Work Practices for Cleaning Operations. Any person subject to 310 CMR 7.18(31) shall minimize VOC emissions of industrial cleaning solvents in accordance with, but not limited to, the following practices:

1. covering any container containing solvent or solvent-contaminated material;
2. storing any solvent-contaminated material (such as cleaning rags) or equipment (such as used applicators) in closed containers;
3. cleaning spray guns in an enclosed system or manually cleaning and flushing spray guns without atomizing the cleaning solvent;
4. collecting and storing used solvent in a closed container;
5. not atomizing any cleaning solvent unless the emissions are vented to add-on air pollution capture and control equipment that meets the requirement of 310 CMR 7.18(31)(d)3.;
6. conveying solvent in closed containers or pipes;
7. maintaining cleaning equipment and solvent containers, including repairing solvent leaks;
8. cleaning up any spills immediately; and
9. properly disposing of any solvent and solvent-contaminated waste.

In addition, any person who is directed to comply with 310 CMR 7.18(31)(e) by any other subsection of 310 CMR 7.18, shall utilize the work practices outlined in 310 CMR 7.18(31)(e) to minimize VOC emissions.

(f) Plan and Extension Submittal Requirements.

1. Any person subject to 310 CMR 7.18(31)(a)1. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(31)(d) shall submit an emission control plan in accordance with 310 CMR 7.18(20).

2. Any person subject to 310 CMR 7.18(31)(a)1. who chooses to apply for an extension under 310 CMR 7.18(31)(c) shall comply with 310 CMR 7.18(20).

(g) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(31)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on-site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved emission control plan or upon request. Such records shall include, but are not limited to:

1. name, identification, quantity, formulation and density of industrial cleaning solvent(s) used;
2. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person;
3. when complying through 310 CMR 7.18(31)(d)1., the associated category from Table 310 CMR 7.18(31)(d)1. and the VOC content of each industrial cleaning solvent, in pounds per gallon or grams per liter, as applied;
4. when complying through 310 CMR 7.18(31)(d)2., the VOC composite partial pressure of each industrial cleaning solvent used in the industrial cleaning operation; and
5. when complying through 310 CMR 7.18(31)(d)3., all records required by 310 CMR 7.18(2)(e) necessary to demonstrate the VOC control efficiency.

(h) Testing Requirements. Any person subject to 310 CMR 7.18(31)(a) shall, upon request of the Department, perform or have performed tests to demonstrate compliance with 310 CMR 7.18(31). Testing shall be conducted in accordance with EPA Methods 24, 25, 25A or 25B as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA. EPA Method 25A shall be used when:

1. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitation;
2. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or
3. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

7.18: continued

(32) Fiberglass Boat Manufacturing.(a) Applicability.

1. On or after March 9, 2020, any person who owns, leases, operates, or controls a fiberglass boat manufacturing facility and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of volatile organic compounds (VOC) per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with 310 CMR 7.18(32)(b), (d), (e), (f), (g)3. and 4. and (h) through (j).
2. On or after March 9, 2018, any person who owns, leases, operates, or controls a fiberglass boat manufacturing facility and related cleaning operations which emit, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period shall comply with the work practices of 310 CMR 7.18(32)(g)1. and 2. for manufacturing and cleaning operations.
3. 310 CMR 7.18(32) does not apply to the following activities:
 - a. surface coatings applied to fiberglass boats and metal recreational boats or pleasure crafts;
 - b. closed molding operations; and
 - c. industrial adhesives used in the assembly of fiberglass boats, with the exception of polyester resin putties used to assemble fiberglass parts, which are not considered adhesives for the purpose of 310 CMR 7.18(32).

(b) Definitions. The definitions found in 310 CMR 7.00 apply to 310 CMR 7.18(32). The following words and phrases shall have the following meanings as they appear in 310 CMR 7.18(32). Where a term is defined in both 310 CMR 7.00: *Definitions* and 310 CMR 7.18(32), the definition in 310 CMR 7.18(32) shall apply.

CLOSED MOLDING means a fiberglass boat manufacturing process by which pressure is used to distribute a resin through reinforcing fabric placed between two mold surfaces to either saturate the fabric or fill the mold cavity. The term includes, but is not limited to, compression molding with sheet molding compound, infusion molding, resin injection molding, vacuum-assisted resin transfer molding, resin transfer molding, and vacuum-assisted compression molding. The term does not include any processes in which a closed mold is used only to compact saturated fabric or remove air or excess resin from the fabric, such as in vacuum bagging.

FIBERGLASS means a material consisting of extremely fine glass fibers.

FIBERGLASS BOAT MANUFACTURING FACILITY means any facility that manufactures hulls, decks, or boats from fiberglass, or builds molds to make fiberglass boat hulls or decks. A facility is not considered a fiberglass boat manufacturing facility if the facility solely manufactures:

1. parts of boats, such as hatches, seats, or lockers; or
2. boat trailers.

FILLED RESIN means a resin to which fillers have been added to achieve certain physical properties, particularly for building fiberglass boat molds.

GEL COAT means a clear or pigmented polyester resin that, when mixed with a hardening catalyst, is applied so that it becomes the outer surface of the finished part or mold.

MONOMER means a VOC that partially combines with itself, or with other similar compounds, by a cross-linking reaction to become a part of the cured resin.

OPEN MOLDING means a family of techniques for composite fabrication which make use of single-cavity molds and require little or no external pressure.

PRODUCTION RESIN or gel coat means a resin or gel coat that is used to fabricate fiberglass boat hulls or decks.

7.18: continued

ROLL-OUT means the process of using rollers, squeegees, or similar tools to compact reinforcing materials saturated with resin to remove trapped air or excess resin.

SKIN COAT means the first layer of resin applied to the gel coat.

TOOLING RESIN or TOOLING GEL COAT means a resin or gel coat used to build molds and which is normally harder, more heat-resistant, and more dimensionally stable than production materials.

VACUUM BAGGING means any molding technique in which the reinforcing fabric is saturated with resin and then covered with a flexible sheet that is sealed to the edge of the mold and where a vacuum is applied under the sheet to compress the laminate, remove excess resin, or remove trapped air from the laminate during curing. Vacuum bagging does not include processes that meet the definition of closed molding.

VINYLESTER RESIN means a thermosetting resin containing esters of acrylic or methacrylic acids and having double-bond and ester linkage sites only at the ends of the resin molecules.

(c) Exemptions. The requirements in 310 CMR 7.18(32)(e) shall not apply to the following:

1. production resins, including skin coat resins, applied with non-atomizing resin application equipment, that must meet specifications under 46 CFR chapter I subchapter Q (Equipment, Construction and Materials: Specifications and Approval) or 46 CFR chapter I subchapter T (Small Passenger Vessels (Under 100 Gross Tons));
2. production and tooling resins, and pigmented, clear, and tooling gel coats used for part or mold repair and touch-up not exceeding one percent by weight of all resins and gel coats used at a fiberglass boat manufacturing facility during any consecutive 12-month period; or
3. 100% vinylester skin coat resins, applied with non-atomizing resin application equipment, that do not exceed five percent by weight of all resins and gel coats used at a fiberglass boat manufacturing facility during any consecutive 12-month period.

(d) Extensions. Any person subject to 310 CMR 7.18(32)(e) may apply in writing to the Department for a non-renewable extension of the implementation deadline in 310 CMR 7.18(32)(a)1. by complying with 310 CMR 7.18(32)(h). The Department will consider a non-renewable extension of the deadline in 310 CMR 7.18(32)(a)1. for persons applying under 310 CMR 7.18(32)(d) until no later than March 9, 2021, provided the emission control plan submitted for approval under 310 CMR 7.18(20) meets the following criteria in addition to those of 310 CMR 7.18(20):

1. a Toxics Use Reduction Plan or a Resource Conservation Plan completed for the facility in accordance with 310 CMR 50.40 through 50.48 is submitted as part of the emission control plan;
2. the Toxics Use Reduction Plan or Resource Conservation Plan was certified by a Toxics Use Reduction Planner certified under M.G.L. c. 21I and 310 CMR 50.50 through 50.63;
3. the emission control plan proposes to reduce emissions or natural asset use, from the process or elsewhere in the facility, more than otherwise required pursuant to an applicable regulation or approval of the Department, through toxics use reduction techniques or resource conservation actions as defined in M.G.L. c. 21I; and
4. implementation of the emission control plan meets the emission limitations of 310 CMR 7.18(32)(e).

(e) Reasonably Available Control Technology Emission Limitations for Resins and Gel Coats. Any person subject to 310 CMR 7.18(32) shall limit VOC emissions by complying with one or more of the requirements in 310 CMR 7.18(32)(e)1. through 4., and complying with 310 CMR 7.18(32)(e)5. and 6. as applicable.

1. Monomer VOC Content Limitations. Use only materials having a VOC content no greater than the limitations in Table 310 CMR 7.18(32)(e)1.

7.18: continued

Table 310 CMR 7.18(32)(e)1. Compliant Materials Monomer VOC Content Limitations for Open Molding Resins and Gel Coats		
Material Used	Application Method	Monomer VOC Content Limitation (weight percent, as applied)
Production Resin	Atomized (spray)	28
Production Resin	Non-atomized	35
Pigmented gel coat	Any method	33
Clear gel coat	Any method	48
Tooling resin	Atomized	30
Tooling resin	Non-atomized	39
Tooling gel coat	Any method	40

2. Weighted-Average Monomer VOC Content. Emit no more, in a consecutive 12-month period, than the applicable monomer VOC content limitation for a specific category and application method in Table 310 CMR 7.18(32)(e)1. determined using Equation 1:

Equation 1: Weighted-average monomer VOC content = $\sum_{i=1}^n (M_i \text{ VOC}_i) / \sum_{i=1}^n (M_i)$

where:

- M_i = the mass of open molding resin or gel coat i used in an operation in the past consecutive 12-month period, in megagrams;
 VOC_i = monomer VOC content, by weight percent, of open molding resin or gel coat i used in an operation in the past consecutive 12-month period; and
 n = the number of different open molding resins or gel coats used in an operation in the past consecutive 12-month period.

3. Material Emissions Average. Any person subject to 310 CMR 7.18(32) may calculate the weighted-average emission rate that is equivalent to the use of compliant resin and gel coat materials contained in Table 310 CMR 7.18(32)(e)1. For a particular consecutive 12-month period, the actual monomer VOC emissions calculated in Equation 3 shall not exceed the allowable monomer VOC emissions calculated in Equation 2. The allowable monomer VOC emission limitation and the actual monomer VOC emissions shall be recalculated monthly using the current month's and previous 11 months' actual monomer usage. For each consecutive 12-month period:

- identify each resin and gel coat material to be included in the calculation;
- use Equation 2 to determine the allowable monomer VOC emissions limitation;
- use Equation 3 to determine the actual monomer VOC emissions; and
- use Equation 4 to determine the weighted-average monomer VOC emission rate (PV_{op}) for each resin and gel coat material operation for the consecutive 12-month period in Equation 3.

Equation 2: Allowable Monomer VOC Limitation = $46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG})$

The numerical coefficients of Equation 2 are the allowable monomer VOC emission rates for the particular materials in units of kg/Mg of material used.

where:

- M_R = the mass of production resin used in the past consecutive 12-month period, excluding any materials that are exempt, in megagrams;
 M_{PG} = the mass of pigmented gel coat used in the past consecutive 12-month period, excluding any materials that are exempt, in megagrams;
 M_{CG} = the mass of clear gel coat used in the past consecutive 12-month period, excluding any materials that are exempt, in megagrams;
 M_{TR} = the mass of tooling resin used in the past consecutive 12-month period, excluding any materials that are exempt, in megagrams; and
 M_{TG} = the mass of tooling gel coat used in the past consecutive 12-month period, excluding any materials that are exempt, in megagrams.

7.18: continued

Equation 3: Actual Monomer VOC emissions = $(PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG})$

where:

PV_R = the weighted-average monomer VOC emission rate for production resin used in the past consecutive 12-month period, in kilograms per megagram as calculated using Equation 4;

M_R = the mass of production resin used in the past consecutive 12-month period, in megagrams;

PV_{PG} = the weighted-average monomer VOC emission rate for pigmented gel coat used in the past consecutive 12-month period, in kilograms per megagram as calculated using Equation 4;

M_{PG} = the mass of pigmented gel coat used in the past consecutive 12-month period, in megagrams;

PV_{CG} = the weighted-average monomer VOC emission rate for clear gel coat used in the past consecutive 12-month period, in kilograms per megagram as calculated using Equation 4;

M_{CG} = the mass of clear gel coat used in the past consecutive 12-month period, in megagrams;

PV_{TR} = the weighted-average monomer VOC emission rate for tooling resin used in the past consecutive 12-month period, in kilograms per megagram as calculated using Equation 4;

M_{TR} = the mass of tooling resin used in the past consecutive 12-month period, in megagrams;

PV_{TG} = the weighted-average monomer VOC emission rate for tooling gel coat used in the past consecutive 12-month period, in kilograms per megagram as calculated using Equation 4; and

M_{TG} = the mass of tooling gel coat used in the past consecutive 12-month period, in megagrams.

Equation 4: $PV_{OP} = \sum_{i=1}^n (M_i PV_i) / \sum_{i=1}^n (M_i)$

where:

M_i = the mass of resin or gel coat i used within an operation in the past consecutive 12-month period, in megagrams;

n = the number of different open molding resins and gel coats used within an operation in the past consecutive 12-month period;

PV_i = the monomer VOC emission rate for resin or gel coat i used within an operation in the past consecutive 12-month period, in kilograms of monomer VOC per megagram of material applied. Use the equations in Table 310 CMR 7.18(32)(e)3. to compute PV_i ; and

PV_{OP} = the sum of the products of M_i and PV_i for open molding resin or gel coats one through n, divided by M_i one through n, as in Table 310 CMR 7.18(32)(e)3.

Table 310 CMR 7.18(32)(e)3. Monomer VOC Emission Rate Equations for Open Molding Operations		
Material Used	Application Method	Equation to Calculate Monomer VOC Emission Rate PV_i (kg of monomer VOC per Mg of material applied) =
Production resin, tooling resin	Atomized	$0.014 \times (\text{Resin VOC}\%)^{2.425}$
	Atomized, plus vacuum bagging with roll-out	$0.01185 \times (\text{Resin VOC}\%)^{2.425}$
	Atomized, plus vacuum bagging without roll-out	$0.00945 \times (\text{Resin VOC}\%)^{2.425}$
	Non-atomized	$0.014 \times (\text{Resin VOC}\%)^{2.275}$
	Non-atomized, plus vacuum bagging with roll-out	$0.0110 \times (\text{Resin VOC}\%)^{2.275}$
	Non-atomized, plus vacuum bagging without roll-out	$0.0076 \times (\text{Resin VOC}\%)^{2.275}$
Pigmented gel coat, clear gel coat, tooling gel coat	All methods	$0.445 \times (\text{Gel coat VOC}\%)^{1.675}$

7.18: continued

4. Add-on Air Pollution Capture and Control Equipment. Use add-on air pollution capture and control equipment to emit no more than a numerical monomer VOC emission limitation that is determined for each facility in accordance with Equation 2, based on the mix of application methods and materials used at that facility, except that instead of using the mass of each material used over the past consecutive 12-month period, the facility shall use the mass of each material used during the air pollution control device performance test.

5. Filled Resin Emission Rate. In addition to complying with 310 CMR 7.18(32)(e)1., 2., 3. or 4., the following shall be used in calculating the emission rate for the filled resins used at the facility:

a. when using a filled production resin or filled tooling resin, any person subject to 310 CMR 7.18(32) shall calculate the emission rate for the filled material on an as-applied basis using Equation 5:

$$\text{Equation 5: } PV_F = PV_U \times (100 - \% \text{ Filler}) / 100$$

where:

PV_F = the as-applied monomer VOC emission rate for the filled production resin or tooling resin, kilograms monomer VOC per megagram of filled material;

PV_U = the monomer VOC emission rate for the neat or unfilled resin, before filler is added, as calculated using the equations in Table 310 CMR 7.18(32)(e)3.; and

% Filler = the weight percent of filler in the as-applied filled resin system.

b. If the filled resin is used as a production resin, the value of PV_F calculated using Equation 5 shall not exceed 46 kilograms of monomer VOC per megagram of filled resin applied.

c. If the filled resin is used as a tooling resin, the value of PV_F calculated using Equation 5 shall not exceed 54 kilograms of monomer VOC per megagram of filled resin applied.

d. If the facility includes a filled resin in the facility-specific material emissions averaging procedure, the facility shall use the value of PV_F calculated using Equation 5 for the value of PV_i in 310 CMR 7.18(32)(e)3., Equation 4.

6. Non-monomer VOC Content.

a. Up to 5% by weight of non-monomer VOC content of a resin or gel coat shall be exempt from the VOC content limitations of 310 CMR 7.18(32)(e).

b. If the non-monomer VOC content of a resin or gel coat exceeds five percent by weight, then the excess non-monomer VOC over five percent by weight shall be added to the monomer VOC content in determining compliance with 310 CMR 7.18(32)(e).

(f) Application Methods. Production resins, including skin coat resins, that must meet specifications under 46 CFR chapter I subchapter Q (Equipment, Construction and Materials: Specifications and Approval) or 46 CFR chapter I subchapter T (Small Passenger Vessels (Under 100 Gross Tons)), and that do not meet the requirements in 310 CMR 7.18(32)(e), shall be applied with non-atomizing resin application equipment.

(g) Work Practices and Emission Limitations for Cleaning Operations and Resin and Gel Coat Mixing Containers.

1. Any person subject to 310 CMR 7.18(32) shall comply with the work practices of 310 CMR 7.18(31)(e).

2. Any person subject to 310 CMR 7.18(32) using resin and gel coat mixing containers with a capacity equal to or greater than 208 liters, equivalent to 55 gallons, including those used for on-site mixing of putties and polyputties, shall have a cover with no visible gaps in place at all times, except when material is being manually added to or removed from a container, or when mixing or pumping equipment is being placed in or removed from a container.

3. Any person subject to 310 CMR 7.18(32) shall only use VOC cleaning solvents for routine application equipment cleaning that either:

a. contain no more than five percent VOC by weight; or

b. have a VOC composite partial pressure of no more than 0.50 mm Hg at 68°F.

4. Any person subject to 310 CMR 7.18(32) shall only use non-VOC solvents to remove cured resin and gel coat from application equipment.

7.18: continued

(h) Plan and Extension Submittal Requirements.

1. Any person subject to 310 CMR 7.18(32)(a)1. who chooses to install add-on air pollution capture and control equipment to comply with 310 CMR 7.18(32)(e) shall submit an emission control plan in accordance with 310 CMR 7.18(20).

2. Any person subject to 310 CMR 7.18(32)(a)1. who chooses to apply for an extension under 310 CMR 7.18(32)(d) shall comply with 310 CMR 7.18(20).

(i) Recordkeeping Requirements. Any person subject to 310 CMR 7.18(32)(a) shall prepare and maintain records sufficient to demonstrate compliance consistent with 310 CMR 7.18(2). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department and EPA in accordance with the requirements of an approved emission control plan or upon request. Such records shall include, but are not limited to:

1. identity, quantity, formulation and density of resins and gel coat(s) used;

2. identity, quantity, formulation and density of any diluent(s) and clean-up solvent(s) used;

3. solids content of any gel coat(s) or resins used;

4. actual operational and emissions characteristics of the operation and any appurtenant emissions capture and control equipment;

5. quantity of product processed, if necessary to determine emissions; and

6. any other requirements specified by the Department in any approval(s) issued under 310 CMR 7.18(20) or any order(s) issued to the person.

(j) Testing Requirements. Any person subject to 310 CMR 7.18(32)(a) shall, upon request of the Department, perform or have performed the following tests, as applicable, to demonstrate compliance with 310 CMR 7.18(32).

1. Testing to determine the monomer VOC content of resin and gel coat materials shall be conducted in accordance with SCAQMD Method 312-91, Determination of Percent Monomer in Polyester Resins, revised April 1996.

2. Testing to determine the non-monomer VOC content of resin and gel coat materials shall be conducted in accordance with EPA Method 24 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

3. If acceptable to the Department and EPA, manufacturer's formulation data may be used to demonstrate compliance with monomer and non-monomer VOC content limitations. In the case of a dispute, the VOC content determined using SCAQMD Method 312-91 and EPA Method 24 shall prevail, unless a person is able to demonstrate to the satisfaction of the Department and EPA that the manufacturer's formulation data are correct.

4. EPA Method 25A shall be used when:

a. an exhaust concentration of less than or equal to 50 parts per million volume (ppmv) as carbon is required to comply with the applicable limitations;

b. the inlet concentration and the required level of control results in an exhaust concentration of less than or equal to 50 ppmv as carbon; or

c. the high efficiency of the control device alone results in an exhaust concentration of less than or equal to 50 ppmv as carbon.

7.19: U Reasonably Available Control Technology (RACT) for Sources of Oxides of Nitrogen (NO_x)(1) Applicability.

- (a) 310 CMR 7.19 shall apply in its entirety to any person who owns, leases, operates or controls any facility having potential to emit, before application of air pollution control equipment, greater than or equal to 50 tons per year (TPY) of NO_x.
- (b) Any person who owns, leases, operates or controls a facility subject to 310 CMR 7.19, which has had actual emissions greater than or equal to 50 TPY in any year after 1989, shall continue to comply with all requirements of 310 CMR 7.19 even if emissions from the subject facility no longer exceed the 50 TPY applicability threshold in 310 CMR 7.19(1)(a).
- (c) The requirements of 310 CMR 7.19 do not apply to:
1. Any person subject to 310 CMR 7.19 who is able to demonstrate to the Department that, after calendar year 1989, the facility has not emitted 50 TPY or more of NO_x, provided that the person obtains a permit restriction from the Department under 310 CMR 7.02(9) (Restricted Emission Status or RES) by May 31, 1995, which restricts the potential emissions to below 50 TPY, and complies with the permit restriction by May 31, 1995. Persons who have obtained an RES prior to May 31, 1995, may notify the Department of their intent to operate in compliance with one of the rolling 12-month emission caps under 310 CMR 7.02(11)(e) or (f) as a means of limiting the facility's potential emissions to 25 TPY or less of NO_x.
 2. Any emission unit that has a permit restriction prohibiting it from operating between May 1st and September 30th of each year and restricting potential emissions to less than 50 tons per year of NO_x from the emission unit.
 3. Any boiler having an energy input capacity of less than 20,000,000 Btu per hour provided that potential emissions from the emission unit are less than 50 TPY of NO_x.
 4. Any stationary combustion turbine having an energy input capacity of less than 25,000,000 Btu per hour.
 5. Any stationary reciprocating internal combustion engine having an energy input capacity of less than 3,000,000 Btu per hour.
 6. Any glass melting furnace having a maximum production rate of less than 14 tons of glass removed from the furnace per day.
 7. Any other furnace, kiln, dryer or oven having potential emissions less than 25 TPY of NO_x.
 8. Any municipal waste combustor unit having potential emissions of less than 25 TPY of NO_x.
 9. Any person who, since January 1, 1990, obtains a plan approval for an emission unit under 310 CMR 7.02 where such approval establishes BACT or LAER to be no less stringent than the RACT applicable to the facility size and type, as defined in 310 CMR 7.19. Such person shall comply with the BACT or LAER established in the plan approval, and is not subject to RACT standards of 310 CMR 7.19 as may otherwise be applicable, until the applicable RACT standards of 310 CMR 7.19 become more stringent than the BACT or LAER established in the plan approval, at which time the person shall become subject to the updated RACT standards.
 10. Any large municipal waste combustor unit subject to 310 CMR 7.08(2).
 11. Any engine subject to and in compliance with 310 CMR 7.26(43).
- (d) Any large boiler subject to 310 CMR 7.19(4)(b), or combustion turbine subject to 310 CMR 7.19(7)(b), that, as of March 9, 2018 has an annual capacity factor of less than 10% averaged over the most recent three year consecutive period, shall not be required to meet the applicable emission standards. If such a boiler or combustion turbine subsequently meets or exceeds the 10% capacity factor based on a three calendar year consecutive period, the owner/operator of the boiler or combustion turbine shall notify the Department in writing, and, if applicable, submit an Emission Control Plan pursuant to 310 CMR 7.19(3)(a)1., within 180 days of the end of the three-year period, and shall comply with the applicable NO_x emission standards within two years of the end of the three-year period.

(2) General Provisions.

- (a) After May 31, 1995, any person subject to 310 CMR 7.19 shall achieve and maintain continuous compliance with all requirements of 310 CMR 7.19.

7.19: continued

(b) Any person unable to comply with emission standards under 310 CMR 7.19(4)(b), (7)(b), (8)(d) or (9) may submit an application under 310 CMR 7.19(3) for a source specific alternative RACT. Such application shall be submitted to the Department for approval no later than September 5, 2018. No later than March 10, 2020, a person approved under 310 CMR 7.19(2)(b) must comply with the approved source specific alternative RACT. Such application must evaluate each of the following NO_x controls, where it may be applied, and its technological and economic feasibility.

1. low-NO_x burners;
2. close coupled and separated overfire air;
3. flue gas recirculation;
4. burners out of service;
5. steam/water injection;
6. dry low-NO_x combustors;
7. ignition timing retard;
8. low emission combustion for reciprocating internal combustion engines;
9. separate circuit after-cooling;
10. fuel emulsification;
11. fuel switching;
12. selective noncatalytic reduction (SNCR);
13. selective catalytic reduction (SCR);
14. nonselective catalytic reduction (NSCR).
15. gas reburn; and
16. use of emission reduction credits (ERCs) certified by the Department pursuant to 310 CMR 7.00: *Appendix B(3)*, or pursuant to the interstate trading provisions at 310 CMR 7.00: *Appendix B(3)(f)*.

Any person approved under 310 CMR 7.19(2)(b) must comply with the requirements of 310 CMR 7.19(13), except as specified in 310 CMR 7.19(9)(b).

(c) An emission unit subject to 310 CMR 7.19 shall be operated under conditions acceptable to the Department and EPA, and consistent with the operational parameters and limits established in the approved emission control plan.

(d) Any person subject to 310 CMR 7.19 may elect to comply with a more stringent NO_x limit in order to; create Emission Reduction Credits under 310 CMR 7.00: *Appendix B(3)*; create emissions offsets for use under the provisions of 310 CMR 7.00: *Appendix A(6)*; reduce the net emissions increase below the significance level under 310 CMR 7.00: *Appendix A(3)*; emissions average under 310 CMR 7.19(14) and 7.00: *Appendix B(4)*.

(e) Any person subject to a more stringent emission standard either contained in a plan approval (issued pursuant to the Department's regulations) or in a PSD permit or contained in a Department regulation shall remain subject to that more stringent emission standard.

(f) Seasonal Fuel Switching. After May 31, 1995 but before March 9, 2018, any person owning, leasing, operating or controlling an emissions unit subject to an emissions standard contained in 310 CMR 7.19 may choose to have the emissions unit comply with 310 CMR 7.19(2)(f) instead of an emissions limit contained in 310 CMR 7.19(4) through (11) by fuel switching.

1. The 12 month rolling average NO_x emissions standard, in pounds per million Btu, shall be less than or equal to the NO_x emissions standard calculated in the following manner.

a. The annual limit shall be determined according to the following equation:

$$AS_{NO_x} = \frac{(HI_1) \times (ES_1) + (HI_2) \times (ES_2) \dots + (HI_N) \times (ES_N)}{HI_1 + HI_2 \dots + HI_N}$$

AS_{NO_x} is the annual standard for nitrogen oxides derived from all fuels fired during the base year.

HI₁ is the heat input for fuel 1 in Btu during the base year.

ES₁ is the emissions standard for fuel 1 contained in 310 CMR 7.19(4) through (11), except that for tangential oil or oil and gas fired boilers, the emissions standard is 0.2 pounds per million Btu.

N is the number of fuels burned during the base year.

7.19: continued

- b. The base year shall be 1990. 1991 or 1992 may be used instead if the Department determines 1991 or 1992 is more representative of normal operation.
 - 2. The maximum daily NO_x emissions standard from May 1st through September 30th shall be the emissions standard allowed under 310 CMR 7.19(4) through (11) for the fuel burned in the largest amount, on a Btu basis, during the base year. However, for tangential oil or oil and gas fired boilers, the emissions standard is 0.2 pounds per million Btu.
 - 3. The emission unit(s) must burn only the fuel, of the fuels it is approved to burn, that has the lowest NO_x emissions rate, between May 1 and September 30 of each year unless the fuel is not available.
- (g) Emission Reduction Credits. Any facility may comply, either in part, or entirely, with the applicable emissions standard requirement contained in 310 CMR 7.19 through the use of emissions reduction credits (ERCs) certified by the Department pursuant to 310 CMR 7.00: *Appendix B(3)*. For any ERCs generated from emissions reductions at a facility that, if it were operating after March 9, 2018, would be subject to 310 CMR 7.19(4)(b), 7.19(7)(b), and 7.19(8)(d), and such ERCs were certified prior to March 9, 2018 in accordance with Appendix B(3), the Department shall devalue the ERCs based on the ratio of the new applicable NO_x RACT emission standard to the lower of the actual emissions or the allowable NO_x RACT emission standard that was used to generate the ERCs.
- (3) Emission Control Plans for Implementation of RACT.
- (a) 1. General Applicability. After March 9, 2018, any person owning, leasing, operating or controlling a facility subject to 310 CMR 7.19(4)(b), (7)(b), or (8)(d) that requires installation of air pollution controls or retrofitting of air pollution controls, or proposes to use ERCs, to meet applicable emission standards shall submit an Emission Control Plan to the Department within 180 days of March 9, 2018.
 - 2. Any person subject to 310 CMR 7.19(9) shall submit an Emission Control Plan by September 5, 2018 for Department approval in accordance with 310 CMR 7.19(9)(b).
 - 3. Any person using ERCs in accordance with 310 CMR 7.19(2)(b)16. shall submit an Emission Control Plan.
 - (b) Emission Control Plan Requirements. The emission control plan under 310 CMR 7.19(3) shall be submitted on a Department approved form and shall include, at a minimum, the following:
 - 1. a list and description of all the exempt and non-exempt emission units at the facility having potential to emit NO_x including:
 - a. any associated plan approvals, dates of installation, any subsequent alterations, *etc.*;
 - b. the maximum energy input capacity, in millions of Btu per hour, of each emission unit;
 - c. for fuel utilization facilities, the type of fuel(s) permitted to be burned in each emission unit;
 - d. the maximum NO_x emissions rate of each unit, in pounds per million Btu, for each fuel burned before and after the application of NO_x RACT;
 - e. the total actual fuel usage and energy input in million Btu for each fuel for each of the last two years for each emission unit;
 - f. the energy conversion efficiency (in brake horsepower hour output per million Btu input (HHV)) for each reciprocating internal combustion engine;
 - g. the O₂ exhaust gas concentration and the dry standard cubic feet per million Btu of energy input for each stationary combustion turbine; and
 - h. the energy input, million Btu, per ton of glass produced for glass manufacturing furnaces.
 - 2. a demonstration that the provisions of 310 CMR 7.19 can be met by each emission unit included in the emission control plan, including the potential emissions after implementation of RACT of all emission units emitting NO_x for which the emission control plan is being submitted. A demonstration that combustion conditions will not significantly deteriorate shall be included for any emission unit for which a higher CO emission standard is being applied pursuant to 310 CMR 7.19(4)(f).
 - 3. if applicable, the control efficiency, design, specifications, and standard operating and maintenance procedures for any control equipment used to reduce NO_x emissions to implement RACT;

7.19: continued

4. the testing, monitoring, recordkeeping and reporting procedures, as contained in 310 CMR 7.19(13), used to demonstrate compliance with 310 CMR 7.19;
5. a schedule for the implementation of RACT at the facility, including provisions for demonstrating periodic increments of progress and demonstrating compliance;
6. any other information required by the Department; and
7. the signature of a responsible official.

(c) Additional Requirements for Demonstration of RACT. An emission control plan submitted by any person who owns, leases operates or controls a facility or part of a facility subject to 310 CMR 7.19(2)(b), (4)(c) or (12), must meet the following requirements in addition to the requirements under 310 CMR 7.19(3)(b).

1. The plan must demonstrate the emission limits reflecting the application of RACT for that facility or part thereof; and
2. The plan must include pertinent information supporting the demonstration made under 310 CMR 7.19(3)(c)1., including technical and economic considerations.

(d) Approval of an Emission Control Plan. For persons applying under 310 CMR 7.19(2)(b) or (4)(c) or (12) or (14), for each ECP application where the information submitted subject to 310 CMR 7.19(3)(d) is sufficient to support the emissions limits and the proposed schedule, the Department shall:

1. Provide a 30-day period for submittal of public comment;
2. Post on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period, the following:
 - a. Notice of availability of the Department's proposed decision to approve or deny the ECP application and information on how to submit public comment;
 - b. The Department's proposed decision to approve or deny the ECP application; and
 - c. Information on how to access the administrative record for the Department's proposed decision to approve or deny the ECP application.
3. Send a copy of the notice required under 310 CMR 7.19(3)d.2.a. to EPA.

After the close of the public comment period, the Department shall issue a final approval or disapproval of the ECP.

(e) Prohibition. Except as provided for in 310 CMR 7.19(3)(a), no emission reductions or any other actions taken at any facility or part of a facility will constitute implementation of RACT at that facility unless those emission reductions or other actions are part of an emission control plan approved by the Department.

(f) Additional requirements may be included in the emission control plan approval to assure that emissions from the unit(s) subject to RACT will not cause or contribute to a condition of air pollution or a violation of any other regulation. Such requirements include, but are not limited to, emissions limits on other air contaminants, and additional stack testing or emissions monitoring requirements.

(4) Large Boilers.

(a) Applicability and NO_x RACT. After May 31, 1995, any person owning, leasing, operating or controlling a boiler having an energy input capacity of 100,000,000 Btu per hour or greater, at a facility subject to 310 CMR 7.19, shall comply with the following NO_x emission standards in 310 CMR 7.19(4)(a), except as provided in 310 CMR 7.19(2)(b), 7.19(2)(e), 7.19(2)(f), 7.19(4)(b), 7.19(4)(c) and 7.19(4)(d).

1. For dry bottom boilers burning coal:
 - a. for tangential fired boilers, 0.38 pounds per million Btu; and
 - b. for face fired boilers, 0.45 pounds per million Btu.
2. For stoker-fired boilers burning other solid fuels, 0.33 pounds per million Btu.
3. For boilers with an energy input capacity greater than or equal to 250 million Btu per hour burning either oil or oil and gas (This includes burning the oil and gas simultaneously or at different times. Boilers approved to burn another fuel, such as coal, are subject to this limit only while burning only oil and/or gas and not the other fuel.):
 - a. i. for tangential oil fired boilers, 0.25 pounds per million Btu;
 - ii. for tangential gas fired boilers, 0.20 pounds per million Btu; and
 - b. for face fired boilers, 0.28 pounds per million Btu.
4. For boilers with an energy input capacity greater than or equal to 100,000,000 Btu per hour and less than 250,000,000 Btu per hour burning either oil or oil and gas:
 - a. for boilers with a heat release rate less than or equal to 70,000 Btu/hours-ft³, 0.30 pounds per million Btu; and
 - b. for boilers with a heat release greater than 70,000 Btu/hour-ft³, 0.40.

7.19: continued

5. For boilers burning only gas, 0.20 pounds per million Btu.
 6. The averaging time for determining compliance with 310 CMR 7.19(4)(a) shall be one hour. Except that, for boilers using a continuous emissions monitoring system that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance will be based on a calendar day average.
- (b) Applicability and NO_x RACT. On or after two years from March 9, 2018, any person owning, leasing, operating or controlling a boiler having an energy input capacity of 100,000,000 Btu per hour or greater at a facility subject to 310 CMR 7.19 shall comply with the NO_x emission standards in 310 CMR 7.19(4)(b), except as provided in 310 CMR 7.19(1)(d), (2)(b), and (e).
1. For dry bottom boilers burning coal:
 - a. for tangential fired boilers, 0.12 pounds per million Btu; and
 - b. for face fired boilers, 0.12 pounds per million Btu.
 2. For stoker-fired boilers burning other solid fuels, 0.33 pounds per million Btu.
 3. For boilers with an energy input capacity greater than or equal to 250 million Btu per hour burning either oil or oil and gas (This includes burning the oil and gas simultaneously or at different times. Boilers approved to burn another fuel, such as coal, are subject to this limit only while burning only oil and/or gas and not the other fuel.):
 - a. i. for tangential oil fired boilers, 0.15 pounds per million Btu; and
 - ii. for tangential gas fired boilers, 0.08 pounds per million Btu.
 - b. for face fired boilers, 0.15 pounds per million Btu.
 4. For boilers with an energy input capacity greater than or equal to 100,000,000 Btu per hour and less than 250,000,000 Btu per hour burning either oil or oil and gas:
 - a. for boilers with a heat release rate less than or equal to 70,000 Btu/hours-ft³, 0.15 pounds per million Btu; and
 - b. for boilers with a heat release greater than 70,000 Btu/hour-ft³, 0.15.
 5. For boilers burning only gas, 0.06 pounds per million Btu.
 6. The averaging time for determining compliance with 310 CMR 7.19(4)(b) shall be one hour. Except that, for boilers using a continuous emissions monitoring system that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance will be based on either a calendar day average or calendar month basis when a facility demonstrates existing controls installed for purposes of 310 CMR 7.29 compliance relied on the longer averaging period.
- (c) Alternative NO_x RACT. Any person owning, leasing, operating or controlling a boiler subject to 310 CMR 7.19(4)(a), may choose to have that boiler comply with 310 CMR 7.19(4)(c) instead of 310 CMR 7.19(4)(a).
1. After May 31, 1995, the maximum allowable daily NO_x emission standard, in pounds per million Btu, shall be equal to 0.6 times the worst NO_x emission rate. The worst NO_x emission rate shall be determined in accordance with a methodology specified by the Department for each fuel burned.
 2. The Department will approve the boiler to comply with an alternative emission limitation contained in 310 CMR 7.19(4)(c)1. only if a demonstration is contained in the Emission Control Plan that the boiler cannot comply with the emission limitation contained in 310 CMR 7.19(4)(a) through use of available NO_x controls or NO_x ERCs. This may be demonstrated either through technical or economic infeasibility.
- (d) Except as provided for under 310 CMR 7.19(2)(f), if more than one fuel is fired simultaneously or during the same hour (or day if an averaging time of 24 hours is used), the allowable NO_x emission standard shall be calculated according to the procedure contained in 310 CMR 7.19(15) using the emission standard from 310 CMR 7.19(4)(a) or (b), as applicable.
- (e) Testing, Monitoring, Recordkeeping, Reporting and Emission Control Plan. Any facility subject to 310 CMR 7.19(4), shall comply with any applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13) and shall submit an emission control plan as required by 310 CMR 7.19(3).
- (f) Carbon Monoxide (CO) Limitation. Any facility subject to 310 CMR 7.19(4), shall not exceed a CO exhaust concentration of 200 ppmvd, corrected to 3% oxygen. This shall be based on a one hour averaging time. If a continuous emissions monitoring system is used for determining compliance, the averaging time shall be a calendar day. Notwithstanding this CO emission standard, the Department may approve a higher CO emission standard for a large boiler as part of the emission control plan if the facility demonstrates that combustion conditions will not significantly deteriorate with the higher CO emission standard.

7.19: continued

(5) Medium-size Boilers.

(a) Applicability and NO_x RACT. After May 31, 1995, any person owning, leasing, operating or controlling a boiler with an energy input capacity of 50,000,000 Btu per hour or greater and less than 100,000,000 Btu per hour at a facility subject to 310 CMR 7.19, shall comply with the following NO_x emission standard, except as provided for in 310 CMR 7.19(2)(b), (e) and (f).

1. For tangential or face-fired or stoker-fired boilers, burning solid fuel, 0.43 pounds per million Btu, based on a one hour average.
2. For tangential or face fired boilers, based on a one hour average.
 - a. burning gas only, 0.1 pounds per million Btu.
 - b. burning distillate oil or oil and gas (This includes burning the oil and gas simultaneously or at different times. Boilers approved to burn another fuel such as coal are subject to this limit while only burning oil and/or gas and not coal.) 0.12 pounds per million Btu.
 - c. burning residual oil,
 - i. 0.3 pounds per million Btu burning residual oil or residual oil and gas (This includes burning the oil and gas simultaneously or at different times. Boilers approved to burn another fuel such as coal are subject to this limit while burning only oil and/or gas and not coal.), or
 - ii. recirculate at least 15% of the flue gas and maintain flue gas oxygen concentration at 3% at the boiler exit. The O₂ level should not be decreased beyond the point that the CO concentration increases beyond 130 ppmvd, corrected to 3% O₂.
3. For boilers using a continuous emissions monitoring system that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance will be based on a calendar day average.

(b) Cofiring Fuels. Except as provided for under 310 CMR 7.19(2)(f), if more than one fuel is fired simultaneously or during the same hour (or day if an averaging time of 24 hours is used), the allowable NO_x emissions standard shall be calculated according to the procedure contained in 310 CMR 7.19(15).

(c) Testing, Monitoring, Recordkeeping, Reporting and Emission Control Plan. Any facility subject to 310 CMR 7.19(5), shall comply with all applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13) and shall submit an emission control plan as required by 310 CMR 7.19(3).

(d) Carbon Monoxide (CO) Limitation. Any facility subject to 310 CMR 7.19(5), shall not exceed a CO exhaust concentration of 200 ppmvd, corrected to 3% oxygen. This shall be based on a one hour averaging time. If a continuous emissions monitoring system is used for determining compliance, the averaging time shall be a calendar day. Notwithstanding this CO emission standard, the Department may approve a higher CO emission standard for a medium-size boiler as part of the emission control plan if the facility demonstrates that combustion conditions will not significantly deteriorate with the higher CO emission standard.

(6) Small Boilers.

(a) Applicability and NO_x RACT After March 15, 1995, any person owning, leasing, operating or controlling a boiler, with an energy input capacity of less than 50,000,000 Btu per hour and equal to or greater than 20,000,000 Btu per hour or with an energy input capacity less than 20,000,000 Btu per hour with potential emissions greater than 50 TPY of NO_x, at a facility subject to 310 CMR 7.19, shall tune the boiler annually according to the following procedure (tuneup procedure based on *Combustion Efficiency Optimization Manual for Operators of Oil and Gas Fired Boilers* (EPA 340/1-83-023)):

1. Operate the boiler at a firing rate most typical of normal operation. If the boiler experiences significant load variations during normal operation, operate it at its average firing rate.

7.19: continued

2. At this firing rate record stack gas temperature, oxygen concentration, and CO concentration (for gaseous fuels) or smoke-spot number (For liquid fuels, the smoke spot number can be determined with ASTM Test Method D-2156 (Bacharach or equivalent)) and observe flame conditions after boiler operation stabilizes at the firing rate selected. If the excess oxygen in the stack gas is at the lower end of the range of typical minimum values (typical minimum oxygen levels for boilers at high firing rates are: for natural gas 0.5-3.0%; for liquid fuels 2.0-4.0%. The O₂ level should be reduced below this range with caution). If the CO emissions are low and there is no smoke, the boiler is probably operating at near optimum efficiency at this particular firing rate. However, complete the remaining portion of this procedure at 310 CMR 7.19(6)(a)3. through 10. to determine whether still lower oxygen levels are practical.
3. Increase combustion air flow to the boiler until stack gas oxygen levels increase by 1 to 2% over the level measured in 310 CMR 7.19(6)(a)2. As in 310 CMR 7.19(6)(a)2., record the stack gas temperature, CO concentration (for gaseous fuels) and smoke-spot number (for liquid fuels), and observe flame conditions for these higher oxygen levels after boiler operation stabilizes.
4. Decrease combustion air flow until the stack gas oxygen concentration is at the level measured in 310 CMR 7.19(6)(a)2. From this level gradually reduce the combustion air flow, in small increments. After each increment, record the stack gas temperature, oxygen concentration, CO concentration (for gaseous fuels) and smoke-spot number (for liquid fuels). Also observe the flame and record any changes in its condition.
5. Continue to reduce combustion air flow stepwise, until one of these limits is reached:
 - a. Unacceptable flame conditions - such as flame impingement on furnace walls or burner parts, excessive flame carryover, or flame instability.
 - b. Stack gas CO concentrations greater than 400 ppm for gaseous fuels.
 - c. Smoking at the stack for liquid fuels.
 - d. Equipment-related limitation - such as low windbox/furnace pressure differential, built in air-flow limits, etc.
6. Develop an O₂/CO curve (for gaseous fuels) or O₂/smoke curve (for liquid fuels) similar to those shown in figures 310 CMR 7.19(6)-1 and 2 using the excess oxygen and CO or smoke-spot number data obtained at each combustion air flow setting.
7. From the curves prepared in 310 CMR 7.19(6)(a)6., find the stack gas oxygen levels where the CO emission or smoke spot number equals the following values:

<u>Fuel</u>	<u>Measurement</u>	<u>Value</u>
Gaseous	CO emissions	400 ppm
#1 & #2 oils	smoke-spot number	number 1
#4 oil	smoke-spot number	number 2
#5 oil	smoke-spot number	number 3
#6 oil	smoke-spot number	number 4

The above conditions are referred to as CO or smoke threshold, or as the minimum excess oxygen level. Compare this minimum value of excess oxygen to the expected value provided by the combustion unit manufacturer. If the minimum level found is substantially higher than the value provided by the combustion unit manufacturer, the owner or operator should improve fuel and air mixing, thereby allowing operation with less air.

8. Add 0.5 to 2.0% to the minimum excess oxygen level found in 310 CMR 7.19(6)(a)7. and reset burner controls to operate automatically at this higher stack gas oxygen level. This margin above the minimum oxygen level accounts for fuel variations, variations in atmospheric conditions, load changes, and non-repeatability or play in automatic controls.

7.19: continued

9. If the load of the combustion unit varies significantly during normal operation, repeat 310 CMR 7.19(6)(a)1. through 8. for firing rates that represent the upper and lower limits of the range of the load. Because control adjustment at one firing rate may effect conditions at other firing rates, it may not be possible to establish the optimum excess oxygen level at all firing rates. If this is the case, choose the burner control settings that give best performance over the range of firing rates. If one firing rate predominates, settings should optimize conditions at that rate.

10. Verify that the new settings can accommodate the sudden changes that may occur in daily operation without adverse effects. Do this by increasing and decreasing load rapidly while observing the flame and stack. If any of the conditions in 310 CMR 7.19(6)(a)5. result, reset the combustion controls to provide a slightly higher level of excess oxygen at the affected firing rates. Next, verify these new settings in a similar fashion. Then make sure that the final control settings are recorded at steady-state operating conditions for future reference.

11. Alternatively, another tune-up procedure, such as found in MACT subpart JJJJJ [40 CFR 63.11223(b) and Table 2] or MACT Subpart DDDDD [40 CFR 63.7540(a)(10) and Table 3], may be used if approved in writing by the Department and EPA.

12. Nothing in any tune-up procedure shall be construed to require any act or omission that would result in unsafe conditions or would be in violation of any regulation or requirement established by National Fire Prevention Association, Federal Occupational Safety and Health Administration, or other applicable regulations or requirements.

(b) Testing, Recordkeeping, and Notification. Any person subject to 310 CMR 7.19(6) shall:

1. provide written notification to the Department by January 1, 1995 that the facility is subject to, and will comply with 310 CMR 7.19(6).
2. maintain records for five years of the tune-up, including:
 - a. date of tune-up;
 - b. person(s) conducting tune-up;
 - c. O₂/CO (for gas) or O₂/smoke spot (for oil) correlations obtained during tune-up;
 - d. boiler/burner manufacturer's recommended set-points;
 - e. final boiler set-points as result of tune-up;
 - f. normal boiler/burner maintenance records.
 - g. at least once per month verify that the settings determined during the tune-up have not changed.

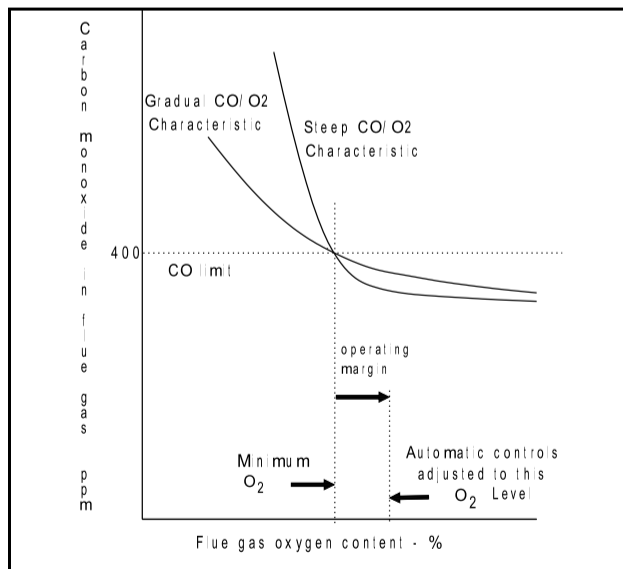


Figure 310 CMR 7.19(6) - 1

7.19: continued

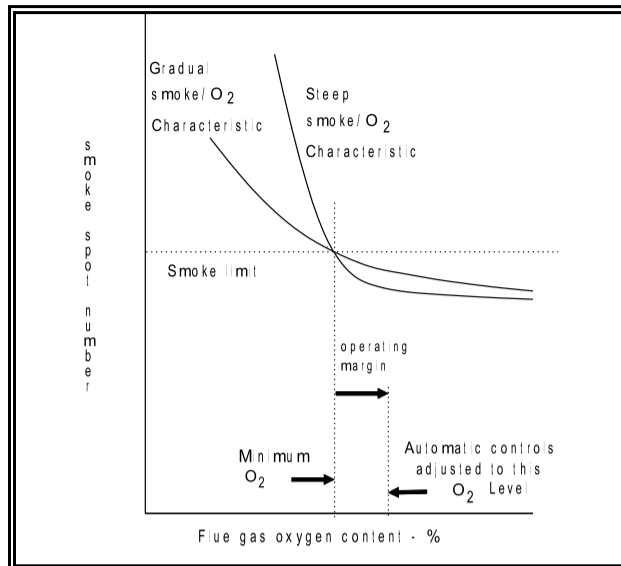


Figure 310 CMR 7.19(6) - 2

(7) Stationary Combustion Turbines.

(a) Applicability and NO_x RACT. After May 31, 1995, any person owning, leasing, operating or controlling any stationary combustion turbine having an energy input capacity of 25,000,000 Btu per hour or greater at a facility subject to 310 CMR 7.19, shall comply with the following NO_x and CO emission standards in 310 CMR 7.19(7)(a), except as provided for in 310 CMR 7.19(2)(b), 7.19(2)(e), and 7.19(2)(f).

1. For combined cycle stationary combustion turbines, based on a one-hour average:
 - a. 42 ppmvd NO_x, corrected to 15% O₂, when firing gas, and
 - b. 65 ppmvd NO_x, corrected to 15% O₂, when firing oil, and
 - c. 50 ppmvd CO, corrected to 15% O₂, when firing oil and/or gas.
2. For simple cycle stationary combustion turbines, based on a one hour average:
 - a. 65 ppmvd NO_x, corrected to 15% O₂, when firing gas, and
 - b. 100 ppmvd NO_x, corrected to 15% O₂, when firing oil, and
 - c. 100 ppmvd CO, corrected to 15% O₂, when firing oil and/or gas.
3. For stationary combustion turbines using a monitoring system that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance will be based on a calendar day average.
4. Notwithstanding the CO emission standard stated in 310 CMR 7.19(7)(a)1.c. and 2.c., the Department may approve a higher CO emission standard for a stationary combustion turbine if it is demonstrated that combustion conditions will not significantly deteriorate with a higher CO emission standard.

(b) Applicability and NO_x RACT. On or after two years from March 9, 2018, any person owning, leasing, operating or controlling any stationary combustion turbine having an energy input capacity of 25,000,000 Btu per hour or greater at a facility subject to 310 CMR 7.19 shall comply with the NO_x and CO emission standards in 310 CMR 7.19(7)(b), except as provided in 310 CMR 7.19(1)(d), 7.19(2)(b), and 7.19(2)(e).

1. For combined cycle stationary combustion turbines, based on a one-hour average:
 - a. 25 ppmvd NO_x, corrected to 15% O₂, when firing gas, and
 - b. 42 ppmvd NO_x, corrected to 15% O₂, when firing oil, and
 - c. 50 ppmvd CO, corrected to 15% O₂, when firing oil and/or gas.
2. For simple cycle stationary combustion turbines, based on a one hour average:
 - a. 40 ppmvd NO_x, corrected to 15% O₂, when firing gas, and
 - b. 50 ppmvd NO_x, corrected to 15% O₂, when firing oil, and
 - c. 100 ppmvd CO, corrected to 15% O₂, when firing oil and/or gas.
3. For stationary combustion turbines using a monitoring system that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance will be based on a calendar day average.

(c) Testing, Monitoring, Recordkeeping, Reporting and Emission Control Plan. Any facility subject to 310 CMR 7.19(7), shall comply with all applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13) and shall submit an emission control plan as required by 310 CMR 7.19(3).

7.19: continued

(8) Stationary Reciprocating Internal Combustion Engines.

(a) Applicability and NO_x RACT. After May 31, 1995, any person owning, leasing, operating or controlling a reciprocating internal combustion engine having energy input capacity of 3,000,000 Btu per hour or greater at a facility subject to 310 CMR 7.19, is subject to 310 CMR 7.19(8) and shall comply with NO_x RACT as defined in 310 CMR 7.19(8)(c), (d) or (e) as applicable, except as provided for in 310 CMR 7.19(2)(b), 7.19(2)(e) and 7.19(2)(f).

(b) Exemption. An engine installed and operated in compliance with 310 CMR 7.02(8)(i), 310 CMR 7.03(10), or 310 CMR 7.26(42) is exempt from the requirements of 310 CMR 7.19(8).

(c) For a stationary reciprocating internal combustion engine that has operated 1000 hours or more during any consecutive 12-month period since January 1, 1990, but has not operated 1000 hours or more during any consecutive 12-month period after March 9, 2018, the NO_x emission standard shall be:

1. For rich burn, gas-fired reciprocating internal combustion engines, 1.5 grams per bhp-hr, based on a one hour average.
2. For lean burn, gas-fired reciprocating internal combustion engines, 3.0 grams per bhp-hr, based on a one hour average.
3. For lean burn, oil-fired or dual fuel reciprocating internal combustion engines, 9.0 grams per bhp-hr, based on a one hour average.
4. For stationary reciprocating internal combustion engine using a monitoring system that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance will be based on a calendar day average.

(d) For a stationary reciprocating internal combustion engine that has operated 1000 hours or more during any consecutive 12-month period since March 9, 2018, the owner/operator of such engine shall have until two years after the 12-month consecutive period that exceeded the 1000 hours of operation to comply with the applicable NO_x emission standards below:

1. For rich burn, gas-fired reciprocating internal combustion engines, 1.5 grams per bhp-hr, based on a one hour average.
2. For lean burn, gas-fired reciprocating internal combustion engines, 1.5 grams per bhp-hr, based on a one hour average.
3. For lean burn, oil-fired or dual fuel reciprocating internal combustion engines, 2.3 grams per bhp-hr, based on a one hour average.
4. For stationary reciprocating internal combustion engines using a monitoring system that satisfies the requirements of 310 CMR 7.19(13)(b) to determine compliance, compliance will be based on a calendar day average.

(e) For a stationary reciprocating internal combustion engine that has not operated 1000 hours or more during any consecutive 12 month period since January 1, 1990, the NO_x emission standard shall be:

1. the emission standard in 310 CMR 7.19(8)(c) or (d), as applicable; or, set and maintain the ignition timing of the engine four degrees retarded relative to standard timing; provided the ignition timing shall not be retarded beyond the point that:
 - a. the CO emission concentration increases by 100 ppmvd, corrected to 15% O₂, or
 - b. the turbocharger speed is increased beyond the maximum operating speed recommended by the manufacturer, or
 - c. the exhaust port temperature increases beyond the manufacturer's recommended maximum operating temperature.
2. install and maintain an elapsed time meter to indicate, in cumulative hours, the elapsed engine operating time for the previous 12 months;
3. determine the hours of operation for each engine for the previous 12-month period on a monthly basis;
4. notify the Department if the operation exceeds 1000 hours for any consecutive 12-month period, and the facility is subject to the emission standard in 310 CMR 7.19(8)(c) or (d), as applicable.
5. maintain records to certify that the ignition timing of the engine has been inspected and adjusted at least once every three years.

(f) Testing, Monitoring, Recordkeeping, Reporting and Emission Control Plan. Any facility subject to 310 CMR 7.19(8), shall comply with all applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13) and shall submit an emission control plan as required by 310 CMR 7.19(3).

7.19: continued

(9) Small Municipal Waste Combustor Units.

(a) Applicability and NO_x RACT. Any person owning, leasing, operating or controlling a small municipal waste combustor unit as defined in 310 CMR 7.08(2) with potential emissions of NO_x equal to or greater than 25 tons per year at a facility having potential emissions, before application of air pollution control equipment, greater than or equal to 50 tons per year of NO_x shall comply with 310 CMR 7.19(9).

1. Until the dates specified in 310 CMR 7.19(9)(a)2.a. and b., the NO_x emission standard for a municipal waste combustor unit subject to 310 CMR 7.19(9) is 0.6 pounds per million Btu, based on a one hour average, while burning municipal waste, except as provided for in 310 CMR 7.19(2)(b), (2)(e) and (2)(f). However, for any municipal waste combustor unit equipped with a continuous emissions monitoring system, the averaging time shall be based on a calendar day average.

2. Beginning on the dates specified in 310 CMR 7.19(9)(a)2.a. and b., the NO_x emission standard for a municipal waste combustor unit subject to 310 CMR 7.19(9) is 167 parts per million corrected to 7% oxygen by volume, based on a calendar day average, while burning municipal waste, except as provided for in 310 CMR 7.19(2)(b), (2)(e) and (2)(f).

a. For any person subject to 310 CMR 7.19(9) not submitting an emission control plan application as specified in 310 CMR 7.19(9)(b), the standard in 310 CMR 7.19(9)(a)1. is in effect until June 7, 2018 and the standard in 310 CMR 7.19(9)(a)2. is in effect beginning June 8, 2018.

b. For any person subject to 310 CMR 7.19(9) submitting an emission control plan application as specified in 310 CMR 7.19(9)(b), the standard in 310 CMR 7.19(9)(a)1. is in effect until one year after issuance of the Department approval and the standard in 310 CMR 7.19(9)(a)2. is in effect beginning one year and one day after issuance of the Department approval, but no later than March 10, 2020.

(b) Testing, Monitoring, Recordkeeping Reporting and Emission Control Plan. Any person subject to 310 CMR 7.19(9) shall either comply with the applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13) or comply with the applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.08(2) and shall submit an emissions control plan as required by 310 CMR 7.19(3) or submit a notification to the Department no later than April 9, 2018 stating that the facility as currently equipped is in compliance with the requirements of 310 CMR 7.19(9).

(c) Ammonia. No later than the dates specified in the approval issued by the Department under 310 CMR 7.19(2)(b) or (3)(a), any person subject to 310 CMR 7.19(9) utilizing ammonia or urea for NO_x control shall:

1. conduct ammonia optimization testing;
2. submit a report to the Department correlating NO_x emissions and ammonia slip;
3. propose an ammonia emissions limit that the Department will review and may modify before incorporating in the unit's approval; and
4. if using an ammonia continuous emission monitoring system to demonstrate compliance, obtain, at a minimum, valid hourly averages based on at least two data points per hour, for at least 90% of the operating hours per calendar quarter and 95% of the operating hours per calendar year that the affected facility is combusting municipal solid waste.

((10) Reserved)

(11) Glass Melting Furnaces.

(a) Applicability and NO_x RACT. After May 31, 1995, any person owning, leasing, operating or controlling a container glass melting furnace having a maximum production rate of 14 tons of glass removed from the furnace per day or greater, at a facility subject to 310 CMR 7.19, shall comply with an emission standard of 5.3 pounds of NO_x per ton of glass removed from the furnace based on a calendar day average, except as provided for in 310 CMR 7.19(2)(b), (e) and (f).

(b) Testing, Monitoring, Recordkeeping, Reporting and Emission Control Plan Any facility subject to 310 CMR 7.19(11), shall comply with any applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13) and shall submit an emission control plan as required by 310 CMR 7.19(3).

7.19: continued

(12) Miscellaneous RACT.

(a) Applicability. Any emissions unit with potential emissions of NO_x equal to or greater than 25 tons per year at a facility having potential emissions, before application of air pollution control equipment, greater than or equal to 50 tons per year of NO_x is subject to 310 CMR 7.19(12) and shall comply with the source specific RACT for that emissions unit.

(b) Emissions Exemptions.

1. RACT is not required to be defined under 310 CMR 7.19(12) for any emissions unit that since January 1, 1990 has been approved as Best Available Control Technology or Lowest Achievable Emission Rate in an approval containing specific emission limits or work practice standards issued under a federally enforceable regulation.

2. RACT is not required to be defined under 310 CMR 7.19(12) for any emissions unit either subject to a RACT standard under 310 CMR 7.19(4), (5), (6), (7), (8), or (11) or exempt under 310 CMR 7.19(1)(c)2. through 8.

(c) NO_x Reasonably Available Control Technology Requirements. After May 31, 1995, no person subject to the requirements of 310 CMR 7.19(12) shall cause, suffer, allow or permit emissions from the facility in excess of an emission rate achievable through the implementation of reasonably available control technology as required in an emission control plan approved under 310 CMR 7.19(3).

(d) Emission Control Plan Requirements. Any person subject to 310 CMR 7.19(12)(a) must submit an emission control plan as required by 310 CMR 7.19(3) by April 1, 1994 to demonstrate how compliance will be achieved. The emission control plan and the plan approval issued by the Department under 310 CMR 7.19(3) must also be approved by the EPA as a Massachusetts SIP revision.

(e) Testing, Monitoring, Recordkeeping, Reporting and Emission Control Plan. Any facility subject to 310 CMR 7.19(12), shall comply with any applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13) and shall submit an emission control plan as required by 310 CMR 7.19(3).

(13) Testing, Monitoring, Recordkeeping, and Reporting Requirements.

(a) Applicability. Any person subject to 310 CMR 7.19(2)(b), (4), (5), (7), (8), (9), (10), (11), (12) or (14) shall comply with 310 CMR 7.19(13). For any variance of a requirement under 310 CMR 7.19(13), the variance must be made federally enforceable. A variance from the requirement will be given only where it will not adversely impact the ability to monitor emissions. Regardless of the Department's determination in the emission control plan, any facility that is subject to 40 CFR Parts 60 and 75 must still comply with those requirements.

1. For boilers with an energy input capacity greater than or equal to 250,000,000 Btu per hour, compliance with the NO_x and CO emission standards shall be demonstrated with a continuous emissions monitoring system (CEMS) as specified in 310 CMR 7.19(13)(b), and recordkeeping and reporting as specified in 310 CMR 7.19(13)(d).

2. For boilers with an energy input capacity equal to or greater than 100,000,000 Btu per hour and less than 250,000,000 Btu per hour, compliance with the NO_x and CO emission standards shall be demonstrated by performing an annual stack test as specified in 310 CMR 7.19(13)(c), and recordkeeping and reporting as specified in 310 CMR 7.19(13)(d). The annual stack test requirement is waived for boilers equipped with a CEMS satisfying the requirements of 310 CMR 7.19(13)(b).

3. For multiple emission units that are complying with 310 CMR 7.19(14), compliance with the CO (as applicable) and NO_x emission standards shall be demonstrated:

a. with a continuous emissions monitoring system (CEMS) as specified in 310 CMR 7.19(13)(b), or

b. for emission unit(s) not required by 310 CMR 7.19(13)(a) to use CEMS to determine compliance, by performing an annual stack test as specified in 310 CMR 7.19(13)(c). The emission rate from the stack tested emission unit shall be adjusted by a compliance assurance multiplier determined by the Department within the range of 1.1-1.25.

c. for emission unit(s) not generating surplus emission reductions to be used by another emission unit in the average, compliance may alternatively be determined by the procedure contained in 310 CMR 7.19(13)(a) for similar emission units (*e.g.*, a stationary combustion turbine burning the same fuel with the same energy input) that are not emissions averaging to determine compliance.

7.19: continued

4. a. For boilers with an energy input capacity equal to or greater than 50,000,000 Btu per hour and less than 100,000,000 Btu per hour, compliance with the NO_x and CO emission standards shall be demonstrated by performing an initial stack test as specified in 310 CMR 7.19(13)(c). The recordkeeping in 310 CMR 7.19(13)(d) shall apply.
b. For boilers complying with the requirement on allowable oxygen level, an oxygen analyzer and recorder shall be utilized. The recordkeeping in 310 CMR 7.19(13)(d) shall apply.
5. For combined cycle combustion turbines with an energy input capacity greater than or equal to 100,000,000 Btu per hour, compliance with the NO_x and CO emission standards shall be demonstrated with a continuous emission monitoring system (CEMS) as specified in 310 CMR 7.19(13)(b) and recordkeeping as specified in 310 CMR 7.19(13)(d).
6. For combined cycle combustion turbines with an energy input capacity less than 100,000,000 Btu per hour, compliance with the NO_x and CO emission standards shall be demonstrated by performing an annual stack test as specified in 310 CMR 7.19(13)(c). The annual stack test requirement is waived for combined cycle combustion turbines equipped with a monitoring system satisfying the requirements of 310 CMR 7.19(13)(b).
7. For simple cycle combustion turbines, compliance with the NO_x and CO emission standards shall be demonstrated by performing an annual stack test as specified in 310 CMR 7.19(13)(c).
8. For stationary reciprocating internal combustion engines with an energy input capacity greater than or equal to 30,000,000 Btu per hour, compliance with the NO_x emission standards shall be demonstrated with a continuous emissions monitoring system (CEMS) as specified in 310 CMR 7.19(13)(b) and recordkeeping as specified in 310 CMR 7.19(13)(d). For engines operating less than 1000 hours per year in this size range compliance shall be determined by recordkeeping as required in 310 CMR 7.19(8)(e).
9. For stationary reciprocating internal combustion engines with an energy input capacity less than 30,000,000 Btu per hour and operating 1000 hours or more in any consecutive 12 month period, compliance with the applicable emission standard shall be demonstrated by performing an initial stack test as specified in 310 CMR 7.19(13)(c), and recordkeeping as specified in 310 CMR 7.19(13)(d). For engines operating less than 1000 hours per year in this size range compliance shall be determined by recordkeeping as required in 310 CMR 7.19(8)(e).
10. For glass melting furnaces, compliance with the applicable emission standard shall be demonstrated by performing an annual stack test as specified in 310 CMR 7.19(13)(c), and recordkeeping and reporting as specified in 310 CMR 7.19(13)(d). The annual stack test requirement is waived for glass melting furnaces equipped with a CEMS satisfying the requirements of 310 CMR 7.19(13)(b).
11. For emission units subject to 310 CMR 7.19(2)(b) or 7.19(12), compliance with the applicable emission standard shall be demonstrated through a combination of continuous emissions monitoring, stack testing and/or recordkeeping specified in the approved emission control plan.
12. The Department or EPA may require compliance stack testing beyond that listed above.
13. For municipal waste combustors with potential emissions greater than 25 tons per year of NO_x, compliance with the applicable NO_x emissions standard shall be demonstrated by performing an annual stack test as specified in 310 CMR 7.19(13)(c), and recordkeeping and reporting as specified in 310 CMR 7.19(13)(d). However, for any municipal waste combustor unit that in May 1995 is equipped with a continuous emissions monitoring system (CEMS), compliance shall be demonstrated with a CEMS as specified in 310 CMR 7.19(13)(b) and recordkeeping and reporting as specified in 310 CMR 7.19(13)(d).

7.19: continued

(b) Continuous Emissions Monitoring Systems (CEMS). Any person required to monitor NO_x emissions (*i.e.*, through NO_x concentrations and the associated diluent concentrations) pursuant to 40 CFR 75, shall use the procedures contained either therein or in 310 CMR 7.19(13)(b)1. through (b)14. to gather and analyze data and provide quality assurance and quality control in order to determine compliance with 310 CMR 7.19, except that missing data routines and bias adjustment factors do not need to be applied. Any person subject to 40 CFR 75 for NO_x also may monitor CO emissions using 40 CFR 75 procedures to gather and analyze data and provide quality assurance and quality control in order to determine compliance with 310 CMR 7.19, except that CO quality assurance performance specifications shall comply with 40 CFR 60: *Appendix B* as an alternative to compliance with 310 CMR 7.19(13)(b)1. through (b)14. Any person subject to 310 CMR 7.19(13)(b) shall comply with 310 CMR 7.19(13)(b)9., 10., 11., and 12. for data averaging, hourly data validity, and data capture requirements. Any person operating a CEMS subject to 40 CFR 75 for NO_x may conduct Quarterly Quality Assurance activities for CO in accordance with the same 40 CFR 75 timelines as NO_x. Any person subject to 310 CMR 7.19(13)(b)1. through (b)14., but not 40 CFR 75, may choose to use 40 CFR 75 procedures to gather and analyze data and provide quality assurance and quality control for NO_x and CO emissions (*i.e.*, pollutant and diluents) in accordance with 40 CFR 75 as described above; however, the CEMS first must be re-certified in accordance with 40 CFR 75 for NO_x and CO, except that CO quality assurance performance specifications in 40 CFR 60: *Appendix B* shall apply. Any person demonstrating compliance with 310 CMR 7.19 for emission units using CEMS who is not subject to or choosing to follow 40 CFR 75 shall:

1. for any emission unit either already having a CEMS in place or having a CEMS being procured or installed, submit a preliminary CEMS monitoring plan for Department approval as part of the emission control plan required in 310 CMR 7.19(3), unless the CEMS is already certified and approved by the Department or EPA;
2. for any emission unit not covered under 310 CMR 7.19(13)(b)1., submit a preliminary CEMS monitoring plan for Department approval at least 180 days prior to equipment installation;
3. include the following information in the preliminary CEMS monitoring plan: source identification, source description, control technology description, the applicable regulations, the type of monitor, a monitoring system flow diagram, a description of the data handling system, and a sample calculation demonstrating compliance with the emission limits using conversion factors from 40 CFR 60 or approved by the Department and EPA;
4. submit a CEMS certification protocol at least 90 days prior to certification testing for the CEMS, and submit any proposed adjustment to the certification testing at least seven days in advance;
5. include the following information in the certification protocol, which must be found acceptable by the Department: the location of and specifications for each instrument or device, as well as procedures for calibration, operation, data evaluation and data reporting;
6. install, calibrate, maintain and operate a CEMS for measuring NO_x, and CO, and either O₂ or CO₂ at locations approved in the Department's approval of the CEMS certification protocol and record the output of each CEMS;
7. submit a certification report within 60 days of the completion of the certification test for review and written Department approval;
8. certify each CEMS in accordance with the performance specifications contained in 40 CFR 60: *Appendix B* and quality assurance and quality control procedures contained in 40 CFR 60: *Appendix F* and continue to comply with the requirements of 40 CFR 60 *Appendix F*;
9. calculate a calendar month average from each operating day average within the applicable month; an operating day must consist of at least four operating hours, including startup and shutdown time;
10. calculate a calendar day average for each operating day from a block hourly average for each hour the emissions unit is operating;
11. calculate a block hourly average from at least three data points, generated by a CEMS at 15 minute intervals over each one-hour period or in accordance with 40 CFR 60.13(h)(2);

7.19: continued

12. operate each continuous emission monitoring system at all times that the emissions unit(s) is operating except for periods of CEMS calibrations checks, zero span adjustment, and preventive maintenance as described in the preliminary monitoring plan submitted to the Department and as determined during certification. Notwithstanding such exceptions, in all cases obtain valid data for at least 75% of the hours per operating day, 75% of the operating days per month, and 95% of the hours per quarter during which the emission unit is operating;
 13. use only valid data to calculate the emissions rate averages using conversion factors from 40 CFR 60 or approved by the Department and EPA; and
 14. Any person required to utilize a monitoring system to determine compliance of a stationary reciprocating engine or stationary combustion turbine with the applicable NO_x emissions standard may monitor process or control device parameters provided it is demonstrated to the Department, and the Department approves in writing, that the parametric monitoring system (PMS) provides an equivalent degree assurance of compliance with the emissions standard. Alternatively, the Department or EPA may approve a predictive emission monitoring system that meets EPA performance specification PS-16. The Department or EPA may require any conditions it deems necessary to assure continuous compliance.
- (c) Stack Testing. Any person required to demonstrate compliance with a NO_x emission standard contained in 310 CMR 7.19 by stack testing shall comply with 310 CMR 7.19(13)(c). That person shall:
1. submit a pretest protocol for the required emission test for review and Department approval at least 60 days prior to the anticipated date of testing;
 2. include in the pretest protocol, a description of sampling point locations, sampling equipment, sampling and analytical procedures, and the operating conditions for the required testing;
 3. conduct compliance stack testing in accordance with procedures set forth in Appendix A of 40 CFR Part 60 or another method approved by the Department and EPA;
 4. perform the initial compliance stack test on the emission unit before August 1, 1995 for existing emission units, or within 90 days of continuous operation for new emission units to demonstrate compliance;
 5. perform the annual compliance test, where annual compliance stack testing is required either by 310 CMR 7.00 or in the approved emission control plan, on the emission unit prior to October 1st of each year beginning 1995;
 6. submit the emission test report for the review and written Department approval within 60 days of the completion of the compliance stack testing.
- (d) Recordkeeping and Reporting. Any person required to demonstrate compliance with 310 CMR 7.19 by recordkeeping and reporting shall comply with 310 CMR 7.19(13)(d). That person:
1. shall maintain a record of all measurements, performance evaluations, calibration checks, and maintenance or adjustments for each continuous emission monitor;
 2. shall submit to the Department's regional office by the 30th day of April, July, October, and January of each calendar year, a report showing any excess emissions as measured by a CEMS within the previous calendar quarter (January-March, April-June, *etc.*) and shall include:
 - a. the date and time of commencement and completion of each period of excess emissions and the magnitude of the excess emissions for each hour;
 - b. identification of the suspected reason for the excess emissions and any corrective action taken;
 - c. the date and time that any CEMS stopped collecting valid data and when it started to collect valid data again, except for zero and span checks; and
 - d. the nature and date of system repairs; or
- In the event none of the above items have occurred such information shall be stated in the report; or
3. shall measure and record for each unit on a daily basis: type fuel(s) burned each day, heat content of each fuel, the total heating value of the fuel consumed for each day, the actual emission rate (for emissions units demonstrating compliance with CEMS), and the allowable emission rate. For units complying with 310 CMR 7.19(14), daily records should also include a summation of these values for all units included in the average, as well as any other data needed to demonstrate compliance.

7.19: continued

4. shall submit to the Department the necessary information (calculations and data) to demonstrate an applicable emission unit has an annual capacity factor of less than 10% in accordance with 310 CMR 7.19(1)(d). This documentation shall be provided to the Department in the first quarter of each year (*i.e.*, no later than March 31st), and may be included in the fourth quarter RACT quarterly report (due January 30th) if the facility operates other RACT sources.
5. shall obtain a certification from the fuel supplier for each shipment of residual oil that includes the following information:
 - a. the name of the oil supplier;
 - b. the nitrogen content of each oil shipment (acceptable test methods for determining nitrogen content of the oil are ASTM methods D3228 and D4629 or any other method approved by the Department and EPA);
 - c. the location where the sample was drawn for analysis to determine the nitrogen content of the oil, specifically including whether the oil was sampled as delivered to the affected facility or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility or another location;
6. may, as an alternative to the fuel supplier certification required in 310 CMR 7.19(13)(d)5., elect to sample and analyze the residual oil immediately after the fuel tank is filled and before any oil is combusted for each new shipment according to methods approved by the Department;

7.19: continued

7. shall maintain copies of all fuel supplier certifications or fuel oil analyses on site for a period of five years;
8. shall maintain all records required by 310 CMR 7.19(13)(d) for a period of five years in a permanently bound log book or any other form acceptable to the Department including computer retained and generated data; and
9. shall submit compliance records within ten days of written request by the Department or EPA.

(14) Averaging for Multiple Emission Units to Achieve Compliance.

- (a) Applicability and RACT Requirement. After May 31, 1995, any person operating or controlling more than one emission unit subject to a NO_x emission standard contained in 310 CMR 7.19(4), (5), (7), (8) or (12) may comply with 310 CMR 7.19 by emissions averaging, provided the requirements of 310 CMR 7.19(14) and 7.00 Appendix B(4) are met.
- (b) Stationary Reciprocating Internal Combustion Engines. For any stationary reciprocating internal combustion engine(s) included in the average with boiler(s), the emissions rate and emissions standard for the stationary reciprocating internal combustion engine(s) shall be converted to pounds per million according to the following equation:

$$ES_{p/mmBtu} = 0.866 \times ES_{gm/bhp-hr} \times Eff$$

Where:

ES_{p/mmBtu} - Emission standard expressed in pounds per million Btu.ES_{gm/bhp-hr} - Emission standard expressed in grams per brake horse-power hour.

Eff = Thermal efficiency; the ratio of the electrical/mechanical output energy to the energy input.

The thermal efficiency must be demonstrated to the Department's satisfaction. There shall be either a direct or indirect readout of the electrical/mechanical energy output. If a stationary combustion turbine and a stationary reciprocating internal combustion engine are to be averaged, the conversion factors contained in 310 CMR 7.19(14)(b) and (c) shall both be used.

- (c) Stationary Combustion Turbines. If stationary combustion turbines are to be averaged with boilers, the emissions rate in ppmvd at 15% O₂ shall be converted to units of pounds per million Btu according to the procedure contained in 40 CFR 60.45.

For natural gas or propane:

$$\text{pounds per million Btu} = (\text{ppmvd}@15\%O_2) \times (0.00369)$$

For oil:

$$\text{pounds per million Btu} = (\text{ppmvd}@15\%O_2) \times (0.00389)$$

If a stationary combustion turbine and a stationary reciprocating internal combustion engine are to be averaged, the conversion factors contained in 310 CMR 7.19(14)(b) and (c) shall both be used.

- (d) Testing, Monitoring, Recordkeeping, Reporting and Emission Control Plan. Any facility subject to 310 CMR 7.19(14) shall comply with the applicable testing, monitoring, recordkeeping, and reporting requirements contained in 310 CMR 7.19(13)(b), (c) and (d) and shall submit an emission control plan as required by 310 CMR 7.19(3).

- (15) Cofiring fuels. When different fuels are either burned simultaneously in any combination, or during the same hour (or day if a 24 hour averaging time is used), the applicable emission standard (e.g. in pounds per million Btu) is determined by proration using the following formula:

7.19: continued

$$PS_{NOX} = \frac{(HI_1)x(ES_1) + (HI_2)x(ES_2) \dots + (HI_N)x(ES_N)}{HI_1 + HI_2 \dots + HI_N}$$

PS_{NOx} is the prorated standard for nitrogen oxides when burning different fuels simultaneously, in pounds per million Btu heat input derived from all fuels fired.

HI_1 is the heat input for fuel 1

ES_1 is the emissions standard for fuel 1

N is the total number of fuels burned either simultaneously or on that day.

7.24: U Organic Material Storage and Distribution

(1) Organic Material Storage Tanks. No person who owns, leases, operates or controls a storage tank with a capacity equal to or greater than 40,000 gallons, into which organic material having a vapor pressure of 1.5 pounds per square inch absolute or greater under actual storage conditions, is placed, stored, or held shall store, hold or otherwise transfer the organic material in the storage tank unless:

(a) each tank is equipped with a submerged fill pipe; and,

(b) each tank not equipped with an external floating roof (*see* 310 CMR 7.24(1)(c)) is equipped with one of the following control devices:

1. a pressure tank system which maintains pressure at all times so as to prevent organic material loss to the atmosphere; or,

2. a vapor recovery system which collects all of the organic vapors emitted from the tank, and a vapor control system which reduces emissions of vapors to the atmosphere by at least 95% over every three hour period; or

3. if the tank does not store organic material with a true vapor pressure greater than 11.0 psia under actual storage conditions, then a fixed roof and a floating roof consisting of a pontoon, double deck, or internal floating roof which rests on the surface of the liquid contents and is equipped with a closure seal, or seals, to close the space between the roof edge and tank wall, and tank gauging and sampling devices which are gas tight except when in use; or,

4. any other equipment equal to or greater in efficiency than listed in 310 CMR 7.24(1)(b)2. and approved by the Department and EPA; and

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

(PAGES 250.57 THROUGH 250.60 ARE RESERVED FOR FUTURE USE.)

7.24: continued

(c) on or after November 1, 1984, each external floating roof tank is equipped with an external floating roof of a pontoon, double deck, or external floating cover design, which rests on the surface of the liquid contents; and is fitted with a primary seal and a continuous secondary seal which seals the space between the edge of the floating roof and the tank wall; and stores organic material which has a vapor pressure less than 11.0 pounds per square inch absolute under actual storage conditions; and all tank gauging or sampling devices are gas tight except when in use; and,

(d) each of the seal(s) required by 310 CMR 7.24(1)(b)3. and 310 CMR 7.24(1)(c) meet the following requirements, where applicable:

1. there are no visible holes, tears, or other openings in the seal(s) or seal fabric; and,
2. the seal(s) is intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall; and,
3. for vapor mounted primary seals on any external floating roof tank, the accumulated area of gaps between the secondary seal and the tank wall which exceed 0.32 cm ($\frac{1}{8}$ in.) in width do not exceed 21.2 square cm per meter of tank diameter (1.0 square in per ft of tank diameter), as determined by 310 CMR 7.24(1)(k); and

7.24: continued

4. measurement of the gap in the secondary seal is made annually, and such measurement complies with 310 CMR 7.24(1)(d)3.; and,
 5. a visual inspection of the secondary closure seal is conducted semi-annually; and,
 6. an inspection of internal floating roofs is conducted through the roof hatches monthly; and,
 7. an inspection of cover and seal for internal floating roofs is conducted whenever the tank is emptied for nonoperational reasons or once every ten years whichever is sooner; and,
- (e) all openings in a floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves, are:
1. equipped with covers, seals, or lids which are kept closed except when the openings are in actual use; and,
 2. equipped with projections into tank which remain below-the-liquid surface at all times; and
- (f) automatic bleeder vents are kept closed except when the roof is being floated off of, or being landed on, the roof leg supports; and,
- (g) rim vents are set to open when the roof is being floated off the leg supports, or at the manufacture recommended setting; and,
- (h) emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least 90% of the area of the opening; and,
- (i) Recordkeeping and Reporting. for any tank with a capacity of 40,000 gallons or more which contains an organic liquid with a true vapor pressure greater than 1.5 psia, records are prepared, maintained and kept onsite for a minimum of two years: of the average monthly storage temperature; of the true vapor pressure, monthly throughput and type of organic material stored; of any inspections or tests conducted under 310 CMR 7.24(1)(d)4. through 7.; of any transfers made; and of any maintenance of the vapor processing system; and,
- (j) for any tank with a capacity in excess of 40,000 gallons which is equipped with an external floating roof and which contains any organic material with a vapor pressure greater than 1.0 psia but less than 1.5 psia under actual storage conditions, records are maintained and kept for a minimum of two years; of the average monthly storage temperature and the type of liquid stored and its vapor pressure; and
- (k) the total area of gaps under 310 CMR 7.24(1)(d)3. is determined by physically measuring the length and width of all gaps around the entire circumference of the secondary seal in each place where a 1/8 in. uniform diameter probe passes freely (without forcing or binding against the seal) between the seal and the tank wall, and summing the area of the individual gaps; any person who proposes to conduct this test shall notify the Department at least 30 days before the test so the Department may, at its option, observe the test.
- (l) 310 CMR 7.24(1)(a) through 310 CMR 7.24(1)(k) do not apply to petroleum liquid storage tanks which are used to store waxy, heavy pour crude oil, or which have a capacity less than 416,000 gallons and are used to store produced crude oil and condensate prior to lease custody transfer.
- (2) Bulk Terminals and Bulk Plants.
- (a) U Bulk Terminals No person who owns, leases, operates or controls a bulk terminal shall cause, suffer, allow or permit the transfer into a tank truck, trailer or other contrivance of any organic material with a vapor pressure of 1.5 psia or greater under actual storage conditions unless:
1. each loading rack at the bulk terminal is equipped with a vapor collection and disposal system, which has been installed and is maintained and operated in accordance with the operating instructions of the manufacturer; and,
 2. any vapor discharged during transfer of the organic material is collected and disposed of by the vapor collection and disposal system; and,
 3. the amount of organic material released to the ambient air is less than 80 milligrams per liter of liquid loaded or unloaded over a six hour period, as determined by the reference method and test procedures found in Title 40 CFR 60.503(c) and 60.503(d); and,

7.24: continued

4. any transfer of organic material takes place through a submerged fill pipe; and,
 5. each loading rack at the bulk terminal is equipped with a loading arm which has a vapor collection adaptor designed, maintained and operated to force a vapor-tight seal between the adaptor and hatch; and,
 6. each loading rack at the bulk terminal has a means to:
 - a. prevent any remaining liquid organic material from draining when the loading rack is disconnected from the hatch of any tank truck, trailer or other contrivances: or,
 - b. accomplish complete drainage of any remaining organic material before the loading rack is disconnected from the hatch of any tank truck, trailer or other contrivance; or,
 - c. if loading is effected through means other than a hatch, then all loading and vapor lines shall be equipped with fittings which make vapor-tight connections and which close automatically when disconnected.
- (b) CM, MB, MV, PV, SM. Bulk Plants On or after July 1, 1980 no person who owns, leases, operates or controls a bulk plant shall cause, suffer, allow or permit the transfer into any tank truck, trailer or other contrivance of any organic material with a vapor pressure of 1.5 psia or greater under actual storage conditions unless:
1. the transfer of the organic material takes place through a submerged fill pipe; and,
 2. any vapor discharged during transfer of the organic material is processed by vapor balance system.
- (c) B, Dukes County, Nantucket County. Bulk Plants. On or after April 1, 1993 no person who owns, leases, operates or controls a bulk plant shall cause, suffer, allow or permit the transfer into a tank truck, trailer or other contrivance of any organic material with a vapor pressure of 1.5 psia or greater under actual storage conditions unless:
1. the transfer of the organic material takes place through a submerged fill pipe; and,
 2. any vapor discharged during transfer of the organic material is processed by a vapor balance system.
- (d) Any person who owns, leases, operates or controls a facility which is or becomes subject to 310 CMR 7.24(2)(a) through (c), shall only transfer organic material with a vapor pressure of 1.5 psia or greater under actual storage condition into tank trucks which are in compliance with 310 CMR 7.24(4).
- (e) Any person who owns, leases, operates or controls a facility which is or becomes subject to 310 CMR 7.24(2)(a), (b) or (c), shall continue to comply with all requirement of 310 CMR 7.24(2)(a), (b) or (c), respectively, even if the facility no longer meets the applicability requirements of 310 CMR 7.24(2)(a), (b) or (c).
- (f) 310 CMR 7.24(2) shall not apply to dispensing of motor vehicle fuel to motor vehicle fuel tanks.
- (3) Distribution of Motor Vehicle Fuel.
- (a) Applicability.
1. The requirements of 310 CMR 7.24(3) apply to:
 - a. Any owner/operator of a motor vehicle fuel dispensing facility;
 - b. Any owner/operator of a company that performs Stage I compliance tests pursuant to 310 CMR 7.24(3).
 2. The requirements of 310 CMR 7.24(3) do not apply to:
 - a. Stationary motor vehicle fuel storage tanks of less than 550 gallons capacity used exclusively for farm use provided the transfer of motor vehicle fuel only occurs through submerged filling;
 - b. Transfers made to motor vehicle fuel storage tanks equipped with floating roofs that have been approved by the Department pursuant to 310 CMR 7.24(1);
 - c. Stationary motor vehicle fuel storage tanks with a capacity of 250 to 1000 gallons, used for the purpose of onsite fueling of motor vehicles with motor vehicle fuel that is the by-product of motor vehicle salvage yard operations, provided the motor vehicle fuel storage tank is equipped with:
 - i. a submerged fill pipe; and
 - ii. a pressure vacuum vent valve;

7.24: continued

- d. Stationary motor vehicle fuel storage tanks of greater than 1000 gallons capacity, used for the purpose of onsite fueling of motor vehicles with motor vehicle fuel that is the by-product of motor vehicle salvage yard operations, provided the motor vehicle fuel storage tank is equipped with:
 - i. a submerged fill pipe; and
 - ii. an EVR pressure vacuum vent valve.
- (b) Stage I Requirements.
1. No owner/operator of a motor vehicle fuel dispensing facility shall allow the transfer of motor vehicle fuel to a storage tank unless the vapors are collected by a Stage I system.
 2. Any owner/operator of a motor vehicle fuel dispensing facility shall:
 - a. On or before two years from January 2, 2015, or upon decommissioning a Stage II system, whichever occurs sooner, install:
 - i. CARB Enhanced Vapor Recovery (EVR) pressure/vacuum vent valves; and
 - ii. CARB EVR rotatable product and vapor adaptors; except that such adaptors shall not be required for aboveground storage tanks and motor vehicle fuel storage tanks equipped with coaxial Stage I systems.
 - b. On or before seven years from January 2, 2015 install:
 - i. A Stage I CARB EVR System in accordance with any one of the Executive Orders listed in 310 CMR 7.24(3)(c)1.: *Table 1*, except in accordance with 310 CMR 7.24(3)(d)4.; or
 - ii. A Stage I Component EVR System in accordance with the applicable Executive Orders listed in 310 CMR 7.24(3)(c)1.: *Table 1*. and manufacturers' guidance, except in accordance with 310 CMR 7.24(3)(d)4.
 - c. Not install a coaxial Stage I system, except that an existing coaxial system may be repaired (including replaced) and maintained with non-EVR components until the motor vehicle fuel tank is replaced.
 3. Any owner/operator of a motor vehicle fuel dispensing facility who installs a Stage I system after January 2, 2015 shall install:
 - a. A Stage I CARB EVR System in accordance with one of the Executive Orders listed in 310 CMR 7.24(3)(c)1.: *Table 1*; or
 - b. A Stage I Component EVR System in accordance with the applicable Executive Orders listed in 310 CMR 7.24(3)(c)1.: *Table 1*. and manufacturers' guidance;
 - c. Submerged fill pipes so that the discharge point is entirely submerged when the liquid level is six inches above the bottom of the tank; and
 - d. A dual-point Stage I system.
 4. Except as provided in 310 CMR 7.24(3)(b)5., any owner/operator of a motor vehicle fuel dispensing facility that has a monthly throughput of 100,000 gallons of motor vehicle fuel or more shall install and operate a Stage I system that meets the following design criteria:
 - a. All vapor connections and lines on the storage tank shall be equipped with closures that seal upon disconnect;
 - b. The vapor line from the gasoline storage tank to the gasoline cargo tank shall be vapor-tight;
 - c. The vapor balance system shall be designed such that the pressure in the tank truck does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer;
 - d. The vapor recovery and product adaptors, and the method of connection with the delivery elbow, shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations;
 - e. If a gauge well separate from the fill tube is used, it shall be provided with a submerged drop tube that extends no more than six inches from the bottom of the tank;
 - f. Liquid fill connections for all systems shall be equipped with vapor-tight caps.
 - g. Pressure/vacuum (P/V) vent valves shall be installed on the storage tank vent pipes. The pressure specifications for PV vent valves shall be: a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water. The total leak rate of all PV vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of four inches of water;

7.24: continued

h. The vapor balance system shall be capable of meeting the static pressure performance requirement of the following equation:

$$P_f = 2e^{-500.887/v}$$

Where:

P_f = Minimum allowable final pressure, inches of water.

v = Total ullage affected by the test, gallons.

e = Dimensionless constant equal to approximately 2.718.

2 = The initial pressure, inches water.

5. NESHAPS Compliance.

a. Any owner/operator subject to 310 CMR 7.24(3)(b)4. who chooses, under the provisions of 40 CFR Part 63.6(g), to use a vapor balance system other than that described in Table 1 to Subpart CCCCC of 40 CFR Part 63, and who demonstrates to EPA the equivalency of their vapor balance system to that described in 310 CMR 7.24(3)(c)1.: *Table 1* pursuant to 40 CFR Part 63.11120(b), shall not be required to install and operate a Stage I system that meets the design criteria in 310 CMR 7.24(3)(b)4.a. through h.

b. Any owner/operator subject to 310 CMR 7.24(3)(b)4. who does not meet the requirements of 40 CFR Part 63.11118(b)(2) is required to fully comply with all applicable requirements in Subpart CCCCC of 40 CFR Part 63, including recordkeeping, testing and monitoring, notification and reporting to EPA.

(c) CARB EVR Systems.

1. The Department adopts all terms and conditions of the CARB EVR System Executive Orders listed in 310 CMR 7.24(3)(c)1.: *Table 1.* and *Table 2.*

Table 1.

CARB Underground Storage Tank Phase I Enhanced Vapor Recovery System Executive Orders

Executive Order Number	Description	Date
VR-101-V	Phil-Tite/EBW/FFS Phase I Vapor Recovery System	April 27, 2022
VR-102-V	OPW Phase I Vapor Recovery System	May 31, 2021
VR-104-L	CNI Manufacturing Phase I Vapor Recovery System	May 31, 2021
VR-105-J	EMCO Wheaton Phase I Vapor Recovery System	May 31, 2021

Table 2.

CARB Aboveground Storage Tank Phase I Enhanced Vapor Recovery System Executive Orders

Executive Order Number	Description	Date
VR-301-I	Standing Loss Control of Vapor Recovery Systems for Existing Installations of Aboveground Storage Tanks	June 26, 2020
VR-302-I	Standing Loss Control of Vapor Recovery Systems for New Installations of Aboveground Storage Tanks	June 26, 2020
VR-401-F	OPW Phase I Enhanced Vapor Recovery (EVR) System for Aboveground Storage Tanks (AST)	July 17, 2019
VR-402-E	Morrison Brothers Phase I Enhanced Vapor Recovery (EVR) System for Aboveground Storage Tanks (AST)	July 17, 2019
G-70-216	Extension of Effective Dates for Existing Aboveground Storage Tanks	March 13, 2014

7.24: continued

(d) Stage I System Operation, Maintenance and Record Keeping.

1. Any owner/operator of a motor vehicle fuel dispensing facility shall operate and maintain the Stage I system in accordance with the system's applicable Executive Orders and manufacturers' guidance.
2. Any owner/operator of a motor vehicle fuel dispensing facility shall visually inspect or cause to be visually inspected the Stage I system once every seven days to determine that the system and its components are unbroken, correctly installed and functioning. Each visual inspection shall include, but not be limited to, inspection of: coaxial adaptors; fuel and vapor rotatable adaptors; dust caps and gaskets; fuel and vapor spill buckets; drain valves; and pressure/vacuum vent valves. The owner/operator shall ensure that:
 - a. Visual inspections shall be performed only by a person who is trained to operate and maintain the Stage I system in accordance with the applicable manufacturers' guidance; and
 - b. A current record of all persons trained shall be maintained on site, including the date training was last received and the trainee's printed name and signature acknowledging receipt of the training.
3. Upon determining during a visual inspection that a Stage I system component is incorrectly installed, non-functioning or broken, the owner/operator of a motor vehicle fuel dispensing facility shall:
 - a. Immediately repair or replace the component; or
 - b. If repairs or replacements cannot be made immediately, repair or replace the component within 30 days of the visual inspection date, or
 - c. If a component cannot be repaired or replaced within 30 days of the visual inspection date, the transfer of motor vehicle fuel into the motor vehicle fuel storage tank equipped with the incorrectly installed, non-functioning or broken component is prohibited until the component is repaired or replaced.
4. Any replacement of an incorrectly installed, non-functioning or broken Stage I components shall be with a CARB EVR component and shall be installed in accordance with the applicable Executive Orders and manufacturers' guidance, except that an existing non-EVR "slip-on" spill bucket may be repaired (including replaced) until seven years from January 2, 1015 and may be used after seven years from January 2, 2015 until it needs to be repaired or replaced.
5. Every visual inspection shall be recorded on an inspection checklist that contains at a minimum the following information:
 - a. The date each inspection was performed and the name and signature of the person who performed the inspection;
 - b. Any Stage I system component determined to be incorrectly installed, non-functioning or broken;
 - c. Whether any incorrectly installed, non-functioning or broken component was immediately repaired or replaced within 30 days, or whether the transfer of motor vehicle fuel into the motor vehicle fuel storage tank was prohibited until the component was repaired or replaced; and
 - d. The date the incorrectly installed, non-functioning or broken component was repaired or replaced.
6. Any owner/operator of a motor vehicle fuel dispensing facility shall retain on-site in a centralized location in either hard copy or electronic format, the following records:
 - a. All of the visual inspection checklists for the prior rolling twelve-month period.
 - b. A copy of compliance testing company test results for compliance tests performed during the prior rolling 12-month period.
 - c. A copy of the Stage I system's most recent In-use Compliance Certification in accordance with 310 CMR 7.24(3)(e)4., or, if more recent, a copy of the Stage I system's Installation/Substantial Modification Certification in accordance with 310 CMR 7.24(3)(e)3.
 - d. The date and type of Stage I Routine Maintenance performed in the most recent rolling 12-month period in accordance with 310 CMR 7.24(3)(e)2.a.
7. All records required to be maintained shall be made available to the Department and EPA immediately upon request. If requested records cannot be made immediately available, requested records shall be delivered to the Department and EPA within seven business days of the initial request.

7.24: continued

(e) Stage I Compliance Testing and Certification.

1. Compliance Tests. Any owner/operator of a motor vehicle fuel dispensing facility shall conduct the following compliance tests:

- a. For all Stage I underground storage tank systems:
 - i. Pressure Decay two inch Test (CARB TP-201.3; March 17, 1999);
 - ii. Vapor Tie Test (San Diego APCD TP-96-1, section 5.1.9; March 1, 1996);
 - iii. Pressure/VacuumVent Valve Test (CARB TP-201.1E; October 8, 2003);
 - iv. Static Torque Rotatable Adaptor Test (CARB TP-201.1B; October 8, 2003), if rotatable adaptors are installed; and
 - v. as applicable to CARB EVR components, either:
 - (i) Leak Rate of Drop Tube/Drain Valve Assembly Test (CARB TP-201.1C; October 8, 2003); or
 - (ii) Leak Rate of Drop Tube/ Overfill Prevention Devices (CARB TP-201.1D; October 8, 2003).
- b. For all Stage I aboveground storage tank systems:
 - i. Determination of Static Pressure Performance of Vapor Recovery Systems at Gasoline Dispensing Facilities with Aboveground Storage Tanks in Exhibit 4 of CARB Executive Order VR-401-C (June 30, 2013) and CARB Executive Order VR-402-B (April 15, 2013);
 - ii. Static Torque Rotatable Adaptor Test (CARB TP-201.1B; October 8, 2003), if rotatable adaptors are installed; and
 - iii. Pressure/VacuumVent Valve Test (CARB TP-201.1E; October 8, 2003).

2. Stage I Routine Maintenance and Stage I Minor Modifications.

- a. In the event of Stage I routine maintenance, a record of all Stage I routine maintenance shall be maintained in accordance with 310 CMR 7.24(3)(d)6. Compliance testing and submittal of a compliance certification to the Department is not required.
- b. In the event of a Stage I minor modification, applicable compliance tests shall be performed in accordance with 310 CMR 7.24(3)(e)1. and passed prior to commencing system operation and a record of the modification and test results shall be maintained in accordance with 310 CMR 7.24(3)(d)6. Submittal of a compliance certification to the Department is not required.
- c. Any replacement of a Stage I system component shall be with a CARB EVR component.

3. Stage I Installation and Substantial Modification Certification. Any owner/operator of a motor vehicle fuel dispensing facility who installs a Stage I system or makes a Stage I substantial modification shall, prior to commencing operation, perform and pass all applicable compliance tests listed in 310 CMR 7.24(3)(e)1. The owner/operator shall submit to the Department within seven business days of performing and passing the tests, a fully completed and signed Installation/Substantial Modification Certification, on a form provided by the Department, attesting to the following:

- a. The installed or substantially modified Stage I system has been installed, repaired or modified in accordance with the applicable Executive Orders and manufacturers' guidance; and
- b. All applicable compliance tests listed in 310 CMR 7.24(3)(e)1. were performed and passed.

4. Annual In-use Compliance Certification. Except as provided in 310 CMR 7.24(3)(e)5.:

- a. Any owner/operator of a motor vehicle fuel dispensing facility shall annually submit to the Department within 30 days of performing and passing all applicable compliance tests a fully completed and signed In-use Compliance Certification on a form provided by the Department.
- b. Any owner/operator of a motor vehicle fuel dispensing facility shall attest to the following:
 - i. The Stage I system is operated and maintained in accordance with the applicable Executive Orders and manufacturers' guidance; and
 - ii. All applicable compliance tests listed in 310 CMR 7.24(3)(e)1. were performed and passed.

7.24: continued

5. Alternative Annual In-use Compliance Certification.
 - a. Any owner/operator of a motor vehicle fuel dispensing facility who submits Annual In-use Compliance Certifications for two consecutive years in compliance with 310 CMR 7.24(3)(e)4. in which all applicable in-use compliance tests were passed on the first try, as certified pursuant to 310 CMR 7.24(3)(h)8., may elect to submit to the Department an Alternative Annual In-use Compliance Certification on a form provided by the Department.
 - b. An owner/operator meeting the requirements of 310 CMR 7.24(3)(e)5.a. and electing to submit an Alternative Annual In-use Compliance Certification shall be:
 - i. exempt from annual Stage I compliance testing requirements in the first year the Alternative Annual In-use Compliance Certification is submitted in compliance with 310 CMR 7.24(3)(e)5.a.; and
 - ii. subject to all compliance tests listed in 310 CMR 7.24(3)(e)1. as applicable, in the second year the Alternative Annual In-use Compliance Certification is submitted, and every other year thereafter.
 - c. Any owner/operator of a motor vehicle fuel dispensing facility who submits an alternative In-use Compliance Certification and fails one or more compliance certification tests on the first try shall, in subsequent years, comply with the requirements of 310 CMR 7.24(3)(e)4., until such time as the owner/operator meets the requirements in 310 CMR 7.24(3)(e)5.a.
6. Determination of Submittal and Receipt Dates.
 - a. The owner/operator of a motor vehicle fuel dispensing facility shall submit the annual certification required by 310 CMR 7.24(3)(e)4. to the Department no later than the anniversary of the receipt date of the most recently submitted:
 - i. Stage I Installation/Substantial Modification Certification;
 - ii. Annual Stage I In-use Compliance Certification;
 - iii. Alternative Annual In-use Compliance Certification; or
 - iv. Stage II Decommissioning Notification.
 - b. If the owner/operator requests a change in the submittal due date, the Department may revise the annual certification submittal due date and shall set a revised submittal due date that is no more than 12 months after the current submittal due date.
 - c. Receipt Date at the Department shall be determined as follows:
 - i. If hand-delivered, the receipt date is the date of the receipt stamp;
 - ii. If mailed, the receipt date is the date of the postmark on the envelope used to submit the document to the Department; or
 - iii. If electronically submitted, the receipt date is the date the electronic submission is sent to the Department.
7. Any owner/operator of a motor vehicle fuel dispensing facility whose Stage I system fails one or more in-use compliance tests required by 310 CMR 7.24(3)(e)1. shall:
 - a. Immediately repair or replace the incorrectly installed, non-functioning or broken component in accordance with the applicable Executive Orders and manufacturers' guidance;
 - b. If any Stage I system component is replaced, it shall be replaced with a CARB EVR component and installed in accordance with applicable Executive Orders and manufacturers' guidance;
 - c. Continue to repair or replace and re-test until each failed test is passed; and
 - d. Submit to the Department an Annual In-use Compliance Certification on or before the facility's Annual In-use Compliance Certification submittal due date or within 30 days of the date of the first passing test result, whichever occurs first.
8. If a Stage I system fails one or more required in-use compliance tests and the system cannot be repaired as required by 310 CMR 7.24(3)(e)7., the owner/operator of a motor vehicle fuel dispensing facility shall not transfer or allow the transfer of motor vehicle fuel into the motor vehicle fuel storage tank equipped with the failing Stage I system until the system is repaired in accordance with the applicable Executive Orders and manufacturers' guidance and all applicable compliance testing, record keeping and certification requirements for routine maintenance, minor modification or substantial modification of a Stage I system are complied with.

7.24: continued

9. Any Certification submitted to the Department as required by 310 CMR 7.24(3)(e) shall be signed by a Stage I System Responsible Official as required by 310 CMR 7.24(3)(g).

10. Any owner/operator of a motor vehicle fuel dispensing facility, upon written notice from the Department, shall perform such compliance tests as the Department determines necessary to demonstrate the Stage I system is installed and maintained in accordance with the applicable Executive Orders and manufacturers' guidance and shall submit the results to the Department within 14 days of the performance of the tests.

11. Compliance tests performed to meet the requirements of 310 CMR 7.24(3)(e)1. shall be performed only by a compliance testing company that has submitted a Compliance Testing Company Notification to the Department as required by 310 CMR 7.24(3)(h)1.

(f) Notification Requirements.

1. Any person, upon entering into a purchase, lease or other contractual agreement by which the person becomes the owner/operator of a motor vehicle fuel dispensing facility subject to 310 CMR 7.24(3), shall submit to the Department, within 30 days of the effective date of becoming such an owner/operator or within ten days of a written request from the Department, a fully completed New Stage I System Owner/Operator Notification on a form provided by the Department.

a. The Notification shall include the following:

- i. The name of the new Stage I system owner/operator, and related business documentation, including the name and address of the facility where the Stage I system is located; and
- ii. The effective date that the person became the new owner/operator.

b. The Notification shall be signed by the individual who is a Stage I Responsible Official for the new owner/operator regarding the Stage I system, who shall attest to the following:

- i. I certify that I personally examined the foregoing and am familiar with the information contained in this document and all the attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment;
- ii. I am fully authorized to make this attestation on behalf of this facility.

2. Any owner/operator of a motor vehicle fuel dispensing facility, upon entering into a sale, lease or other contractual agreement by which the owner/operator relinquishes his or her authority as an owner/operator of a motor vehicle fuel dispensing facility subject to 310 CMR 7.24(3), shall submit to the Department, within 30 days of the effective date of the sale, lease or other contractual agreement, a signed letter, or a form provided by the Department, notifying the Department of the following:

- a. The name of the owner/operator relinquishing authority as an owner/operator, the facility name, address, and DEP Facility Account Number, as applicable;
- b. The name of the new owner/operator of the motor vehicle fuel dispensing facility subject to 310 CMR 7.24(3) mailing address, phone number, email address; and
- c. The effective date of the change of owner/operator.

3. Any owner/operator of a motor vehicle fuel dispensing facility seeking to permanently or temporarily take out-of-service a Stage I system shall submit to the Department a fully completed and signed Stage I System Closure Notification on a form provided by the Department.

a. The Stage I System Closure Notification shall include, but not be limited to:

- i. The name of the motor vehicle fuel dispensing facility owner/operator and related business information;
- ii. The DEP Facility Account Number, as applicable;
- iii. The name and address of the facility where the Stage I system is located;
- iv. The date the Stage I system was permanently or temporarily taken out-of-service, and attached, as applicable, current:

- (i) Underground storage tank Registration pursuant to 310 CMR 80.00: *Underground Storage Tank (UST) Operator Training* indicating that the status of the tank is Temporarily Out-of-service;

7.24: continued

- (ii) Underground storage tank Registration pursuant to 310 CMR 80.00: *Underground Storage Tank (UST) Operator Training* indicating the that status of the tank is closed (Removed or Closed In-place); or
 - (iii) Local permit for aboveground storage tank documenting Temporarily Out-of service Status or closure/removal.
 - b. A Stage I system shall not be temporarily out-of-service for more than five years from the date of being taken out of service pursuant to 310 CMR 7.24(3)(f)a.iv.(i) through (iii), as applicable.
 - c. Any owner/operator of a Stage I system that is temporarily out-of-service in accordance with 310 CMR 7.24(3)(f)3. shall, prior to recommencing operation, perform and pass all applicable compliance tests in accordance with 310 CMR 7.24(3)(e)1. and submit to the Department a fully completed Installation/Substantial Modification Certification as required by 310 CMR 7.24(3)(e)3.
 - d. Any Notification submitted to the Department as required by 310 CMR 7.24(6)(f) shall be signed by a Responsible Official as required by 310 CMR 7.24(3)(g).
- (g) Stage I System Responsible Official Certification of Compliance.
- 1. Except in circumstances described in 310 CMR 7.24(3)(g)2., any Certification required by 310 CMR 7.24(3)(e) or Notification required by 310 CMR 7.24(3)(f) shall be signed by a Responsible Official regarding Stage I system compliance.
 - 2. For Stage I systems owned by one party and leased, operated or controlled by another independent party and where both parties have separate Stage I system compliance responsibilities, any Certification submitted pursuant to 310 CMR 7.24(3)(e) or Notification submitted pursuant to 310 CMR 7.24(3)(f) shall be signed by Responsible Officials for each party regarding Stage I system compliance. Each Responsible Official shall attest to the following:
 - a. I certify that I personally examined the foregoing and am familiar with the information contained in this document and all the attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment;
 - b. that systems to maintain compliance are in place at the facility and will be maintained for the coming year even if the processes or operating procedures are changed over the course of the year; and
 - c. I am fully authorized to make this attestation on behalf of this facility.
- (h) Compliance Testing Company Requirements.
- 1. If an owner/operator, employee or contractor of a compliance testing company performs Stage I compliance tests to meet the requirements of 310 CMR 7.24(3)(e)1., the owner/operator of a compliance testing company shall submit to the Department a fully completed Compliance Testing Company Notification, on a form provided by the Department, prior to performing any required Stage I compliance test.
 - a. The Compliance Testing Company Notification shall include the following:
 - i. The name and business mailing address of the Stage I compliance testing company owner, operator, lessee or controller;
 - ii. The name and address of any business that is engaged in the installation or Substantial Modification of Stage I systems and is owned, operated, leased or controlled by, or affiliated with the owner/operator of the compliance testing company;
 - iii. The name and address of any motor vehicle fuel dispensing facility subject to 310 CMR 7.24(3) that is owned, operated, leased or controlled by, or affiliated with the owner/operator of the compliance testing company;
 - iv. The address and telephone number of the facility(ies) from which the daily compliance testing activities of the compliance testing company originate and at which any records required by 310 CMR 7.24(3)(h)10. are maintained;
 - v. A written description of the employee training systems in place at the compliance testing company to ensure required compliance tests are performed as required by applicable protocols and procedures, pursuant to 310 CMR 7.24(3)(h)6. and 7.; and

7.24: continued

- vi. A list of all compliance testing company Responsible Officials with the authority to sign Compliance Testing Company Certifications on behalf of the compliance testing company.
 - b. Each Compliance Testing Company Notification shall be signed by an individual who is a Responsible Official for the compliance testing company, who shall attest to the following:
 - i. I certify that I personally examined the foregoing and am familiar with the information contained in this document and all the attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment;
 - ii. Employee training systems are in place at the compliance testing company to ensure Stage I compliance tests are performed as required by all applicable protocols and procedures and such training systems will be maintained for the coming year even if the protocols and procedures are changed over the course of the year; and
 - iii. I am fully authorized to make this attestation on behalf of this compliance testing company.
 2. An owner/operator of a compliance testing company shall notify the Department in writing of any change to the information submitted to the Department pursuant to 310 CMR 7.24(3)(h)1. within 14 days of the effective date of such change. Upon the Department's written request, the person shall submit a fully revised and completed Notification to the Department as required by the requirements of 310 CMR 7.24(3)(h)1.
 3. No owner/operator, employee or contractor of a compliance testing company shall perform any Stage I compliance test unless said person has first been trained in accordance with the applicable compliance test protocols and procedures required by 310 CMR 7.24(3)(h)7.
 4. An owner/operator of a compliance testing company shall submit, at least once every two weeks, a written list to the Department identifying all motor vehicle fuel dispensing facilities at which the company is scheduled to perform required Stage I compliance tests over the next 14 day period.
 - a. The list shall include the name and address of each motor vehicle fuel dispensing facility to be tested, the applicable section under 310 CMR 7.24(3)(e) 3., 4., or 5., and the estimated time that the company expects to arrive at the facility location.
 - b. The Department shall be notified, in writing, of any change of date of an individual facility's scheduled compliance tests no later than 9:00 A.M. of the day the scheduled tests are to occur. Additions to a submitted compliance-testing schedule shall be submitted to the Department, in writing, no less than two working days prior to the date of any scheduled test.
 - c. Failure to comply with the Notification requirements of 310 CMR 7.24(3)(h)4. may be a basis for the Department to determine that tests conducted after inadequate notice are invalid.
 5. An owner/operator of a compliance testing company shall immediately notify the Department of any failed Stage I compliance tests performed as required by 310 CMR 7.24(3)(e) if the person did not return to retest the Stage I system as required by 310 CMR 7.24(3)(e)7. on or before the facility's Annual In-use Compliance Certification submittal date, or within 30 days of the date of the Stage I system's first passing test result, whichever occurs first. The owner/operator of the compliance testing company shall notify the Department regarding the name and address of the motor vehicle fuel dispensing facility, the facility's Facility Account Number and the tests failed.
 6. An owner/operator, employee or contractor of a compliance testing company shall perform compliance tests to meet the requirements of 310 CMR 7.24(3)(e) only upon confirmation that:
 - a. All Stage I system components are installed as required and are the correct components pursuant to the requirements of 310 CMR 7.24(3)(c); and
 - b. All motor vehicle fuel dispensing facilities with two or more motor vehicle fuel storage tanks are properly manifolded pursuant to the requirements of applicable Executive Orders.

7.24: continued

7. An owner/operator, employee or contractor of a compliance testing company shall perform Stage I compliance tests on all Stage I systems to meet the requirements of 310 CMR 7.24(3) only in accordance with the applicable test procedures cited in 310 CMR 7.24(3)(e)1.
 8. An owner/operator of a compliance testing company shall certify to the Department that each compliance test performed to meet the requirements of 310 CMR 7.24(3)(e) was performed as required by 310 CMR 7.24(3)(h)6. and 7. As applicable, the Certification shall be submitted on a Stage I Installation/Substantial Modification Certification, Alternative Annual In-use Compliance Certification, or In-use Compliance Certification and shall include:
 - a. The date each compliance test was first performed and the result; and
 - b. The date each compliance test was performed and passed.
 9. Each Certification submitted pursuant to 310 CMR 7.24(3)(h)8. shall be fully completed and signed by a compliance testing company Responsible Official, who shall attest to the following:
 - a. I certify that I personally examined the foregoing and am familiar with the information contained in this document and all the attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment; and
 - b. I am fully authorized to make this attestation on behalf of this compliance testing company.
 10. An owner/operator of a compliance testing company shall maintain the following records on site, for a minimum of five years, at the location(s) referenced on the form submitted pursuant to 310 CMR 7.24(3)(h)1.a.:
 - a. A complete set of records of compliance tests performed to meet the requirements of 310 CMR 7.24(3)(c). Such records shall include, by facility address:
 - i. The date and first result for each required test performed;
 - ii. The date each test was performed and passed; and
 - iii. An itemized list of all Stage I system components repaired or replaced as necessary for the system to pass the applicable tests, including but not limited to: all spill containment buckets, drain valves, dust caps, rotatable product adaptors, riser adaptors, drop tubes, rotatable vapor adaptors, tank gauge ports, and pressure/vacuum vent valves that are replaced with a CARB EVR component.
 - b. A current record of all employees or contractors trained as required by 310 CMR 7.24(3)(h)3. Such record shall include the following:
 - i. The date training was received;
 - ii. The person or employee's printed name; and
 - iii. The signature of the person or employee acknowledging receipt of required training.
 11. The owner/operator of the compliance testing company shall make all records available to the Department or EPA immediately upon the request. If requested records cannot be made immediately available, requested records shall be delivered to the Department and EPA within seven business days of the initial request.
- (i) Violations of 310 CMR 7.24(3). Any failure to comply with 310 CMR 7.24(3), or the terms and conditions of any order, permit, authorization, determination, certification, prohibition or approval issued under 310 CMR 7.24(3) shall constitute a violation of 310 CMR 7.24(3). Nothing in 310 CMR 7.24(3), or in any order issued pursuant thereto, shall be construed to limit any right of the Department to take enforcement action pursuant to any other authority.
- (j) Enforcement Provisions. The provisions and requirements of 310 CMR 7.24(3)(a) and (b) are subject to the enforcement provisions specified in 310 CMR 7.52.
- (4) Motor Vehicle Fuel Tank Trucks.
- (a) No owner/operator of a tank truck that carries motor vehicle fuel with a true vapor pressure equal to or greater than 1.5 psia under actual storage conditions and receives fuel from or delivers fuel to a facility subject to 310 CMR 7.24(2), or delivers fuel to a facility subject to the requirements of 310 CMR 7.24(2) or (3) shall cause, suffer, allow or permit the tank truck to be loaded or unloaded unless the tank truck:

7.24: continued

1. Was tested within the 12 preceding months pursuant to 310 CMR 7.24(4)(i);
 2. Sustains a pressure change of no more than three inches of water in five minutes when pressurized to a gauge pressure of 18 inches of water or when evacuated to a gauge pressure of 5.9 inches of water during the testing;
 3. Is repaired and retested within 15 days of testing if it does not meet the criteria of 310 CMR 7.24(4)(a)2.; and
 4. Displays a marking in two inch high letters near the Department of Transportation Certification plate required by 49 CFR 178.340-10b, which:
 - a. Shows the initials "DEP" and the date the tank truck last passed the test ("DEP date"); and
 - b. Shall expire not more than 12 months after the date the tank truck last passed the test.
- (b) The owner/operator of a bulk terminal, bulk plant, motor vehicle fuel dispensing facility or tank truck subject to 310 CMR 7.24(2), (3), or (4)(a) shall design, install and operate any vapor collection and disposal system, vapor balance system, and any appurtenant loading equipment in a vapor-tight manner that prevents:
1. Gauge pressure from exceeding 18 inches of water and vacuum from exceeding 5.9 inches of water in the tank truck; and
 2. A reading equal to or greater than 100% of the lower explosive limit (LEL, measured as propane) at one inch from all points of the perimeter of a potential leak source during transfer operations at the loading rack or stationary tank; and
 3. Visible liquid leaks during loading at the loading rack or unloading at the stationary tank.
- (c) The owner/operator of a tank truck subject to 310 CMR 7.24(4) shall:
1. Notify the Department in writing of the date and location of a certification test at least two days before the anticipated test date; and
 2. Within 15 days, repair and retest a vapor recovery system or tank truck that exceeds the limits in 310 CMR 7.24(4)(a) or (b).
- (d) The Department may, at any time, test any tank truck, or vapor recovery system to determine compliance with the requirements of 310 CMR 7.24(4)(a) or (b).
- (e) [Reserved]
- (f) Copies of all records and reports required under 310 CMR 7.24 shall immediately be made available to the Department upon verbal or written request, at any reasonable time.
- (g) At the discretion of the Department, the requirements for testing and marking motor vehicle fuel tank trucks subject to 310 CMR 7.24(4) may be satisfied if the vehicle undergoes equivalent certification in another state.
- (h) The owner/operator of a tank truck subject to 310 CMR 7.24(4)(a) shall maintain records of the daily throughput of any organic material with a true vapor pressure of 1.5 psia or greater under actual storage conditions.
- (i) Testing Requirements. Testing to determine compliance with 310 CMR 7.24(4) shall be conducted in accordance with EPA Method 27 as described in Appendix A of CFR Title 40 Part 60, or by any other methods approved by the Department and EPA.
- (j) Any owner/operator of a tank truck shall:
1. Maintain and operate the tank truck such that it is vapor tight at all times;
 2. Re-fill the tank truck only at bulk gasoline terminals and plants equipped with properly operating vapor recovery systems pursuant to 310 CMR 7.24(2); and
 3. Keep hatches on the tank truck closed at all times during loading and unloading.
- (6) U Dispensing of Motor Vehicle Fuel.
- (a) Applicability and Installation Requirements.
1. Any person who owns, leases, operates or controls a motor vehicle fuel dispensing facility or tank truck shall be prohibited from installing a Stage II Vapor Recovery System.
 2. Any person who owns, leases, operates or controls a motor vehicle fuel dispensing facility or tank truck with a Stage II Vapor Recovery System shall decommission the Stage II Vapor Recovery System on or before two years from January 2, 2015 in accordance with 310 CMR 7.24(6)(1).

7.24: continued

3. In response to a written request submitted to the Department six months prior to two years from January 2, 1015, the Department, in its sole discretion, may grant an owner, lessee, operator or controller of a Stage II system with an annual throughput of less than 500,000 gallons, an extension of up to two years after two years from January 2, 2015 to decommission the Stage II system based on financial hardship or extenuating circumstances.
 4. Any person who owns, leases, operates or controls a motor vehicle fuel dispensing facility or tank truck with a Stage II vapor recovery system shall maintain and operate the Stage II system in accordance with 310 CMR 7.24(6) until the Stage II system is decommissioned in accordance with 310 CMR 7.24(6)(1).
 5. Any person subject to 310 CMR 7.24(6) shall conspicuously post Stage II system operating instructions on both sides of all motor vehicle fuel dispensers or at a position adjacent to the dispensers that is clearly visible to the system operator during the refueling process. Such instructions shall include:
 - a. a clear pictorial or written description of how to correctly dispense motor vehicle fuel using the installed Stage II system;
 - b. a warning not to continue dispensing motor vehicle fuel ("topping-off") after automatic system shutoff has engaged; and
 - c. the telephone number of the Department's Stage II Consumer Hotline.
- (b) Operation and Maintenance Requirements.
1. Any person subject to 310 CMR 7.24(6) shall comply with the following operation and maintenance requirements.
 - a. Operate and maintain the installed Stage II system as required by the terms and conditions of the system's currently applicable Executive Order.
 - b. Take such actions as necessary to comply with the applicable terms and conditions of any new or modified Executive Order upon Department revision of 310 CMR 7.24(6) to incorporate such new or modified Executive Order. Such actions shall be taken either:
 - i. during applicable Routine Maintenance, Minor Modification or Substantial Modification of the Stage II System; or
 - ii. within four years of January 2, 2015.
 - c. Once every seven days perform a weekly visual inspection of the Stage II system components to determine if such components are installed, functioning and unbroken as required by the terms and conditions of the system's currently applicable Executive Order. Each visual inspection shall include, but not be limited to, inspection of: nozzle boots and splash/vapor guards; hoses; hose retractors, coaxial adaptors, dry breaks, fill caps and gaskets, vapor recovery caps and gaskets, spill containment boxes and drain valves.
 - d. Upon determining a Stage II system component is incorrectly installed, non-functioning or broken during a visual inspection, immediately:
 - i. repair such component(s) as required by the terms and conditions of the system's currently applicable Executive Order;
 - ii. stop dispensing motor vehicle fuel through such component(s), conspicuously post "Out of Service" signs on such component, and repair such component as required by the terms and conditions of the system's currently applicable Executive Order within 14 days of the date such component is determined to be incorrectly installed, non-functioning or broken; or
 - iii. decommission the Stage II system in accordance with 310 CMR 7.24(6)(1).
 - e. If an incorrectly installed, non-functioning or broken component cannot be repaired as required by 310 CMR 7.24(6)(b)1.d., such component shall immediately be isolated. "Out of Service" signs shall be conspicuously posted on said isolated component until such time as said component is correctly repaired as required by the Stage II system's currently applicable Executive Order or the Stage II system is decommissioned in accordance with 310 CMR 7.24(6)(1) .
 - f. If an incorrectly installed, non-functioning or broken component cannot be repaired or isolated as required by 310 CMR 7.24(6)(b)1.d. or e., the person who owns, operates, leases or controls the Stage II system at the facility shall immediately stop dispensing motor vehicle fuel and conspicuously post "Out of Service" signs on all motor vehicle fuel dispensers until such time as all incorrectly installed, non-functioning or broken components are correctly repaired as required by the terms and conditions of the Stage II system's currently applicable Executive Order or the Stage II system is decommissioned in accordance with 310 CMR 7.24(6)(1).

7.24: continued

2. A visual inspection of a Stage II system to meet the requirements of 310 CMR 7.24(6)(b)1.c. shall be performed only by a person who is trained to operate and maintain the Stage II system as required by the terms and conditions of the system's currently applicable Executive Order. A current record of all persons trained shall be maintained on site or, for tank trucks, at the address from which the tank truck is principally operated, and shall include the following:
 - a. the date training was last received;
 - b. the trainee's printed name; and
 - c. the personal signature of the trainee acknowledging receipt of the training.
 3. Any person subject to 310 CMR 7.24(6) shall maintain all Stage II system maintenance records on site, in a centralized location, for the most recent rolling 12-month period. Such records may be either in hard copy or electronic format, provided that a hard copy of any electronic records shall be printed on-site immediately upon request. Such maintenance records for tank trucks shall be maintained at the address from which the tank truck is principally operated. Stage II system maintenance records shall include:
 - a. all of the facility's weekly inspection checklists for the prior rolling 12-month period, identifying:
 - i. the date each weekly visual inspection was performed and the signature of the person who performed the visual inspection;
 - ii. any Stage II system component determined to be incorrectly installed, non-functioning or broken;
 - iii. whether the identified incorrectly installed, non-functioning or broken component was immediately repaired, taken out of service and repaired within 14 days, Isolated, or the facility stopped dispensing motor vehicle fuel and all fuel dispensers were taken out of service;
 - iv. the date the incorrectly installed, non-functioning or broken components identified in 310 CMR 7.24(6)(b)3.iii. were repaired.
 - b. A copy of compliance testing company test results for all Stage II compliance tests during the prior rolling twelve-month period.
 - c. A copy of the Stage II system's most recent Annual In-use Compliance Certification.
 4. All records maintained pursuant to 310 CMR 7.24(6)(b)2. and 3. shall be made available to the Department or EPA immediately upon request. In the event requested records cannot be made immediately available, requested records shall be delivered to the Department or EPA, as applicable, within seven business days of the initial request.
- (c) Compliance Testing and Certification Requirements.
1. Stage II system testing, record keeping and certification as a result of routine maintenance or minor modification of a Stage II system.
 - a. In the event of routine maintenance, a record of such maintenance shall be maintained in accordance with 310 CMR 7.24(6)(b)3. Compliance testing and submittal of a compliance certification to the Department is not required.
 - b. In the event of a minor modification of a Stage II system, applicable compliance tests shall be performed and passed prior to commencing system operation and a record of such modification and test results shall be maintained in accordance with 310 CMR 7.24(6)(b)3. Submittal of a compliance certification to the Department is not required.
 2. Installation/Substantial Modification Certification. Any person subject to 310 CMR 7.24(6) who installs or makes a substantial modification to a Stage II system shall, prior to commencing operation, perform and pass all applicable compliance tests pursuant to 310 CMR 7.24(6)(d) and submit to the Department within seven days of performing and passing said tests, a fully completed and signed Installation/Substantial Modification Certification, on a form obtained from the Department, attesting to the following:
 - a. the installed or substantially modified Stage II system is installed or substantially modified in compliance with 310 CMR 7.24(6)(a);
 - b. all applicable compliance tests as required by 310 CMR 7.24(6)(d) were performed and passed; and
 - c. the applicable installation compliance tests were performed and passed not more than 30 days prior to the submittal of the Certification to the Department.

7.24: continued

3. Annual In-use Compliance Certification. Except as provided in 310 CMR 7.24(6)(c)4., any person subject to 310 CMR 7.24(6) shall annually submit to the Department a fully completed and signed Annual In-use Compliance Certification, on a form obtained from the Department, attesting to the following:
 - a. the installed Stage II system is operated and maintained as required by 310 CMR 7.24(6)(b);
 - b. the following in-use compliance tests, as applicable, were performed as required by 310 CMR 7.24(6)(d):
 - i. Vapor Balance Systems.
 - (i) Annual in-use compliance tests: Pressure Decay Test; Vapor Tie Test; P/V Vent Test.
 - (ii) Every-third-year in-use compliance test: Dynamic Pressure/Liquid Blockage Test.
 - ii. Vacuum Assist Systems.
 - (i) Annual in-use compliance tests: Pressure Decay Test; Vapor Tie Test; P/V Vent Test; and Air-to-liquid Ratio Test.
 - (ii) Every-third-year in-use compliance test: Dynamic Pressure/Liquid Blockage Test.
 - iii. Healy Systems. All applicable tests shall be performed annually.
 - c. The applicable in-use compliance tests were performed and passed not more than 30 days prior to the submittal of the Certification to the Department.
4. Alternative Annual In-use Compliance Certification. Any person subject to 310 CMR 7.24(6) who submits two consecutive years of Annual In-use Compliance Certifications in compliance with 310 CMR 7.24(6)(c)3. in which all applicable in-use compliance tests were passed on the first try, as certified pursuant to 310 CMR 7.24(6)(g)8., may elect to submit annually to the Department an Alternative Annual In-use Compliance Certification on a form obtained from the Department:
 - a. Facilities meeting the requirements of 310 CMR 7.24(6)(c)4. and electing to submit an Alternative Annual In-use Compliance Certification shall be:
 - i. exempt from annual Stage II compliance testing requirements in the year following the submittal of two consecutive years' of Annual In-use Compliance Certifications in compliance with 310 CMR 7.24(6)(c)4.; and
 - ii. subject to all applicable Stage II compliance tests as referenced in 310 CMR 7.24(6)(d) in the second year following the submittal of two consecutive years' Annual In-use Compliance Certifications in compliance with 310 CMR 7.24(6)(c)3., and every other year thereafter.
 - b. Any person submitting an Alternative Annual In-use Compliance Certification to the Department shall fully complete and sign said Certification and attest to the following:
 - i. the installed Stage II system is correctly operated and maintained as required by 310 CMR 7.24(6)(b);
 - ii. all applicable compliance tests were performed and passed as required by 310 CMR 7.24(6)(c)4.a.ii., and
 - iii. The applicable compliance tests were performed and were passed not more than 30 days prior to the date postmarked on the envelope used to submit the Certification to the Department.
 - c. Any person submitting an Alternative Annual In-use Compliance Certification and fails one or more compliance certification tests on the first try as required by 310 CMR 7.24(6)(c)4. shall be required, in subsequent years, to annually certify in compliance with the requirements of 310 CMR 7.24(6)(c)3., until such time as said person meets the requirements in 310 CMR 7.24(6)(c)4.
5. Annual In-use Compliance Certification Submittal Requirements. The annual submittal date for Certifications required pursuant to 310 CMR 7.24(6)(c)3. and 4., is no later than:
 - a. For persons subject to 310 CMR 7.24(6) who install or make a Substantial Modification to a Stage II system on or after January 1, 2001, the anniversary of the submittal to the Department of the Installation Compliance Certification required by 310 CMR 7.24(6)(c)1. or the date the facility commenced operation, whichever occurs first; and

7.24: continued

- b. For all other persons subject to 310 CMR 7.24(6), May 1, 2002, or a date otherwise provided by the Department, whichever is earlier. Persons subject to 310 CMR 7.24(6)(c)5.b. who are provided an annual submittal date by the Department shall be notified by the Department of their first annual submittal date and required in-use compliance tests pursuant to 310 CMR 7.24(6)(c)3.b. no less than 90 days prior to the first annual submittal date established by the Department.
 - c. Upon request of any person subject to 310 CMR 7.24(6), the Department may revise said person's annual Certification submittal date. Such revision shall set a revised annual submittal date that is no more than 12 months after the otherwise applicable submittal date.
6. Any person who owns, leases, operates or controls a Stage II system that fails one or more in-use compliance tests required by 310 CMR 7.24(6)(c)3. or 4., shall immediately:
 - a. either:
 - i. repair or replace an incorrectly installed, non-functioning or broken component as required by the terms and conditions of the Stage II system's currently applicable Executive Order; or
 - ii. decommission the Stage II system in accordance with 310 CMR 7.24(6)(1);
 - b. if such person does not elect to decommission the Stage II system, then such person shall also re-test and pass each failed test; and
 - c. submit to the Department the required Annual In-use Compliance Certification on or before the facility's Annual In-use Compliance Certification submittal date or within 30 days of the date of the Stage II system's first passing test result as required by 310 CMR 7.24(6)(c)3.c. or 310 CMR 7.24(6)(c)4.c., as applicable, whichever occurs first.
 7. If a facility fails one or more required in-use compliance tests and the incorrectly installed, non-functioning or broken components cannot be repaired as required by 310 CMR 7.24(6)(c)7., the person who owns, leases, operates or controls the Stage II system at such facility shall immediately:
 - a. either:
 - i. isolate the incorrectly installed, non-functioning or broken components from the Stage II system so that the remainder of the Stage II system operates as required by the terms and conditions of the system's currently applicable Executive Order; or
 - ii. decommission the Stage II system in accordance with 310 CMR 7.24(6)(1).
 - b. if such person does not elect to decommission the Stage II system, then the person who owns, leases, operates or controls the Stage II system shall also submit to the Department the required Annual In-use Compliance Certification based on passing test results for the remainder of the Stage II system on or before the facility's Annual In-Use Compliance Certification submittal date or within 30 days of the date of the Stage II system's first passing test result as required by 310 CMR 7.24(6)(c)3.c. or 310 CMR 7.24(6)(c)4.c., as applicable, whichever occurs first.
 - c. Any Stage II system component isolated from the remainder of the Stage II System shall remain Isolated until such time as:
 - i. said component is repaired as required by the terms and conditions of the Stage II System's currently applicable Executive Order; and
 - ii. all applicable, compliance testing, record keeping and certification requirements for the Routine Maintenance, Minor Modification, or Substantial Modification of a Stage II system are complied with.
 8. If a facility fails one or more required in-use compliance test and the incorrectly installed, non-functioning or broken Stage II system component cannot be repaired as required by 310 CMR 7.24(6)(c)6. or 7., the person who owns, operators, leases or controls such Stage II system at such facility shall immediately stop dispensing motor vehicle fuel and conspicuously post "Out of Service" signs on all motor vehicle fuel dispensers until such time as:
 - a. all incorrectly installed, non-functioning or broken components are repaired as required by the terms and conditions of the Stage II system's currently applicable Executive Order;
 - b. all applicable in-use compliance tests are performed and passed as required by 310 CMR 7.24(6)(c)3. or 4., as applicable; and

7.24: continued

- c. a fully completed Annual In-use Compliance Certification has been submitted to the Department as required by 310 CMR 7.24(6)(c)3.
 - d. If a facility fails one or more required in-use compliance tests and is subject to 310 CMR 7.24(6)(c)8., for purposes of compliance with the Annual In-use Compliance Certification submittal requirements of 310 CMR 7.24(6)(c)3. or 4., the person who owns, operates, leases or controls the Stage II system shall submit to the Department a fully completed and signed Stage II System Closure Notification as required by 310 CMR 7.24(6)(e)3. on or before said facility's currently applicable Annual In-Use Compliance Certification submittal due date.
9. Any Certification submitted to the Department as required by 310 CMR 7.24(6)(c) shall be signed by a Stage II System Responsible Official as required by 310 CMR 7.24(6)(f).
 10. Any person subject to 310 CMR 7.24(6), upon written notice from the Department, shall perform such compliance tests as the Department determines necessary to demonstrate the Stage II system is installed and maintained as required by the terms and conditions of the system's currently applicable Executive Order and shall submit the results to the Department within 14 days of the performance of said tests.
 11. Receipt of submittals by the Department shall be as follows:
 - a. If hand-delivered, the receipt date is the date of the receipt stamp;
 - b. If mailed, the receipt date is the date of the postmark on the envelope used to submit the document to the Department; or
 - c. If electronically submitted, the receipt date is the date the electronic submission is sent to the Department.
- (d) Stage II System Compliance Testing Requirements. For the purposes of 310 CMR 7.24(6)(c), the following Stage II System compliance tests and requirements shall be required:
1. Vapor Balance Systems. Pressure Decay Test, Vapor Tie Test, P/V Vent Test and Dynamic Pressure/Liquid Blockage Test
 2. Vacuum Assist Systems. Pressure Decay Test, Vapor Tie Test, P/V Vent Test, Air-to-Liquid Ratio Test and Dynamic Pressure/ Liquid Blockage Test
 3. Healy Systems.
 - a. Healy 400 ORVR (Executive Order # G-70-186), Healy 400 ORVR Above Ground Storage System (Executive Order # G-70-187) and Franzen-Hill Cargo Tank Truck System (Executive Order # G-70-193):
 - i. Pressure Decay Test;
 - ii. Vapor Tie Test;
 - iii. P/V Vent Test;
 - iv. Exhibit 4: Vapor Return Line Vacuum Integrity Test; and
 - v. Exhibit 5: Fillneck Vapor Pressure Regulation Fueling Test.
 - b. Healy 600 (Executive Order # G-70-165):
 - i. Pressure Decay Test;
 - ii. Vapor Tie Test;
 - iii. P/V Vent Test;
 - iv. Air-to-liquid Ratio Test; and
 - v. Exhibit 4: Vapor Return Line Vacuum Integrity Test.
 4. Compliance tests performed to meet the requirements of 310 CMR 7.24(6)(c) shall be performed only by a person or Stage II compliance testing company that has submitted to the Department a Stage II Compliance Testing Company Notification as required by 310 CMR 7.24(6)(g)1.
- (e) Notification Requirements.
1. Any person, upon entering into a purchase, lease or other contractual agreement by which said person becomes the owner, operator, lessee or controller of an existing motor vehicle fuel dispensing facility or tank truck subject to 310 CMR 7.24(6) shall submit to the Department, within 30 days of the effective date of becoming such an owner, operator, lessee or controller or within ten days of a written request from the Department, a fully completed New Stage II System Owner, Operator, Lessee or Controller Notification on a form obtained from the Department.

7.24: continued

- a. Said Notification shall include the following:
 - i. the name of the new Stage II system owner, operator, lessee or controller and related business documentation, including the name and address of the facility where the Stage II system is located or from which the tank truck is principally operated; and
 - ii. the effective date said person became the new owner, operator, lessee or controller.
 - b. Said Notification shall be signed by the individual who is a Responsible Official for the new owner, operator, lessee or controller regarding the Stage II system, who shall attest to the following:
 - i. I certify that I personally examined the foregoing and am familiar with the information contained in this document and all the attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment;
 - ii. I am fully authorized to make this attestation on behalf of this facility or tank truck, as applicable.
2. Any person subject to 310 CMR 7.24(6), upon entering into a sale, lease or other contractual agreement by which said person relinquishes his or her authority as an owner, operator, lessee or controller of a facility or tank truck subject to 310 CMR 7.24(6), shall submit to the Department, within 30 days of the effective date of said sale, lease or other contractual agreement, a signed letter notifying the Department of the following:
- a. the name of the person relinquishing his or her authority as an owner, operator, lessee or controller of the facility or tank truck subject to 310 CMR 7.24(6), the facility name, DEP Facility Account Number and address or the address from which the tank truck is principally operated, as applicable;
 - b. the name of the new owner, operator, lessee or controller of the facility or tank truck subject to 310 CMR 7.24(6) and related business information, including the new facility name and address or the address from which the tank truck is principally operated, as applicable; and
 - c. the effective date of the change of owner, operator, lessee or controller.
3. Any person subject to the requirements of 310 CMR 7.24(6) seeking to permanently or temporarily take out-of-service a motor vehicle fuel dispensing facility or tank truck shall submit to the Department a fully completed and signed Stage II System Closure Notification, on a form obtained from the Department.
- a. Said Notification shall include the following:
 - i. the name of the Stage II facility owner, operator, lessee or controller and related business information, including the name and address of the facility where the Stage II system was located or from which the tank truck was principally operated, as applicable;
 - ii. the DEP Facility Account Number for the applicable facility or tank truck; and
 - iii. the date the Stage II system was permanently or temporarily taken out-of-service, and attached, as applicable, current:
 - (i) underground storage tank Registration Notification indicating that the status of the tank is Temporarily Out-of-service;
 - (ii) underground storage tank Notification indicating the that status of the tank is closed (Removed or Closed In-place); or
 - (iii) local permit documenting Temporarily Out-of-service Status or closure/removal.
 - b. Any person subject to the requirements of 310 CMR 7.24(6) who temporarily takes out-of-service a motor vehicle fuel dispensing system or tank truck shall, prior to commencing the distribution of motor vehicle fuel, perform and pass all applicable compliance tests and submit to the Department a fully completed Installation/Substantial Modification Certification as required by 310 CMR 7.24(6)(c)2. or decommission the Stage II system in accordance with 310 CMR 7.24(6)(l).
 - c. A Stage II system shall not be temporarily out-of-service for more than two years.

7.24: continued

- d. Any person subject to the requirements of 310 CMR 7.24(6), where the motor vehicle fuel dispensing facility is permanently closed, shall no longer be subject to 310 CMR 7.24(6) as of the effective date the facility was permanently closed as referenced in the required applicable underground storage tank Notification indicating that the status of the tank is closed (Removed or Closed In-place) or local permit for aboveground storage tank documenting closure/removal.
4. Any Notification submitted to the Department as required by 310 CMR 7.24(6)(e) shall be signed by a Stage II System Responsible Official as required by 310 CMR 7.24(6)(f).
- (f) Stage II System Responsible Official Certification of Compliance.
1. Except in circumstances described in 310 CMR 7.24(6)(f)2., any Certification or Notification required by 310 CMR 7.24(6)(c) or (e) shall be signed by an individual who is a Responsible Official regarding Stage II system compliance.
 2. For Stage II systems owned by one party and leased, operated or controlled by another independent party and where both parties have separate Stage II compliance responsibilities, any Certification or Notification submitted in compliance with the requirements of 310 CMR 7.24(6)(c) or (e) shall be signed by Responsible Officials for each party regarding Stage II system compliance. Each Stage II System Responsible Official shall attest to the following:
 - i. I certify that I personally examined the foregoing and am familiar with the information contained in this document and all the attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment;
 - ii. that systems to maintain compliance are in place at the facility or, if applicable, at the location from which the tank truck is principally operated and will be maintained for the coming year even if the processes or operating procedures are changed over the course of the year; and
 - iii. I am fully authorized to make this attestation on behalf of this facility or tank truck, as applicable.
 3. Any person immediately responsible for obtaining information referenced in 310 CMR 7.24(6)(f), who knowingly and willfully makes false, inaccurate, incomplete or misleading statements pursuant to any Certification or Notification required under 310 CMR 7.24(6), may be in violation of 310 CMR 7.24(6). Notwithstanding the previous sentence, any person subject to the requirements of 310 CMR 7.24(6), shall comply with all applicable provisions of 310 CMR 7.24(6).
- (g) Compliance Testing Company Requirements.
1. Any person who owns, leases, operates or controls a company that performs Stage II compliance tests to meet the requirements of 310 CMR 7.24(6)(c) shall submit to the Department a fully completed Stage II Compliance Testing Company Notification, on a form obtained from the Department, prior to performing any required Stage II compliance test.
 - a. the Notification shall include the following:
 - i. the name and business mailing address of the Stage II compliance testing company owner, operator, lessee or controller;
 - ii. the name and address of any business that is engaged in the installation or Substantial Modification of Stage II systems and is owned, operated, leased or controlled by, or affiliated with the owner, operator, lessee or controller of the compliance testing company;
 - iii. the name and address of any motor vehicle fuel dispensing facility or tank truck subject to 310 CMR 7.24(6) that is owned, operated, leased or controlled by, or affiliated with the owner, operator, lessee or controller of the compliance testing company;
 - iv. the address and telephone number of the facility(ies) from which the daily compliance testing activities of the compliance testing company originate and at which any records required by 310 CMR 7.24(6)(g)10. are maintained;

7.24: continued

- v. a written description of the employee training systems in place at the compliance testing company to ensure required compliance tests are performed as required by applicable protocols and procedures, pursuant to 310 CMR 7.24(6)(g)6. and 7; and
 - vi. a list of all Compliance Testing Company Responsible Officials with the authority to sign Compliance Testing Company Certifications on behalf of the compliance testing company.
- b. Each Notification shall be signed by an individual who is a Responsible Official regarding the compliance testing company, who shall attest to the following:
- i. I certify that I personally examined the foregoing and am familiar with the information contained in this document and all the attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment;
 - ii. Employee training systems are in place at the company to ensure Stage II compliance tests are performed as required by all applicable protocols and procedures and such training systems will be maintained for the coming year even if the protocols and procedures are changed over the course of the year; and
 - iii. I am fully authorized to make this attestation on behalf of this Stage II Compliance Testing Company.
2. Any person subject to the requirements of 310 CMR 7.24(6)(g) shall notify the Department in writing of any change to the information submitted to the Department pursuant to 310 CMR 7.24(6)(g)1. within 14 days of the effective date of such change. Upon the Department's written request, the person shall submit a fully revised and completed Notification to the Department as required by the requirements of 310 CMR 7.24(6)(g)1.
3. No person subject to 310 CMR 7.24(6)(g) shall perform any Stage II compliance test unless said person has first been trained in accordance with the applicable compliance test protocols and procedures required by 310 CMR 7.24(6)(g)6. and 7.
4. Any person subject to the requirements of 310 CMR 7.24(6)(g) shall submit, at least once every two weeks, a written list to the Department identifying all motor vehicle fuel dispensing facilities and tank trucks at which the company is scheduled to perform required Stage II compliance test(s) over the next 14 day period.
- a. The list shall be organized by Department region and date, and shall include the name and address of each facility or tank truck to be tested, the applicable section under 310 CMR 7.24(6)(c)2., 3., or 4., the required compliance tests to be performed, and the estimated time that the company expects to arrive at the facility location.
 - b. The Department shall be notified, in writing, of any change of date of an individual facility's scheduled compliance tests no later than 9 A.M. of the day the scheduled test(s) is to occur. Additions to a submitted compliance-testing schedule shall be submitted to the Department, in writing, no less than two working days prior to the date of any scheduled test.
 - c. Failure to comply with the Notification requirements of 310 CMR 7.24(6)(g) 4. may be a basis for the Department to determine that tests conducted after inadequate notice are invalid.
5. Any person subject to the requirements of 310 CMR 7.24(6)(g) shall immediately notify the Department of any failed Stage II compliance tests performed as required by 310 CMR 7.24(6)(c) if said person did not return to retest the Stage II system as required by 310 CMR 7.24(6)(c)6. or 7. on or before the facility's Annual In-Use Compliance Certification submittal date, or within 30 days of the date of the Stage II system's first passing test result, whichever occurs first. Said person shall notify the Department regarding the name and address of the facility, and the facility's Facility Account Number.
6. Any person subject to 310 CMR 7.24(6)(g) shall perform compliance tests to meet the requirements of 310 CMR 7.24(6)(c) only upon confirmation that:
- a. all above ground Stage II system components including, but not limited to: dispensers; nozzles; swivels; hose retractors; hoses; breakaways; vapor check valves; and the pressure/vacuum valve(s) are installed as required and are the correct components as required by the terms and conditions of the system's currently applicable Executive Order; and

7.24: continued

- b. all motor vehicle fuel dispensing facilities with two or more motor vehicle fuel storage tanks are properly manifolded as required by the terms and conditions of the system's currently applicable Executive Order.
- 7. Any person subject to 310 CMR 7.24(6)(g), shall perform Stage II compliance tests to meet the requirements of 310 CMR 7.24(6) only in accordance with the applicable test procedures cited below:
 - a. Pressure Decay Test (Bay Area Air Pollution Control District Source Test Procedure ST-30 (2/6/1991)) and 310 CMR 7.24(6)(g)7.a.: *Table A. Minimum Allowable Pressure.*

Ullage (Gal)	Minimum Allowable Pressure ("wc)	Ullage (Gal)	Minimum Allowable Pressure ("wc)
500	3.70	6,000	9.38
600	4.50	7,000	9.46
700	5.20	7,500	9.50
800	5.80	8,000	9.52
900	6.20	9,000	9.56
1,000	6.50	10,000	9.60
1,250	7.05	11,000	9.62
1,750	7.90	12,000	9.64
2,000	8.20	13,000	9.66
2,250	8.35	14,000	9.68
2,500	8.50	15,000	9.70
2,750	8.60	16,000	9.71
3,000	8.70	17,000	9.71
3,250	8.80	18,000	9.72
3,500	8.90	19,000	9.73
3,750	9.00	20,000	9.73
4,000	9.10	21,000	9.74
4,250	9.15	22,000	9.75
4,500	9.20	23,000	9.75
4,750	9.25	24,000	9.76
5,000	9.30	25,000	9.77
		30,000	9.80

Note: For a valid test, total ullage must be at least 500 gallons but no more than 30,000 gallons.

- b. Underground Piping Check (Vapor Tie) Test (San Diego County Air Pollution Control District Test Procedure TP-96-1, Section 5.1.9).
- c. Pressure/Vacuum Vent Test (Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, CARB TP-201.1E) P/V relief vents shall be tested to be within .29oz/in² or 0.5 inches of water column of the designed pressure and within 1.2oz/in² or 2.0 inches of water column of the vacuum settings.
- d. Air-to-liquid Volume Ratio Test (CARB TP-201.5).
- e. Dynamic Pressure/Liquid Blockage Test (CARB TP-201.4).
- f. Healy 400 ORVR (Executive Order # G-70-186), Healy 400 ORVR Above Ground Storage System (Executive Order # G-70-187) and Franzen-Hill Cargo Tank Truck System (Executive Order # G-70-193).
 - Exhibit 4: Vapor Return Line Vacuum Integrity Test.
 - Exhibit 5: Fillneck Vapor Pressure Regulation Fueling Test.
 - Healy 600 (Executive Order # G-70-165).
 - Exhibit 4: Vapor Return Line Vacuum Integrity Test.
- 8. Any person subject to 310 CMR 7.24(6)(g) shall certify to the Department that each compliance test performed to meet the requirements of 310 CMR 7.24(6)(c) was performed as required by 310 CMR 7.24(6)(g)6. and 7. As applicable, the Certification shall be submitted on a Stage II Installation/Substantial Modification Certification, Alternative Annual In-use Compliance Certification, or Annual In-use Compliance Certification and shall include:

7.24: continued

- a. the date each compliance test was first performed and the result;
 - b. the date each compliance test was performed and passed;
 - c. a notation whether:
 - i. the entire installed Stage II system was tested and passed all applicable compliance tests; or
 - ii. incorrectly installed, non-functioning or broken components were isolated from the remainder of the installed Stage II system and the remainder of Stage II system was tested and passed all applicable compliance tests; and
 - d. If the remainder of the Stage II system was tested and passed all applicable compliance tests, as noted in 310 CMR 7.24(6)(g)8.c., identify all components isolated from the remainder of the Stage II system.
9. Each Certification submitted pursuant to 310 CMR 7.24(6)(g)8. shall be fully completed and signed by a Compliance Testing Company Responsible Official, who shall attest to the following:
- a. I certify that I personally examined the foregoing and am familiar with the information contained in this document and all the attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment; and
 - b. I am fully authorized to make this attestation on behalf of this Stage II Compliance Testing Company.
10. Any person subject to 310 CMR 7.24(6)(g) shall maintain the following records on site, for a minimum of five years, at the location(s) referenced on the form submitted pursuant to 310 CMR 7.24(6)(g)1.a.iv:
- a. A complete set of records of compliance tests performed to meet the requirements of 310 CMR 7.24(6)(c). Such records shall include, by facility address:
 - i. the date and first result for each required test performed;
 - ii. the date each test was performed and passed; and
 - iii. an itemized list of all Stage II system components re-installed, repaired or replaced as necessary for the system to pass the applicable test(s).
 - b. A current record of all persons or employees trained as required by 310 CMR 7.24(6)(g)3. Such record shall include the following: i. the date training was received; ii. the person or employee's printed name; and iii. the personal signature of the person or employee acknowledging receipt of required training.
11. All records maintained pursuant to 310 CMR 7.24(6)(g)10. shall be made available to the Department or the US EPA immediately upon the request of either.
- (h) Violations of 310 CMR 7.24(6). For any person subject to 310 CMR 7.24(6) it shall be a violation of 310 CMR 7.24(6) to:
1. fail to submit any Certification or Notification required by to 310 CMR 7.24(6) as applicable;
 2. make any false, inaccurate, incomplete or misleading statements in any Certification or Notification required by to 310 CMR 7.24(6);
 3. make any false, inaccurate, incomplete or misleading statements in any record, report, plan, file, log or register which said person is required to keep pursuant to 310 CMR 7.24(6);
 4. hold themselves out as a responsible official in violation of the applicable requirements of to 310 CMR 7.24(6);
 5. fail to comply with any applicable standards imposed under 310 CMR 7.24(6); or
 6. violate any other provision of 310 CMR 7.24(6).
- (i) Department Adopted CARB Stage II System Executive Orders.

Number	Description
G-70-7-AD	Certification of the Hasstech Model VCP-2 and VCP 2A Phase II Vapor Recovery System.
G-70-14-AA	Recertification of Red Jacket Aspirator Assist Phase II Vapor Recovery System.
G-70-17-AD	Modification of Certification of the Emco Wheaton Balance Phase II Vapor Recovery System.

7.24: continued

Number	Description (continued)
G-70-18-C	Modification of Certification of the Shell Model 75B1 and 75B1-R3 Service Station Phase II Vapor Recovery System.
G-70-23-AC	Recertification of the Exxon Balance Phase II Vapor Recovery System.
G-70-25-AA	Recertification of the Atlantic Richfield Balance Phase II Vapor Recovery System.
G-70-33-AB	Certification of the Modified Hirt VCS-200 Vacuum Assist Phase II Vapor Recovery System.
G-70-36-AD	Modification of Certification of the OPW Balance Phase II Vapor Recovery System.
G-70-37-B	Modification of the Certification of the Chevron Balance Phase II Vapor Recovery System with OPW nozzles for Service.
G-70-38-AB	Recertification of the Texaco Balance Phase II Vapor Recovery System.
G-70-48-AA	Recertification of the Mobil Oil Balance Phase II Vapor Recovery System.
G-70-49-AA	Recertification of the Union Balance Phase II Vapor Recovery System.
G-70-52-AM	Certification of Components for Red Jacket, Hirt and Balance Phase II Vapor Recovery System.
G-70-53-AA	Recertification of the Chevron Balance Phase II Vapor Recovery System.
G-70-77	Certification of the OPW Repair/Replacement Parts and Modification of the Certification of the OPW Balance Phase II Vapor Recovery System.
G-70-78	Certification of the E-Z Flo Nozzle Company Rebuilt Vapor Recovery Nozzles and Vapor Recovery Components.
G-70-101-B	Certification of the E-Z Flo Model 3006 and 3007 Vapor Recovery Nozzles and Use of E-Z Flo Components with OPW Models 11VC and 11 VE Vapor Recovery Nozzles.
G-70-107	Certification of Rainbow Petroleum Products Model RA3003, RA3005, RA3006 and RA3007 Vapor Recovery Nozzles and Vapor Recovery Components.
G-70-110	Certification of Stage I and II Vapor Recovery Systems for Methanol Fueling Facilities.
G-70-118-AB	Certification of Amoco V-1 Vapor Recovery System.
G-70-125-AA	Modification of the Certification of the Husky Model V Phase II Balance Vapor Recovery Nozzle.
G-70-127	Certification of the OPW Model 111-V Phase Vapor Recovery Nozzle.
G-70-134	Certification of the EZ Flo Rebuilt A-4000 Series and 11V-Series Vapor Recovery System.
G-70-139	Addition to the Certification of the Hirt Model VCS-200 Phase II Vapor Recovery System.
G-70-150-AE	Modification of the Certification of the Gilbarco VaporVac Phase II Vapor Recovery System.
G-70-153-AD	Modification to the Certification of the Dresser/Wayne WayneVac Phase II Vapor Recovery System.
G-70-154-AA	Modification to the Certification of the Tokheim MaxVac Phase II Vapor Recovery System.
G-70-159-AB	Modification of the Certification of the Saber Nozzle for Use with the Gilbarco VaporVac Phase II Vapor Recovery System.
G-70-163-AA	Certification of the OPW VaporEZ Phase II Vapor Recovery System.
G-70-164-AA	Modification to the Certification of the Hasstech VCP-3A Vacuum Assist Phase II Vapor Recovery System.
G-70-165	Healy Vacuum Assist Phase II Vapor Recovery System.
G-70-169-AA	Modification to the Certification of the Franklin Electric INTELLIVAC Phase II Vapor Recovery System.
G-70-170	Certification of the EZ-flo Rebuilt 5005 and 5015 for use with the Balance Phase II Vapor Recovery System.
G-70-177-AA	Certification of the VCS400-7 Vacuum Assist Phase II Vapor Recovery System.
G-70-179	Certification of the Catlow ICVN-V1 Vacuum Assist Phase II Vapor Recovery System.
G-70-180	Order Revoking Certification of the Healy Phase II Vapor Recovery Systems for Gasoline Dispensing Systems.
G-70-183-AA	Certification of the Healy/Franklin Vacuum Assist Phase II Vapor Recovery System.
G-70-186	Certification of the Healy Model 400 ORVR Vapor Recovery System.
G-70-188	Certification of the Catlow ICVN Vapor Recovery Nozzle System for use with the Gilbarco VaporVac Vapor Recovery System.

7.24: continued

Number	Description (continued)
G-70-191AA	Healy/Franklin VP-1000 Vapor Pump Phase II Vapor Recovery System(Healy ORVR Phase II Vapor Recovery System).
G-70-196	Certification of the Saber Technologies, LLC SaberVac VR Phase II Vapor Recovery System
G-70-199-AJ	Certification of the Gasoline Dispensing Nozzles to the Liquid Retention of 350 milliliters per 1,000 Gallons Dispensed.
VR-201-A	Healy System Inc. Phase II Enhanced Vapor Recovery (EVR) System Not Including ISD
EVR-202-A	Healy Phase II Enhanced Vapor Recovery System Including Veeder-Root ISD System
G-70-204-A	Certification of the Gilbarco VaporVac/OPW Vaporsaver ORVR-Compatible System

(j) Department Adopted Carb Stage Ii System Executive Orders for Aboveground Storage Tank Vapor Recovery Systems.

Number	Description
G-70-102-A	Certification of a Phase I Vapor Recovery System for Aboveground Storage Tanks with less than 40,000 Gallons Capacity for Gasoline or Gasoline/Methanol Blended Fuels
G-70-116-F	ConVault Aboveground Tank Vapor Recovery System
G-70-128	Bryant Fuel Cell Aboveground Tank Vapor Recovery System
G-70-130A	Petrovault Aboveground Tank Vapor Recovery System
G-70-131A	Tank Vault Aboveground Tank Vapor Recovery System
G-70-132-A	Supervault Aboveground Tank Vapor Recovery System
G-70-132-B	Supervault Aboveground Tank Vapor Recovery System
G-70-136	FireSafe Aboveground Tank Vapor Recovery System
G-70-137	FuelSafe Aboveground Tank Vapor Recovery System
G-70-138	Phase II Vapor Recovery Systems Installed on Gasoline Bulk Plants/Dispensing Facilities with Aboveground Tanks
G-70-139	Addition to the Certification of the Hirt Model VCS-200 Phase II Vapor Recovery System
G-70-140-A	Integral Phase I and Phase II Aboveground Tank Configurations with the Healy Phase II Vapor Recovery System
G-70-142-B	Phase I Vapor Recovery System for Aboveground Gasoline Storage Tanks
G-70-143	P/T Vault Aboveground Tank Vapor Recovery System
G-70-147-A	New United Motors Manufacturing, Incorporated Phase II Vapor Recovery System at the Fremont, California Assembly Plant
G-70-148-A	Lube Cube Aboveground Tank Vapor Recovery System
G-70-152	Moiser Brothers Tanks and Manufacturing Aboveground Tank Vapor Recovery System
G-70-155	Petroleum Marketing Aboveground Tank Vapor Recovery System
G-70-156	Ecovault Aboveground Tank Vacuum Assist Vapor Recovery System
G-70-157	Ecovault Aboveground Tank Balance Vapor Recovery System
G-70-158-A	Firesafe Aboveground Tank Vapor Recovery System
G-70-160	Aboveground Tank Vault Vapor Recovery System
G-70-161	Hoover Containment Systems, Incorporated Fuelmaster Aboveground Tank Vapor Recovery System
G-70-162-A	Steel Tank Institute Fireguard Aboveground Tank Vapor Recovery System
G-70-167	EnviroVault Aboveground Tank Vapor Recovery System
G-70-168	Bryant Fuel Systems Phase I Vapor Recovery System
G-70-175	Hasstech VCP-3A Vacuum Assist Phase II Vapor Recovery System for Aboveground Tank Systems
G-70-181	Hirt VCS400-7 Bootless Nozzle Phase II Vapor Recovery System for Aboveground Storage Tank Systems
G-70-187	Healy Model 400 ORVR Vapor Recovery System for Aboveground Tank Systems
G-70-190	Guardian Containment, Corporation Armor Cast Aboveground Tank Vapor Recovery System
G-70-192	Certification of the Healy Model 400 ORVR Nozzle for Existing Aboveground Storage Tank Systems

7.24: continued

Number	Description (continued)
G-70-193	Certification of the Hill-Vac Vapor Recovery System for Cargo Tank Motor Vehicle Fueling Systems
G-70-194	Containment Solutions Hoover Vault Aboveground Tank Vapor Recovery System
G-70-195	Cretex Companies, Inc FuelVault Aboveground Tank Vapor Recovery System
G-70-197	Synchrotek Fastflo 3 Phase II Vapor Recovery System
G-70-200	Oldcastle Aboveground Below-grade Fuel Vault with Balance Vapor Recovery System and Buried Vapor Return Piping
G-70-201	Oldcastle Aboveground Below-grade Fuel Vault with Balance Vapor Recovery System and Trenched Vapor Return Piping
G-70-202	Oldcastle Aboveground Below-grade Fuel Vault with Gilbarco VaporVac Phase II Recovery System and Trenched Vapor Return Piping

(k) The provisions and requirements of 310 CMR 7.24(6)(a) and (b) are subject to the enforcement provisions specified in 310 CMR 7.52.

(l) Decommissioning.

1. Any person subject to 310 CMR 7.24(6) shall decommission an installed Stage II Vapor Recovery System only in accordance with the following requirements:

a. Decommissioning will be done in accordance with the PEI Recommended Practices for Installation and Testing of Vapor Recovery Systems at Vehicle-fueling Sites, PEI/RP300-09, Section 14, Decommissioning Stage II Vapor Recovery Piping; and

b. If not already installed, a California Air Resources Board Enhanced Vapor Recovery (CARB EVR) Pressure Vacuum Vent Valve and CARB EVR rotatable product and vapor adaptors as described in the CARB Executive Orders listed in 310 CMR 7.24(6)(l)1.b.: *Table 1.* and *Table 2.* shall be installed. Rotatable adaptors shall not be required for aboveground storage tanks and coaxial Stage I systems.

Table 1.

CARB Underground Storage Tank Enhanced Vapor Recovery System Executive Orders

Executive Order Number	Description	Date
VR-101-N	Phil-Tite Phase I Vapor Recovery System.	June 8, 2013
VR-102-O	OPW Phase I Vapor Recovery System.	October 3, 2014
VR-103-G	EBW Phase I Vapor Recovery System.	June 3, 2013
VR-104-G	CNI Manufacturing Phase I Vapor Recovery System.	June 8, 2013
VR-105-D	EMCO Wheaton Phase I Vapor Recovery System	August 27, 2014

7.24: continued

Table 2.
CARB Aboveground Storage Tank Enhanced Vapor Recovery System Executive Orders

Executive Order Number	Description	Date
VR-301-F	Standing Loss Control of Vapor Recovery Systems for Existing Installations of Aboveground Storage Tanks	June 3, 2014
VR-302-F	Standing Loss Control of Vapor Recovery Systems for New Installations of Aboveground Storage Tanks	June 3, 2014
VR-401-D	OPW Enhanced Vapor Recovery (EVR) System for Above Ground Storage Tanks (AST)	May 12, 2014
VR-402-B	Morrison Brothers Phase I Enhanced Vapor Recovery (EVR) System for Above Ground Storage Tanks (AST)	April 15, 2013
G-70-216	Extension of Executive Orders for Existing Above Ground Storage Tanks	March 13, 2014

2. Prior to re-commencing operations following decommissioning, the following compliance tests, as applicable, shall be performed:

- a. Pressure Decay two inch Test (CARB TP-201.3; March 17, 1999);
- b. Vapor Tie Test (San Diego APCD TP-96-1, section 5.1.9; March 1, 1996);
- c. Pressure/Vacuum Vent Valve Test (CARB TP-201.1E; October 8, 2003);
- d. Static Torque Rotatable Adaptor Test (CARB TP-201.1B; October 8, 2003), if rotatable adaptors are installed; and as applicable, either:
 - e. Leak Rate of Drop Tube/Drain Valve Assembly Test (CARB TP-201.1 C; October 8, 2003); or
 - f. Leak Rate of Drop Tube/Overfill Prevention Devices (CARB T-201.1D; October 8, 2003).

3. If a facility fails any of the tests cited in 310 CMR 7.24(6)(l)2., the failed component shall be replaced with a comparable CARB EVR component.

4. Prior to re-commencing operations following decommissioning, a fully completed and signed Stage II Decommissioning Notification, including a copy of PEI Decommissioning Checklist and passing test results for all applicable compliance tests, shall be submitted to the Department.

(7) Oxygenated Gasoline Composition and Use.

(a) Applicability.

1. 310 CMR 7.24(7) applies to any person who owns, leases, operates, or controls one or more of the following in the Commonwealth of Massachusetts as defined in 310 CMR 7.00:

- a. Bulk plants;
- b. Bulk terminals;
- c. Tank trucks subject to 310 CMR 7.24(4);
- d. Gasoline marketing facilities; or
- e. Motor vehicle fuel dispensing facilities.

2. If the Department verifies a violation of the eight hour carbon monoxide National Ambient Air Quality Standard within Boston, Cambridge, Chelsea, Everett, Malden, Medford, Quincy, Revere or Somerville, in the next applicable oxygenated gasoline control period, no person subject to 310 CMR 7.24(7)(a)1. shall provide, offer for sale, use, sell, or exchange in trade any gasoline in the oxygenated gasoline control area, during the oxygenated gasoline control period, which is not oxygenated gasoline, except where an emergency exemption has been issued by the Department pursuant to 310 CMR 7.24(7)(g).

7.24: continued

3. Such limitations shall not apply to the offer, provision, sale, or exchange of gasoline not meeting the requirements of 310 CMR 7.24(7)(a)2. by subject bulk plants, bulk terminals, or tank trucks during the oxygenated gasoline control period to gasoline marketing facilities or motor vehicle fuel dispensing facilities located outside the oxygenated gasoline control area.

(b) Compliance Testing.

1. Any person who owns, leases, operates, or controls a bulk plant or bulk terminal subject to 310 CMR 7.00 shall conduct gasoline testing for the purposes of compliance with the requirements of 310 CMR 7.24(7). Such compliance testing shall include but not be limited to:

- a. determination of the oxygenate content by weight of gasoline;
- b. the percent oxygen content by weight; and
- c. the oxygenate type(s) utilized to satisfy the requirements of 310 CMR 7.00.

2. Bulk plants and bulk terminals subject to 310 CMR 7.24(7) which receive oxygenated gasoline such that no additional blending of oxygenates occurs for the purpose of compliance with 310 CMR 7.00, shall conduct compliance testing upon receipt of each delivery of such oxygenated gasoline.

3. Bulk plants and bulk terminals subject to 310 CMR 7.24(7) which blend oxygenates with gasoline for the purpose of compliance with 310 CMR 7.24(7), shall conduct compliance testing upon the transfer of every 1,000,000 gallons of oxygenated gasoline from said bulk plant or bulk terminal to subject tank trucks, or more frequently if so required by the Department.

(c) Methods for Sampling, Testing, and Calculating Oxygen Content.

1. Any person determining the oxygen content by weight of gasoline shall use the values listed in Table 7.24(7)(c)1., and the methods identified in 310 CMR 7.24(7)(c)2., 3., and 4. All volume measurements shall be adjusted to 60°F.

2. Any person determining the oxygen content by weight of gasoline shall obtain a representative sample in accordance with the US Environmental Protection Agency's (EPA) sampling method as detailed in Title 40 CFR Part 80, Appendix D or any other sampling method approved by the Department and EPA.

3. Any person determining the oxygen content by weight of gasoline shall determine the mass concentration of each oxygenate in the sample by one of the following methods:

- a. ASTM Method 4815 (Standard Test Method For Determination of C1 to C4 Alcohols and MTBE in Gasoline by Gas Chromatography); or
- b. Appendix C to EPA's Notice of Guidelines for Oxygenated Gasoline Credit Programs; or
- c. Any other method approved by the Department and EPA.

4. Any person determining the oxygen content by weight of gasoline shall use the oxygen content conversion methodology contained in EPA's Notice of Guidelines for Oxygenated Gasoline Credit Programs.

TABLE 7.24(7)(c) - 1
SPECIFIC GRAVITY AND WEIGHT FRACTION OXYGEN OF COMMON OXYGENATES

Oxygenate	Weight Fraction Oxygen	Specific Gravity
Methyl alcohol	0.4993	0.7963
Ethyl alcohol	0.3473	0.7939
Normal propyl alcohol	0.2662	0.8080
Isopropyl alcohol	0.2662	0.7899
Normal butyl alcohol	0.2158	0.8137
Isobutyl alcohol	0.2158	0.8058
Secondary butyl alcohol	0.2158	0.8114
Tertiary butyl alcohol	0.2158	0.7922
Methyl tertiary butyl ether (MTBE)	0.1815	0.7460
Tertiary amyl methyl ether (TAME)	0.1566	0.7752
Ethyl tertiary butyl ether (ETBE)	0.1566	0.7452
Di-isopropyl ether (DIPE)	0.1566	0.7300

7.24: continued

(d) Record Keeping.

1. All records and documentation maintained in compliance with 310 CMR 7.24(7)(d)2., 3., and 4. shall be retained on site, or, upon the written agreement from the Department, in a centralized location, for not less than two calendar years, and shall be made available for review upon request of the Department.
2. Any person who owns, leases, operates, or controls a bulk plant or bulk terminal subject to 310 CMR 7.24(7) shall maintain records containing the following information:
 - a. Results of all compliance testing, including the test method and sampling procedure, and the name and address of the person performing such testing.
 - b. All transfer documents specified in 310 CMR 7.24(7)(e)1.
3. Any person who owns, leases, operates, or controls a tank truck subject to 310 CMR 7.24(7) shall maintain records containing the following information:
 - a. All transfer documents specified in 310 CMR 7.24(7)(e)1.
 - b. All transfer documents specified in 310 CMR 7.24(7)(e)2.
4. Any person who owns, leases, operates, or controls a gasoline marketing facility or motor vehicle fuel dispensing facility subject to 310 CMR 7.00 shall maintain records containing the following information:

All transfer documents specified in 310 CMR 7.24(7)(e)2.

(e) Transfer Documents.

1. Any person who owns, leases, operates, or controls a bulk plant or bulk terminal subject to 310 CMR 7.24(7) shall provide a transfer document for the purposes of documenting each transfer of oxygenated gasoline from said plant or terminal to a subject tank truck. Said transfer document may consist of an invoice, bill of lading, shipping paper or other documentation, and shall include, but need not be limited to, the following information:
 - a. a statement that the oxygenated gasoline transferred complies with the requirements of 310 CMR 7.24(7)(a)2.;
 - b. the date and quantity of oxygenated gasoline transferred;
 - c. the name and address of the person owning, leasing, operating, or controlling said bulk plant or bulk terminal from which oxygenated gasoline is transferred; and
 - d. The name and address of the person owning, leasing, operating, or controlling said tank truck to which oxygenated gasoline is transferred.
2. Any person who owns, leases, operates, or controls a tank truck subject to 310 CMR 7.24(7) shall provide a transfer document for the purposes of documenting each transfer of oxygenated gasoline from said tank truck to a subject gasoline marketing facility or motor vehicle fuel dispensing facility. Said transfer document may consist of an invoice, bill of lading or other documentation, and shall include, but need not be limited to, the following information:
 - a. a statement that the oxygenated gasoline transferred complies with the requirements of 310 CMR 7.24(7)(a)2.;
 - b. the date and quantity of oxygenated gasoline transferred;
 - c. the name and address of the person owning, leasing, operating, or controlling said tank truck from which oxygenated gasoline is transferred; and
 - d. The name and address of the person owning, leasing, operating, or controlling said gasoline marketing facility or motor vehicle fuel dispensing facility to which oxygenated gasoline is transferred.

(f) Dispenser Labeling.

1. Each gasoline marketing facility or motor vehicle fuel dispensing facility subject to 310 CMR 7.24(7)(f) shall permanently affix a label to each gasoline dispensing device as specified in 310 CMR 7.24(7)(f)2.
2. The label shall state the following: "From November 1st through the last day of February, the gasoline dispensed from this pump is oxygenated and will reduce carbon monoxide pollution from motor vehicles."
3. Any label required pursuant to 310 CMR 7.24 shall be:
 - a. Posted on the upper $\frac{1}{3}$, of the pump or dispenser unit face which depicts the volume and cost of gasoline dispensed, such that the label is clear, conspicuous, and easily readable to a driver in the vehicle to which gasoline may be dispensed; and
 - b. Is clearly legible and in block letters that are:
 - i. No less than 20-point bold type; and
 - ii. In a color that contrasts with the background on which they are placed.

7.24: continued

(g) Emergency Exemption.

1. In extreme and unusual circumstances, such as a natural disaster or other event outside of the control of the applicant, such that the applicant has an insufficient supply of oxygenated gasoline, and which could not have been avoided by the exercise of prudence, diligence, and due care the Department may approve an application for an emergency exemption if the applicant demonstrates, in writing, to the Department's satisfaction that:
 - a. the emergency exemption is in the public interest;
 - b. the applicant has exercised prudent planning and was not able to avoid the insufficient supply of oxygenated gasoline and has taken all reasonable steps to minimize the extent of the insufficient supply of oxygenated gasoline;
 - c. the applicant can show how the requirements for oxygenated gasoline will be expeditiously met; and
 - d. the applicant will not incur a financial gain from the granting of such an emergency exemption.
2. The Department may elect to hold a public hearing on any request for an emergency exemption.
3. No person who applies, in writing, for an emergency exemption shall provide, offer for sale, sell, or exchange in trade any gasoline other than oxygenated gasoline during the oxygenated gasoline control period in the oxygenated gasoline control area without the written approval of the Department.
4. An emergency exemption issued by the Department shall not exceed 30 days. Said exemption may be renewed by the Department upon written demonstration of need, consistent with the requirements of 310 CMR 7.24(7)(g).
5. Any person to whom the Department has issued an emergency exemption shall:
 - a. Only provide, offer for sale, sell, or exchange in trade gasoline with an oxygen content of at least 2% by weight during the oxygenated gasoline control period;
 - b. Maintain records required by 310 CMR 7.24(7)(d)1. documenting the quantity of gasoline sold or transferred each day; and
 - c. Within 30 days of the end of the emergency exemption, submit a report to the Department in writing summarizing the information contained in such records.
- (h) The provisions of 310 CMR 7.24(7) may be enforced pursuant to 310 CMR 7.52.

(8) Marine Volatile Organic Liquid Transfer.

- (a) Applicability. 310 CMR 7.24(8) applies to any person who owns, leases, operates, or controls a marine terminal or marine tank vessel which:
 1. takes part in a loading event which transfers an organic liquid, or in which any liquid is transferred into a marine vessel cargo tank which previously held an organic liquid; or,
 2. which performs ballasting or cleaning operations on a cargo tank which previously held organic liquid while the vessel is moored at a dock or other permanent stationary structure. The provisions of 310 CMR 7.24(8) do not apply to lightering operations.
- (b) Reasonably Available Control Technology (RACT) Requirements. On or after May 31, 1995 no person subject to 310 CMR 7.24(8) shall cause, suffer, allow, or permit emissions of volatile organic compounds in excess of the emissions limitations and standards set forth in 310 CMR 7.24(8)(c) through (e).
- (c) RACT Emissions Limitations.
 1. No person subject to 310 CMR 7.24(8) shall cause, suffer, allow, or permit a loading event while docked at a marine terminal unless:
 - a. marine tank vessel emissions of volatile organic compounds are limited to two lbs per 1,000 bbls of organic liquid transferred (5.7 grams per cubic meter); or,
 - b. marine tank vessel emissions of volatile organic compounds are processed by equipment satisfying 310 CMR 7.24(8)(d), and reduced by at least 95% by weight as compared to uncontrolled conditions when using a recovery device, or by at least 98% by weight as compared to uncontrolled conditions when using a combustion device; and,
 - c. the organic material storage tanks at the marine terminal to be used during the loading event meet the requirements of 310 CMR 7.24(1).
 2. Marine tank vessel emissions resulting from ballasting or cleaning of cargo tanks are subject to the emissions limitations of 310 CMR 7.24(8)(c)1. only if emissions capture and control equipment is installed at the marine terminal.

7.24: continued

- (d) Emissions Capture and Control Equipment Requirements. Any emissions capture and control equipment used to comply with 310 CMR 7.24(8)(c) shall be designed and operated to collect and control volatile organic compound emissions from the loading of organic liquids into marine tank vessels or from ballasting and cleaning cargo tanks which previously held an organic liquid.
- (e) Equipment Performance Standards.
1. No person subject to 310 CMR 7.24(8) shall cause, suffer, allow, or permit a loading event unless the marine tank vessel is vapor tight or the tank vessel is loaded at less than atmospheric pressure.
 2. Marine tank vessels shall be demonstrated to be vapor tight by one of the following:
 - a. present a copy of the vapor-tightness pressure test documentation for the marine tank vessel prior to loading. The date listed on the documentation must be within the 12 months preceding the date of demonstration, and the test must be conducted in accordance with the procedures specified in Section 63.565(c)(1) of 40 CFR Part 63, Subpart Y; or
 - b. present a copy of the vapor-tightness leak test documentation for the marine tank vessel prior to loading. The date listed on the documentation must be within the 12 months preceding the date of demonstration, and the test must be conducted in accordance with the procedures in Method 21 of 40 CFR Part 60 Appendix A; or
 - c. perform a leak test during the loading event in accordance with the procedures in Method 21 of 40 CFR Part 60 Appendix A.
- (f) Plan Submittal Requirements. Any person subject to 310 CMR 7.24(8) must submit an emission control plan for approval by the Department which satisfies the requirements of 310 CMR 7.18(20)(c). This provision does not apply to any person who is subject to 310 CMR 7.24(8), and who has received written approval from the Department under 310 CMR 7.02, 310 CMR 7.18(17), or 310 CMR 7.18(20) for emission capture and control equipment which satisfies the requirements of 310 CMR 7.24(8).
- (g) Recordkeeping Requirements. Any person subject to 310 CMR 7.24(8) shall prepare and maintain records regarding each loading event sufficient to demonstrate compliance with 310 CMR 7.24(8)(c) through (e). Records kept to demonstrate compliance shall be kept on site for five years and shall be made available to representatives of the Department or EPA. Such records shall include, but are not limited to:
1. The name and location of the marine terminal at which the loading event occurred.
 2. The company responsible for the operation of the marine terminal.
 3. The date(s) and times at which the marine tank vessel arrived and departed from the marine terminal.
 4. The name, registry, and owner of the marine tank vessel.
 5. The prior cargo carried by the marine tank vessel.
 6. The type and amount of organic liquid loaded into the tank vessel.
 7. The condition of the tanks prior to being loaded (*e.g.*, cleaned, gas freed, *etc.*).
 8. Description of the operating procedure used to control emissions while ballasting into unsegregated ballast tanks (associated with unloading or other events).
 9. Any testing performed during loading.
 10. Any leaks detected and the repair action taken.
- (h) Testing Requirements.
1. Any person subject to 310 CMR 7.24(8) who owns or operates a marine terminal shall, upon startup of the emission control equipment, conduct initial performance tests to demonstrate compliance with 310 CMR 7.24(8). Testing shall be conducted in accordance with EPA Method 21 and Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.
- (i) Monitoring Requirements.
1. Any person subject to 310 CMR 7.24(8) who installs and operates emission control equipment to meet the emission limitations in 310 CMR 7.24(8)(c) must monitor the emission control equipment in accordance with the procedures specified in §§ 63.564(e) through (j) of 40 CFR 63 Subpart Y.
 2. Any person subject to 310 CMR 7.24(8) who owns or operates a marine terminal shall, upon the request of the Department, conduct tests of the emission control equipment, to demonstrate compliance with 310 CMR 7.24(8). Testing shall be conducted in accordance with EPA Method 21 and Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the Department and EPA.

7.24: continued

3. The owner or operator of any marine terminal shall notify the Department in writing of the date of any test to demonstrate compliance with the emission limitations of 310 CMR 7.24(8)(c)1. at least 30 days in advance of that date. Testing results shall be submitted to the Department within 30 days of completion of the test. Testing results shall also be maintained at the marine terminal for a period of five years.

7.25: U Best Available Controls for Consumer and Commercial Products

(1) Purpose. 310 CMR 7.25 applies to and sets forth requirements for the control of volatile organic compound emissions from the use of consumer and commercial products as defined in Title I Part D Subpart 2 Section 183(e)(1)(B) of the federal Clean Air Act.

[(2) through (10): Reserved]

(11) Architectural and Industrial Maintenance (AIM) Coatings.

(a) Applicability.

1. Except as provided in 310 CMR 7.25(11)(a)2., the requirements of 310 CMR 7.25(11) apply to any person who, on or after January 1, 2009, supplies, sells, offers for sale, blends for sale, or manufactures any architectural coating listed in 310 CMR 7.25(11)(b) for use within Massachusetts, as well as any person who applies or solicits the application of any architectural coating within Massachusetts.

2. The provisions of 310 CMR 7.25(11) do not apply to any person who supplies, sells, offers for sale, blends for sale, or manufactures any architectural coating that is for exclusive use outside of Massachusetts.

(b) Definitions. Terms used in 310 CMR 7.25 are defined at 310 CMR 7.00: *Definitions* or in 310 CMR 7.25. Where a term is defined in both 310 CMR 7.00: *Definitions* and in 310 CMR 7.25, the definition in 310 CMR 7.25 shall apply.

AEROSOL COATING PRODUCT means an aerosol coating product containing pigments or resins that is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marketing applications.

ANTENNA COATING means a coating labeled and formulated exclusively for application to equipment and associated structural appurtenances that are used to receive or transmit electromagnetic signals.

ANTIFOULING COATING means a coating labeled and formulated for application to submerged stationary structures and their appurtenances to prevent or reduce the attachment of marine or freshwater biological organisms. To qualify as an antifouling coating, the coating must be registered with both the U.S. EPA under the Federal Insecticide, Fungicide and Rodenticide Act (7 U.S.C. § 136 *et seq.*) and with the under the Massachusetts Pesticide Control Act.

APPURTENANCE means any accessory to a stationary structure coated at the site of installation, whether installed or detached, including but not limited to: bathroom and kitchen fixtures; cabinets; concrete forms; doors; elevators; fences; hand railings; heating equipment, air conditioning equipment, and other fixed mechanical equipment or stationary tools; lampposts; partitions, pipes and piping systems; rain gutters and downspouts; stairways; fixed ladders; catwalks and fire escapes; and window screens.

ARCHITECTURAL COATING means a coating to be applied to stationary structures or the appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. Coatings applied in shop applications or to nonstationary structures such as airplanes, ships, boats, railcars, and automobiles, and adhesives are not considered architectural coatings for the purposes of 310 CMR 7.25.

7.25: continued

ASTM means the American Society for Testing and Materials.

BAAQMD means Bay Area Air Quality Management District of the State of California.

BITUMENS means black or brown materials including, but not limited to, asphalt, tar, pitch, and asphaltite that are soluble in carbon disulfide, consist mainly of hydrocarbons, and are obtained from natural deposits or as residues from the distillation of crude petroleum or coal.

BITUMINOUS ROOF COATING means a coating that incorporates bitumens that is labeled and formulated exclusively for roofing.

BITUMINOUS ROOF PRIMER means a primer that incorporates bitumens that is labeled and formulated exclusively for roofing.

BOND BREAKER means a coating labeled and formulated for application between layers of concrete to prevent a freshly poured top layer of concrete from bonding to the layer over which it is poured.

CALCIMINE RECOATER means a flat solvent-borne coating formulated and recommended specifically for recoating calcimine-painted ceilings and other calcimine-painted substrates.

CARB means the California Air Resources Board.

CLEAR BRUSHING LACQUERS means clear wood finishes, excluding clear lacquer sanding sealers, formulated with nitrocellulose or synthetic resins to dry by solvent evaporation without chemical reaction and to provide a solid, protective film, which are intended exclusively for application by brush and which are labeled as specified in 310 CMR 7.25(11)(d)3.

CLEAR WOOD COATINGS means clear and semi-transparent coatings, including lacquers and varnishes, applied to wood substrates to provide a transparent or translucent solid film.

COATING means a material applied onto or impregnated into a substrate for protective, decorative, or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealers, and stains.

COLORANT means a concentrated pigment dispersion in water, solvent, and/or binder that is added to an architectural coating after packaging in sale units to produce the desired color.

CONCRETE CURING COMPOUND means a coating labeled and formulated for application to freshly poured concrete to retard the evaporation of water.

CONCRETE SURFACE RETARDER means a mixture of retarding ingredients such as extender pigments, primary pigments, resin, and solvent that interact chemically with the cement to prevent hardening on the surface where the retarder is applied, allowing the retarded mix of cement and sand at the surface to be washed away to create an exposed aggregate finish.

CONSUMER means any person who purchases or acquires any product for personal, family, household, or institutional use. Persons acquiring a product for resale are not consumers for that product.

CONVERSION VARNISH means a clear acid curing coating with an alkyd or other resin blended with amino resins and supplied as a single component or two-component product. Conversion varnishes produce a hard, durable, clear finish designed for professional application to wood flooring. The film formation is the result of an acid-catalyzed condensation reaction, affecting a transesterification at the reactive ethers of the amino resins.

DATE-CODE means the day, month and year on which the product was manufactured, filled, or packaged, or a code indicating such a date.

7.25: continued

DRY FOG COATING means a coating labeled and formulated only for spray application such that overspray droplets dry before subsequent contact with incidental surfaces in the vicinity of the surface coating activity.

EXEMPT COMPOUND a compound identified as exempt under the definition of Volatile Organic Compound (VOC), under 310 CMR 7.25(11)(b). Exempt compounds content of a coating shall be determined by U.S. EPA Method 24 or South Coast Air Quality Management District (SCAQMD) Method 303-91 (Revised August 1996).

FAUX FINISHING COATING means a coating labeled and formulated as a stain or a glaze to create artistic effects including, but not limited to, dirt, old age, smoke damage, and simulated marble and wood grain.

FIRE-RESISTIVE COATING means an opaque coating labeled and formulated to protect structural integrity by increasing the fire endurance of interior or exterior steel and other structural materials, that has been fire tested and rated by a testing agency and approved by building code officials for use in bringing assemblies of structural materials into compliance with federal, state, and local building code requirements. The fire-resistive coating and the testing agency shall have been approved by building code officials. The fire-resistive coating shall be tested in accordance with ASTM Designation E 119-98.

FIRE-RETARDANT COATING means a coating labeled and formulated to retard ignition and flame spread, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing building and construction materials into compliance with federal, state, and local building code requirements. Building code officials shall have been approved the fire-retardant coating and the testing agency. The fire-retardant coating shall be tested in accordance with ASTM Designation E 84-99.

FLAT COATING means a coating that is not defined under any other definition in 310 CMR 7.25 and that registers gloss less than 15 on an 85° meter or less than five on a 60° meter according to ASTM Designation D 523-89 (1999).

FLOOR COATING means an opaque coating that is labeled and formulated for application to flooring, including, but not limited to, decks, porches, steps, and other horizontal surfaces that may be subjected to foot traffic.

FLOW COATING means a coating labeled and formulated exclusively for use by electric power companies or their subcontractors to maintain the protective coating systems present on utility transformer units.

HIGH-TEMPERATURE COATING means a high performance coating labeled and formulated for application to substrates exposed continuously or intermittently to temperatures above 204°C.

IMPACTED IMMERSION COATING means a high performance maintenance coating formulated and recommended for application to steel structures subject to immersion in turbulent, debris-laden water. These coatings are specifically resistant to high-energy impact damage caused by floating ice or debris.

INDUSTRIAL MAINTENANCE COATING means high performance architectural coating, including primers, sealers, undercoaters, intermediate coats, and topcoats, formulated for application to substrates exposed to one or more of the following extreme environmental conditions listed in a. through e., and labeled as specified in 310 CMR 7.25(11)(d)2.:

- (a) Immersion in water, wastewater, or chemical solutions (aqueous and non-aqueous solutions), or chronic exposures of interior surfaces to moisture condensation;
- (b) Acute or chronic exposure to corrosive, caustic, or acidic agents, or to chemicals, chemical fumes, or chemical mixtures or solutions;
- (c) Repeated exposure to temperatures above 121°C (250°F);
- (d) Repeated heavy abrasion, including mechanical wear and frequently repeated scrubbing with industrial solvents, cleansers, or scouring agents; or
- (e) Exterior exposure of metal structures and structural components.

7.25: continued

LABEL means any written, printed, or graphic matter affixed to, applied to, attached to, blown into, formed, molded into, embossed on, or appearing upon any product or product package, for purposes of branding, identifying, or giving information with respect to the product or to the contents of the package.

LACQUER means a clear or opaque wood coating, including clear lacquer sanding sealers, formulated with cellulosic or synthetic resins to dry by evaporation without chemical reaction and to provide a solid, protective film.

LOW-SOLIDS COATING means a coating containing 0.12 kilogram or less of solids per liter (one pound or less of solids per gallon) of coating material.

LUBRICANT means a product designed to reduce friction, heat, noise, or wear between moving parts, or to loosen rusted or immovable parts or mechanisms. Lubricant does not include automotive power steering fluids; products for use inside power generating motors, engines, and turbines, and their associated power-transfer gearboxes; two-cycle oils or other products designed to be added to fuels; products for use on the human body or animals or products that are sold exclusively to establishments that manufacture or construct goods or commodities, and labeled not for retail sale.

MAGNESITE CEMENT COATING means a coating labeled and formulated for application to magnesite cement decking to protect the magnesite cement substrate from erosion by water.

MANUFACTURER means any person who manufactures, processes, imports, assembles, produces, packages, repackages, or re-labels a product.

MANUFACTURERS MAXIMUM RECOMMENDATION means the maximum recommendation for thinning that is indicated on the label or lid of the coating container.

MASTIC TEXTURE COATING means a coating labeled and formulated to cover holes and minor cracks and to conceal surface irregularities, and is applied in a single coat of at least ten mils (0.010 inch) dry film thickness.

METALLIC PIGMENTED COATING means a coating containing at least 48 grams of elemental metallic pigment per liter of coating as applied (0.4 pounds per gallon) when tested in accordance with SCAQMD Method 318-95.

MULTI-COLOR COATING means a coating that is packaged in a single container and that exhibits more than one color when applied in a single coat.

NON-FLAT HIGH GLOSS COATING means a non-flat coating that registers a gloss of 70 or above on a 60° meter according to ASTM Designation D 523-89 (1999).

NON-FLAT COATING means a coating that is not defined under any other definition in 310 CMR 7.25(11)(b) and that registers a gloss of 15 or greater on an 85° meter and five or greater on a 60° meter according to ASTM Designation D 523-89 (1999).

NON-INDUSTRIAL USE means any use of architectural coatings except in the construction or maintenance of any of the following: facilities used in the manufacturing of goods and commodities; transportation infrastructure, including highways, bridges, airports and railroads; facilities used in mining activities, including petroleum extraction; and utilities infrastructure, including power generation and distribution, and water treatment and distribution systems.

NUCLEAR COATING means a protective coating formulated and recommended to seal porous surfaces such as steel or concrete that otherwise would be subject to intrusion by radioactive materials. These coatings must be resistant to long-term, *e.g.*, service life, cumulative radiation exposure (tested according to ASTM Method D 4082-89, *Standard Test Method for Effects of Gamma Radiation on Coatings for Use in Light-Water Nuclear Power Plants*), relatively easy to decontaminate, and resistant to various chemicals to which the coatings are likely to be exposed (Tested according to ASTM Method D 3912-80, Reapproved 1989, *Standard Test Method for Chemical Resistance of Coatings Used in Light-Water Nuclear Power Plants*).

7.25: continued

PESTICIDE means and includes any substance or mixture of substances labeled, designed, or intended for use in preventing, destroying, repelling or mitigating any pest, or any substance or mixture of substances labeled, designed, or intended for use as a defoliant, desiccant, or plant regulator, provided that the term “pesticide” does not include any substance, mixture of substances, or device that the U.S. EPA does not consider to be a pesticide.

POST-CONSUMER COATING means a finished coating that would have been disposed of as waste, having completed its usefulness to a consumer, and does not include manufacturing wastes.

PRE-TREATMENT WASH PRIMER means a primer that contains a minimum of 0.5% acid, by weight, when tested in accordance with ASTM Designation D 1613-96, and that is labeled and formulated for application directly to bare metal surfaces to provide corrosion resistance and to promote adhesion of subsequent topcoats.

PRIMER means a coating labeled and formulated for application to a substrate to provide a firm bond between the substrate and subsequent coats.

QUICK-DRY ENAMEL means non-flat coating that is labeled as specified in 310 CMR 7.25(11)(d)6. and that is formulated to have the following characteristics:

- (a) Is capable of being applied directly from the container under normal conditions with ambient temperatures between 16°C and 27°C;
- (b) When tested in accordance with ASTM Designation D 1640-95, sets to touch in two hours or less, is tack free in four hours or less, and dries hard in eight hours or less by the mechanical test method; and
- (c) Has a dried film gloss of 70 or above on a 60° meter.

QUICK-DRY PRIMER SEALER AND UNDERCOATER mean a primer, sealer, or undercoater that is dry to the touch in 30 minutes and can be re-coated in two hours when tested in accordance with ASTM Designation D 1640-95.

RECYCLED COATING means an architectural coating formulated such that 50% or more of the total weight consists of secondary and post-consumer coating, with 10% or more of the total weight consisting of post-consumer coating.

RESIDENCE means areas where people reside or lodge, including, but not limited to, single and multiple family dwellings, condominiums, mobile homes, apartment complexes, motels, and hotels.

ROOF COATING means a non-bituminous coating labeled and formulated exclusively for application to roofs for the primary purpose of preventing penetration of the substrate by water or reflecting heat and ultraviolet radiation. Metallic pigmented roof coatings, which qualify as metallic pigmented coatings, shall not be considered in this category, but shall be considered to be in the Metallic Pigmented Coatings category.

RUST PREVENTIVE COATING means a coating formulated exclusively for non-industrial use to prevent the corrosion of metal surfaces and labeled as specified in 310 CMR 7.25(11)(d)4.

SANDING SEALER means a clear or semi-transparent wood coating labeled and formulated for application to bare wood to seal the wood and to provide a coat that can be abraded to create a smooth surface for subsequent applications of coatings. A Sanding Sealer that also meets the definition of a Lacquer is not included in this category, but it is included in the Lacquer category.

SCAQMD means South Coast Air Quality Management District of the State of California.

SEALER means a coating labeled and formulated for application to a substrate for one or more of the following purposes: to prevent subsequent coatings from being absorbed by the substrate, or to prevent harm to subsequent coatings by materials in the substrate.

7.25: continued

SECONDARY COATING (REWORK) means a fragment of a finished coating or a finished coating from a manufacturing process that has converted resources into a commodity of real economic value, but does not include excess virgin resources of the manufacturing process.

SHELLAC means a clear or opaque coating formulated solely with the resinous secretions of the lac beetle (*Lacifer lacca*), thinned with alcohol, and formulated to dry by evaporation without a chemical reaction.

SHOP APPLICATION means application of a coating to a product or a component of a product in or on the premises of a factory or a shop as part of a manufacturing, production, or repairing process (*e.g.*, original equipment manufacturing coatings).

SOLICIT means to require for use or to specify, by written or oral contract.

SPECIALTY PRIMER, SEALER, AND UNDERCOATER means a coating that is formulated for application to a substrate to seal fire, smoke or water damage; to condition excessively chalky surfaces; or to block stains. An excessively chalky surface is one that is defined as having a chalk rating of four or less as determined by ASTM Designation D 4214-98.

STAIN means a clear, semi-transparent, or opaque coating labeled and formulated to change the color of a surface, but not conceal the grain pattern or texture.

SWIMMING POOL COATING means a coating labeled and formulated to coat the interior of swimming pools and to resist the adverse effects of chemicals in swimming pool water.

SWIMMING POOL REPAIR AND MAINTENANCE COATING means a rubber-based coating labeled and formulated to be used over existing rubber-based coatings for the repair and maintenance of swimming pools.

TEMPERATURE-INDICATOR SAFETY COATING means a coating labeled and formulated as a color-changing indicator coating for the purpose of monitoring the temperature and safety of the substrate, underlying piping, or underlying equipment, and for application to substrates exposed continuously or intermittently to temperatures above 204°C (400°F).

THERMOPLASTIC RUBBER COATING AND MASTIC means a coating or mastic formulated and recommended for application to roofing or other structural surfaces and that incorporates no less than 40% by weight of thermoplastic rubbers in the total resin solids and may also contain other ingredients including, but not limited to, fillers, pigments, and modifying resins.

TINT BASE means an architectural coating to which colorant is added after packaging in sale units to produce a desired color.

TRAFFIC MARKING COATING means a coating labeled and formulated for marking and striping streets, highways, or other traffic surfaces including, but not limited to, curbs, driveways, parking lots, sidewalks, and airport runways.

UNDERCOATER means a coating labeled and formulated to provide a smooth surface for subsequent coatings.

VARNISH means a clear or semi-transparent wood coating, excluding lacquers and shellacs, formulated to dry by chemical reaction on exposure to air. Varnishes may contain small amounts of pigment to color a surface, or to control the final sheen or gloss of the finish.

VOC CONTENT means the weight of VOC per volume of coating, calculated according to the procedures specified in 310 CMR 7.25(11)(f)1.

WATERPROOFING CONCRETE/MASONRY SEALER means a clear or pigmented film-forming coating that is labeled and formulated for sealing concrete and masonry to provide resistance against water, alkalis, acids, ultraviolet light, and staining.

7.25: continued

WATERPROOFING SEALER means a coating labeled and formulated for application to a porous substrate for the primary purpose of preventing the penetration of water.

WOOD PRESERVATIVE means a coating labeled and formulated to protect exposed wood from decay or insect attack that is registered with both the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. § 136, *et seq.*) and with the Massachusetts Pesticide Control Act.

(c) Standards.

1. VOC Content Limits. Except as provided in 310 CMR 7.25(11)(c)2. through 310 CMR 7.25(11)(c)4., 310 CMR 7.25(11)(c)6., and 310 CMR 7.25(11)(c)7., no person subject to 310 CMR 7.25 shall:

- a. manufacture or blend for sale within Massachusetts;
- b. supply, sell, or offer for sale within Massachusetts; or
- c. solicit for application or apply within Massachusetts any architectural coating with a VOC content in excess of the corresponding limit specified in 310 CMR 7.25(11)(c)1.: *Table 1.*

Table 1. VOC Content Limits for Architectural And Industrial Maintenance Coatings
Effective January 1, 2009

Coating Category	VOC Content Limit (grams/liter)
Flat Coatings	100
Non-flat Coatings	150
Non-flat High Gloss Coatings	250
SPECIALTY COATINGS	
Antenna Coatings	530
Antifouling Coatings	400
Bituminous Roof Coatings	300
Bituminous Roof Primers	350
Bond Breakers	350
Calcimine Recoater	475
Clear Wood Coatings	
Clear Brushing Lacquers	680
Lacquers (including lacquer sanding sealers)	550
Sanding Sealers (other than lacquer sanding sealers)	350
Varnishes	350
Conversion Varnishes	725
Concrete Curing Compounds	350
Concrete Surface Retarders	780
Dry Fog Coatings	400
Faux Finishing Coatings	350
Fire Resistive Coatings	350
Fire Retardant Coatings	
Clear	650
Opaque	350
Floor Coatings	250
Flow Coatings	420
Form-release Compounds	250
Graphic Arts Coatings (Sign Paints)	500
High Temperature Coatings	420
Impacted Immersion Coatings	780
Industrial Maintenance Coatings	340
Low-solids Coatings	120
Magnesite Cement Coatings	450
Mastic Texture Coatings	300
Metallic Pigmented Coatings	500
Multi-color Coatings	250

7.25: continued

Coating Category	VOC Content Limit (grams/liter)
Nuclear Coatings	450
Pre Treatment Wash Primers	420
Primers, Sealers, and Undercoaters	200
Quick Dry Enamels	250
Quick Dry Primers, Sealers and Undercoaters	200
Recycled Coatings	250
Roof Coatings	250
Rust Preventative Coatings	400
Shellacs	
Clear	730
Opaque	550
Specialty Primers, Sealers, and Undercoaters	350
Stains	250
Swimming Pool Coatings	340
Swimming Pool Repair and Maintenance Coatings	340
Temperature-indicator Safety Coatings	550
Thermoplastic Rubber Coatings and Mastics	550
Traffic Marking Coatings	150
Waterproofing Sealers	250
Waterproofing Concrete/Masonry Sealers	400
Wood Preservatives	350

Limits are expressed in grams of VOC per liter of coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water, exempt compounds, or colorant added to tint bases.

2. Most Restrictive VOC Limit. If anywhere on the container of any architectural coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer or anyone acting on its behalf, any representation is made that indicates that the coating meets the definition of, or is recommended for use, for more than one of the coating categories specified in 310 CMR 7.25(11)(c)1., then the lowest VOC content limit shall apply. 310 CMR 7.25(11)(c)2. does not apply to the following coating categories:

- a. Lacquer coatings (including lacquer sanding sealers).
- b. Metallic pigmented coatings.
- c. Shellacs.
- d. Fire-retardant coatings.
- e. Pretreatment wash primers.
- f. Industrial maintenance coatings.
- g. Low-solids coatings.
- h. Wood preservatives.
- i. High-temperature coatings.
- j. Temperature-indicator safety coatings.
- k. Antenna coatings.
- l. Antifouling coatings.
- m. Flow coatings.
- n. Bituminous roof primers.
- o. Specialty primers, sealers, and undercoaters.
- p. Calcimine recoaters.
- q. Concrete surface retarders.
- r. Conversion varnishes.
- s. Impacted Immersion Coatings.
- t. Nuclear coatings.
- u. Thermoplastic rubber coating and mastic.

3. Sell-through of Coatings. A coating manufactured prior to January 1, 2009, may be sold, supplied, offered for sale, or applied after January 1, 2009, until January 1, 2012, so long as the coating complied with the VOC content standards and other applicable requirements in effect at the time the coating was manufactured. 310 CMR 7.25(11)(c)3. shall not apply if:

7.25: continued

- a. A coating does not display the date on which the product was manufactured or a code indicating such date as required by 310 CMR 7.25(11)(d)1.a.i.; or
 - b. The manufacturer has not filed an explanation of the code with the Department by the deadlines specified in 310 CMR 7.25(11)(d)1.a.ii.(i) for a coating on which the manufacturer has used a code indicating the date of manufacture that is different than the code specified in 310 CMR 7.25(11)(d)1.a.ii.(ii).
4. Exclusions. The VOC content standards specified in 310 CMR 7.25(11)(c)1. shall not apply to:
- a. Any aerosol coating product.
 - b. Any architectural coating that is sold in a container with a volume of one liter (1.057 quart) or less.
5. Coatings Not Listed in 310 CMR 7.25(11)(c)1.: Table 1. For any coating that does not meet any of the definitions for the specialty coatings categories listed in 310 CMR 7.25(11)(c)1.: *Table 1*, the VOC content limit shall be determined by classifying the coating as a flat coating, non-flat coating, or non-flat high gloss coating based on its gloss, as defined in 310 CMR 7.25(11)(b), and the corresponding flat, non-flat, or non-flat high gloss coating limit shall apply.
6. Lacquers. Notwithstanding the provisions of 7.25(11)(c)1., a person or facility may add up to 10% by volume of VOC to a lacquer to avoid blushing of the finish during days with relative humidity greater than 70% and temperature below 65°F, at the time of application, provided that the coating contains acetone and no more than 550 grams of VOC per liter of coating, less water and exempt compounds, prior to the addition of VOC.
7. Products Registered Under FIFRA.
- a. AIM coatings registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA; 7 U.S.C. § 136-136y) must comply with the VOC standards specified in 310 CMR 7.25(11)(c)1.: *Table 1*, by 12 months after the VOC limit compliance date specified in 310 CMR 7.25(11)(c)1. Such products must also be registered under the Massachusetts Pesticide Control Act.
 - b. The labeling requirements of 310 CMR 7.25(11)(d) do not apply to products that are registered as pesticides under FIFRA and the Massachusetts Pesticide Control Act.
 - c. For coatings that are registered under FIFRA, the three-year sell-through period provided in 310 CMR 7.25(11)(c)3. shall begin one year after the date specified in 310 CMR 7.25(11)(c)1.
8. Thinning. No person who applies or solicits the application of any architectural coating shall apply a coating that is thinned to exceed the applicable VOC limit specified in *Table 1*.
9. Painting Practices. All architectural coating containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing, rolling, padding, ragging, or other means, shall be closed when not in use. These architectural coatings containers include, but are not limited to, drums, buckets, cans, pails, trays, or other application containers. Containers of any VOC-containing materials used for thinning and cleanup shall also be closed when not in use.
- (d) Labeling Requirements.
- 1. Each manufacturer of any architectural coating subject to this rule shall display the information required in 310 CMR 7.25(11)(d)1.a. through 7.25(11)(d)1.c. on the coating container (or label) in which the coating is sold or distributed.
 - a. Product Dating.
 - i. The date the coating was manufactured, or a code representing the date, shall be indicated on the label, lid, or bottom of the container.
 - ii. Explanation of the Code.
 - (i) If the manufacturer uses a code indicating the date of manufacture for any coating, an explanation of the code shall be filed with the Department no later than:
 - the effective date of the applicable standard specified in 310 CMR 7.25(11)(c)1.; or, the date on which the product first becomes available for sale, distribution, or use within Massachusetts, whichever is later; and
 - 12 months prior to any date on which the product first becomes available for sale, distribution, or use within Massachusetts after any modification to an existing product's date-code format.

7.25: continued

(ii) A manufacturer who uses the following code to indicate the date of manufacture shall not be subject to the requirements of 310 CMR 7.25(11)(d)1.a.ii.(i), if the code is represented separately from other codes on the product container so that it is easily recognizable:

YY DDD

where:

YY = two digits representing the year in which the product was manufactured.

DDD = three digits representing the day of the year on which the product was manufactured, with "001" representing the first day of the year, "002" representing the second day of the year, and so forth (*i.e.*, the "Julian date").

iii. No person shall erase, alter, deface or otherwise remove or make illegible any date or code indicating the date of manufacture from any regulated product container without the express authorization of the manufacturer.

iv. Codes indicating the date of manufacture are public information and may not be claimed as confidential.

b. Thinning Recommendations. A statement of the manufacturer's recommendation regarding thinning of the coating shall be indicated on the label or lid of the container. 310 CMR 7.25(11)(d)1.b. does not apply to the thinning of architectural coatings with water. If thinning of the coating prior to use is not necessary, the recommendation must specify that the coating must be applied without thinning.

c. VOC Content. Each container of any coating subject to this rule shall display either the maximum or the actual VOC content of the coating, as supplied, including the maximum thinning as recommended by the manufacturer. VOC content shall be displayed in grams of VOC per liter of coating. VOC content displayed shall be calculated using product formulation data, or shall be determined using the test methods in 310 CMR 7.25(11)(f)2. The equations in 310 CMR 7.25(11)(f)1. shall be used to calculate VOC content.

2. Industrial Maintenance Coatings. In addition to the information specified in 310 CMR 7.25(11)(d)1.a. through 310 CMR 7.25(11)(d)1.c., each manufacturer of any industrial maintenance coating subject to this rule shall display on the label or the lid of the container in which the coating is sold or distributed one or more of the following descriptions:

- a. "For industrial use only."
- b. "For professional use only."
- c. "Not for residential use." or "Not intended for residential use."

3. Clear Brushing Lacquers. The labels of all clear brushing lacquers shall prominently display the statements "For Brush Application Only" and "This product must not be thinned or sprayed."

4. Rust Preventive Coatings. The labels of all rust preventive coatings shall prominently display the statement "For Metal Substrates Only."

5. Specialty Primers, Sealers, and Undercoaters. The labels of all specialty primers, sealers, and undercoaters shall prominently display one or more of the following descriptions:

- a. For blocking stains.
- b. For fire-damaged substrates.
- c. For smoke-damaged substrates.
- d. For water-damaged substrates.
- e. For excessively chalky substrates.

6. Quick Dry Enamels. The labels of all quick dry enamels shall prominently display the words "Quick Dry" and the dry hard time.

7. Non-flat High Gloss Coatings. The labels of all non-flat high gloss coatings shall prominently display the words "High Gloss."

7.25: continued

(e) Recordkeeping and Reporting Requirements.

1. Each manufacturer of a product subject to a VOC content limit in 310 CMR 7.25(11)(c) of this regulation shall keep records demonstrating compliance with the VOC content limits in accordance with 310 CMR 7.25(11)(f). Such records shall clearly list each product by name (and identifying number, if applicable) as shown on the product label and in applicable sales and technical literature, the VOC content as determined in 310 CMR 7.25(11)(f), the names and chemical abstract service (CAS) numbers of the VOC constituents in the product, the dates of the VOC content determinations, the coating category and the applicable VOC content limit. These records shall be kept on site for a period not less than three years and shall be made available to the Department within 90 days of a written request.
2. A responsible official from each manufacturer shall, upon request of the Department, provide data concerning the distribution and sales of coatings subject to a VOC content limit in 310 CMR 7.25(11)(c). The responsible official shall within 90 days provide information including, but not limited to:
 - a. the name and mailing address of the manufacturer;
 - b. the name, address and telephone number of a contact person;
 - c. the name of the product as it appears on the label and the coating category in 310 CMR 7.25(11)(c) under which it is regulated;
 - d. whether it is marketed for interior or exterior use or both;
 - e. the number of gallons sold in Massachusetts in containers greater than one liter and less than one liter;
 - f. the actual VOC content and VOC content limit in grams per liter. If thinning is recommended, list the actual VOC content and VOC content after recommended thinning. If containers less than one liter have a different VOC content than containers greater than one liter, list separately;
 - g. the names and CAS numbers of the VOC constituents in the product; and
 - h. the names and CAS numbers of any compounds in the products specifically exempted under 310 CMR 7.25(11)(c).

(f) Compliance Provisions and Test Methods.

1. Calculation of VOC Content. For the purpose of determining compliance with the VOC content limits in 310 CMR 7.25(11)(c)1.: *Table 1*, the VOC content of a coating shall be determined according to 310 CMR 7.25(11)(f)1.a. or 310 CMR 7.25(11)(f)1.b., as appropriate. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured.
 - a. For all coatings other than low-solids coatings, the VOC content of the coating in units of grams of VOC per liter of coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water and exempt compounds, shall be determined using Equation (1) as follows:

$$\text{VOC Content} = (W_v - W_w - W_{ec}) / (V_c - V_w - V_{ec}) \quad \text{Equation (1)}$$

Where,

VOC Content = grams of VOC per liter of coating

 W_v = weight of volatiles, in grams W_w = weight of water, in grams W_{ec} = weight of exempt compounds, in grams V_c = volume of coating, in liters V_w = volume of water, in liters V_{ec} = volume of exempt compounds, in liters

7.25: continued

b. For low-solids coatings, the VOC content in units of grams of VOC per liter of coating thinned to the manufacturer's maximum recommendation, including the volume of any water and exempt compounds, shall be determined using Equation (2) as follows:

$$\text{VOC Content (ls)} = (W_v - W_w - W_{ec}) / (V_c) \quad \text{Equation (2)}$$

where,

VOC Content (ls) = the VOC content of a low solids coating in grams per liter of coating

W = weight of volatile, in grams

W_w = weight of water, in grams

W_{ec} = weight of exempt compounds, in grams

V_c = volume of coating, in liters

2. VOC Content of Coatings. Except as provided in 310 CMR 7.25(11)(f)3. and (f)4., U.S. EPA Method 24 shall be used to determine the physical properties of a coating in order to perform the calculations in 310 CMR 7.25(11)(f)1. An alternative method to determine the VOC content of coatings is SCAQMD Method 304-91 (Revised February 1996). The exempt compounds content shall be determined by SCAQMD Method 303-91 (Revised August 1996). The manufacturer may use U.S. EPA Method 24, an alternative test method as provided in 310 CMR 7.25(11)(f)3., formulation data, or any other reasonable means (*e.g.*, quality assurance records, recordkeeping) to determine the VOC content of the coating. However, if there are any inconsistencies between the results of a Method 24 test and any other means for determining VOC content, the Method 24 results shall govern, except when an alternative method is approved by EPA. The Department may require the manufacturer to conduct a Method 24 analysis.

3. Alternative Test Methods. Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with 310 CMR 7.25(11)(c)1. may be used provided that the manufacturer has received an approval from CARB for the alternative testing method to be used in architectural and maintenance coatings VOC content determination. A copy of CARB's approval, including all conditions established by CARB applicable to the testing procedure, shall be submitted to the Department within 30 days upon the Department's written request.

4. Methacrylate Traffic Coating Markings. Analysis of methacrylate multi-component coatings used as traffic marking coatings shall be conducted according to a modification of U.S. EPA Method 24 (40 CFR 59, subpart D, Appendix A). This method has not been approved for methacrylate multicomponent coatings used for purposes other than traffic marking coatings or for other classes of multicomponent coatings.

5. Test Methods. The following test methods are incorporated by reference herein, and shall be used to test coatings subject to the provisions of this rule:

a. Flame Spread Index. The flame-spread index of a fire-retardant coating shall be determined by the ASTM Designation E 84-99, *Standard Test Method for Surface Burning Characteristics of Building Materials*.

b. Fire-resistance Rating. The fire-resistance rating of a fire-resistive coating shall be determined by ASTM designation E 119-98, *Standard Test Methods for Fire Tests of Building Construction Materials*

c. Gloss Determination. The gloss of a coating shall be determined by ASTM Designation D 523-89 (1999), *Standard Test Method for Specular Gloss*.

d. Metal Content of Coatings. The metallic content of a coating shall be determined by SCAQMD Method 318-95, *Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction*, SCAQMD Laboratory Methods of Analysis for Enforcement Samples.

7.25: continued

- e. Acid Content of Coatings. The acid content of a coating shall be determined by ASTM Designation D 1613-96, *Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer and Related Products*.
- f. Drying Times. The set-to-touch, dry-hard, dry-to-touch and dry-to-recoat times of a coating shall be determined by ASTM Designation D 1640-95, *Standard Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature*. The tack free time of a quick-dry enamel coating shall be determined by the Mechanical Test Method of ASTM Designation D 1640-95.
- g. Surface Chalkiness. The chalkiness of a surface shall be determined using ASTM Designation D 4214-98, *Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films*.
- h. Exempt Compounds – Siloxanes. To determine the cyclic, branched, or linear completely methylated siloxanes content of a coating, the coating shall be analyzed according to BAAQMD Method 43, *Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials*, BAAQMD Manual of Procedures, Volume III, adopted November 6, 1996.
- i. Exempt Compounds - Parachlorobenzotrifluoride (PCBTF). To determine parachlorobenzotrifluoride content of a coating, the coating shall be analyzed according to BAAQMD Method 41, *Determination of Volatile Organic Compounds in Solvent-Based Coatings and Related Materials Containing Parachlorobenzotrifluoride*, BAAQMD Manual of Procedures, Volume III, adopted December 20, 1995.
- j. Exempt Compounds – Volatile Organic Compounds Exempted Under U.S. EPA Method 24. To determine the composition of a coating with respect to volatile organic compounds that are exempt under U.S. EPA Method 24, the coating shall be analyzed according to SCAQMD Method 303-91 (Revised August 1996), *Determination of Exempt Compounds*, SCAQMD "Laboratory Methods of Analysis for Enforcement Samples."
- k. VOC Content of Coatings. The VOC content of a coating shall be determined by U.S. EPA Method 24 as it exists in appendix A of 40 Code of Federal Regulations (CFR) Part 60, *Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings*.
- l. Alternative Methods for Determining VOC Content of Coatings. The VOC content of coatings may be determined by either U.S. EPA Method 24 or by SCAQMD Method 304-91 (Revised 1996), *Determination of Volatile Organic Compounds (VOC) in Various Materials*, SCAQMD Laboratory Methods of Analysis for Enforcement Samples.
- m. Methacrylate Traffic Marking Coatings. The VOC content of methacrylate multi-component coatings used as traffic marking coatings shall be determined by the procedures in 40 CFR part 59, subpart D, appendix A, *Determination of Volatile Matter Content of Methacrylate Multi-component Coatings Used as Traffic Marking Coatings*, (September 11, 1998).

(12) Consumer Products.(a) Applicability.

1. Except as provided in 310 CMR 7.25(12)(a)2., the requirements of 310 CMR 7.25(12) apply to any person who, on or after January 1, 2009, sells, supplies, offers for sale, or manufactures any consumer product listed in 310 CMR 7.25(12)(c)1. for use in Massachusetts.
2.
 - a. The provisions of 310 CMR 7.25(12) do not apply to any person who, sells, supplies, offers for sale, or manufactures in Massachusetts any consumer product specified in 310 CMR 7.25(12)(b) that is for exclusive use outside of Massachusetts as long as the manufacturer or distributor can demonstrate both that the consumer product is intended for shipment and use outside of Massachusetts and that the manufacturer or distributor has taken reasonable prudent precautions to assure that the consumer product is not distributed to Massachusetts.
 - b. The provision in 310 CMR 7.25(12)(a)2.a. does not apply to consumer products that are sold, supplied, or offered for sale by any person to retail outlets in Massachusetts.

7.25: continued

(b) Definitions. Terms used in 310 CMR 7.25 are defined at 310 CMR 7.00: *Definitions* or in 310 CMR 7.25. Where a term is defined in both 310 CMR 7.00: *Definitions* and in 310 CMR 7.25, the definition in 310 CMR 7.25 shall apply.

ACP EXECUTIVE ORDER means the document approved and signed by CARB that includes the conditions and requirements of the ACP, and which allows a manufacturer to sell products in the state of California under the ACP.

ADHESIVE means any product that is used to bond one surface to another by attachment. Adhesive does not include products used on humans and animals, adhesive tape, contact paper, wallpaper, shelf liners, or any other product with an adhesive incorporated onto or in an inert substrate. For Contact Adhesive, “adhesive” does not include units of product, less packaging, which consist of more than one gallon. For Construction, Panel, and Floor Covering Adhesive, and General Purpose Adhesive, “adhesive” does not include units of product, less packaging, which weigh more than one pound and consist of more than 16 fluid ounces. This limitation does not apply to aerosol adhesives.

ADHESIVE REMOVER means a product designed to remove adhesive from either a specific type of substrate or a variety of types of substrates. Adhesive removers do not include products that remove adhesives intended for use on humans or animals. For the purpose of 310 CMR 7.25(11)(b): ADHESIVE REMOVER and 310 CMR 7.25(11)(b): ADHESIVE REMOVER 1. through 4. , the term “adhesive” shall mean a substance used to bind one or more materials. Adhesive includes, but is not limited to: caulks; sealants; glues; or similar substances used for the purpose of forming a bond.

1. FLOOR AND WALL COVERING ADHESIVE REMOVER means a product designed or labeled to remove floor or wall coverings and associated adhesive from the underlying substrate;

2. GASKET OR THREAD LOCKING ADHESIVE REMOVER means a product designed or labeled to remove gaskets or thread locking adhesives. Products labeled for dual use as a paint stripper and gasket remover and/or thread locking adhesive remover are considered Gasket or Thread Locking Adhesive Remover.

3. GENERAL PURPOSE ADHESIVE REMOVER means a product designed or labeled to remove cyanoacrylate adhesives as well as non-reactive adhesives or residue from a variety of types of substrates. General Purpose Adhesive Remover includes, but is not limited to, products that remove thermoplastic adhesives; pressure sensitive adhesives; dextrin or starch-based adhesives; casein glues; rubber or latex-based adhesives; as well as products that remove stickers; decals; stencils; or similar materials. General Purpose Adhesive Remover does not include Floor or Wall Covering Adhesive Remover.

4. SPECIALTY ADHESIVE REMOVER means a product designed to remove reactive adhesives from a variety of substrates. Reactive adhesives include adhesives that require a hardener or catalyst in order for the bond to occur. Examples of reactive adhesives include, but are not limited to: epoxies, urethanes, and silicones. Specialty Adhesive Remover does not include Gasket or Thread Locking Adhesive Remover.

AEROSOL ADHESIVE means an aerosol adhesive product in which the spray mechanism is permanently housed in a non-refillable can designed for hand-held application without the need for ancillary hoses or spray equipment. Aerosol Adhesives include Special Purpose Spray Adhesives, Mist Spray Adhesives, and Web Spray Adhesives.

AEROSOL COOKING SPRAY means any aerosol product designed either to reduce sticking on cooking and baking surfaces or to be applied on food, or both.

AEROSOL PRODUCT means a pressurized spray system that dispenses product ingredients by means of a propellant contained in a product’s container or a mechanically induced force. Aerosol Product does not include Pump Spray.

AGRICULTURAL USE means the use of any pesticide or method or device for the control of pests in connection with the commercial production, storage or processing of any animal or plant crop. Agricultural Use does not include the sale or use of pesticides in properly labeled packages or containers that are intended for home use; use in structural pest control; industrial use; or institutional use. For the purposes of this definition only:

7.25: continued

1. HOME USE means use in a household or its immediate environment.
2. STRUCTURAL PEST CONTROL USE means a use requiring a license under the Massachusetts Pesticide Control Act.
3. INDUSTRIAL USE means use for or in a manufacturing, mining, or chemical process or use in the operation of factories, processing plants, and similar sites.
4. INSTITUTIONAL USE means use within the lines of or on property necessary for the operation of buildings such as hospitals, schools, libraries, and auditoriums.

AIR FRESHENER means any consumer product including, but not limited to, sprays, wicks, powders, and crystals, designed for the purpose of masking odors, or freshening, cleaning, scenting, or deodorizing the air. Air Freshener includes dual-purpose air freshener/disinfectant products. Air Freshener does not include products that are used on the human body, products that function primarily as cleaning products as indicated on a product label, or Toilet/Urinary Care Products, disinfectant products claiming to deodorize by killing germs on surfaces, or institutional/industrial disinfectants when offered for sale solely through institutional and industrial channels of distribution. Air Freshener does include spray disinfectants and other products that are expressly represented for use as air fresheners, except institutional and industrial disinfectants when offered for sale through institutional and industrial channels of distribution. To determine whether a product is an air freshener, all verbal and visual representations regarding product use on the label or packaging and in the product's literature and advertising may be considered. The presence of, and representations about, a product's fragrance and ability to deodorize (resulting from surface application) shall not constitute a claim of air freshening.

ALL OTHER CARBON CONTAINING COMPOUNDS means any other compound that contains at least one carbon atom and is not an Exempt Compound or an LVP-VOC.

ALL OTHER FORMS means all consumer product forms for which no form-specific VOC standard is specified. Unless specified otherwise by the applicable VOC standard, All Other Forms include, but are not limited to, solids, liquids, wicks, powders, crystals, and cloth or paper wipes (towelettes).

ALTERNATIVE CONTROL PLAN or ACP means an emissions-averaging program approved by CARB pursuant to California Code of Regulations, Title 17, Subchapter 8.5, Article 4, Sections 94540-94555.

ANTIMICROBIAL HAND OR BODY CLEANER OR SOAP means a cleaner, or soap, that is designed to reduce the level of microorganisms on the skin through germicidal activity. Antimicrobial Hand or Body Cleaner or Soap includes, but is not limited to antimicrobial hand or body washes/cleaners, food-handler hand washes, healthcare personnel hand washes, pre-operative skin preparations and surgical scrubs. Antimicrobial Hand or Body Cleaner or Soap does not include prescription drug products, Antiperspirants, Astringent/Toner, Deodorant, Facial Cleaner or Soap, General-use Hand or Body Cleaner or Soap, Hand Dishwashing Detergent (including antimicrobial), Heavy-duty Hand Cleaner or Soap, Medicated Astringent/Medicated Toner, and Rubbing Alcohol.

ANTIPERSPIRANT means any product including, but not limited to, aerosols, roll-ons, sticks, pumps, pads, creams, and squeeze bottles, that is intended by the manufacturer to be used to reduce perspiration in the human axilla by at least 20% in at least 50% of a target population.

ANTI-STATIC PRODUCT means a product that is labeled to eliminate, prevent, or inhibit the accumulation of static electricity. Anti-Static Product does not include Electronic Cleaner, Floor Polish or Wax, Floor Coating, and products that meet the definition of Aerosol Coating Product or Architectural Coating.

ARCHITECTURAL COATING means a coating to be applied to stationary structures or the appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs.

ASTM means the American Society for Testing and Materials.

7.25: continued

ASTRINGENT/TONER means any product not regulated as a drug by the United States Food and Drug Administration (FDA) that is applied to the skin for the purpose of cleaning or tightening pores. This category also includes clarifiers and substrate-impregnated products. This category does not include any hand, face, or body cleaner or soap product, Medicated Astringent/Medicated Toner, cold cream, lotion, or antiperspirant.

AUTOMOTIVE BRAKE CLEANER means a cleaning product designed to remove oil, grease, brake fluid, brake pad material or dirt from motor vehicle brake mechanisms.

AUTOMOTIVE HARD PASTE WAX means an automotive wax or polish that is:

1. designed to protect and improve the appearance of automotive paint surfaces; and
2. a solid at room temperature; and
3. contains 0% water by formulation.

AUTOMOTIVE INSTANT DETAILER means a product designed for use in a pump spray that is applied to the painted surface of automobiles and wiped off prior to the product being allowed to dry.

AUTOMOTIVE RUBBING OR POLISHING COMPOUND means a product designed primarily to remove oxidation, old paint, scratches or swirl marks, and other defects from the painted surfaces of motor vehicles without leaving a protective barrier.

AUTOMOTIVE WAX, POLISH, SEALANT OR GLAZE means a product designed to seal out moisture, increase gloss, or otherwise enhance a motor vehicle's painted surfaces. Automotive Wax, Polish, Sealant or Glaze includes, but is not limited to, products designed for use in autobody repair shops and drive-through car washes, as well as products designed for the general public. Automotive Wax, Polish, Sealant or Glaze does not include Automotive Rubbing or Polishing Compounds, automotive wash and wax products, surfactant-containing car wash products, and products designed for use on unpainted surfaces such as bare metal, chrome, glass, or plastic.

AUTOMOTIVE WINDSHIELD WASHER FLUID means any liquid designed for use in a motor vehicle windshield washer system either as antifreeze or for the purpose of cleaning, washing, or wetting the windshield. Automotive windshield washer fluid does not include fluids placed by the manufacturer in a new vehicle.

BATHROOM AND TILE CLEANER means a product designed to clean tile or surfaces in bathrooms. Bathroom and Tile Cleaner does not include products designed primarily to clean toilet bowls, toilet tanks, or urinals.

BUG AND TAR REMOVER means a product labeled to remove either or both of the following from painted motor vehicle surfaces without causing damage to the finish:

1. biological-type residues such as insect carcasses and tree sap; and
2. road grime, such as road tar, roadway paint markings, and asphalt.

CARB means the California Air Resources Board.

CARBURETOR OR FUEL-INJECTION AIR INTAKE CLEANERS means a product designed to remove fuel deposits, dirt, or other contaminants from a carburetor, choke, throttle body of a fuel-injection system, or associated linkages. Carburetor or fuel-injection air intake cleaners does not include products designed exclusively for direct introduction into the fuel lines or fuel storage tank prior to introduction into the carburetor or fuel injectors.

CARPET AND UPHOLSTERY CLEANER means a cleaning product designed for the purpose of eliminating dirt and stains on rugs, carpeting, and the interior of motor vehicles and/or on household furniture or objects upholstered or covered with fabrics such as wool, cotton, nylon or other synthetic fabrics. Carpet and Upholstery Cleaner includes, but is not limited to, products that make fabric protectant claims. Carpet and Upholstery Cleaner does not include General Purpose Cleaners, Spot Removers, vinyl or leather cleaners, dry cleaning fluids, or products designed exclusively for use at industrial facilities engaged in furniture or carpet manufacturing.

7.25: continued

CHARCOAL LIGHTER MATERIAL means any combustible material designed to be applied on, incorporated in, added to, or used with charcoal to enhance ignition. Charcoal Lighter Material does not include any of the following:

1. electrical starters and probes;
2. metallic cylinders using paper tinder;
3. natural gas;
4. propane; and
5. fat wood.

COLORANT means any pigment or coloring material used in a consumer product for an aesthetic effect, or to dramatize an ingredient.

CONSTRUCTION, PANEL, AND FLOOR COVERING ADHESIVE means any one component adhesive that is designed exclusively for the installation, remodeling, maintenance, or repair of:

1. structural and building components that include, but are not limited to, beams, trusses, studs, paneling (such as drywall or drywall laminates, fiberglass reinforced plastic (FRP), plywood, particle board, insulation board, pre-decorated hardboard or tileboard, *etc.*), ceiling and acoustical tile, molding, fixtures, countertops or countertop laminates, cover or wall bases, and flooring or subflooring; or
 2. floor or wall coverings that include, but are not limited to, wood or simulated wood covering, carpet, carpet pad or cushion, vinyl backed carpet, flexible flooring material, non-resilient flooring material, mirror tiles and other types of tiles, and artificial grass.
- Construction, Panel, and Floor Covering Adhesive does not include Floor Seam Sealer.

CONSUMER means any person who purchases or acquires any product for personal, family, household, or institutional use. Persons acquiring a product for resale are not Consumers for that product.

CONSUMER PRODUCT means a chemically formulated product used by household and institutional consumers including, but not limited to, detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products; but does not include other paint products, furniture coatings, or architectural coatings. Consumer Product, as defined in 310 CMR 7.25, includes Aerosol Adhesives used for consumer, industrial, or commercial uses.

CONTACT ADHESIVE means an adhesive that:

1. is designed for application to both surfaces to be bonded together; and
2. is allowed to dry before the two surfaces are placed in contact with each other; and
3. forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other; and
4. does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces. Contact Adhesive does not include rubber cements that are primarily intended for use on paper substrates. Contact Adhesive also does not include vulcanizing fluids that are designed and labeled for tire repair only.

CONTACT ADHESIVE - GENERAL PURPOSE means any contact adhesive that is not a Contact Adhesive - Special Purpose.

CONTACT ADHESIVE - SPECIAL PURPOSE means a contact adhesive that:

1. is used to bond melamine-covered board, unprimed metal, unsupported vinyl, Teflon, ultra-high molecular weight polyethylene, rubber, high pressure laminate or wood veneer 1/16 inch or less in thickness to any porous or nonporous surface, and is sold in units of product, less packaging, that contain more than eight fluid ounces; or
2. is used in automotive applications that are:
 - a. automotive under-the-hood applications requiring heat, oil or gasoline resistance; or
 - b. body-side molding, automotive weather-strip or decorative trim.

7.25: continued

CONTAINER/PACKAGING means the part or parts of the consumer or institutional product that serve only to contain, enclose, incorporate, deliver, dispense, wrap or store the chemically formulated substance or mixture of substances which is solely responsible for accomplishing the purposes for which the product was designed or intended. Container/Packaging includes any article onto or into which the principal display panel and other accompanying literature or graphics are incorporated, etched, printed or attached.

CRAWLING BUG INSECTICIDE means any insecticide product that is designed for use against ants, cockroaches, or other household crawling arthropods, including, but not limited to, mites, silverfish or spiders. Crawling Bug Insecticide does not include products designed to be used exclusively on humans or animals, or any house dust mite product. For the purposes of 310 CMR 7.25(11)(b): CRAWLING BUG INSECTICIDE only:

1. HOUSE DUST MITE PRODUCT means a product whose label, packaging, or accompanying literature states that the product is suitable for use against house dust mites, but does not indicate that the product is suitable for use against ants, cockroaches, or other household crawling arthropods.
2. HOUSE DUST MITE means mites that feed primarily on skin cells shed in the home by humans and pets and which belong to the phylum Arthropoda, the subphylum Chelicerata, the class Arachnida, the subclass Acari, the order Astigmata, and the family Pyroglyphidae.

DATE-CODE means the day, month and year on which the product was manufactured, filled, or packaged, or a code indicating such a date.

DEODORANT means any product including, but not limited to, aerosols, roll-ons, sticks, pumps, pads, creams, and squeeze bottles, that indicates or depicts on the container or packaging, or any sticker or label affixed thereto, that the product can be used on or applied to the human axilla to provide a scent and or minimize odor. A Deodorant Body Spray product that indicates or depicts on the container or packaging, or any sticker or label affixed thereto, that it can be used on or applied to the human axilla is a Deodorant as defined in 310 CMR 7.25(12)(b).

DEODORANT BODY SPRAY is a Personal Fragrance Product, as defined in 310 CMR 7.25(12)(b), with 20% or less fragrance that is designed for application all over the human body to provide a scent. A Deodorant Body Spray product that indicates or depicts on the container or packaging, or any sticker or label affixed thereto, that it can be used on or applied to the human axilla is a Deodorant as defined in 310 CMR 7.25(12)(b).

DEVICE means any instrument or contrivance other than a firearm that is designed for trapping, destroying, repelling, or mitigating any pest or any other form of plant or animal life (other than human and other than bacterium, virus, or another microorganism on or in living human or other living animals); but not including equipment used for the application of pesticides when sold separately therefrom.

DISINFECTANT means any product intended to destroy or irreversibly inactivate infectious or other undesirable bacteria, pathogenic fungi, or viruses on surfaces or inanimate objects and whose label is registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA, 7 U.S.C. 136, *et seq.*). Disinfectant does not include any of the following:

1. products designed solely for use on humans or animals;
2. products designed for agricultural use;
3. products designed solely for use in swimming pools, therapeutic tubs, or hot tubs;
4. products which, as indicated on the principal display panel or label, are designed primarily for use as bathroom and tile cleaners, glass cleaners, general purpose cleaners, toilet bowl cleaners, or metal polishes.

DISTRIBUTOR means any person to whom a consumer product is sold or supplied for the purposes of resale or distribution in commerce, except that manufacturers, retailers, and consumers are not distributors.

7.25: continued

DOUBLE PHASE AEROSOL AIR FRESHENER means an aerosol air freshener with the liquid contents in two or more distinct phases that requires the product container be shaken before use to mix the phases, producing an emulsion.

DRY CLEANING FLUID means any non-aqueous liquid product designed and labeled exclusively for use on:

1. fabrics that are labeled “for dry clean only,” such as clothing or drapery; or
2. S-coded fabrics. Dry Cleaning Fluid includes, but is not limited to, those products used by commercial dry cleaners and commercial businesses that clean fabrics such as draperies at the customer’s residence or work place. Dry Cleaning Fluid does not include Spot Remover or Carpet and Upholstery Cleaner. For the purposes of 310 CMR 7.25(11)(b): DRY CLEANING FLUID, S-coded fabric means an upholstery fabric that is designed to be cleaned only with water-free spot cleaning products as specified by the Joint Industry Fabric Standards Committee.

DUSTING AID means a product designed to assist in removing dust and other soils from floors and other surfaces without leaving a wax or silicone based coating. Dusting Aid does not include Pressurized Gas Duster.

ELECTRICAL CLEANER means a product labeled to remove heavy soils such as grease, grime, or oil from electrical equipment, including, but not limited to, electric motors, armatures, relays, electric panels, or generators. Electrical Cleaner does not include General Purpose Cleaner, General Purpose Degreaser, Dusting Aid, Electronic Cleaner, Energized Electrical Cleaner, Pressurized Gas Duster, Engine Degreaser, Anti-static Product, or products designed to clean the casings or housings of electrical equipment.

ELECTRONIC CLEANER means a product labeled for the removal of dirt, moisture, dust, flux, or oxides from the internal components of electronic or precision equipment such as circuit boards, and the internal components of electronic devices, including but not limited to, radios, compact disc (CD) players, digital video disc (DVD) players, and computers. Electronic Cleaner does not include General Purpose Cleaner, General Purpose Degreaser, Dusting Aid, Pressurized Gas Duster, Engine Degreaser, Electrical Cleaner, Energized Electrical Cleaner, Anti-static Product, or products designed to clean the casings or housings of electronic equipment.

ENERGIZED ELECTRICAL CLEANER means a product that meets both of the following criteria:

1. the product is labeled to clean and/or degrease electrical equipment, where cleaning and/or degreasing is accomplished when electrical current exists, or when there is a residual electrical potential from a component such as a capacitor; and
2. the product label clearly displays the statements: “For Energized Equipment use only. Not to be used for motorized vehicle maintenance, or their parts.” Energized Electrical Cleaner does not include Electronic Cleaner.

ENGINE DEGREASER means a cleaning product designed to remove grease, grime, oil and other contaminants from the external surfaces of engines and other mechanical parts.

EXISTING PRODUCT means any formulation of the same product category and form sold, supplied, manufactured, or offered for sale in Massachusetts prior to January 1, 2009, or any subsequently introduced identical formulation.

FABRIC PROTECTANT means a product designed to be applied to fabric substrates to protect the surface from soiling from dirt and other impurities or to reduce absorption of liquid into the fabric's fibers. Fabric Protectant does not include waterproofers, products designed for use solely on leather, or products designed for use solely on fabrics that are labeled for dry clean only and sold in containers of ten fluid ounces or less.

7.25: continued

FABRIC REFRESHER means a product labeled to neutralize or eliminate odors on non-laundered fabric including, but not limited to, soft household surfaces, rugs, carpeting, draperies, bedding, automotive interiors, footwear, athletic equipment, clothing and/or on household furniture or objects upholstered or covered with fabrics such as, but not limited to, wool, cotton, or nylon. Fabric Refresher does not include Anti-static Product, Carpet and Upholstery Cleaner, soft household surface sanitizers, Footwear or Leather Care Product, Spot Remover, or Disinfectant, or products labeled for application to both fabric and human skin. For the purposes of 310 CMR 7.25(11)(b): FABRIC REFRESHER only, soft household surface sanitizer means a product labeled to neutralize or eliminate odors on surfaces whose label is registered as a sanitizer under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA, 7 U.S.C. 136 *et seq.*).

FACIAL CLEANER OR SOAP means a cleaner or soap designed primarily to clean the face. Facial Cleaner or Soap includes, but is not limited to, facial cleansing creams, semisolids, liquids, lotions, and substrate-impregnated forms. Facial Cleaner or Soap does not include prescription drug products, Antimicrobial Hand or Body Cleaner or Soap, Astringent/Toner, General-use Hand or Body Cleaner or Soap, Medicated Astringent/Medicated Toner, or Rubbing Alcohol.

FAT WOOD means pieces of wood kindling with high naturally occurring levels of sap or resin that enhance ignition of the kindling. Fat wood does not include any kindling with substances added to enhance flammability, such as wax-covered or wax-impregnated wood-based products.

FLEA AND TICK INSECTICIDE means any insecticide product that is designed for use against fleas, ticks, their larvae, or their eggs. Flea and Tick Insecticide does not include products that are designed to be used exclusively on humans or animals and their bedding.

FLEXIBLE FLOORING MATERIAL means asphalt, cork, linoleum, no-wax, rubber, seamless vinyl, and vinyl composite flooring.

FLOOR COATING means an opaque coating that is labeled and formulated for application to flooring, including, but not limited to, decks, porches, steps, and other horizontal surfaces that may be subjected to foot traffic.

FLOOR POLISH OR WAX means a wax, polish, or any other product designed to polish, protect, or enhance floor surfaces by leaving a protective coating that is designed to be periodically replenished. Floor Polish or Wax does not include spray buff products, products designed solely for the purpose of cleaning floors, floor finish strippers, products designed for unfinished wood floors, and coatings subject to architectural coatings regulations.

FLOOR SEAM SEALER means any product designed and labeled exclusively for bonding, fusing, or sealing (coating) seams between adjoining rolls of installed flexible sheet flooring.

FLOOR WAX STRIPPER means a product designed to remove natural or synthetic floor polishes or waxes through breakdown of the polish or wax polymers, or by dissolving or emulsifying the polish or wax. Floor Wax Stripper does not include aerosol floor wax strippers or products designed to remove floor wax solely through abrasion.

FLYING BUG INSECTICIDE means any insecticide product that is designed for use against flying insects or other flying arthropods, including but not limited to flies, mosquitoes, moths, or gnats. Flying Bug Insecticide does not include wasp and hornet insecticide, products that are designed to be used exclusively on humans or animals, or any mothproofing product. For the purposes of 310 CMR 7.25(11)(b): FLYING BUG INSECTICIDE only, moth-proofing product means a product whose label, packaging, or accompanying literature indicates that the product is designed to protect fabrics from damage by moths, but does not indicate that the product is suitable for use against flying insects or other flying arthropods.

7.25: continued

FOOTWEAR OR LEATHER CARE PRODUCT means any product designed or labeled to be applied to footwear or to other leather articles/components, to maintain, enhance, clean, protect, or modify the appearance, durability, fit, or flexibility of the footwear or leather article/component. Footwear includes both leather and non-leather foot apparel. Footwear or Leather Care Product does not include Fabric Protectant, General Purpose Adhesive, Contact Adhesive, Vinyl/Fabric/Leather/Polycarbonate Coating, Rubber and Vinyl Protectant, Fabric Refresher, products solely for deodorizing, or sealant products with adhesive properties used to create external protective layers greater than two millimeters thick.

FORM-RELEASE COMPOUND means a coating labeled and formulated for application to a concrete form to prevent the freshly poured concrete from bonding to the form. The form may consist of wood, metal, or some material other than concrete.

FRAGRANCE means a substance or complex mixture of aroma chemicals, natural essential oils, and other functional components with a combined vapor pressure not in excess of two millimeters of mercury at 20°C, the sole purpose of which is to impart an odor or scent, or to counteract a malodor.

FURNITURE COATING means any paint designed for application to room furnishings including, but not limited to, cabinets (such as kitchen, bath and vanity cabinets), tables, chairs, beds, and sofas.

FURNITURE MAINTENANCE PRODUCT means a wax, polish, conditioner, or any other product designed for the purpose of polishing, protecting or enhancing finished wood surfaces other than floors. Furniture Maintenance Product does not include Dusting Aids, Wood Cleaners and products designed solely for the purpose of cleaning, and products designed to leave a permanent finish such as stains, sanding sealers and lacquers.

GEL means a colloid in which the disperse phase has combined with the continuous phase to produce a semisolid material, such as jelly.

GENERAL PURPOSE ADHESIVE means any non-aerosol adhesive designed for use on a variety of types of substrates. General Purpose Adhesive does not include:

1. contact adhesives;
2. construction, panel, and floor covering adhesives;
3. adhesives designed exclusively for application on one specific category of substrates (*i.e.*, substrates that are composed of similar materials, such as different types of metals, paper products, ceramics, plastics, rubbers, or vinyls); or
4. adhesives designed exclusively for use on one specific category of articles (*i.e.*, articles that may be composed of different materials but perform a specific function, such as gaskets, automotive trim, weather-stripping, or carpets).

GENERAL PURPOSE CLEANER means a product designed for general all-purpose cleaning, in contrast to cleaning products designed to clean specific substrates in certain situations. General Purpose Cleaner includes products designed for general floor cleaning, kitchen or countertop cleaning, and cleaners designed to be used on a variety of hard surfaces and does not include general purpose degreasers and electronic cleaners.

GENERAL PURPOSE DEGREASER means any product labeled to remove or dissolve grease, grime, oil and other oil-based contaminants from a variety of types of substrates, including automotive or miscellaneous metallic parts. General Purpose Degreaser does not include Engine Degreaser, General Purpose Cleaner, Adhesive Remover, Electronic Cleaner, Electrical Cleaner, Energized Electrical Cleaner, Metal Polish/Cleanser, products used exclusively in solvent cleaning tanks or related equipment, or products that are:

1. sold exclusively to establishments that manufacture or construct goods or commodities; and
2. labeled “not for retail sale”. Solvent cleaning tanks or related equipment includes, but is not limited to, cold cleaners, vapor degreasers, conveyORIZED degreasers, film cleaning machines, or products designed to clean miscellaneous metallic parts by immersion in a container.

7.25: continued

GENERAL-USE HAND OR BODY CLEANER OR SOAP means a cleaner or soap designed to be used routinely on the skin to clean or remove typical or common dirt and soils. General-use Hand or Body Cleaner or Soap includes, but is not limited to, hand or body washes, dual-purpose shampoo-body cleaners, shower or bath gels, and moisturizing cleaners or soaps. General-use Hand or Body Cleaner or Soap does not include prescription drug products, Antimicrobial Hand or Body Cleaner or Soap, Astringent/Toner, Facial Cleaner or Soap, Hand Dishwashing Detergent, Heavy-duty Hand Cleaner or Soap, Medicated Astringent/Medicated Toner, or Rubbing Alcohol.

GLASS CLEANER means a cleaning product designed primarily for cleaning surfaces made of glass. Glass cleaner does not include products designed solely for the purpose of cleaning optical materials used in eyeglasses, photographic equipment, scientific equipment and photocopying machines.

GRAFFITI REMOVER means a product labeled to remove spray paint, ink, marker, crayon, lipstick, nail polish, or shoe polish, from a variety of non-cloth or non-fabric substrates. Graffiti Remover does not include Paint Remover or Stripper, Nail Polish Remover, or Spot Remover. Products labeled for dual use as both a paint stripper and graffiti remover are considered Graffiti Removers.

GRAPHIC ARTS COATING OR SIGN PAINT means a coating labeled and formulated for hand-application by artists using brush or roller techniques to indoor and outdoor signs (excluding structural components) and murals including letter enamels, poster colors, copy blockers, and bulletin enamels.

HAIR MOUSSE means a hair-styling foam designed to facilitate styling of a coiffure and provide limited holding power.

HAIR SHINE means any product designed for the primary purpose of creating a shine when applied to the hair. Hair Shine includes, but is not limited to, dual-use products designed primarily to impart sheen to the hair. Hair Shine does not include Hair Spray, Hair Mousse, Hair Styling Product, or products whose primary purpose is to condition or hold the hair.

HAIR SPRAY means a product that is applied to styled hair, and is designed or labeled to provide sufficient rigidity to hold, retain and/or (finish) the style of the hair for a period of time. Hair Spray includes aerosol hair sprays, pump hair sprays, spray waxes; color, glitter, or sparkle hairsprays that make finishing claims; and products that are both a styling and finishing product. Hair Spray does not include spray products that are intended to aid in styling but do not provide finishing of a hairstyle.

For the purposes of 310 CMR 7.25(11)(b): HAIR SPRAY, “finish” or “finishing” means the maintaining and/or holding of previously styled hair for a period of time. For the purposes of 310 CMR 7.25(11)(b): HAIR SPRAY, “styling” means the forming, sculpting, or manipulating of the hair to temporarily alter the hair's shape.

HAIR STYLING PRODUCT means a product manufactured on or after January 1, 2009, that is designed or labeled for the application to wet, damp, or dry hair to aid in defining, shaping, lifting, styling and/or sculpting the hair. Hair Styling Product includes, but is not limited to, hair balm, clay, cream, creme, curl straightener, gel, liquid, lotion, paste, pomade, putty, root lifter, serum, spray gel, stick, temporary hair straightener, wax, spray products that aid in styling but do not provide finishing of a hairstyle, and leave-in volumizers, detanglers and/or conditioners that make styling claims. Hair Styling Product does not include Hair Mousse, Hair Shine, Hair Spray, or shampoos and/or conditioners that are rinsed from the hair prior to styling.

For the purposes of 310 CMR 7.25(11)(b): HAIR STYLING PRODUCT, “finish” or “finishing” means the maintaining and/or holding of previously styled hair for a period of time, and “styling” means the forming, sculpting, or manipulating of the hair to temporarily alter the hair's shape.

7.25: continued

HEAVY-DUTY HAND CLEANER OR SOAP means a product designed to clean or remove difficult dirt and soils such as oil, grease, grime, tar, shellac, putty, printer's ink, paint, graphite, cement, carbon, asphalt, or adhesives from the body with or without the use of water. Heavy-duty Hand Cleaner or Soap does not include prescription drug products, Antimicrobial Hand or Body Cleaner or Soap, Astringent/Toner, Facial Cleaner or Soap, General-use Hand or Body Cleaner or Soap, Medicated Astringent/Medicated Toner or Rubbing Alcohol.

HERBICIDE means a pesticide product designed to kill or retard a plant's growth, but excludes products that are:

1. for agricultural use; or
2. restricted materials that require a permit for use and possession.

HIGH VOLATILITY ORGANIC COMPOUND (HVOC) means any volatile organic compound that exerts a vapor pressure greater than 80 millimeters of mercury when measured at 20°C.

HOUSEHOLD PRODUCT means any consumer product that is primarily designed to be used inside or outside of living quarters or residences that are occupied or intended for occupation by individuals, including the immediate surroundings.

INSECTICIDE means a pesticide product that is designed for use against insects or other arthropods, but excluding products that are:

1. for agricultural use; or
2. for a use that requires a structural pest control license under the Massachusetts Pesticide Control Act; or
3. restricted materials that require a permit for use and possession.

INSECTICIDE FOGGER means any insecticide product designed to release all or most of its content, as a fog or mist, into indoor areas during a single application.

INSTITUTIONAL PRODUCT OR INDUSTRIAL AND INSTITUTIONAL (I&I) PRODUCT means a consumer product that is designed for use in the maintenance or operation of an establishment that:

1. manufactures, transports, or sells goods or commodities, or provides services for profit; or
2. is engaged in the nonprofit promotion of a particular public, educational, or charitable cause. Establishments include, but are not limited to, government agencies, factories, schools, hospitals, sanitariums, prisons, restaurants, hotels, stores, automobile service and parts centers, health clubs, theaters, or transportation companies. Institutional Product does not include household products and products that are incorporated into or used exclusively in the manufacture or construction of the goods or commodities at the site of the establishment.

LABEL means any written, printed, or graphic matter affixed to, applied to, attached to, blown into, formed, molded into, embossed on, or appearing upon any product or product package, for purposes of branding, identifying, or giving information with respect to the product or to the contents of the package.

LAUNDRY PREWASH means a product that is designed for application to a fabric prior to laundering and that supplements and contributes to the effectiveness of laundry detergents and/or provides specialized performance.

LAUNDRY STARCH PRODUCT means a product that is designed for application to a fabric, either during or after laundering, to impart and prolong a crisp, fresh look and may also act to help ease ironing of the fabric. Laundry Starch Product includes, but is not limited to, fabric finish, sizing, and starch.

7.25: continued

LAWN AND GARDEN INSECTICIDE means an insecticide product labeled primarily to be used in household lawn and garden areas to protect plants from insects or other arthropods.

LIQUID means a substance or mixture of substances that is capable of a visually detectable flow as determined under ASTM D4359-90(2000)e1, D 4359 90 *Standard Test Method For Determining Whether A Material Is A Liquid Or A Solid*, ASTM International. Liquid does not include powders or other materials that are composed entirely of solid particles.

LVP-VOC or Low-Vapor-Pressure VOC means a chemical compound or mixture that contains at least one carbon atom and meets one of the following:

1. has a vapor pressure less than 0.1 millimeters of mercury at 20°C, as determined by CARB Method 310; or
2. is a chemical compound with more than 12 carbon atoms, or a chemical mixture comprised solely of compounds with more than 12 carbon atoms as verified by formulation data, and the vapor pressure and boiling point are unknown; or
3. is a chemical compound with a boiling point greater than 216°C, as determined by CARB Method 310; or
4. is the weight percent of a chemical mixture that boils above 216°C, as determined by CARB Method 310.

For the purposes of 310 CMR 7.25(11)(b): LVP-VOC, chemical compound means a molecule of definite chemical formula and isomeric structure, and chemical “mixture” means a substrate comprised of two or more chemical compounds.

MANUFACTURER means any person who manufactures, processes, imports, assembles, produces, packages, repackages, or re-labels a product.

MEDICATED ASTRINGENT/MEDICATED TONER means any product regulated as a drug by the FDA that is applied to the skin for the purpose of cleaning or tightening pores. Medicated Astringent/Medicated Toner includes, but is not limited to, clarifiers and substrate-impregnated products. Medicated Astringent/Medicated Toner does not include hand, face, or body cleaner or soap products, Astringent/Toner, cold cream, lotion, antiperspirants, or products that must be purchased with a doctor’s prescription.

MEDIUM VOLATILITY ORGANIC COMPOUND (MVOC) means any volatile organic compound that exerts a vapor pressure greater than two millimeters of mercury and less than or equal to 80 millimeters of mercury when measured at 20°C.

METAL POLISH/CLEANSER means any product designed primarily to improve the appearance of finished metal, metallic, or metallized surfaces by physical or chemical action. To improve the appearance means to remove or reduce stains, impurities, or oxidation from surfaces or to make surfaces smooth and shiny. Metal Polish/Cleanser includes, but is not limited to, metal polishes used on brass, silver, chrome, copper, stainless steel and other ornamental metals. Metal Polish/Cleanser does not include Automotive Wax, Polish, Sealant or Glaze, wheel cleaner, Paint Remover or Stripper, products designed and labeled exclusively for automotive and marine detailing, or products designed for use in degreasing tanks.

MIST SPRAY ADHESIVE means any aerosol that is not a special purpose spray adhesive and which delivers a particle or mist spray, resulting in the formation of fine, discrete particles that yield a generally uniform and smooth application of adhesive to the substrate.

MULTI-PURPOSE DRY LUBRICANT means any lubricant that is:

1. designed and labeled to provide lubricity by depositing a thin film of graphite, molybdenum disulfide (moly), or polytetrafluoroethylene or closely related fluoropolymer (teflon) on surfaces; and
2. designed for general purpose lubrication, or for use in a wide variety of applications.

7.25: continued

MULTI-PURPOSE LUBRICANT means any lubricant designed for general purpose lubrication, or for use in a wide variety of applications. Multi-purpose Lubricant does not include Multi-purpose Dry Lubricants, Penetrants, or Silicone-based Multi-purpose Lubricants.

MULTI-PURPOSE SOLVENT means any organic liquid designed to be used for a variety of purposes, including cleaning or degreasing of a variety of types of substrates, or thinning, dispersing or dissolving other organic materials. Multi-purpose Solvent includes solvents used in institutional facilities, except for laboratory reagents used in analytical, educational, research, scientific or other laboratories. Multi-purpose Solvent does not include solvents used in cold cleaners, vapor degreasers, conveyORIZED degreasers or film cleaning machines, or solvents that are incorporated into, or used exclusively in the manufacture or construction of, the goods or commodities at the site of the establishment.

NAIL POLISH means any clear or colored coating designed for application to the fingernails or toenails and including but not limited to, lacquers, enamels, acrylics, base coats, and top coats.

NAIL POLISH REMOVER means a product designed to remove nail polish and coatings from fingernails or toenails.

NON-AEROSOL PRODUCT means any consumer product that is not dispensed by a pressurized spray system.

NON-CARBON CONTAINING COMPOUND means any compound that does not contain any carbon atoms.

NON-RESILIENT FLOORING means flooring of a mineral content that is not flexible. Non-Resilient Flooring includes terrazzo, marble, slate, granite, brick, stone, ceramic tile and concrete.

NON-SELECTIVE TERRESTRIAL HERBICIDE means a terrestrial herbicide product that is toxic to plants without regard to species.

OVEN CLEANER means any cleaning product designed to clean and to remove dried food deposits from oven walls.

PAINT means any pigmented liquid, liquefiable, or mastic composition designed for application to a substrate in a thin layer that is converted to an opaque solid film after application and is used for protection, decoration or identification, or to serve some functional purpose such as the filling or concealing of surface irregularities or the modification of light and heat radiation characteristics.

PAINT REMOVER OR STRIPPER means any product designed to strip or remove paints or other related coatings, by chemical action, from a substrate without markedly affecting the substrate. Paint Remover or Stripper does not include Multi-purpose Solvents, paintbrush cleaners, products designed and labeled exclusively as Graffiti Removers, and hand cleaner products that claim to remove paints and other related coatings from skin.

PENETRANT means a lubricant designed and labeled primarily to loosen metal parts that have bonded together due to rusting, oxidation, or other causes. Penetrant does not include Multi-purpose Lubricants that claim to have penetrating qualities, but are not labeled primarily to loosen bonded parts.

PERSONAL FRAGRANCE PRODUCT means any product which is applied to the human body or clothing for primary purpose of adding a scent, or masking a malodor, including cologne, perfume, aftershave, and toilet water. Personal Fragrance Product does not include:

1. Deodorant;
2. medicated products designed primarily to alleviate fungal or bacterial growth on feet or other areas of the body;

7.25: continued

3. mouthwashes, breath fresheners and deodorizers;
4. lotions, moisturizers, powders or other skin care products used primarily to alleviate skin conditions such as dryness and irritations;
5. products designed exclusively for use on human genitalia;
6. soaps, shampoos, and products primarily used to clean the human body; and
7. fragrance products designed to be used exclusively on non-human animals.

PESTICIDE means and includes any substance or mixture of substances labeled, designed, or intended for use in preventing, destroying, repelling or mitigating any pest, or any substance or mixture of substances labeled, designed, or intended for use as a defoliant, desiccant, or plant regulator, provided that the term "pesticide" does not include any substance, mixture of substances, or device that the United States Environmental Protection Agency does not consider to be a pesticide.

PRESSURIZED GAS DUSTER means a pressurized product labeled to remove dust from a surface solely by means of mass air or gas flow, including surfaces such as photographs, photographic film negatives, computer keyboards, and other types of surfaces that cannot be cleaned with solvents. Pressurized Gas Duster does not include Dusting Aid.

PRINCIPAL DISPLAY PANEL OR PANELS means that part or those parts of a label that are so designed as to most likely be displayed, presented, shown or examined under normal and customary conditions of display or purchase. Whenever a principal display panel appears more than once, all requirements pertaining to the principal display panel shall pertain to all such principal display panels.

PRODUCT BRAND NAME means the name of the product exactly as it appears on the principal display panel of the product.

PRODUCT CATEGORY means the applicable category that best describes the product as listed in Definitions.

PRODUCT LINE means a group of products of identical form and function belonging to the same product category or categories.

PROPELLANT means a liquefied or compressed gas that is used in whole or in part, such as a co-solvent, to expel a liquid or any other material from the same self-pressurized container or from a separate container.

PUMP SPRAY means a packaging system in which the product ingredients within the container are not under pressure and in which the product is expelled only while a pumping action is applied to a button, trigger or other actuator.

RESPONSIBLE PARTY means the company, firm or establishment that is listed on the product label. If the label lists two companies, firms or establishments, the responsible party is the party that the product was manufactured for or distributed by, as noted on the label.

RESTRICTED MATERIALS means pesticides established as restricted materials under applicable Massachusetts laws or regulations.

RETAIL OUTLET means any establishment at which consumer products are sold, supplied, or offered for sale directly to consumers.

RETAILER means any person who sells, supplies, or offers consumer products for sale directly to consumers.

ROLLON PRODUCT means any antiperspirant or deodorant that dispenses active ingredients by rolling a wetted ball or wetted cylinder on the affected area.

7.25: continued

RUBBER AND VINYL PROTECTANT means any product designed to protect, preserve or renew vinyl, rubber, and plastic on vehicles, tires, luggage, furniture, and household products such as vinyl covers, clothing, and accessories. Rubber and Vinyl Protectant does not include products primarily designed to clean the wheel rim, such as aluminum or magnesium wheel cleaners, and tire cleaners that do not leave an appearance-enhancing or protective substance on the tire.

RUBBING ALCOHOL means any product containing isopropyl alcohol (also called isopropanol) or denatured ethanol and labeled for topical use, usually to decrease germs in minor cuts and scrapes, to relieve minor muscle aches, as a rubefacient, and for massage.

SEALANT AND CAULKING COMPOUND means any product with adhesive properties that is designed to fill, seal, waterproof, or weatherproof gaps or joints between two surfaces. Sealant and Caulking Compound does not include roof cements and roof sealants; insulating foams; removable caulking compounds; clear, paintable, or water resistant caulking compounds; floor seam sealers; products designed exclusively for automotive uses; or sealers that are applied as continuous coatings. Sealant and Caulking Compound also does not include units of product, less packaging, which weigh more than one pound and consist of more than 16 fluid ounces. For the purposes of 310 CMR 7.25(11)(b):

SEALANT AND CAULKING COMPOUND only, removable caulking compound means a compound that temporarily seals windows or doors for three to six month time intervals. For the purposes of 310 CMR 7.25(11)(b): SEALANT AND CAULKING COMPOUND only, clear/paintable/water resistant caulking compound means a compound that:

1. contains no appreciable level of opaque fillers or pigments;
2. transmits most or all visible light through the caulk when cured;
3. is paintable; and
4. is immediately resistant to precipitation upon application.

SEMISOLID means a product that, at room temperature, will not pour, but will spread or deform easily, including but not limited to gels, pastes, and greases.

SHAVING CREAM means an aerosol product that dispenses a foam lather intended to be used with a blade or cartridge razor, or other wet shaving system, in the removal of facial or other bodily hair. Shaving Cream does not include Shaving Gel.

SHAVING GEL means an aerosol product that dispenses a post-foaming semisolid designed to be used with a blade, cartridge razor, or other shaving system in the removal of facial or other bodily hair. Shaving Gel does not include Shaving Cream.

SILICONE-BASED MULTI-PURPOSE LUBRICANT means any lubricant that is:

1. signed and labeled to provide lubricity primarily through the use of silicone compounds including, but not limited to, polydimethylsiloxane; and
2. designed and labeled for general purpose lubrication, or for use in a wide variety of applications. Silicone-based Multi-purpose Lubricant does not include products designed and labeled exclusively to release manufactured products from molds.

SINGLE-PHASE AEROSOL AIR FRESHENER means an aerosol air freshener with the liquid contents in a single homogeneous phase and that does not require that the product container be shaken before use.

SOLID means a substance or mixture of substances that, either whole or subdivided (such as the particles comprising a powder), is not capable of visually detectable flow as determined under ASTM D4359-90(2000)e1, *Standard Test Method For Determining Whether A Material Is A Liquid Or A Solid*, ASTM International.

SPECIAL PURPOSE SPRAY ADHESIVE Means an aerosol adhesive that meets any of the following definitions:

1. MOUNTING ADHESIVE means an aerosol adhesive designed to permanently mount photographs, artwork, and any other drawn or printed media to a backing (such as paper, board, cloth, etc.) without causing discoloration to the artwork.

7.25: continued

2. FLEXIBLE VINYL ADHESIVE means an aerosol adhesive designed to bond flexible vinyl to substrates. Flexible vinyl means a non-rigid polyvinyl chloride plastic with at least 5%, by weight, of plasticizer content. A plasticizer is a material, such as a high boiling point organic solvent, that is incorporated into a plastic to increase its flexibility, workability, or distensibility, and may be determined using ASTM D1045-95(2001), "Standard Test Methods for Sampling and Testing Plasticizers Used in Plastics," ASTM International, or from product formulation data.
3. POLYSTYRENE FOAM ADHESIVE means an aerosol adhesive designed to bond polystyrene foam to substrates.
4. AUTOMOBILE HEADLINER ADHESIVE means an aerosol adhesive designed to bond together layers in motor vehicle headliners.
5. POLYOLEFIN ADHESIVE means an aerosol adhesive designed to bond polyolefins to substrates.
6. LAMINATE REPAIR/EDGE BANDING ADHESIVE means an aerosol adhesive designed for:
 - a. The touch-up or repair of items laminated with high-pressure laminates (*e.g.*, lifted edges, delaminates, *etc.*); or
 - b. The touch-up, repair, or attachment of edge-bonding materials, including but not limited to, other laminates, synthetic marble, veneers, wood molding, and decorative metals.

For the purposes of this definition, high pressure laminate means sheet materials that consist of paper, fabric, or other core material that have been laminated at temperatures exceeding 265° F, and at pressures between 1,000 and 1,400 psi.
7. AUTOMOTIVE ENGINE COMPARTMENT ADHESIVE means an aerosol adhesive designed for use in motor vehicle under-the-hood applications that require oil and plasticizer resistance, as well as high shear strength, at temperatures of 93°C through 135°C.

SPOT REMOVER means any product labeled to clean localized areas, or remove localized spots or stains on cloth or fabric such as drapes, carpets, upholstery, and clothing, that does not require subsequent laundering to achieve stain removal. Spot Remover does not include Dry Cleaning Fluid, Laundry Prewash, or Multi-purpose Solvent.

SPRAY BUFF PRODUCT means a product designed to restore a worn floor finish in conjunction with a floor buffing machine and special pad.

STICK PRODUCT means any antiperspirant or deodorant that contains active ingredients in a solid matrix form, and that dispenses the active ingredients by frictional action on the affected area.

STRUCTURAL WATERPROOF ADHESIVE means an adhesive whose bond lines are resistant to conditions of continuous immersion in fresh or salt water, and that conforms with Federal Specification MMM-A-181D (Type 1, Grade A).

TERRESTRIAL means to live on or grow from land.

TIRE SEALANT AND INFLATION means any pressurized product that is designed to temporarily inflate and seal a leaking tire.

TOILET/URINAL CARE PRODUCT means any product designed or labeled to clean and/or to deodorize toilet bowls, toilet tanks, or urinals. Toilet bowls, toilet tanks, or urinals include, but are not limited to, toilets or urinals connected to permanent plumbing in buildings and other structures, portable toilets or urinals placed at temporary or remote locations, and toilet or urinals in vehicles such as buses, recreational motor homes, boats, ships, and aircraft. Toilet/Urinal Care Product does not include Bathroom and Tile Cleaner or General Purpose Cleaner.

TYPE A PROPELLANT means a compressed gas such as CO₂, N₂, N₂O, or compressed air that is used as a propellant, and is either incorporated with the product or contained in a separate chamber within the product's packaging.

7.25: continued

TYPE B PROPELLANT means any halocarbon that is used as a propellant, including chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and hydrofluorocarbons (HFCs).

TYPE C PROPELLANT means any propellant that is not a Type A or Type B propellant, including propane, isobutane, n-butane, and dimethyl ether (also known as dimethyl oxide).

UNDERCOATING means any aerosol product designed to impart a protective, non-paint layer to the undercarriage, trunk interior, and/or firewall of motor vehicles to prevent the formation of rust or to deaden sound. Undercoating includes, but is not limited to, rubberized, mastic, or asphaltic products.

USAGE DIRECTIONS means the text or graphics on the product's principal display panel, label, or accompanying literature that describes to the end user how and in what quantity the product is to be used.

VINYL/FABRIC/LEATHER/POLYCARBONATE COATING means a coating designed and labeled exclusively to coat vinyl, fabric, leather, or polycarbonate substrates.

VOC CONTENT means except for charcoal lighter products, the total weight of VOC in a consumer product expressed as a percentage of the product weight (exclusive of the container or packaging), as determined pursuant to 310 CMR 7.25(12)(h)1.

For charcoal lighter material products only,

$$\text{VOC CONTENT} = \text{Certified Emissions} * 100 / \text{Certified Use Rate}.$$

Where:

Certified Emissions = the emissions level for products approved by the CARB and as determined pursuant to South Coast Air Quality Management District Rule 1174 Ignition Method Compliance Certification Protocol (February 27, 1991), expressed to the nearest 0.001 pound CH₂ per start.

Certified Use Rate = the usage level for products approved by CARB and as determined pursuant to South Coast Air Quality Management District Rule 1174 Ignition Method Compliance Certification Protocol (February 27, 1991), expressed to the nearest 0.001 pound certified product used per start.

WASP AND HORNET INSECTICIDE means any insecticide product that is designed for use against wasps, hornets, yellow jackets or bees by allowing the user to spray from a distance a directed stream or burst at the intended insects, or their nest.

WATERPROOFER means a product designed and labeled exclusively to repel water from fabric or leather substrates. Waterproofer does not include Fabric Protectants.

WAX means a material or synthetic thermoplastic substance generally of high molecular weight hydrocarbons or high molecular weight esters of fatty acids or alcohols, except glycerol and high polymers (plastics). Wax includes, but is not limited to, substances derived from the secretions of plants and animals such as caruba wax and beeswax, substances of a mineral origin such as ozocerite and paraffin, and synthetic polymers such as polyethylene.

WEB SPRAY ADHESIVE means any aerosol adhesive that is not a mist spray or special purpose spray adhesive.

WOOD CLEANER means a product labeled to clean wooden materials including, but not limited to, decking, fences, flooring, logs, cabinetry, and furniture. Wood Cleaner does not include Dusting Aid, General Purpose Cleaner, Furniture Maintenance Product, Floor Wax Stripper, Floor Polish or Wax, or products designed and labeled exclusively to preserve or color wood.

7.25: continued

WOOD FLOOR WAX means wax based products for use solely on wood floors.

(c) Standards.

1. VOC Content Limits. Except as provided in 310 CMR 7.25(12)(d) (Variances), 310 CMR 7.25(12)(e) (Innovative Products), and 310 CMR 7.25(12)(i) (Alternative Control Plans), no person subject to 310 CMR 7.25 shall:

- a. manufacture for use within Massachusetts; or
- b. sell, supply, or offer for sale within Massachusetts any consumer product that contains volatile organic compounds in excess of the limits specified in 310 CMR 7.25(11)(c)1.: *Table 2.*

Table 2. VOC Content Limits for Consumer Products Effective January 1, 2009

Product Category	Percent VOC by Weight (%W)
Adhesive Removers	
Floor or Wall Covering	5
Gasket or Thread Locking	50
General Purpose	20
Specialty	70
Adhesives	
Aerosol:	
Mist Spray	65
Web Spray	55
Special Purpose Spray Adhesives:	
Mounting; Automotive Engine Compartment; Flexible Vinyl	70
Polystyrene Foam and Automobile Headliner	65
Polyolefin and Laminate Repair/Edgebanding	60
Construction, Panel, and Floor Covering	15
Contact:	
General Purpose	55
Special Purpose	80
General Purpose	10
Structural Waterproof	15
Air Fresheners	
Single-phase Aerosols	30
Double-phase Aerosols	25
Liquids/pump Sprays	18
Solids/Semisolid	3
Antiperspirants	
Aerosol	40 HVOC 10 MVOC
Non-aerosol	0 HVOC 0 MVOC
Anti-static	
Non-aerosol	11
Automotive Brake Cleaners	45
Automotive Rubbing or Polishing Compound	17
Automotive Wax, Polish, Sealant or Glaze	
Hard Paste Waxes	45
I Instant Detailers	3
All Other Forms	15
Automotive Windshield Washer Fluids	35
Bathroom and Tile Cleaners	
Aerosols	7
All Other Forms	5
Bug and Tar Remover	40
Carburetor or Fuel-injection Air Intake Cleaners	45

7.25: continued

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Product Category	Percent VOC by Weight (%W)
Carpet and Upholstery Cleaners	
Aerosols	7
Non-aerosols (Dilutables)	0.1
Non-aerosols (Ready-to-Use)	3.0
Charcoal Lighter Material	<i>See 310 CMR 7.25(12)(c)8.</i>
Cooking Spray Aerosols	18
Deodorants	
Aerosol	0 HVOC 10 MVOC
Non-aerosol	0 HVOC 0 MVOC
Dusting Aids	
Aerosols	25
All Other Forms	7
Engine Degreasers	
Aerosols	35
Non-aerosols	5
Electrical Cleaner	45
Electronic Cleaner	75
Fabric Protectants	60
Fabric Refresher	
Aerosol	15
Non-aerosol	6
Floor Polishes/ Waxes	
Products for Flexible Flooring Materials	7
Products for Non-resilient Flooring	10
Wood Floor Wax	90
Floor Wax Strippers	
Non-aerosol	<i>See 310 CMR 7.25(12)(c)10.</i>
Footwear or Leather Care Products	
Aerosol	75
Solid	55
All Other Forms	15
Furniture Maintenance Products	
Aerosols	17
All other Forms Except Solid or Paste	7
Graffiti Remover	
Aerosol	50
Non-aerosols	30
General Purpose Cleaners	
Aerosols	10
Non-aerosols	4
General Purpose Degreasers	
Aerosols	50
Non-aerosols	4
Glass Cleaners	
Aerosols	12
Non-aerosols	4
Hair Mousses	6
Hair Shines	55
Hair Sprays	55
Hair Styling Products	
Aerosol and Pump Sprays	6
All Other Forms	2
Heavy-duty Hand Cleaner or Soap	8

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Product Category	Percent VOC by Weight (%W)
Insecticides	
Crawling Bug (Aerosol)	15
Crawling Bug (all other forms)	20
Flea and Tick	25
Flying Bug (Aerosol)	25
Flying Bug (all other forms)	35
Foggers	45
Lawn and Garden (all other forms)	20
Lawn and Garden (Non-Aerosol)	3
Wasp and Hornet	40
Laundry Prewash	
Aerosol / Solids	22
All Other Forms	5
Laundry Starch Products	5
Metal Polishes/ Cleansers	30
Multi-purpose Lubricant (Excluding Solid or Semi-solid Products)	50
Nail Polish Remover	75
Non-selective Terrestrial Herbicide	
Non-aerosols	3
Oven Cleaners	
Aerosols/Pump Sprays	8
Liquids	5
Paint Remover or Stripper	50
Penetrants	50
Rubber and Vinyl Protectants	
Aerosols	10
Non-aerosols	3
Sealants and Caulking Compounds	4
Shaving Creams	5
Shaving Gel	7
Silicone-based Multi-Purpose Lubricants (Excluding Solid or Semi-solid Products)	60
Spot Removers	
Aerosols	25
Non-aerosols	8
Tire Sealants and Inflators	20
Toilet/Urinal Care Products	
Aerosol	10
Non-aerosols	3
Undercoatings	
Aerosols	40
Wood Cleaner	
Aerosol	17
Non-aerosols	4

2. Most Restrictive Limit. Notwithstanding the definition of product category in 310 CMR 7.25(12)(b), if anywhere on the container or packaging of any consumer product manufactured on or after January 1, 2009, or any FIFRA-registered insecticide manufactured on or after January 1, 2010, or on any sticker or label affixed thereto, any representation is made that the product may be used as, or is suitable for use as a consumer product for which a lower VOC limit is specified in 310 CMR 7.25(12)(c)1., then the lowest VOC limit shall apply. This requirement does not apply to general purpose cleaners, antiperspirant/deodorant products and insecticide foggers. This lowest VOC limit requirement shall apply to the consumer product irrespective of whether the definition of the consumer product category, as defined in 310 CMR 7.25(12)(b), explicitly excludes the other consumer product category or categories that have been represented in the product's labeling information.

7.25: continued

3. Sell-through of Consumer Products.
 - a. A consumer product listed in 310 CMR 7.25(12)(c)1.: *Table 2* and manufactured prior to the effective date specified in 310 CMR 7.25(12)(c)1., may be sold, supplied, or offered for sale after the effective date specified in 310 CMR 7.25(12)(c)1.: *Table 2*, so long as the consumer product complied with the VOC content standards and other applicable requirements in effect at the time the consumer product was manufactured. This does not apply to the following:
 - i. Any consumer product that does not display on the product container or package the date on which the product was manufactured, or a code indicating such date, in accordance with 310 CMR 7.25(12)(f)1.
 - ii. Any consumer product on which the manufacturer has used a code indicating the date of manufacture that is different than the code specified in 310 CMR 7.25(12)(f)1.e.ii., but an explanation of the code has not been filed with the Department by the deadlines specified in 310 CMR 7.25(12)(f)1.e.i.
 - iii. Solid Air Fresheners and Toilet/Urinal Care Products that contain paradichlorobenzene. These products are subject to a one-year sell-through period as provided in 310 CMR 7.25(12)(c)13.b.
4. Exclusions.
 - a. The VOC content standards specified in 310 CMR 7.25(12)(c)1. shall not apply to:
 - i. Any LVP-VOC.
 - ii. Fragrances up to a combined level of 2% by weight contained in any consumer product, and colorants up to a combined level of 2% by weight contained in any antiperspirant or deodorant.
 - iii. VOCs that contain more than ten carbon atoms per molecule and for which the vapor pressure is unknown, or that have a vapor pressure of two mm Hg or less at 20°C in antiperspirants or deodorants.
 - iv. Air fresheners that are comprised entirely of fragrance, less compounds not defined as VOCs in 310 CMR 7.25(12)(b) or exempted under 310 CMR 7.25(12)(c)4.a.i.
 - v. Insecticides containing at least 98% paradichlorobenzene.
 - vi. Adhesives sold in containers of one fluid ounce or less.
 - vii. Bait Station Insecticides. For the purpose of 310 CMR 7.25(11)(c)4., bait station insecticides are containers enclosing an insecticidal bait that is not more than 0.5 ounce by weight, where the bait is designed to be ingested by insects and is composed of solid material feeding stimulants with less than 5% active ingredients.
 - b. The medium volatility organic compound (MVOC) content standards specified in 310 CMR 7.25(12)(c)1. for antiperspirants or deodorants shall not apply to ethanol.
5. Use of Toxic Air Contaminants in Antiperspirant or Deodorant. No person shall sell, supply, offer for sale, or manufacture any antiperspirant or deodorant for use in Massachusetts that contains any compound that has been identified by the CARB in Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 7, Section 93000, as a toxic air contaminant.
6. Products that are Diluted Prior to Use.
 - a. For consumer products for which the label, packaging, or accompanying literature specifically states that the product should be diluted with water or non-VOC solvent prior to use, the limits specified in 310 CMR 7.25(12)(c)1. shall apply to the product only after the minimum recommended dilution has taken place. For purposes of 310 CMR 7.25(11)(c)6., minimum recommended dilution shall not include recommendations for incidental use of a concentrated product to deal with limited special applications such as hard-to-remove soils or stains.
 - b. For consumer products for which the label, packaging, or accompanying literature states that the product should be diluted with any VOC solvent prior to use, the limits specified in 310 CMR 7.25(12)(c)1. shall apply to the product only after the maximum recommended dilution has taken place.

7.25: continued

7. Products Registered Under FIFRA.
 - a. For consumer products registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA; 7 U.S.C. § 136-136y), the effective date of the VOC standards is one year after the date specified in 310 CMR 7.25(12)(c)1.: *Table 2* Such products shall also be registered under the Massachusetts Pesticide Control Act.
 - b. The labeling requirements of 310 CMR 7.25(12)(f) do not apply to products that are registered as pesticides under FIFRA and under the Massachusetts Pesticide Control Act.
8. Charcoal Lighter Materials. No person shall sell, supply, offer for sale or manufacture for use in Massachusetts any charcoal lighter materials as defined in 310 CMR 7.25(12)(b) unless the manufacturer of that product has been granted a currently effective charcoal lighter materials certification (Executive Order) for that product by CARB under the Consumer Products provisions of Title 17 California Code of Regulations, § 94509(h). A copy of the certification decision by CARB, including all conditions established by CARB applicable to the certification, shall be submitted to the Department within 30 days upon the Department's written request.
9. Aerosol Adhesives.
 - a. These standards apply to all uses of aerosol adhesives, including consumer, industrial, and commercial uses. Except as otherwise provided in 310 CMR 7.25(12)(c)3. (Sell-Through of Consumer Products), 310 CMR 7.25(12)(d) (Variances), 310 CMR 7.25(12)(e) (Innovative Products), and 310 CMR 7.25(12)(i) (Alternative Control Plans), no person shall sell, supply, offer for sale, or manufacture any aerosol adhesive for use in Massachusetts that, at the time of sale, use, or manufacture, contains VOCs in excess of the specified standard.
 - b. No person shall sell, supply, offer for sale, or manufacture any aerosol adhesive for use in Massachusetts that, at the time of sale, use, or manufacture, contains any of the following compounds: methylene chloride, perchloroethylene, or trichloroethylene.
 - c. If a product meets more than one of the definitions specified in 310 CMR 7.25(12)(b) for Special Purpose Spray Adhesive, then the VOC limit for the product shall be the lowest applicable VOC limit specified in 310 CMR 7.25(12)(c)1.: *Table 2*.
10. Floor Wax Strippers. Effective January 1, 2009, no person shall sell, supply, offer for sale or manufacture any floor wax stripper for use in Massachusetts unless the following requirements are met:
 - a. The label of each non-aerosol floor wax stripper must specify a dilution ratio for light or medium build-up of polish that results in an as-used VOC concentration of 3% by weight or less.
 - b. If a non-aerosol floor wax stripper is also intended to be used for removal of heavy build-up of polish, the label of that floor wax stripper must specify a dilution ratio for its use on heavy build-up of polish that results in an as-used VOC concentration of 12% by weight or less.
 - c. The term "light build-up", "medium build-up", or "heavy build-up" is not specifically required, as long as comparable terminology is used.
11. Contact Adhesives, Electronic Cleaners, Footwear or Leather Care Products, and General Purpose Degreasers.
 - a. Except as provided in 310 CMR 7.25(12)(c)11.b., 310 CMR 7.25(12)(c)11.c., and 310 CMR 7.25(12)(c)11.d., effective January 1, 2009, no person shall sell, supply, offer for sale, or manufacture for use in Massachusetts any contact adhesive, electronic cleaner, footwear or leather care product, or general purpose degreaser that contains any of the following compounds: methylene chloride, perchloroethylene, or trichloroethylene.
 - b. Impurities. The requirements of 310 CMR 7.25(12)(c)11.a. shall not apply to any contact adhesive, electronic cleaner, footwear or leather care product, or general purpose degreaser containing methylene chloride, perchloroethylene, or trichloroethylene that is present as an impurity in a combined amount equal to or less than 0.01% by weight.

7.25: continued

- c. Sell-through of Products. Contact adhesives, electronic cleaners, footwear or leather care products, and general purpose degreasers that contain methylene chloride, perchloroethylene, or trichloroethylene and were manufactured before January 1, 2009, may be sold, supplied, or offered for sale until January 1, 2012, so long as the product container or package displays the date on which the product was manufactured, or a code indicating such date, in accordance with 310 CMR 7.25(12)(f).
- d. Notification for products sold during the sell-through period. Any person who sells or supplies a consumer product subject to standards in 310 CMR 7.25(12)(c)11.a. shall notify, in writing, the purchaser that the sell-through period for that product will end on January 1, 2012 if both of the following conditions are met:
- (i) the product is sold or supplied to a distributor or retailer; and
 - (ii) the product is sold or supplied on or after June 30, 2012.
12. Adhesive Removers, Electrical Cleaners, and Graffiti Removers.
- a. Except as provided below in 310 CMR 7.25(12)(c)12.b., effective January 1, 2009, no person shall sell, supply, offer for sale, or manufacture for use in Massachusetts any adhesive remover, electrical cleaner, or graffiti remover that contains any of the following compounds: methylene chloride, perchloroethylene, or trichloroethylene.
- b. Impurities. The requirements of 310 CMR 7.25(12)(c)12.a. shall not apply to any adhesive remover, electrical cleaner, or graffiti remover containing methylene chloride, perchloroethylene, or trichloroethylene that is present as an impurity in a combined amount equal to or less than 0.01% by weight.
- c. Sell-through of Products. adhesive removers, electrical cleaners, and graffiti removers that contain methylene chloride, perchloroethylene, or trichloroethylene and were manufactured before January 1, 2009, may be sold, supplied, or offered for sale until January 1, 2012, so long as the product container or package displays the date on which the product was manufactured, or a code indicating such date, in accordance with 310 CMR 7.25(12)(f).
- d. Notification for Products Sold During the Sell-through Period. Any person who sells or supplies a consumer product subject to standards in 310 CMR 7.25(12)(c)12.a. shall notify, in writing, the purchaser that the sell-through period for that product will end on January 1, 2012 if both of the following conditions are met:
- (i) the product is sold or supplied to a distributor or retailer; and
 - (ii) the product is sold or supplied on or after June 30, 2012.
13. Solid Air Fresheners and Toilet/Urinal Care Products.
- a. Effective January 1, 2009, no person shall sell, supply, offer for sale, or manufacture for use in Massachusetts any solid air freshener or toilet/urinal care products that contain para-dichlorobenzene.
- b. Solid air fresheners and toilet/urinal care products that contain para-dichlorobenzene and were manufactured before January 1, 2009 may be sold, supplied, or offered for sale until January 1, 2010, so long as the product container or package displays the date on which the product was manufactured, or a code indicating such date, in accordance with 310 CMR 7.25(12)(f).
14. Products Containing Ozone-depleting Compounds.
- a. Effective January 1, 2009, no person shall sell, supply, offer for sale or manufacture for use in Massachusetts any consumer product that contains any of the following ozone-depleting compounds:
- CFC-11 (trichlorofluoromethane), CFC-12 (dichlorodifluoromethane),
 - CFC-113 (1,1,1-trichloro-2,2,2-trifluoroethane),
 - CFC-114 (1-chloro-1,1-difluoro-2-chloro-2,2-difluoroethane),
 - CFC-115 (chloropentafluoroethane), halon 1211 (bromochlorodifluoromethane),
 - halon 1301 (bromotrifluoromethane), halon 2402 (dibromotetrafluoroethane),
 - HCFC-22 (chlorodifluoromethane),
 - HCFC-123 (2,2-dichloro-1,1,1-trifluoroethane),
 - HCFC-124 (2-chloro-1,1,1,2-tetrafluoroethane),
 - HCFC-141b (1,1-dichloro-1-fluoroethane), HCFC-142b
 - (1-chloro-1,1-difluoroethane), 1,1,1-trichloroethane, and carbon tetrachloride.

7.25: continued

- b. The requirements of 310 CMR 7.25(12)(c)14.a. shall not apply to any ozone depleting compounds that may be present as impurities in a consumer product in an amount equal to or less than 0.01% by weight of the product.
 - c. The requirements of 310 CMR 7.25(12)(c)14.a. shall not apply to any existing product formulation that complies with the requirements in 310 CMR 7.25(12)(c)1. or any existing product formulation that is reformulated to meet the requirements in 310 CMR 7.25(12)(c)1., provided that ozone depleting compound content of the reformulated product does not change.
- (d) Variations.
1. Any person who cannot comply with the requirements set forth in 310 CMR 7.25(12)(c)1., because of extraordinary reasons beyond the person's reasonable control may apply in writing to the Department for a variance. The variance application shall set forth the following:
 - a. the specific grounds upon which the variance is sought;
 - b. the proposed dates by which compliance with the provisions of 310 CMR 7.25(12)(c)1. will be achieved;
 - c. a compliance report detailing the methods by which compliance will be achieved.
 - d. information to support criteria in 310 CMR 7.25(12)(d)3.
 2. Upon receipt of a variance application containing the information required in 310 CMR 7.25(12)(d)1., the Department shall hold a public hearing to determine whether, under what conditions, and to what extent, a variance from the requirements in 310 CMR 7.25(12)(c)1. is necessary and will be permitted. A hearing shall be initiated no later than 75 days after receipt of a variance application. Notice of the time and place of the hearing shall be sent to the applicant by certified mail not less than 30 days prior to the hearing. Notice of the hearing shall also be submitted for publication in the *Massachusetts Register* and sent to every person who requests such notice, not less than 30 days prior to the hearing. The notice shall state that the parties may, but need not be, represented by counsel at the hearing. At least 30 days prior to the hearing, the variance application shall be made available to the public for inspection. Information submitted to the Department by a variance applicant may be claimed as confidential, and such information shall be handled in accordance with the Department's confidentiality procedures. The Department may consider such confidential information in reaching a decision on a variance application. Interested members of the public shall be allowed a reasonable opportunity to testify at the hearing and their testimony shall be considered.
 3. No variance shall be granted unless all of the following findings are made:
 - a. that because of reasons beyond the reasonable control of the applicant, requiring compliance with 310 CMR 7.25(12)(c)1. would result in extraordinary economic hardship;
 - b. that the public interest in mitigating the extraordinary hardship to the applicant by issuing the variance outweighs the public interest in avoiding any increased emissions of air contaminants which would result from issuing the variance;
 - c. that the compliance report proposed by the applicant can reasonably be implemented, and will achieve compliance as expeditiously as possible.
 4. Any variance order shall specify a final compliance date by which the requirements of 310 CMR 7.25(12)(c)1. will be achieved. Any variance order shall contain a condition that specifies increments of progress necessary to assure timely compliance, and any other conditions that the Department deems necessary.
 5. A variance shall cease to be effective upon failure of the party to whom the variance was granted to comply with any term or condition of the variance.
 6. Upon the application of any person, the Department may review, and for good cause, modify or revoke a variance from requirements of 310 CMR 7.25(12)(c)1.
 7. All variances, or modifications to variances, shall be approved by EPA.

7.25: continued

(e) Innovative Products.

1. Any manufacturer of a consumer product which has been granted an Innovative Product exemption by CARB under the Innovative Products provisions in Subchapter 8.5, Article 2, Section 94511, or Subchapter 8.5, Article 1, Section 94503.5 of Title 17 of the California Code of Regulations, and such Innovative Products Exemption has been approved by EPA, shall be, for that product, exempt from the VOC limits in 310 CMR 7.25(12)(c)1.: *Table 2* for the period of time that the CARB Innovative Product exemption remains in effect. Any manufacturer claiming an Innovative Product exemption on this basis must submit to the Department a copy of the CARB Innovative Product exemption decision (*i.e.*, the Executive Order), including all conditions established by CARB applicable to the exemption.

2. Manufacturers of consumer products that have been granted an Innovative Products exemption under the Innovative Products provisions in Subchapter 8.5, Article 2, Section 94511, or Subchapter 8.5, Article 1, Section 94503.5 of Title 17 of the California Code of Regulations based on California specific data, or that have not been granted an exemption by CARB, may seek an Innovative Products exemption in accordance with the following criteria:

a. The Department shall exempt a consumer product from the VOC limits specified in 310 CMR 7.25(12)(c)1. if a manufacturer demonstrates by clear and convincing evidence that, due to some characteristic of the product formulation, design, delivery systems or other factors, the use of the product will result in less VOC emissions as compared to:

i. the VOC emissions from a representative consumer product which complies with the VOC limits specified in 310 CMR 7.25(12)(c)1., or

ii. the calculated VOC emissions from a non-complying representative product, if the product had been reformulated to comply with the VOC limits specified in 310 CMR 7.25(12)(c)1. VOC emissions shall be calculated using the following equation:

$$ER = ENC \times VOCSTD / VOCNC$$

where:

ER = the VOC emissions from the non-complying representative product, had it been reformulated

ENC = the VOC emissions from the non-complying representative product in its current formulation

VOCSTD = the VOC limit specified in the table of standards in 310 CMR 7.25(12)(c)1.

VOCNC = the VOC content of the non-complying product in its current formulation

If a manufacturer demonstrates that this equation yields inaccurate results due to some characteristic of the product formulation or other factors, an alternative method that accurately calculates emissions may be used upon approval of the Department.

b. For the purposes 310 MR 7.25(11)(e)2.b., “representative consumer product” means a consumer product that meets all of the following criteria:

i. the representative product shall be subject to the same VOC limit in 310 CMR 7.25(12)(c)1. as the innovative product.

ii. the representative product shall be of the same product form as the innovative product, unless the innovative product uses a new form that does not exist in the product category at the time the application is made.

iii. the representative product shall have at least similar efficacy as other consumer products in the same product category based on tests generally accepted for that product category by the consumer products industry.

7.25: continued

c. A manufacturer shall apply in writing to the Department for any exemption claimed under 310 CMR 7.25(12)(e)2.a. The application shall include the supporting documentation that demonstrates the emissions from the innovative product, including the actual physical test methods used to generate the data and, if necessary, the consumer testing undertaken to document product usage. In addition, the applicant shall provide any information necessary to enable the Department to establish enforceable conditions for granting the exemption including the VOC content for the innovative product and test methods for determining the VOC content. All information submitted by a manufacturer pursuant to 310 CMR 7.25(11)(e)2.c. shall be handled in accordance with the procedures specified in applicable Massachusetts confidentiality requirements.

d. Within 30 days of receipt of the exemption application, the Department shall determine whether an application is complete.

e. Within 90 days after an application has been deemed complete, the Department shall determine whether, under what conditions, and to what extent, an exemption from the requirements of 310 CMR 7.25(12)(c) will be permitted. The applicant and the Department may mutually agree to a longer time period for reaching a decision, and additional supporting documentation may be submitted by the applicant before a decision has been reached. The Department shall notify the applicant of the decision in writing and specify such terms and conditions that are necessary to insure that emissions from the product will meet the emissions reductions specified in 310 CMR 7.25(e)2.a.

f. In granting an exemption for a product, the Department shall establish conditions that are enforceable. These conditions shall include the VOC content of the innovative product, dispensing rates, application rates and any other parameters determined by the Department to be necessary. The Department shall also specify the test methods for determining conformance to the conditions established. The test methods shall include criteria for reproducibility, accuracy, sampling and laboratory procedures.

g. For any product for which an exemption has been granted pursuant to this section, the manufacturer shall notify the Department in writing within 30 days of any change in the product formulation or recommended product usage directions, and shall also notify the Department within 30 days if the manufacturer learns of any information which would alter the emissions estimates submitted to the Department in support of the exemption application.

h. If the VOC limits specified in 310 CMR 7.25(12)(c)1. are lowered for a product category through any subsequent rule making, all innovative product exemptions granted for products in the product category, except as provided in 310 CMR 7.25(12)(e)2.h., shall have no force and effect as of the effective date of the modified VOC standard. 310 CMR 7.25(12)(e)2.h. shall not apply to those innovative products which have VOC emissions less than the applicable lowered VOC limit and for which a written notification of the product's emissions status versus the lowered VOC limit has been submitted to and approved by the Department at least 60 days before the effective date of such limits.

i. If the Department determines that a consumer product for which an exemption has been granted no longer meets the criteria for an innovative product specified in 310 CMR 7.25(12)(e)2.a., the Department may modify or revoke the exemption as necessary to assure that the product will meet these criteria.

(f) Labeling Requirements.

1. Product Dating.

a. No person shall sell, supply, offer for sale, or manufacture a consumer product subject to 310 CMR 7.25(12)(c) for use in Massachusetts unless each consumer product container or package clearly displays the day, month, and year on which the product was manufactured, or a code indicating such date.

b. For products manufactured on or after January 1, 2009, the date-code shall be displayed on the product container or package such that it is readily observable without irreversibly disassembling any portion of the product container or packaging. For the purposes of 310 CMR 7.25(11)(f)1.b., information may be displayed on the bottom of a container as long as it is clearly legible without removing any product packaging.

7.25: continued

- c. No person shall erase, alter, deface or otherwise remove or make illegible any date or code indicating the date of manufacture from any regulated product container without the express authorization of the manufacturer.
- d. Explanation of the Code.
 - i. If a manufacturer uses a code indicating the date of manufacture for any consumer product subject to 310 CMR 7.25(12)(c), an explanation of the code shall be filed with the Department no later than 12 months prior to:
 - the effective date of the applicable standard specified in 310 CMR 7.25(12)(c)1.; or, the date on which the product first becomes available for sale, distribution, or use within Massachusetts, whichever is later; and
 - any date on which the product first becomes available for sale, distribution, or use within Massachusetts after any modification to an existing product's date-code format.
 - ii. A manufacturer who uses the following code to indicate the date of manufacture shall not be subject to the requirements of 310 CMR 7.25(12)(f)1.d.i., if the code is represented separately from other codes on the product container so that it is easily recognizable:

YY DDD

where:

YY = two digits representing the year in which the product was manufactured

DDD = three digits representing the day of the year on which the product was manufactured, with "001" representing the first day of the year, "002" representing the second day of the year, and so forth (*i.e.*, the "Julian date").

- e. The requirements of 310 CMR 7.25(12)(f)1. shall not apply to products containing no VOCs, as defined in 310 CMR 7.25(12)(b), or containing VOCs at 0.10 percent by weight or less.
 - f. Codes indicating the date of manufacture are public information and may not be claimed as confidential.
2. Additional Labeling Requirements for Aerosol Adhesives, Adhesive Removers, Electronic Cleaners, Electrical Cleaners, Energized Electrical Cleaners, and Contact Adhesives.
- a. In addition to the requirements specified in 310 CMR 7.25(12)(f)1., the manufacturer and responsible party for each aerosol adhesive, adhesive remover, electronic cleaner, electrical cleaner, energized electrical cleaner, and contact adhesive product subject to 310 CMR 7.25 shall ensure that all products clearly display the following information on each product container that is manufactured on or after January 1, 2009:
 - i. The product category as specified in 310 CMR 7.25(12)(c)1. or an abbreviation of the category shall be displayed;
 - ii. The applicable VOC standard for the product that is specified in 310 CMR 7.25(12)(c)1., except for energized electrical cleaner, expressed as a percentage by weight, shall be displayed;
 - iii. If the product is classified as a special purpose spray adhesive, the applicable substrate and/or application or an abbreviation of the substrate or application that qualifies the product as special purpose shall be displayed;
 - iv. If the manufacturer or responsible party uses an abbreviation as allowed under 310 CMR 7.25(12)(f)2.a.i. and 310 CMR 7.25(12)(f)2.a.iii., an explanation of the abbreviation must be filed with the Department no later than 90 days prior to:
 - the effective date of the applicable standard specified in 310 CMR 7.25(12)(c)1.; or, the date on which the product first becomes available for sale, distribution, or use within Massachusetts, whichever date is later; and
 - any date on which the product first becomes available for sale, distribution, or use within Massachusetts after any modification to an existing product's abbreviation.

7.25: continued

b. The information required in 310 CMR 7.25(12)(f)3.a., shall be displayed on the product container such that it is readily observable without removing or disassembling any portion of the product container or packaging. For the purposes of this subsection, information may be displayed on the bottom of a container as long as it is clearly legible without removing any product packaging.

c. No person shall remove, alter, conceal, or deface the information required in 310 CMR 7.25(12)(f)2.a. prior to final sale of the product.

(g) Recordkeeping and Reporting Requirements.

1. Each responsible party for a product subject to a VOC content limit in 310 CMR 7.25(12)(c) shall keep records demonstrating compliance with the VOC content limits in accordance with 310 CMR 7.25(12)(h). If the Department requests such information and the responsible party does not have or does not provide the information requested by the Department, the Department may require the reporting of this information by the person that has the information, including, but not limited to, any formulator, manufacturer, supplier, parent company, private labeler, distributor, or repackager. All records for compliance determination, including 310 CMR 7.25(12)(g)2. and 310 CMR 7.25(12)(g)3., shall be kept on site for a period of time not less than three years and shall be made available to the Department within 90 days of request.

2. Upon a written request by the Department, a responsible official from each responsible party shall provide, to the Department within 90 days, the information for any consumer product or products that the Department may specify including, but not limited to, all or part of the following information:

- a. the company name, telephone number, and designated contact person;
- b. any claim of confidentiality made pursuant to applicable Massachusetts confidentiality requirements, 310 CMR 3.00;
- c. the product brand name for each consumer product subject to recordkeeping and reporting requirements and the product label;
- d. the product category to which the consumer product belongs;
- e. the applicable product form(s) listed separately;
- f. an identification of each product brand name and form as a Household Product or Industrial and Institutional Product, or both;
- g. for reporting information submitted by multiple companies, an identification of each company that is submitting relevant data separate from that submitted by the responsible party.

h. for each product brand name and form, the net percent by weight of the total product, less container and packaging, comprised of the following, rounded to the nearest 0.1%:

- i. Total Exempt Compounds
- i. Total LVP-VOCs that are not fragrances
- iii. Total All Other Carbon-Containing Compounds that are not fragrances
- iv. Total All Non-Carbon-Containing Compounds
- v. Total Fragrance
- vi. For products containing greater than two percent by weight fragrance:
 - the percent of fragrance that are LVP-VOCs, and
 - the percent of fragrance that are All Other Carbon-Containing Compounds
- vii. Total Paradichlorobenzene

i. for each product brand name and form, the identity, including the specific chemical name and associated Chemical Abstract Services (CAS) number, of the following:

- i. Each Exempt Compound
- ii. Each LVP-VOC that is not a fragrance
- j. if applicable, the weight percent comprised of propellant for each product;
- k. If applicable, an identification of the type of propellant (Type A, Type B, Type C, or a blend of the different types);
- l. If applicable, the net percent by weight of each ozone-depleting compound that is listed in 310 CMR 7.25(12)(c)14. and is contained in a product subject to reporting under 310 CMR 7.25(12)(g) in any amount greater than 0.1% by weight.

7.25: continued

(h) Compliance Testing Requirements.

1. The responsible party shall determine compliance with the VOC content requirements of this regulation according to one of the following:

a. CARB Method 310 Determination of Volatile Organic Compounds (VOC) in *Consumer Products and Reactive Organic Compounds in Aerosol Coating Products*, adopted September 25, 1997, and as last amended on May 5, 2005;

b. An alternative test method to CARB Method specified in 310 CMR 7.25(12)(h)1.a. that is shown to accurately determine the concentration of VOCs in a subject product, or its emissions, if the applicant has received an approval from CARB for the alternative test method for determining the VOC content of the subject product and the applicant submits to the Department a copy of the CARB Executive Order, including all applicable conditions and limitations;

c. VOC content determination using product formulation and records.

i. Testing to determine compliance with the requirements of 310 CMR 7.25 may be demonstrated through calculation of the VOC content from records of the amounts of constituents used to make the product pursuant to the following equation:

$$\text{VOC Content} = (B-C) \times 100 / A$$

where,

A = total net weight of unit (excluding container and packaging)

B = total weight of all VOCs, as defined in 310 CMR 7.25(12)(b), per unit

C = total weight of VOCs exempted under 310 CMR 7.25(12)(c)4., per unit

ii. If product records demonstrate compliance with the VOC limits, but these records are contradicted by product testing performed using CARB Method 310, the results of CARB Method 310 shall take precedence over the product records and may be used to establish a violation of the requirements of 310 CMR 7.25.

iii. Compliance determinations based on product formulation records may not be used unless the manufacturer of a consumer product keeps accurate records for each day of production of the amount and chemical composition of the individual product constituents. These records shall be kept for at least three years.

2. Testing to determine whether a product is a liquid or solid shall be performed using ASTM D4359-90(2000)e1, *Standard Test Method for Determining Whether a Material Is a Liquid or a Solid*, ASTM International.

3. Testing to determine compliance with the certification requirements for charcoal lighter material shall be performed using the procedures specified in the South Coast Air Quality Management District Rule 1174 Ignition Method Compliance Certification Protocol (Table 1, Section 200.9)(February 28, 1991).

4. Testing to determine distillation points of petroleum distillate-based charcoal lighter materials shall be performed using ASTM D86-04b, *Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure*, ASTM International.

5. Testing to determine plasticizer in flexible vinyl adhesive shall be performed using ASTM D1045-95(2001), *Standard Test Methods for Sampling and Testing Plasticizers Used in Plastics*, ASTM International.

6. Records shall accurately reflect the constituents used to manufacture a product, the chemical composition of the individual product, and any other test, processes, or records used in connection with product manufacture.

(i) Alternative Control Plans.

1. The VOC content limits specified in 310 CMR 7.25(12)(c)1.: Table 2. shall not apply to any manufacturer for any consumer product that is subject to an ACP for the period of time that the ACP remains in effect provided that the manufacturer complies with all conditions and requirements of the ACP Executive Order.

7.25: continued

2. Any manufacturer who claims an exemption pursuant to 310 CMR 7.25(12)(i)1. shall submit to the Department a copy of the ACP Executive Order within 30 days of receiving the ACP Executive Order from CARB
3. Any manufacturer who claims an exemption pursuant to 310 CMR 7.25(12)(i)1. shall notify the Department within 30 days of any violation of the ACP as determined by CARB pursuant to California Code of Regulations, Title 17, Subchapter 8.5, Article 4, Section 94546.

7.26: Industry Performance Standards

((1) - (9) RESERVED)

(10) Perchloroethylene Air Emissions Standards for Dry Cleaning Facilities - Applicability.

(a) Except as provided in 310 CMR 7.26(12)(a) and (b), each dry cleaning facility shall comply with the provisions of 310 CMR 7.26(10) through (16) beginning on May 2, 1997 or immediately upon startup, whichever is later. All coin-operated dry cleaning machines are exempt from the requirements of 310 CMR 7.26(10) through (16).

(b) The provisions of 310 CMR 7.26(10) through (16) apply to the owner or operator of a dry cleaning facility that has:

1. Only dry-to-dry machine(s) and has perchloroethylene consumption equal to or less than 2,100 gallons per 12-month rolling period as determined in accordance with 310 CMR 7.26(10)(c); or

2. Only a transfer machine system(s) or both dry-to-dry machine(s) and transfer machine system(s) and has perchloroethylene consumption equal to or less than 1,800 gallons per 12-month rolling period as determined in accordance with 310 CMR 7.26(10)(c).

(c) When calculating the perchloroethylene consumption for each 12-month rolling period for the purpose of determining applicability under 310 CMR 7.26(10)(a), the owner or operator shall sum on the first day of every month the volume of all perchloroethylene purchases made in each of the previous 12 months, as recorded in the log described in 310 CMR 7.26(15)(d)1.

(d) Notwithstanding the forgoing, 310 CMR 7.26 does not apply to dry-to-dry perchloroethylene dry cleaning facilities co-located with a residence, installed between December 21, 2005 through July 13, 2006. *N.B.* These dry-to-dry facilities are subject to the federal Maximum Available Control Technology (MACT) standards for perchloroethylene dry cleaning facilities (40 CFR Part 63, Subpart M).

(11) Definitions. The definitions found in 310 CMR 7.00 apply to 310 CMR 7.26(10) through (16). The following words and phrases shall have the following meanings as they appear in 310 CMR 7.26(10) through (16). Where a term is defined in the 310 CMR 7.00: *Definitions* and the definition also appears in 310 CMR 7.26(11), the definition in 310 CMR 7.26(11) controls for 7.26(10) through (16).

Ancillary Equipment means the equipment used with a dry cleaning machine in a dry cleaning system including, but not limited to, emission control devices, pumps, filters, muck cookers, stills, solvent tanks, solvent containers, water separators, exhaust dampers, diverter valves, interconnecting piping, hoses, and ducts.

Articles mean clothing, garments, textiles, fabrics, leather goods, and the like, that are drycleaned.

Carbon Adsorber means a bed of activated carbon into which an air-perchloroethylene gas-vapor stream is routed and which adsorbs the perchloroethylene on the carbon.

Co-located means a dry cleaning facility located in a building with a residence, a licensed day care center, a health care facility, a prison, an elementary school, a middle or high school, a children's pre-school, a senior center or a youth center.

Coin-operated Dry Cleaning Machine means a dry cleaning machine that is operated by the customer (that is, the customer places articles into the machine, turns the machine on, and removes articles from the machine).

Colorimetric Detector Tube means a glass tube (sealed prior to use), containing material impregnated with a chemical that is sensitive to perchloroethylene and is designed to measure the concentration of perchloroethylene in air.

Construction means the fabrication (onsite), erection, or installation of a dry cleaning system subject to 310 CMR 7.26(10) through (16).

Desorption means regeneration of a carbon adsorber by removal of the perchloroethylene adsorbed on the carbon.

Diverter Valve means a flow control device that prevents room air from passing through a refrigerated condenser when the door of the dry cleaning machine is open.

7.26: continued

Dry Cleaning means the process of cleaning articles using perchloroethylene.

Dry Cleaning Cycle means the washing and drying of articles in a dry-to-dry machine or transfer machine system.

Dry Cleaning Facility means an establishment with one or more dry cleaning systems.

Dry Cleaning Machine means a dry-to-dry machine or each machine of a transfer machine system.

Dry Cleaning Machine Drum means the perforated container inside the dry cleaning machine that holds the articles during dry cleaning.

Dry Cleaning System means a dry-to-dry machine and its ancillary equipment or a transfer machine system and its ancillary equipment.

Dryer means a machine used to remove perchloroethylene from articles by tumbling them in a heated air stream (see reclaimer).

Dry-to-dry Machine means a one-machine dry cleaning operation in which washing and drying are performed in the same machine.

Exhaust Damper means a flow control device that prevents the air-perchloroethylene gas-vapor stream from exiting the dry cleaning machine into a carbon adsorber before room air is drawn into the dry cleaning machine.

Filter means a porous device through which perchloroethylene is passed to remove contaminants in suspension. Examples include, but are not limited to, lint filter, button trap, cartridge filter, tubular filter, regenerative filter, prefilter, polishing filter, and spin disc filter.

Halogenated Hydrocarbon Detector means a portable device capable of detecting vapor concentrations of perchloroethylene of 25 parts per million by volume and indicating a concentration of 25 parts per million by volume or greater by emitting an audible or visual signal that varies as the concentration changes.

Heating Coil means the device used to heat the air stream circulated from the dry cleaning machine drum, after perchloroethylene has been condensed from the air stream and before the stream reenters the dry cleaning machine drum.

Muck Cooker means a device for heating perchloroethylene-laden waste material to volatilize and recover perchloroethylene.

PCE (Perchloroethylene)-gas Analyzer means a flame ionization detector, photoionization detector, or infrared analyzer capable of detecting vapor concentrations of perchloroethylene of 25 parts per million by volume.

Perceptible Leaks mean any perchloroethylene vapor or liquid leaks that are obvious from:

- (a) the odor of perchloroethylene;
- (b) visual observation, such as pools or droplets of liquid; or
- (c) the detection of gas flow by passing the fingers over the surface of equipment.

Perchloroethylene Consumption means the total volume of perchloroethylene purchased based upon purchase receipts or other reliable measures.

Reclaimer means a machine used to remove perchloroethylene from articles by tumbling them in a heated air stream (see dryer).

Reconstruction means replacement of a washer, dryer, or reclaimer; or replacement of any components of a dry cleaning system to such an extent that the fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable new source.

7.26: continued

Refrigerated Condenser means a vapor recovery system into which an air-perchloroethylene gas-vapor stream is routed and the perchloroethylene is condensed by cooling the gas-vapor stream.

Refrigerated Condenser Coil means the coil containing the chilled liquid used to cool and condense the perchloroethylene.

Residence means any dwelling or housing in which people reside excluding short-term housing that is occupied by the same person for a period of less than 180 days (such as a hotel room).

Secondary Carbon Adsorber means a carbon adsorber into which the air-perchloroethylene gas vapor stream from inside the dry cleaning machine drum is routed immediately before the door of the dry cleaning machine is opened.

Source means each dry cleaning system.

Still means any device used to volatilize and recover perchloroethylene from contaminated perchloroethylene.

Temperature Sensor means a thermometer or thermocouple used to measure temperature.

Transfer Machine System means a multiple-machine dry cleaning operation in which washing and drying are performed in different machines. Examples include, but are not limited to:

- (a) a washer and dryer(s);
- (b) a washer and reclaimer(s); or
- (c) a dry-to-dry machine and reclaimer(s).

Vapor Leak means a perchloroethylene vapor concentration exceeding 25 parts per million by volume (50 parts per million by volume as methane) as indicated by a halogenated hydrocarbon detector or PCE gas analyzer.

Washer means a machine used to clean articles by immersing them in perchloroethylene. This includes a dry-to-dry machine when used with a reclaimer.

Water Separator means any device used to recover perchloroethylene from a water-perchloroethylene mixture.

Year or Yearly means any consecutive 12-month period of time.

(12) Perchloroethylene Dry Cleaning Systems.

(a) Dry-to-dry Machine. An owner or operator of a dry-to-dry machine shall comply with the following requirements:

1. A dry-to-dry machine installed prior to December 9, 1991, shall be equipped with either a carbon adsorber or refrigerated condenser by September 22, 1993.
2. A dry-to-dry machine installed on or after December 9, 1991, shall be equipped with a refrigerated condenser.
3. A dry-to-dry machine installed on or after December 21, 2005 shall be equipped with a refrigerated condenser and a secondary carbon adsorber on or before November 5, 2008.
4. The installation of a co-located dry-to-dry machine, except those co-located with a residence is prohibited as of November 5, 2008.
5. The installation of a dry-to-dry machine(s) co-located with a residence is prohibited as of September 5, 2008.
6. All co-located dry-to-dry machines shall cease operation on or before December 21, 2020.
7. All dry-to-dry machines co-located with a residence installed after July 13, 2006 shall cease operation on September 5, 2008.¹

¹ Under the federal MACT, dry cleaners co-located with a residence were prohibited from operating as of July 13, 2006. On September 5, 2008, 310 CMR 7.26(10) through (16) also become a state requirement.

7.26: continued

8. The operation, maintenance, testing, monitoring, recordkeeping and reporting requirements of 310 CMR 7.26(13) through (15), as applicable.
- (b) Transfer Machine System. The installation of transfer machine(s) is prohibited as of May 2, 1997. On or before September 22, 1993, all transfer machine systems shall be equipped with a carbon adsorber or a refrigerated condenser.
1. The owner or operator of a transfer machine system equipped with a refrigerated condenser shall:
 - a. Not vent the air-perchloroethylene gas-vapor contained within the washer to the atmosphere until the washer door is opened;
 - b. Monitor in accordance with 310 CMR 7.26(12)(b)2.;
 - c. Not use the same refrigerated condenser coil for the washer that is used by a dry-to-dry machine, dryer, or reclaimer; and
 - d. Ensure the temperature difference between the air-perchloroethylene gas-vapor stream entering the refrigerated condenser on a washer and the air-perchloroethylene gas-vapor stream exiting the refrigerated condenser on the washer is greater than or equal to 20°F (11.1°C).
 2. The owner or operator shall calculate, on a weekly basis, the difference between the temperature of the air-perchloroethylene gas-vapor streams entering and exiting the refrigerated condenser on a washer and the temperature of the air-perchloroethylene gas-vapor stream. The owner or operator shall measure the inlet and outlet streams with a temperature sensor. Each temperature sensor shall be used according to the manufacturer's instructions, and designed to measure at least a temperature range from 32°F (0°C) to 120°F (48.9°C) to an accuracy of ± 2°F (± 1.1°C).
 3. The owner or operator shall comply with the operation, maintenance, testing, monitoring, recordkeeping and reporting requirements of 310 CMR 7.26(13) through (15), as applicable
 4. The owner or operator shall cease operation of their transfer machines on or before September 5, 2008.
- (13) Operation and Maintenance Requirements.
- (a) The owner or operator shall close the door of each dry cleaning machine immediately after transferring articles to or from the machine, and shall keep the door closed at all other times except to the extent necessary during maintenance operations.
 - (b) The owner or operator of each dry cleaning system shall operate and maintain the system according to the manufacturers' specifications and recommendations.
 - (c) The owner or operator of a dry cleaning system equipped with a refrigerated condenser shall:
 1. Not vent or release the air-perchloroethylene gas-vapor stream contained within the dry cleaning machine to the atmosphere while the dry cleaning machine drum is rotating;
 2. Monitor the refrigerated condenser in accordance with 310 CMR 7.26(14)(a);
 3. Operate the dry cleaning system with a diverter valve or equivalent design so as to prevent air drawn into the dry cleaning machine when the door of the machine is open from passing through the refrigerated condenser; and
 4. Maintain the temperature of the air-perchloroethylene gas-vapor stream at the end of the cool down cycle on the outlet side of the refrigerated condenser on a dry-to-dry machine, dryer, or reclaimer at equal to or less than 45°F (7.2°C).
 - (d) The owner or operator of a dry cleaning system equipped with a primary or secondary carbon adsorber shall:
 1. Not bypass the carbon adsorber or secondary carbon adsorber to vent or release any air-perchloroethylene gas-vapor stream to the atmosphere at any time; and
 2. Monitor the carbon adsorber in accordance with the requirements in 310 CMR 7.26(14)(b) as applicable.

7.26: continued

(e) If parameter values monitored under 310 CMR 7.26(13)(c) or (d), do not meet the values specified in 310 CMR 7.26(14)(a), or (b), the owner or operator shall make adjustments or repairs to the dry cleaning system or control device to meet those values. If repair parts must be ordered, either a written or verbal order for such parts shall be initiated within two working days of detecting such a parameter value. Such repair parts shall be installed as soon as possible, but in no case later than, five working days after receipt of the parts.

(f) The owner or operator of a dry cleaning system shall drain all cartridge filters in their housing, or other sealed container, for a minimum of 24 hours, or shall treat such filters in an equivalent manner, before removal from the dry cleaning facility.

(g) The owner or operator of a dry cleaning system shall store all perchloroethylene and wastes that contain perchloroethylene in solvent tanks or solvent containers with no perceptible leaks.

(h) The owner or operator of a dry cleaning system shall inspect the following components weekly for perceptible leaks while the dry cleaning system is operating:

1. Hose and pipe connections, fittings, couplings, and valves;
2. Door gaskets and seatings;
3. Filter gaskets and seatings;
4. Pumps;
5. Solvent tanks and containers;
6. Water separators;
7. Muck cookers;
8. Stills;
9. Exhaust dampers;
10. Diverter valves (if required); and
11. All filter housings.

(i) The owner or operator of a dry cleaning system shall inspect the components identified in 310 CMR 7.26(13)(h), at least weekly for vapor leaks. The operator shall place the probe inlet near the surface of each component interface where leakage could occur and move it slowly along the interface periphery. One of the following methods or devices, operated in accordance with the manufacturer's instructions shall be used:

1. a halogenated-hydrocarbon detector;
2. a PCE gas analyzer; or
3. an alternative method approved by the Department. Sufficient documentation shall be provided to the Department to demonstrate that the alternative method is capable of detecting vapor concentrations of PCE of 25 ppm by volume.

(j) The owner or operator of a dry cleaning system shall repair all leaks detected under 310 CMR 7.26(13)(h) and (i) within 24 hours. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within two working days of detecting such a leak. Such repair parts shall be installed as soon as possible but in no case later than five working days after receipt of the parts.

(k) Each owner or operator of a dry cleaning facility shall retain onsite a copy of the design specifications and the operating manuals for each dry cleaning system and each emission control device located at the dry cleaning facility.

(14) Test Methods and Monitoring.

(a) The owner or operator of a dry cleaning system equipped with a refrigerated condenser shall either:

1. Monitor, on a weekly basis, the refrigeration system high pressure and low pressure during the drying phase to determine if they are in the range specified in the manufacturers operating instructions; or
2. Measure the temperature of the air-perchloroethylene gas-vapor stream on the outlet side of the refrigerated condenser on a dry-to-dry machine, dryer, or reclaimer weekly with a temperature sensor to determine if it is equal to or less than 45°F (7.2°C). The temperature sensor shall be used according to the manufacturer's instructions and shall be designed to measure a temperature of 45°F (7.2°C) to an accuracy of ± 2 °F (± 1.1°C).

7.26: continued

(b) The owner or operator of a dry cleaning system equipped with a primary carbon adsorber shall measure, on a weekly basis, the concentration of perchloroethylene in the exhaust of the carbon adsorber to determine that the perchloroethylene concentration in the exhaust is equal to or less than 100 parts per million by volume. The measurement shall be taken while the dry cleaning machine is venting to the carbon adsorber at the end of the last dry cleaning cycle prior to desorption of the carbon adsorber. The owner or operator shall:

1. Use a colorimetric detector tube designed to measure a concentration of 100 parts per million by volume of perchloroethylene in air to an accuracy of ± 25 parts per million by volume; and
2. Use the colorimetric detector tube according to the manufacturer's instructions; and
3. Provide a sampling port for monitoring within the exhaust outlet of the carbon adsorber that is easily accessible and located at least eight stack or duct diameters downstream from any flow disturbance such as a bend, expansion, contraction, or outlet; downstream from no other inlet; and two stack or duct diameters upstream from any flow disturbance such as a bend, expansion, contraction, inlet, or outlet.

(c) The owner or operator of a dry cleaning system equipped with a secondary carbon adsorber shall operate and maintain the system in accordance with the manufacturers specifications.

(15) Recordkeeping and Reporting Requirements.

(a) Each owner or operator of a dry cleaning facility shall submit to the Department a compliance certification in accordance with 310 CMR 70.00.

(b) Compliance Notification. Each owner or operator of a dry cleaning facility shall notify the Department, on forms provided by the Department, on or before September 15, 2008, either electronically utilizing the electronic form via eDEP or by submitting a paper form by registered mail, and subsequently as required by 310 CMR 70.03, of the facility's compliance with the requirements contained in 310 CMR 7.26(10) through(16) and provide the following information:

1. The name and address of the owner or operator;
2. The name and address (that is, physical location) of the dry cleaning facility;
3. The type of each dry cleaning machine(s) and its serial number;
4. The installation date of each dry cleaning machine;
5. A description of the type of air pollution control device(s) used to comply with 310 CMR 7.26(12)(a) or (b) as applicable;
6. The most recent 12-month perchloroethylene quantity purchased, based on invoices or receipts;
7. Whether or not the dry cleaning facility is located in a building with a residence;
8. Whether or not the dry cleaning facility is located in a building with a leased space, another tenant, or owner occupant(s);
9. Whether or not the dry cleaning facility is co-located with sensitive populations such as a licensed day care centers, a health care facility, a prison, an elementary school, middle school or high school, a children's pre-school, a senior center or a youth center.
10. The compliance status of the facility; and
11. That all information submitted is in accordance with 310 CMR 7.01(2)(a) through (c).

(c) Change in Status Notification. Each owner or operator of a dry cleaning facility shall notify the Department, on forms provided by the Department, when there is a change in ownership, a cessation of dry cleaning operations, or a change to a non-perchloroethylene solvent, and provide the following information where applicable.

1. Change in Ownership. The specific date for transfer of responsibility, coverage, and liability between the current and new owner and operator. The new owner shall notify within 60 days of the sale of the operation.
2. Cessation of Operation. The specific date that operation of the dry cleaning system(s) ceased at the facility within 60 days of ceasing operation. This notification is also necessary when the facility changes to a "drop off" facility.
3. Cessation of Perchloroethylene as the Dry Cleaning Solvent. The specific date that perchloroethylene was no longer used as the dry cleaning solvent, the manufacturer of and type of cleaning solvent within 60 days of the change.

7.26: continued

(d) Recordkeeping. Each owner or operator of a dry cleaning facility shall keep receipts of perchloroethylene purchases and a log of the following information, as applicable, and maintain such information up to date so the 12-month rolling period compliance can be determined, and on site for at least one year, and show it upon request for a period of at least three years:

1. The volume of perchloroethylene purchased each month for the dry cleaning facility as recorded from perchloroethylene invoices or receipts of purchases; if no perchloroethylene is purchased during a given month then the owner or operator would enter zero gallons into the log;
2. The calculation and result of the 12-month rolling period perchloroethylene consumption determined on the first day of each month as specified in 310 CMR 7.26(10)(c);
3. The dates when the dry cleaning system components were inspected for leaks, as specified in 310 CMR 7.26(13)(h) and (i), and the name or location of dry cleaning system components where leaks were detected;
4. The dates of repair and records of written or verbal orders for repair parts to demonstrate compliance with 310 CMR 7.26(13)(e) or (j);
5. The date and refrigeration system pressures or temperature sensor monitoring results, as specified in 310 CMR 7.26(14) if a refrigerated condenser is used to comply with 310 CMR 7.26(12)(a) or (b); and
6. The date and colorimetric detector tube monitoring results, as specified in 310CMR7.26(14), if a carbon adsorber is used to comply with 310 CMR 7.26(12)(a) or (b).

(16) Determination of Equivalent Emission Control Technology.

(a) Any person requesting that the use of certain equipment or procedures be considered equivalent to the requirements under 310 CMR 7.26(12) and (13) shall collect, verify, and submit to the Administrator the following information to show that the alternative achieves equivalent emission reductions:

1. Diagrams, as appropriate, illustrating the emission control technology, its operation and integration into or function with dry-to-dry machine(s) or transfer machine system(s) and their ancillary equipment during each portion of the normal dry cleaning cycle;
2. Information quantifying vented perchloroethylene emissions from the dry-to-dry machine(s) or transfer machine system(s) during each portion of the dry cleaning cycle with and without the use of the candidate emission control technology;
3. Information on solvent mileage achieved with and without the candidate emission control technology. Solvent mileage is the average weight of articles cleaned per volume of perchloroethylene used. Solvent mileage data must be of continuous duration for at least one year under the conditions of a typical dry cleaning operation. This information on solvent mileage must be accompanied by information on the design, configuration, operation, and maintenance of the specific dry cleaning system from which the solvent mileage information was obtained;
4. Identification of maintenance requirements and parameters to monitor to ensure proper operation and maintenance of the candidate emission control technology;
5. Explanation of why this information is considered accurate and representative of both the short-term and the long-term performance of the candidate emission control technology on the specific dry cleaning system examined;
6. Explanation of why this information can or cannot be extrapolated to dry cleaning systems other than the specific system(s) examined; and
7. Information on the cross-media impacts (to water and solid waste) of the candidate emission control technology and demonstration that the cross-media impacts are less than or equal to the cross-media impacts of a refrigerated condenser.

(b) Prior to operation of the dry cleaning system, an owner or operator shall receive approval of an equivalency determination of their emission control equipment from the Administrator and shall notify the Department of the Administrator's determination.

(20) Environmental Results Program: Lithographic, Gravure, Letterpress, Flexographic and Screen Printing.

(a) 310 CMR 7.26(20) through (29) sets forth performance standards and recordkeeping requirements for lithographic, gravure, letterpress, flexographic and screen printing at facilities subject to 310 CMR 7.26(20) through (29) pursuant to 310 CMR 7.26(21).

(b) (Reserved)

7.26: continued

(c) By complying with the recordkeeping requirements contained in 310 CMR 7.26(20) through (29), and with the certification requirements contained in 310 CMR 70.00: *Environmental Results Program Certification*, and by maintaining actual emissions below the levels contained in 310 CMR 7.26(20)(c)1. through 4., the owner/operator of a facility subject to 310 CMR 7.26(20) through (29) restricts the federal potential emissions of the facility to below the applicable major source thresholds. For every rolling 12-month period as defined in 310 CMR 7.26(22), the potential and actual emissions of the facility shall be less than the following limitations:

1. 50 tons of VOC or NO_x, or 100 tons of any other regulated air pollutant;
2. 10 tons of any HAP;
3. 25 tons of a combination of HAPs; and
4. Any lesser threshold for a single HAP that the EPA may establish by rule.

(21) Applicability.

(a) The provisions of 310 CMR 7.26(20) through (29) apply to the owner or operator of each facility in 310 CMR 7.26(20) with:

1. a primary 2012 North American Industry Classification System (NAICS) code of 323111 "Commercial Printing (except Screen and Books)", 323113 "Commercial Screen Printing", or 323117 "Books Printing"; and
2. one or more screen, lithographic, gravure, flexographic, or letterpress printing presses.

(b) The provisions of 310 CMR 7.26(20) through (29) do not apply to the owner or operator of a facility that performs lithographic, gravure, flexographic, letterpress, or screen printing with a primary 2012 NAICS code different from those listed in 310 CMR 7.26(21)(a).

(22) Definitions: The definitions found in 310 CMR 7.00 apply to 310 CMR 7.26(20) through (29). The following words and phrases shall have the following meanings as they appear in 310 CMR 7.26(20) through (29). Where a term is defined in the 310 CMR 7.00 and the definition also appears in 310 CMR 7.26(22), the definition found in 310 CMR 7.26(22) controls.

Adhesive means any substance that is used to bond one surface to another surface.

Alcohol means any of the following compounds, when used as a fountain solution additive for offset lithographic printing: ethanol, n-propanol, and isopropanol.

Alcohol Substitute means non-alcohol fountain solution additives including, but not limited to, glycol ethers or ethylene glycol.

Conforming Operation means a press or presses that meet the standards established in 310 CMR 7.26(24)(d), (25)(a) or (26)(a).

Conductive Ink means an ink which transmits electricity and is used in the production of electronic circuits.

Electron Beam Inks means inks which dry by a polymerization reaction induced by electrons from an electron beam generator.

Extreme Performance Ink or Extreme Performance Coating means an ink or coating used in screen printing on a non-porous substrate that is designed to resist or withstand any of the following: more than two years of outdoor exposure or exposure to industrial-grade chemicals, solvents, acids, or detergents, oil products, cosmetics, temperatures exceeding 76°C (170°F), vacuum forming, embossing or molding.

Flexographic Printing means a printing system utilizing a flexible rubber or elastomeric image carrier in which the image area is raised relative to the non-image area. The image is transferred to the substrate through first applying ink to a smooth roller which in turn rolls the ink onto the raised pattern of a rubber or elastomeric pad fastened around a second roller, which then rolls the ink onto the substrate.

7.26: continued

Gravure Printing means an intaglio printing operation in which the ink is transferred from wells on a plate to the substrate by pressure, with excess ink removed from the surface of the plate, which is supported by an impression roller, by a doctor blade.

HAP means an air contaminant listed by EPA as a HAP, pursuant to 42 U.S.C. 7401, § 112. That list is incorporated by reference herein, together with all amendments and supplements thereto.

Heatset Inks means inks used to set or fix the ink pigment and binding resins to the substrate.

Heatset Press means an offset lithographic printing press, where the solvent component of the ink is driven off with the use of heat from dryers or ovens. Thermography is not included in this definition.

Incidental Material(s) means one or more VOC containing material(s) which do not, in total, exceed 55 gallons per rolling 12 month period, and which do not comply with an applicable standard set forth in 310 CMR 7.26(20) through (29).

Large Printer means a printer that:

- (a) uses a total of more than 3,000 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied, per rolling 12 month period; or
- (b) after March 9, 2020, emits more than ten tons of VOC facility-wide per rolling 12 month period based on materials used before the application of air pollution control equipment.

Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol, electron beam ink and ultraviolet ink are excluded from this calculation.

Letterpress Printing means a method where the image area is raised relative to the non-image area and the ink is transferred to the substrate directly from the image surface.

Metallic Ink means an ink that contains greater than 50 grams of metal per liter (0.4 lb/gal) of ink.

Midsized Printer means a printer that:

- (a) uses a total of more than 275 and no more than 3000 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied, per rolling 12 month period; or
- (b) uses a total of more than 55 gallons of alcohol per rolling 12 month period and a total of no more than 3000 gallons of cleanup solution, and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied, per rolling 12 month period; or
- (c) after March 9, 2020, does not meet the definition of a large printer and emits, before any application of add-on air pollution capture and control equipment, equal to or greater than 15 pounds of VOC per day or, in the alternative, equal to or greater than three tons of VOC per rolling 12 month period from offset lithographic printing operations and related cleaning operations, or letterpress printing operations and related cleaning operations.

Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol, electron beam ink, and ultraviolet ink are excluded from this calculation.

Non-conforming Operation means a press or presses that use(s) ink, coating, or adhesive which do not meet the standards established in 310 CMR 7.26(24)(d), 310 CMR 7.26(25)(a), or 310 CMR 7.26(26)(a) at a printer who has demonstrated that it is technically or economically infeasible to use ink, coating, or adhesive that meets those standards.

Non-heatset Offset Lithographic Printing means offset lithographic printing in which the ink dries by oxidation and absorption into the substrate without the use of heat from dryers or ovens.

Offset Lithographic Printing means a planeographic method in which the image and non-image areas are on the same plane.

Plastisol Ink(s) means a dispersion of finely divided resin in a plasticizer.

7.26: continued

Printer means the owner or operator of a facility subject to 310 CMR 7.26(20) through (29) pursuant to 310 CMR 7.26(21).

Rolling 12 Month Period means any consecutive 12 month period of time.

Screen Printing means a process where the printing ink passes through a web or a fabric to which a refined form of stencil has been applied. The stencil openings determine the form and dimensions of the imprint.

SDS means a Safety Data Sheet.

Small Printer means a printer that:

- (a) does not qualify as a Very Small Printer; and
- (b) 1. uses a total of no more than 275 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied per rolling 12 month period; and
2. uses less than or equal to 55 gallons of alcohol per rolling 12 month period.

Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol, electron beam ink and ultraviolet ink are excluded from this calculation.

Solvent means organic compounds which are used as adhesives, diluents, thinners, dissolvers, viscosity reducers, cleaning agents or for other similar uses.

Thermography means a process for simulating a raised printed surface by dusting the wet ink with a resinous material and then fusing it to the ink with heat to produce a raised effect.

Ultraviolet Inks mean inks which dry by a polymerization reaction induced by ultraviolet energy.

Very Small Printer means a printer that:

- (a) is connected to municipal sewer;
- (b) uses a total of no more than 55 gallons of cleanup solution and inks/coatings/adhesives with a VOC content greater than 10% by weight as applied per rolling 12 month period;
- (c) uses no more than 55 gallons of alcohol per rolling 12 month period; and
- (d) generates no more than 55 gallons of hazardous waste per rolling 12 month period.

Incidental material, ink used in non-heatset offset lithographic printing, water-based ink/coating/adhesive, plastisol, electron beam ink and ultraviolet ink are excluded from the calculation in 310 CMR 7.26: Very Small Printer(b).

Water-based Ink/Coating/Adhesives means an ink, coating, or adhesive with a VOC content less than or equal to 10% by weight as applied.

(23) Rules for Permitted Facilities:

- (a) Each printing press shall be operated on or after May 1, 1998 in compliance with the standards and requirements set forth in 310 CMR 7.26(20) through (29) except in the following situations:
 1. (Reserved)
 2. if a heatset press or non-conforming operation at a facility that, based on materials used before the application of air pollution control equipment, emits no more than ten tons of VOCs facility-wide on a rolling 12 month period, is covered by a plan approval pursuant to 310 CMR 7.02(1) issued prior to May 1, 1998, then the heatset press or non-conforming operation may either be operated in compliance with that plan approval or operated in compliance with the applicable requirements set forth in 310 CMR 7.26(27)(a)1. and 2., except to the extent applicable requirements of 310 CMR 7.18 become more stringent than those in the plan approval or 310 CMR 7.26.
 3. if a heatset press or non-conforming operation at a facility that, based on materials used before the application of air pollution control equipment, emits more than ten tons of VOCs facility-wide on a rolling 12 month period, is covered by a plan approval pursuant to 310 CMR 7.02(1) or a permit pursuant to 310 CMR 7.02(9), then that heatset press or non-conforming operation shall be operated in compliance with the terms and conditions of that plan approval or permit, except to the extent applicable requirements of 310 CMR 7.18 or 7.26 become more stringent than those in the plan approval or permit.

7.26: continued

4. The following provisions take effect on March 9, 2020: 310 CMR 7.26(24)(a)1.b., 2.a.ii., (25)(b)2.b., (28)(b)5., and (c)6.

(24) Standards for Non-heatset Offset Lithographic Printing:

(a) Fountain solution standards for midsize and large printers: The following standards apply to midsize and large printers, except that they do not apply to the fountain solution in a press with a fountain solution reservoir that holds less than or equal to one gallon. Printers may calculate the percent of alcohol in fountain solution using the methodology set forth in 310 CMR 7.26(24)(a)3.:

1. For Web-fed Presses: fountain solution shall:
 - a. not contain any alcohol; and
 - b. contain no more than 5% alcohol substitutes by weight as applied.
2. For Sheet-fed Presses, except for a sheet-fed press with maximum sheet size of 11 by 17 inches or smaller:
 - a. unrefrigerated fountain solution shall either:
 - i. contain no more than 5.0% VOC by weight as applied; or
 - ii. contain no more than 5% alcohol substitutes by weight as applied and contain no alcohol; and
 - b. refrigerated fountain solution shall contain no more than 8% VOC by weight as applied, and shall be refrigerated to a temperature of less than 60° F.

(b) Fountain Solution Tank Standard: Fountain solution mixing and storage tanks shall be covered, except when adding or removing solution.

(c) Work Practices and Emission Limitations for Printing and Cleaning Operations.

1. Any person subject to 310 CMR 7.26(20) shall comply with the work practices of 310 CMR 7.18(31)(e).
 2. Cleanup solution used to clean an offset lithographic printing press shall meet at least one of the following standards, except that these standards do not apply to incidental materials:
 - a. shall not exceed 70% VOC by weight as applied, calculated pursuant to EPA test method 24; or
 - b. shall have a VOC composite partial pressure of 10 mmHg or less at 20°C (68°F)
- (d) Adhesive standard for midsize and large printers: Adhesives shall meet the following limit for VOC content, expressed in grams VOC per liter of product as applied (pounds per gallon), less water:
Adhesive 300 (2.5)

(25) Gravure, Letterpress, and Flexographic Printing:

(a) Ink, Coating, and Adhesive Standards for Midsize and Large Printers. The following standards apply to midsize and large printers. Inks, coatings, and adhesives, except incidental materials, shall meet the following limits for VOC content, expressed in grams VOC per liter of product as applied (pounds per gallon), less water:

- | | |
|----------|------------|
| Ink | 300 (2.5) |
| Coating | 300 (2.5) |
| Adhesive | 150 (1.25) |

(b) Work Practices and Emission Limitations for Printing and Cleaning Operations.

1. Any person subject to 310 CMR 7.26(20) shall comply with the work practices of 310 CMR 7.18(31)(e).
2. Cleanup solution shall meet the following standards, except that these standards do not apply to incidental materials:
 - a. cleanup solution shall have a VOC composite partial pressure of 25 mm Hg or less at 20°C (68°F); and
 - b. cleanup solution used to clean a letterpress printing press at a midsize or large printer, as of the effective date in 310 CMR 7.26(23)(a)4., shall:
 - i. have a VOC composite partial pressure of less than 10 mm Hg at 20°C (68°F); or
 - ii. contain less than 70% VOC by weight.

7.26: continued

(26) Screen Printing:

(a) Ink, Coating, and Adhesive Standards for Midsize and Large Printers: The following standard applies to midsize and large printers. Inks, coatings, and adhesives, except incidental materials, used in screen printing shall meet the following limits for VOC content, expressed in grams VOC per liter of product as applied (pounds per gallon), less water:

Ink	400 (3.3)
Coating	400 (3.3)
Adhesive	400 (3.3)
Extreme Performance Ink/Coating	800 (6.7)
Metallic Ink	400 (3.3)
Conductive Ink	850 (7.1)

(b) Work Practices and Emission Limitations for Printing and Cleaning Operations.

1. Any person subject to 310 CMR 7.26(20) shall comply with the work practices of 310 CMR 7.18(31)(e).
2. Cleanup solution used in screen printing shall have a VOC composite partial pressure of 5.0 mm Hg or less at 20°C (68°F) except that this standard does not apply to incidental materials.

(27) Printers with Heatset Presses or Non-conforming Operations:

(a) A printer that emits no more than ten tons of actual VOC emissions facility-wide on a rolling 12 month period based on raw material inputs may operate a heatset press(es) or non-conforming operation(s) without a plan approval or permit pursuant to 310 CMR 7.02(1) or 310 CMR 7.02(9), provided that:

1. with respect to the heatset press(es), the printer operates such presses in compliance with cleanup solution standards set forth in 310 CMR 7.26(24)(c), the fountain solution requirement for web-fed lithographic presses set forth in 310 CMR 7.26(24)(a)1., and applicable recordkeeping requirements set forth in 310 CMR 7.26(28). In addition, the printer shall calculate and keep records of actual VOC and HAP emissions per calendar month based on each VOC and each HAP containing compound used at the facility pursuant to 310 CMR 7.26(28)(c)3.
2. with respect to the non-conforming operation(s), the printer operates in compliance with applicable cleanup solution standards set forth in 310 CMR 7.26(25)(b) and 310 CMR 7.26(26)(b), and applicable recordkeeping requirements set forth in 310 CMR 7.26(28). In addition, the printer shall calculate and keep records of actual VOC and HAP emissions per calendar month based on each VOC and each HAP containing compound used at the facility pursuant to 310 CMR 7.26(28)(c)3.

(b) A printer that emits no more than ten tons of actual VOCs facility-wide on a rolling 12 month period based on approved control equipment or other enforceable restrictions contained in a plan approval or permit issued pursuant to 310 CMR 7.02(1) or (9), including but not limited to production and operational restrictions, may install one or more heatset presses or non-conforming operations without obtaining a plan approval or permit pursuant to 310 CMR 7.02(1) or (9) for the new press(es) or operation(s) provided that:

1. installation of the new heatset press(es) or non-conforming operation(s) will not result in more than ten tons per year (TPY) of actual VOC emissions facility-wide on a rolling 12 month period based on:
 - a. raw material inputs associated with the new press(es) or operation(s); and
 - b. with respect to existing heatset press(es) or non-conforming operation(s), approved control equipment or other enforceable restrictions, including but not limited to production and operational restrictions; and,
2. with respect to the new press(es) or operation(s), the printer complies with the requirements set forth in 310 CMR 7.26(27)(a)1. and 2.

(c) A printer that emits more than ten tons of actual VOCs facility-wide on a rolling 12 month period based on raw material inputs or enforceable restrictions contained in a plan approval or permit issued pursuant to 310 CMR 7.02(1) or (9), including but not limited to production and operational restrictions, shall, with respect to heatset press(es) or non-conforming operation(s), comply with the terms and conditions of a plan approval or permit issued pursuant to 310 CMR 7.02(1) or (9), except to the extent applicable requirements of 310 CMR 7.18 or 7.26 become more stringent than those in the plan approval or permit.

7.26: continued

(d) Notwithstanding 310 CMR 7.26(27)(c), a printer that emits more than ten tons of actual VOCs facility-wide on a rolling 12-month period based on raw material inputs or enforceable restrictions contained in a plan approval or permit issued pursuant to 310 CMR 7.02(1) or (9), including but not limited to production and operational restrictions, need not obtain a plan approval or permit pursuant to 310 CMR 7.02(1) or (9) for existing press(es) or operation(s) provided that:

1. installation of the existing heatset press(es) or non-conforming operation(s) occurred such that the actual VOC emissions facility-wide on a rolling 12 month period based on raw material inputs or enforceable restrictions contained in a plan approval or permit issued pursuant to 310 CMR 7.02(1) or (9) including, but not limited to, production and operational restrictions were less than or equal to ten tons per year; and,
2. such presses or operations comply with the requirements set forth in 310 CMR 7.26(27)(a)1. and 2..

(28) **Recordkeeping:** Each printer shall maintain records sufficient to demonstrate compliance. Such records shall be kept on-site for at least five years, and shall be made available to representatives of the Department upon request. Such records shall include, but are not limited to, the following:

- (a) Each small printer or very small printer shall maintain:
 1. monthly purchase or usage records sufficient to demonstrate that the printer is a small printer or very small printer, including but not limited to records concerning cleanup solutions, alcohol, inks, coatings, adhesives and incidental materials, excluding water-based inks/coatings/ adhesives, electron beam inks, ultraviolet inks, plastisol inks, and inks used in non-heatset offset lithographic printing;
 2. records demonstrating that cleanup solutions are in compliance with applicable standards set forth in 310 CMR 7.26(20) through (29) according to EPA test method 24 or 24A, as applicable, or an equivalent test methodology as determined by the Department and EPA, and appropriate documentation indicating compliance with the VOC composite partial pressure as defined in 310 CMR 7.00; and,
 3. for water-based inks/coatings/adhesives, electron beam inks, ultraviolet inks, and plastisol inks, SDSs or other records demonstrating that the ink/coating/adhesive is water-based, ultraviolet, electron beam, or plastisol as applicable.
- (b) Each midsize printer shall maintain:
 1. monthly purchase or usage records sufficient to demonstrate that the printer is a midsize printer, including but not limited to records concerning cleanup solutions, inks, coatings, adhesives, electron beam inks, and incidental materials, excluding water-based inks/coatings/adhesives, electron beam inks, ultraviolet inks, plastisol inks, and inks used in non-heatset offset lithographic printing;
 2. records demonstrating that cleanup solutions, inks, coatings, and adhesives are in compliance with applicable standards set forth in 310 CMR 7.26(20) through (29) according to EPA test method 24 or 24A, as applicable, or an equivalent test methodology as determined by the Department and EPA, and appropriate documentation indicating compliance with the VOC composite partial pressure as defined in 310 CMR 7.00;
 3. records of the percent by weight of VOC in fountain solution as determined each time alcohol or alcohol mix is used to mix a new batch of fountain solution and each time it is added to fountain solution on-press, based on analytical data, and the proportions of the constituents mixed;
 4. the daily temperature of fountain solutions required to be refrigerated pursuant to 310 CMR 7.26(24)(a)2.b. when alcohol content is greater than 5% by weight;
 5. records of the percent by weight of alcohol substitutes in fountain solution as determined each time alcohol substitutes are used to mix a new batch of fountain solution and each time alcohol substitutes are added to fountain solution on-press, based on analytical data, and the proportions of the constituents mixed;
 6. for water-based inks/coatings/adhesives, electron beam inks, ultraviolet inks, and plastisol inks, SDSs or other records demonstrating that the ink/coating/adhesive is water-based, electron beam, ultraviolet, or plastisol as applicable; and,
 7. printers using alcohol-free fountain solution on web-fed or sheetfed non-heatset offset lithographic printing presses, records (e.g., SDSs) demonstrating that the fountain solution constituents are alcohol-free.

7.26: continued

(c) Each large printer shall maintain:

1. monthly purchase or usage records sufficient to demonstrate that the printer is a large printer including, but not limited to, records concerning cleanup solutions, inks, coatings, adhesives and incidental materials, excluding water based inks/coatings/adhesives, electron beam inks, ultraviolet inks, plastisol inks, and inks used in non-heatset offset lithographic printing;
2. records demonstrating that cleanup solutions, inks, coatings, and adhesives are in compliance with applicable standards set forth in 310 CMR 7.26(20) through (29) according to EPA test method 24 or 24A, as applicable, or an equivalent test methodology as determined by the Department and EPA, and appropriate documentation indicating compliance with the VOC composite partial pressure as defined in 310 CMR 7.00;
3. a calculation of actual emissions per calendar month based on all VOC and each HAP containing compound used at the facility. VOC emissions from non-heatset, non-vegetable-based inks used in lithography shall be calculated by assuming that 5% of the inks' VOCs are emitted to the atmosphere and 95% are retained in the paper. VOC emissions from heatset, non-vegetable-based inks used in lithography shall be calculated by assuming that 80% of the inks' VOCs are emitted to the atmosphere and 20% are retained in the paper. VOC emissions from vegetable-based inks used in lithography shall be calculated by assuming that none of the inks' VOCs are emitted to the atmosphere and 100% are retained in the paper. VOC emissions from cleaning materials in shop towels shall be calculated by assuming that 50% of the VOCs are emitted to the atmosphere and 50% are retained in the towels, only if VOC composite vapor pressure of the cleaning material is less than 10 mm Hg at 20°C and cleaning materials and used shop towels are kept in closed containers.
4. the percent by weight of VOC in fountain solution as determined each time alcohol or alcohol mix is used to mix a new batch of fountain solution and each time it is added to fountain solution on-press, based on analytical data and the proportions of the constituents mixed;
5. the daily temperature of fountain solutions required to be refrigerated pursuant to 310 CMR 7.26(24)(a)2.b. when alcohol content is greater than 5% by weight;
6. records of the percent by weight of alcohol substitutes in fountain solution as determined each time alcohol substitutes are used to mix a new batch of fountain solution and each time alcohol substitutes are added to fountain solution on-press, based on analytical data, and the properties of the constituents mixed.
7. for water-based inks/coatings/adhesives, ultraviolet inks, electron beam inks, and plastisol inks, MSDSs or other records demonstrating that the ink/coating/adhesive is water-based, ultraviolet, electron beam, or plastisol as applicable; and,
8. printers using alcohol-free fountain solution on web-fed or sheetfed non-heatset offset lithographic printing presses, records (*e.g.*, SDSs) demonstrating that the fountain solution constituents are alcohol-free.

(29) Compliance Certification Requirement:

- (a) Beginning on September 15, 2006, each printer, except very small printers, shall submit to the Department a compliance certification on a form prescribed by the Department, in accordance with 310 CMR 70.00: *Environmental Results Program Certification* and 310 CMR 7.26(29). As part of the certification, each large printer shall submit information the Department may specify, including:
 1. the nature and amounts of emissions from the facility,
 2. information which may be needed to determine the nature and amounts of emissions from the facility, and
 3. any other information pertaining to the facility which the Department requires.
- (b) 1. If, during the course of the certification period, a printer installs a new printing press or makes operational changes which will cause a modification of its size classification, the printer shall, within 60 days of operation of the new press or actual operational changes respectively, notify the Department in writing. Such printer shall comply with 310 CMR 7.26(20) through (29) based on the applicable new size classification as soon as the new press is operating or the operational change is made.

7.26: continued

2. If, on March 9, 2020, a printer that formerly met the definition of a very small printer or small printer meets the definition of a midsize printer or a large printer, the printer shall, on or before March 9, 2020, notify the Department in writing. Such printer shall comply with 310 CMR 7.26(20) through (29) based on the applicable new size classification on and after March 9, 2020.
- (c) If, during the course of the certification period, a printer relinquishes an existing plan approval in accordance with 310 CMR 7.26(23)(a)2., then within 30 days of such change the printer shall notify the Department in writing.

(30) U Boilers – Applicability. Except as provided in 310 CMR 7.26(30)(a) and (b), the provisions of 310 CMR 7.26(30) through (37) apply to any person who owns or operates a boiler installed on or after September 14, 2001, with a heat input rating equal to or greater than 10,000,000 Btu per hour, but less than 40,000,000 Btu per hour. Complying with the criteria in 310 CMR 7.26(30) through (37) does not relieve the owner or operator from his or her applicability to the requirements of 40 CFR 60 Subpart Dc – Standards of Performance for Small Industrial – Commercial Steam Generating Units, 40 CFR 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, or 40 CFR 63 Subpart JJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.

- (a) The provisions of 310 CMR 7.26(30) through (37) do not apply to any person who is an owner or operator of a facility:
 1. who proposes to install a wood fuel-fired boiler with a heat input rating equal to or greater than 10,000,000 Btu per hour, but less than 40,000,000 Btu per hour; however, 310 CMR 7.02(5) does apply; or
 2. who installs a temporary boiler in accordance with 310 CMR 7.03(23).
- (b) If installation of a boiler would cause the facility to be subject to 310 CMR 7.00: *Appendix C*, or to exceed an emission cap contained in a written Department approval, or notification pursuant to 310 CMR 7.02(11), or become subject to Non-attainment Review at 310 CMR 7.00: *Appendix A* or PSD (40 CFR 52.21), the person who is an owner or operator of the facility shall, as applicable:

NON-TEXT PAGE

7.26: continued

1. file either a Limited Plan Application pursuant to 310 CMR 7.02(4) or Comprehensive Plan Application pursuant to 310 CMR 7.02(5) to increase the facility-wide cap or to establish an emission cap to avoid applicability to Non-Attainment Review at 310 CMR 7.00: *Appendix A*, Operating Permit and Compliance Program at 310 CMR 7.00: *Appendix C* or federal PSD(40 CFR 52.21); or
 2. comply with 310 CMR 7.26(30) through (37) and comply with the requirements of Non-Attainment Review at 310 CMR 7.00: *Appendix A*, the Operating Permit and Compliance Program at 310 CMR 7.00: *Appendix C* and federal PSD (40 CFR 52.21) as applicable; or
 3. comply with 310 CMR 7.26(30) through (37) and submit a notification establishing an emission cap under 310 CMR 7.02(11), or a higher emissions cap under 310 CMR 7.02(11) where the installation would otherwise violate an emissions cap pursuant to 310 CMR 7.02(11); or
 4. comply with 310 CMR 7.26(30) through (37) and comply with the requirements of 310 CMR 7.02(10): *Modification of a Restricted Emission Status (RES)*.
- (c) Any person who is the owner/operator of a boiler installed in accordance with 310 CMR 7.26(30) shall continue to comply with 310 CMR 7.26(31) and (33) through (37) even if the facility later becomes subject to 310 CMR 7.00: *Appendix C*.

(31) Definitions. Terms used in 310 CMR 7.26(30) through (37) are defined in 310 CMR 7.00 or in 310 CMR 7.26(31). Where a term is defined in both 310 CMR 7.00 and in 310 CMR 7.26(31), the definition in 310 CMR 7.26(31) is applicable.

ADJACENT STRUCTURE means a structure that is within 5L of the stack. 5L means five times the lesser dimension (height or maximum projected width) of the structure.

AUTOMATED COMBUSTION CONTROL SYSTEM means a system that self adjusts burner/boiler operation to maximize energy efficiency. It must include at least the following capabilities: fuel/air ratio adjusted automatically, fuel flow metered/monitored, and continuous monitoring of nitrogen oxides (NOx) and carbon monoxide.

BOILER means a device that combusts any fuel and produces steam or heats water.

DISTILLATE FUEL OIL for the purposes of 310 CMR 7.26(30) means fuel oil that complies with the specifications for fuel oil numbers 1 or 2 as defined by the American Society for Testing and Materials in ASTM D396-98, "Standard Specification for Fuel Oil" dated September 1998 and has a sulfur content not to exceed 0.05% by weight or D6751 for bio-diesel and has a sulfur content not to exceed 0.0015% by weight.

INSTALL or INSTALLATION as used in 310 CMR 7.26(30) means to set an emission unit in position for use. A relocation of a previously approved boiler, provided that it is relocated within the facility or to a contiguous property, owned and operated by the same owner is not an installation.

ULTRA-LOW SULFUR DISTILLATE FUEL OIL (ULSD) means any fuel oil or other fuel, excluding used oil fuel and hazardous waste fuel, which complies with the applicable U.S. Environmental Protection Agency sulfur limits for fuel pursuant to 40 CFR 80.29, 40 CFR 80.500, and 40 CFR 80.520(a) and (b) as in effect on January 18,2001 and either complies with the specifications for fuel oil numbers 1 or 2 as defined by the American Society for Testing and Materials (ASTM) in ASTM D-396-98 or D6751 for bio-diesel.

SUPPLIER means a person or persons who manufactures, provides, assembles, or installs for use a boiler subject to 310 CMR 7.26(30) through (37) for the person who is the owner or operator.

(32) Certification.

- (a) An owner or operator of a boiler subject to 310 CMR 7.26(30) shall submit to the Department an initial compliance certification form within 60 days of the date on which the boiler commences operation.

7.26: continued

(b) Effective December 28, 2007, prior to installation and operation, a person who is an owner or operator of a boiler subject to 310 CMR 7.26(30) shall certify to the Department, in compliance with 310 CMR 70.00, that the boiler is in compliance with 310 CMR 7.26(30) through (37).

(33) Fuel of Use/Emission Limitations.

(a) Fuel of Use.

1. Only natural gas and distillate fuel oil(s) may be used, as specified in 310 CMR 7.26(33)(a)2. through (a)4. Used oil fuel and Hazardous Waste Fuel as defined under 310 CMR 30.000 cannot be burned in boilers subject to 310 CMR 7.26(30).
2. NATURAL GAS – Prior to July 1, 2009:
 - a. a boiler subject to 310 CMR 7.26(30) shall burn natural gas as the primary fuel of use where the boiler is located on a property adjacent to a street or sidewalk underlain by a natural gas pipeline having sufficient pressure and capacity to supply natural gas to the boiler.
 - b. a natural gas fired boiler may burn distillate fuel oil for a maximum of 180 days per calendar year. Total annual distillate fuel use (gallons/year) is calculated by multiplying 90 days/yr x 24 hours/day x maximum firing rate (gals/hour) per boiler. Records must be established and maintained up to date in accordance with 310 CMR 7.26(36): *Recordkeeping and Reporting.*
3. DISTILLATE – Prior to July 1, 2009, a boiler subject to 310 CMR 7.26(30) may burn distillate fuel oil as the primary fuel of use when conditions for natural gas use, as specified in 310 CMR 7.26(33)(a)2., cannot reasonably be met.
4. On and after July 1, 2009, there is no restriction on the gallons of distillate fuel oil burned in a boiler subject to 310 CMR 7.26(30) through (37). The owner or operator of a boiler subject to 310 CMR 7.26(30) shall accept for delivery only natural gas or ultra-low sulfur distillate fuel oil.
5. On and after July 1, 2009, an owner or operator of a boiler subject to 310 CMR 7.26(30) shall accept for delivery only natural gas or ultra-low sulfur distillate fuel oil.

(b) Emission Limitations. Each boiler shall comply with the following emission limitations in pounds per million Btu heat input for the fuel of use.

POLLUTANT	Fuel of Use	Emission limitation (lbs. per million Btu)
Nitrogen Oxides	Natural Gas	0.0350
	Distillate	0.150
	Ultra-low Sulfur Distillate Fuel Oil	
Particulate Matter	Natural Gas	0.010
	Distillate and Ultra-low Sulfur Distillate Fuel Oil	0.020
Carbon Monoxide	Natural Gas	0.080
	Distillate and Ultra-low Sulfur Distillate Fuel Oil	0.080
Volatile Organic Compounds	Natural Gas	0.030
	Distillate and Ultra-low Sulfur Distillate Fuel Oil	0.030

(c) The sulfur dioxide emissions are limited by the sulfur content of the distillate fuel oil. The sulfur content of the distillate fuel oil is limited to 0.05% by weight and the sulfur content of the ULSD fuel oil is limited to 0.0015% by weight.

(d) The carbon monoxide emission limitation specified in 310 CMR 7.26(33)(b) does not apply to high turndown boilers while operating at less than 25% of the maximum input rating.

(e) Visible Emissions (excluding water vapor) may not exceed 10% opacity at any time during boiler operation.

(34) Operational Requirements.

(a) The boiler and appurtenances shall be operated in accordance with the manufacturer's standard operating and maintenance procedures.

7.26: continued

(b) A boiler tune-up shall be performed annually. A boiler tune-up shall include an inspection for proper operation, any other maintenance recommended by the manufacturer, and an efficiency test. An efficiency test shall include at least a smoke spot reading, flue gas temperature measurement and a measure of carbon dioxide, oxygen, and carbon monoxide. A written record of the efficiency test and any maintenance performed shall be kept on-site in accordance with the record keeping provisions contained 310 CMR 7.26(36).

(c) Fuel additives shall only be used in accordance with the manufacturer's instructions.

(35) Stack Requirements.

(a) Minimum stack height shall be 1.5 times the height of the building on which the stack is located. If the stack height is:

1. lower than 1.5 times the building height; or
2. lower than the height of an adjacent structure, an EPA Guideline air quality model shall be run to document that the operation of the applicable boiler(s) will not cause National Ambient Air Quality Standards exceedances. The air quality model documentation must be retained on-site for as long as the boiler(s) are operational.

(b) Stacks shall not be equipped with rain protection of a type that restricts the vertical exhaust flow of the combustion gases as they are emitted to the ambient air. "Shanty caps", "egg beaters" and the like are prohibited.

(c) The stack shall be configured to discharge the combustion gases vertically upwards.

(36) Recordkeeping and Reporting.

(a) A recordkeeping system shall be established and implemented onsite and shall provide sufficient detail to document compliance.

(b) Recordkeeping shall include the following:

1. dates of boiler installation and first operation;
2. a monthly record of fuel type, fuel additives, fuel usage in gallons or cubic feet, and sulfur content, as certified by the fuel supplier;
3. a written record of all tune-ups, including inspections, maintenance, and results of the efficiency tests, and;
4. all purchase orders and invoices related to boiler combustion or emission rate.

(c) Documentation shall be maintained onsite that the boiler and its appurtenances, as designed and installed, will comply with the emission limitations when operated in accordance with the manufacturer's instructions. This documentation, including the manufacturer's operating instructions, shall be retained for as long as the boiler operates.

(d) All records shall be maintained up-to-date such that year-to-date information is readily available for Department examination. Records shall be kept for at least three calendar years.

(e) The person who is the owner or operator of an applicable boiler is subject to the reporting requirements of 310 CMR 7.12: *U Source Registration*.

(37) Prohibitions.

(a) Concealing of emissions is prohibited.

(b) Removal of air pollution control or monitoring equipment is prohibited.

(c) Natural draft rotary cup burners are prohibited.

(40) Engines and Combustion Turbines.

(a) Engines and Turbines. For engines and turbines installed on and after March 23, 2006, the owner/operator of:

1. An emergency engine or turbine shall comply with the requirements of 310 CMR 7.26(42).
2. Any other engine or turbine shall comply with the requirements of 310 CMR 7.26(43) or 7.02(5), except that an engine or turbine in a CHP operation may comply with 310 CMR 7.26(45) if it meets the requirements of 310 CMR 7.26(45).

(b) Exceptions. 310 CMR 7.26(40) through (45) shall not apply to:

1. An engine that is operated as a nonroad engine as defined under 40 CFR 1068.30.
2. Any construction or major modification that would be subject to Prevention of Significant Deterioration (PSD) review, or Emission offsets and Non-attainment Review at 310 CMR 7.00: *Appendix A*, with respect to the installation of the engine or turbine.

7.26: continued

(41) Definitions. Terms used in 310 CMR 7.26(40) through (45) are defined in 310 CMR 7.00 and 7.26(41). When a term is defined in both 310 CMR 7.00 and 7.26(41), the definition in 310 CMR 7.26(41) shall govern.

Applicable Model Year means the model year that corresponds to the calendar year in which the engine is installed.

Combined Heat and Power (CHP) means a system consisting of an engine or turbine in combination with a heat recovery system such as a boiler that sequentially produces both electric power and thermal energy for use.

Design System Efficiency means the sum of the full load design thermal output and electric output divided by the heat input, all in consistent units of measurement.

Emergency means an electric power outage due to failure of the electrical supply, in whole or in part, on-site disaster, local equipment failure, flood, fire, or natural disaster. Emergency shall also mean when the imminent threat of a power outage is likely due to failure of the electrical supply.

Engine means spark ignition (SI) or compression ignition (CI) stationary reciprocating internal combustion engine.

Install or Installation as used in 310 CMR 7.26(42) and (43), means to set an emission unit in position for use. Relocating a previously approved engine or turbine within the same facility or to a contiguous property owned and operated by the same owner is not an installation.

Model Year means the calendar year in which the engine was originally produced, or the annual new model production period of the engine manufacturer if it is different than the calendar year. Model Year shall include January 1st of the calendar year for which the model year is named. Model Year shall not begin before January 2nd of the previous calendar year, and it shall end by December 31st of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a non-road or other non-stationary engine, Model Year means the calendar year or new model production period in which the engine was originally produced.

Power-to-heat Ratio means the design electrical output divided by the design-recovered thermal output in consistent units of measurement.

Rated Power Output means the maximum mechanical power output stated on the nameplate affixed to the engine or turbine by the manufacturer.

Supplier means a person that manufactures, assembles, or otherwise supplies engines or turbines.

Turbine means a stationary combustion turbine.

(42) Emergency Engines and Emergency Turbines.

(a) Applicability. 310 CMR 7.26(42) shall apply to any person who owns or operates an engine with a rated power output equal to or greater than 37 kW or a turbine with a rated power output less than one MW, that is installed on and after March 23, 2006, if said engine or turbine complies with 310 CMR 7.26(42).

(b) Emission Limitations. The owner/operator of an engine or turbine subject to 310 CMR 7.26(42) shall comply with the emission limitations and documentation as follows:

1. Engines installed before March 9, 2018, shall comply with the applicable model year emission limitations set by EPA for nonroad compression ignition engines (40 CFR 89 as in effect October 23, 1998) at the time of the engine installation.
2. Engines installed on and after March 9, 2018 shall comply with the applicable model year emission limitations set by EPA in Standards of Performance for New Stationary Sources for emergency compression ignition reciprocating engines under 40 CFR 60 Subpart III.

7.26: continued

3. The owner/operator of an engine subject to the requirements of 310 CMR 7.26(42)(b)1. and 2. shall obtain from the supplier a statement that a certificate of conformity has been obtained from the Administrator.
 - a. For an engine installed on or before March 9, 2018 pursuant to 40 CFR 89.105 as in effect October 23, 1998, any engine certified under EPA nonroad standards is automatically certified to operate as an emergency engine pursuant to 310 CMR 7.26(42).
 - b. For a spark ignition engine, a letter or other documentation from the supplier stating that the engine meets the applicable emission limitation shall satisfy the certificate of conformity requirement in 310 CMR 7.26(42)(b)3.
4. A turbine with a rated power output less than one MW shall comply with the emission limitations contained in 310 CMR 7.26(42): *Table 1*.

Table 1.

Emission Limitations – Emergency Turbines

Rated Power Output < 1 MW	Oxides of Nitrogen 0.60 pounds/MWh
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(c) Fuel Requirements. No person shall accept delivery for burning in any engine or turbine subject to 310 CMR 7.26(42) diesel or any other distillate fuel that does not meet the sulfur content limits for fuel in 310 CMR 7.05.

(d) Operational Requirements. Any person who owns or operates an engine or turbine subject to 310 CMR 7.26(42) shall comply with the following requirements:

1. Operation and Maintenance.
 - a. An engine or turbine shall operate only:
 1. for up to 100 hours per calendar year, or as otherwise approved by EPA, for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine;
 2. as part of the 100 hours, for up to 50 hours per calendar year for non-emergency situations; and
 3. during an emergency.
 - b. Additional limitations and conditions may apply, including but not limited to 40 CFR Part 63, Subpart ZZZZ; 40 CFR Part 60, Subpart JJJJ; and 40 CFR Part 60, Subpart IIII.
 - c. A non-turn-back hour counter shall be installed, operated and maintained in good working order on each unit.
2. Sound. Engines, turbines and associated equipment shall be constructed, located, operated and maintained in a manner to comply with the requirements of 310 CMR 7.10.
3. Stack Height and Emission Dispersion.
 - a. All engines or turbines shall utilize an exhaust stack that discharges so as to not cause a condition of air pollution (310 CMR 7.01(1)).
 - i. Exhaust stacks shall be configured to discharge the combustion gases vertically and shall not be equipped with any part or device that impedes the vertical exhaust flow of the emitted combustion gases.
 - ii. Any emission impacts of exhaust stacks upon sensitive receptors including, but not limited to, people, windows and doors that open, and building fresh air intakes shall be minimized by employing good air pollution control engineering practices. Such practices include without limitation:
 - (i) Avoiding locations that may be subject to downwash of the exhaust; and
 - (ii) Installing a stack of sufficient height in locations that will prevent and minimize flue gas impacts upon sensitive receptors.
 - b. An engine or turbine with a rated power output equal to or greater than 300 kW, shall have an exhaust stack with a minimum stack height of ten feet above the facility rooftop or the emergency engine or turbine enclosure, whichever is lower.

7.26: continued

- c. An engine with a rated power output equal to or greater than one MW shall be equipped with an exhaust stack with a minimum stack height of 1.5 times the height of the building on which the stack is located. If the stack is lower than 1.5 times the building height or lower than the height of a structure that is within 5L of the stack (5L being five times the lesser of the height or maximum projected width of the structure), the owner/operator shall submit documentation that the operation of the engine or turbine will not cause an exceedance of any National Ambient Air Quality Standard.
5. Visible Emissions. Engines and turbines shall comply with all the requirements of 310 CMR 7.06(1)(a) and (b).
- (e) Emission Certification, Monitoring and Testing.
1. Certification. No person shall cause, suffer, allow, or permit the installation and subsequent operation of an engine or turbine unless said person has certified compliance with the requirements of 310 CMR 7.26(42) in its entirety in accordance with the provisions of 310 CMR 70.00: *Environmental Results Program Certification*. Certification shall include a statement from the supplier that the installed engine or turbine is capable of complying with the emission limitations for the first three years of operation. A one-time certification shall be made to the Department within 60 days of commencement of operation. An annual certification is not required.
 2. Monitoring. The Department may require emission or other monitoring to assure compliance with the requirements of 310 CMR 7.26(42).
 3. Testing. Any testing when required shall comply with the following:
 - a. Tests to certify compliance with emission limitations shall be performed in accordance with EPA reference Methods, California Air Resources Board Methods approved by EPA, or equivalent methods as approved by the Department and EPA.
 - b. Particulate matter from reciprocating engines using liquid fuel shall be determined using Method 8178 D2 of the International Organization for Standardization.
 - c. The Department may require emission or other testing to assure compliance with the emission limitations or fuel requirements.
- (f) Recordkeeping and Reporting. The owner/operator shall maintain records described in 310 CMR 7.26(42)(f)1. through 4. Such records shall be maintained on site or for remote locations, at the closest facility where records can be maintained and shall be made available to the Department or its designee upon request. The owner/operator shall certify that records are accurate and true in accordance with 310 CMR 7.01(2)(a) through (c).
1. Information on equipment type, make and model, and rated power output;
 2. A log of operations, including date, time and duration of operation and reason for each start per 310 CMR 7.26(42)(d)1., fuel type and supplier;
 3. Purchase orders, invoices, and other documents to substantiate information in the log; and
 4. Copies of all certificates and documents from the manufacturer related to certificates.
- (43) Engines and Turbines.
- (a) Applicability. 310 CMR 7.26(43) in its entirety shall apply to any person who owns or operates an engine with a rated power output equal to or greater than 50kW or a turbine with a rated power output less than or equal to ten MW that is installed on or after March 23, 2006, except:
1. Engines and turbines subject to 310 CMR 7.26(42) are not subject to the requirements of 310 CMR 7.26(43).
 2. The owner/operator of any engine or turbine subject to 310 CMR 7.26(43) may comply with the requirements of 310 CMR 7.02(5)(c) for such unit in *lieu* of complying with the requirements of 310 CMR 7.26(43).
 3. The owner/operator of a turbine with a rated output of less than one MW burning fuel oil, or greater than ten MW burning any fuel, shall comply with the requirements of 310 CMR 7.02(5)(c) for such unit.
 4. On and after January 17, 2009, any owner/operator who constructs, substantially reconstructs or alters an engine or turbine that is part of a combined heat and power system, may satisfy 310 CMR 7.26(43)(b) by complying with the requirements of 310 CMR 7.26(45).

7.26: continued

(b) Emission Limitations. An owner/operator of an engine or turbine subject to 310 CMR 7.26(43) shall comply with the emission limitations established in 310 CMR 7.26(43): *Table 1, 2 and 3.*

Table 1
Emission Limitations – Engines

<u>Installation Date</u>	<u>Oxides of Nitrogen</u>	<u>Particulate Matter (Liquid Fuel Only)</u>	<u>Carbon Monoxide</u>
On and after 3/23/06	0.6 lbs/MWh/megawatt-hour (MWh)	≤ 1MW 0.7 lbs/MWh; > 1 MW 0.09 lbs/MWh	10 lbs/MWh
On and after 1/1/08	0.3 lbs/MWh	0.07 lbs/MWh	2 lbs/MWh
On and after 1/1/12	0.15 lbs/MWh	0.03 lbs/MWh	1 lb/MWh

Table 2
Emission Limitations – Turbines

<u>Rated Power Output</u>	<u>Oxides of Nitrogen</u>	<u>Ammonia</u>	<u>Carbon Monoxide</u>
Less than 1 MW	0.47 lbs/MWh Natural Gas	N/A	0.47 lbs/MWh Natural Gas
1 to 10 MW	0.14 lbs/MWh Natural Gas 0.34 lbs/MWh Oil	2.0 ppm 15% O ₂ Dry Basis	0.09 lbs/MWh Natural Gas 0.18 lbs/MWh Oil

Table 3
Emission Limitations – Engines and Turbines

<u>Installation Date</u>	<u>Carbon Dioxide</u>
On and after 3/23/06	1900 lbs/MWh
On and after 1/1/08	1900 lbs/MWh
On and after 1/1/12	1650 lbs/MWh

(c) Fuel Requirements. No person shall accept delivery for burning in any engine or turbine subject to 310 CMR 7.26(43) diesel or any other distillate fuel that does not meet the sulfur content limit for fuel pursuant to 310 CMR 7.05.

(d) Operational Requirements. Any person who owns or operates an engine or turbine subject to 310 CMR 7.26(43) shall comply with the following operational requirements:

1. Operation and Maintenance. The engine or turbine shall be operated and maintained in accordance with the manufacturers recommended operating and maintenance procedures.
2. Sound. Engines, turbines and associated equipment shall be constructed, located, operated and maintained in a manner to comply with the requirements of 310 CMR 7.10.
3. Stack Height and Emission Dispersion.
 - a. An engine or turbine shall utilize an exhaust stack that discharges so as to not cause a condition of air pollution (310 CMR 7.01(1)). The exhaust stack shall be configured to discharge the combustion gases vertically and shall not be equipped with any part or device that impedes the vertical exhaust flow of the emitted combustion gases. Any emission impacts of exhaust stacks upon sensitive receptors such as people, windows and doors that open, and building fresh air intakes shall be minimized by employing good air pollution control engineering practices. Such practices include without limitation:
 - i. Avoiding locations that may be subject to downwash of the exhaust.
 - ii. Installing a stack of sufficient height in a location that will prevent and minimize flue gas impacts upon sensitive receptors.

7.26: continued

- b. Engines and turbines burning liquid fuel and with a rated power output of less than 300 kW shall be equipped with an exhaust stack with a minimum stack height of five feet above the rooftop or the engine or turbine enclosure, whichever is higher.
 - c. Engines and turbines with a rated power output equal to or greater than 300kW, shall be equipped with an exhaust stack with a minimum stack height of ten feet above the rooftop or the engine or turbine enclosure, whichever is higher.
 - d. Engines and turbines with a rated power output equal to or greater than one MW shall be equipped with an exhaust stack with a minimum stack height of 1.5 times the height of the building on which the stack is located. If the stack is lower than 1.5 times the building height or lower than the height of a structure that is within 5L of the stack (5L being five times the lesser of the height or maximum projected width of the structure), the owner/operator shall submit documentation that the engine or turbine will not cause an exceedance of any National Ambient Air Quality Standard.
4. Visible Emissions. Engines and turbines shall comply with all the requirements of 310 CMR 7.06(1)(a) and (b).
- (e) Emission Certification, Monitoring and Testing.
- 1. Certification. No person shall cause, suffer, allow, or permit the installation and subsequent operation of an engine or turbine unless said person has certified compliance with the requirements of 310 CMR 7.26(43) in its entirety in accordance with the provisions of 310 CMR 70.00: *Environment Results Program Certification*. Certification by such person shall include a statement from the supplier that the installed engine or turbine is capable of complying with the emission limitations for the lesser of 15,000 hours of operation or the first three years of operation. A one time certification shall be submitted to the Department 30 days prior to commencement of operation. An annual certification is not required.
 - 2. Monitoring. The Department may require emission or other monitoring to assure compliance with the requirements of 310 CMR 7.26(43).
 - 3. Testing. Any testing when required shall comply with the following:
 - a. Tests to certify compliance with emission limitations must be performed in accordance with EPA reference Methods, California Air Resources Board Methods as approved by EPA, or equivalent methods as approved by the Department and EPA.
 - b. Particulate matter, from liquid fuel reciprocating engines, shall be determined using Method 8178 D2 of the International Organization for Standardization.
 - c. The Department may require emission or other testing to assure compliance with the emission limitations or fuel requirements.
- (f) Record Keeping and Reporting. The owner/operator shall maintain records described in 310 CMR 7.26(43)(f)1. through 3. Such records shall be made available to the Department or its designee upon request. The owner/operator shall certify that records are accurate and true in accordance with 310 CMR 7.01(2)(a) through (c).
- 1. Information on equipment type, make and model, and maximum rated power output;
 - 2. Fuel type and supplier; and
 - 3. Copies of certificates and documents from the manufacturer related to certificates.
- (44) Change in Operational Status. An owner/operator of an engine or turbine subject to the requirements of 310 CMR 7.26(42): *Emergency Engines and Turbines* may elect to operate as a non-emergency engine or turbine by complying with either of the two following methods.
- (a) Submit an application and receive approval under the requirements of 310 CMR 7.02(5);
 - or
 - (b) Certify to the Department that the engine or turbine meets all applicable requirements of 310 CMR 7.26(43).
- (45) Combined Heat and Power (CHP). The purpose of 310 CMR 7.26(45) is to encourage the installation of CHP systems. A methodology is set forth whereby emission credits are utilized in determining compliance of a CHP installation with the emission limitations contained in 310 CMR 7.26(43)(b).
- (a) Eligibility. CHP installations shall meet the following requirements to be eligible for emission credits related to thermal output:
 - 1. The power-to-heat ratio shall be between 4.0 and 0.15.
 - 2. The design system efficiency shall be at least 55%.

7.26: continued

3. The CHP project shall comply with the requirements of 310 CMR 7.02(5)(c).
4. The engine shall have a rated power output equal to or greater than 50 kW or the turbine shall have a rated power output less than or equal to ten MW.

(b) **Emission Credits.** A CHP system that meets the requirements in 310 CMR 7.26(45)(a) may receive a compliance credit against its actual emissions based on the emissions that would have been created by a conventional separate system used to generate the same thermal output. The credit will be subtracted from the actual CHP system emissions for the purpose of calculating compliance with the emission limitations contained in 310 CMR 7.26(43)(b). The credit will be calculated according to the following assumptions and procedures:

1. The emission rates for the displaced thermal system (*e.g.* boiler) shall be:
 - a. For CHP installed in new facilities, the emissions limits applicable to new natural gas-fired boilers in 310 CMR 7.26(33) in lb/MMBtu.
 - b. For CHP systems that replace existing thermal systems for which historic emission rates can be documented, the historic emission rates in lbs/MMBtu, but not more than:

Emissions	Maximum Rate
Nitrogen oxides	0.3 lbs/MMBtu
Carbon monoxide	0.08 lbs/MMBtu
Carbon dioxide	117 lbs/MMbtu

2. The emission rate of the thermal system in lbs/MMBtu will be converted to an output-based rate by dividing by the thermal system efficiency. For new systems, the efficiency of the avoided thermal system will be assumed to be 80% for boilers or the design efficiency of other process heat systems. If the design efficiency of the other process heat system cannot be documented, an efficiency of 80% will be assumed. For retrofit systems, the historic efficiency of the displaced thermal system can be used if that efficiency can be documented and if the displaced thermal system is enforceably shut down and replaced by the CHP system, or if its operation is measurably and enforceably reduced by the operation of the CHP system.
3. The emissions per MMBtu of thermal energy output shall be converted to emissions per MWh of thermal energy by multiplying by 3.412 MMBtu/MWh_{thermal}.
4. The emissions credits in lbs/MWh_{thermal}, as calculated in 310 CMR 7.26(45)(b)3., shall be converted to emissions in lbs/MWh_{emissions} by dividing by the CHP system power-to-heat ratio.
5. The credit, as calculated in 310 CMR 7.26(45)(b)4., shall be subtracted from the actual emission rate of the CHP system to produce the emission rate for compliance purposes.
6. The mathematical calculations set forth in 310 CMR 7.26(45)(b)1. through 4. are expressed in the following formula:

$$Credit\ lbs/MWh_{emissions} = \frac{(boiler\ limit\ lbs/MMBtu)}{(boiler\ efficiency)} \times \frac{3.412\ MMBtu/W_{thermal}}{(power-to-heat\ ratio)}$$

7. The amount of credit allowed for oxides of nitrogen shall be limited such that total emissions from the CHP system shall be no greater than the sum of emissions from two separate systems producing the amount of electrical and thermal output.

7.26: continued

(50) Outdoor Hydronic Heaters - Applicability.

(a) 310 CMR 7.26(50) through (54) applies to any person who owns, operates, manufactures, supplies, distributes or sells, or any person who intends to distribute or sell, or market an outdoor hydronic heater for use in the Commonwealth of Massachusetts (Commonwealth), except outdoor hydronic heaters rated with a heat input of one MMBtu/hr or greater that are subject to the Comprehensive Plan Application provisions at 310 CMR 7.02(5)(a)4.

(b) In addition to 310 CMR 7.26(50) through (54), Outdoor hydronic heaters may also be required to comply with other regulations governing design, manufacture and installation of boilers, including, but not limited to:

1. 522 CMR 5.00, Heating Boilers;
2. 522 CMR 6.00, Low-pressure Heating Boilers;
3. 527 CMR 4.00, Oil Burning Equipment, for outdoor hydronic heaters that are dual-fuel units; and
4. 780 CMR 6007, Solid Fuel-burning Appliances of the State Building Code.

(51) Definitions. The following words and phrases shall have the following meanings as they appear in 310 CMR 7.26(50) through (54). Where a term is defined in 310 CMR 7.00 and the definition also appears in 310 CMR 7.26(51) for purposes of 310 CMR 7.26(50) through (54) interpretation, the definition found in 310 CMR 7.26(51) shall govern.

At Retail means the sale by a commercial proprietor of an outdoor hydronic heater.

Clean Wood means wood that has no paint, stains, or other types of coatings, and wood that has not been treated with preservatives, including but not limited to, copper chromium arsenate, creosote, or pentachlorophenol.

7.26: continued

Commercial-size Outdoor Hydronic Heater means a heater with a rated thermal output greater than 350,000 Btu/hr and a heat input design capacity less than one MMBtu/hr as rated by the test method identified in 310 CMR 7.26(54)(c)2.

Distribute or Sell means to distribute, sell, advertise for sale, offer for sale, lease, ship, deliver for shipment, release for shipment, or receive and (having so received) deliver or offer to deliver for use in the Commonwealth.

EPA's ETV Program means U.S. Environmental Protection Agency's Environmental Technology Verification Program.

Executive Summary means a report submitted to the Department that summarizes the results of testing compiled using tables 1, 2a and 2b, heating season and year-round weighted average, respectively, as incorporated in the EPA test method 28 for outdoor hydronic heaters for the applicable particulate matter standards.

Existing Unit or Existing Outdoor Hydronic Heater means an outdoor hydronic heater that is contracted to be paid in full, or installed and/or operated at the intended location of use prior to December 26, 2008.

Heater Efficiency means the ratio of the delivered useful heat output measured by the prescribed test method referenced in 310 CMR 7.26(54)(c)2. to the calculated heat input of the hydronic heater measured by the same test method.

Heating Season means the period beginning October 1st and ending May 15th.

Manufactured means built and operational, and subsequently ready for shipment (whether packaged or not).

Manufacturer means any person who constructs or imports into the United States an outdoor hydronic heater for use in the Commonwealth.

Model means all outdoor hydronic heaters offered for distribution or sale by a single manufacturer that are the same design and output capacity.

Opacity means the degree to which emissions other than water reduce the transmission of light and obscure the view of an object in the background.

Outdoor Hydronic Heater (OHH) or Heater means a fuel burning device:

- (a) designated to burn wood or other approved solid fuels;
- (b) that the manufacturer specifies for outdoor installation or installation in structures not normally occupied by humans (*e.g.*, garages); and
- (c) heats building space and/or water via the distribution, typically through pipes, of a fluid heated in the device, typically water or a water/antifreeze mixture.

Operator means any person who owns or operates an outdoor hydronic heater in the Commonwealth.

Particulate Matter or PM means the total particulate matter measured in accordance with the test methods specified in 310 CMR 7.26(54)(c)2.

Residential-size Outdoor Hydronic Heater means a heater with a rated thermal output of 350,000 Btu/hr or less as rated by the test method identified in 310 CMR 7.26(54)(c)2.

Sale means the transfer of ownership or control.

Seller means any person who distributes or sells an outdoor hydronic heater for use in the Commonwealth.

Similar in All Material Respects means that the construction materials, exhaust and inlet air system, and other design features are within the allowed tolerances for components identified in 310 CMR 7.26(54)(e)1.

7.26: continued

Startup Period means the time period beginning with flame stability after first charge of wood fuel or other approved solid fuel and is no longer than a two-hour duration. 310 CMR 7.26: Startup Period only includes initial startup where no previous coal bed exists. This does not include refueling.

(52) Requirements for Operators.

- (a) On and after December 26, 2008 no person shall:
1. Purchase, install or allow the installation of an outdoor hydronic heater unless it has been certified in accordance with 310 CMR 7.26(54)(a) to meet the applicable emission standard set forth in 310 CMR 7.26(53)(a) or 310 CMR 7.26(53)(b).
 2. Site or install a residential-size outdoor hydronic heater that meets the emission standard at 310 CMR 7.26(53)(a), unless it is installed at least 50 feet from any property line and 75 feet from any occupied dwelling that it is not serving at the time of installation.
 3. Site or install a commercial-size outdoor hydronic heater that meets the emission standard defined in 310 CMR 7.26(53)(b), unless it is installed at least 275 feet or more from any property line and 300 feet from any occupied dwelling that it is not serving, at the time of installation, unless a variance has been granted pursuant to 310 CMR 7.26(52)3.a. through d. from the setback to the property line that allows a shorter distance than 275 feet.
 - a. Variance Procedure. An application for a variance from the setback to the property line shall be submitted to the Department by the owner prior to installation of the unit. The Department will not grant a variance from the required distance of 300 feet to the nearest occupied dwelling.
 - b. Prior to submitting an application to the Department, the applicant shall, at its sole expense, notify the following groups by certified mail of the request for a variance:
 - i. residents of any occupied dwelling within 500 feet of the proposed location of the unit;
 - ii. the board of health of the municipality in which the unit is to be located; and
 - iii. the board of health of the adjacent municipality if the unit is within 500 feet of an adjacent municipality.
 - c. Application Requirements. In the application for a variance, the owner shall:
 - i. Show that meeting the setback is not feasible, based solely on the size and configuration of the property on which the unit is to be installed. Feasibility shall not include consideration of cost to install the unit if the size of the property is sufficient to meet the setback.
 - ii. Include a detailed site plan that clearly shows the proposed location and distances of the unit relative to the applicant's property lines and the distances to all occupied dwellings or buildings within 500 feet of the unit, and the zoning of the adjacent properties;
 - iii. Include a copy of the notice and certified mail receipts showing the appropriate people were notified as required at 310 CMR 7.26(52)(a)3.b.
 - d. Criteria for Granting or not Granting the Variance.
 - i. Meeting the setback to the property line is not feasible based solely on the size and configuration of the property.
 - ii. In no case shall a variance be granted for a distance of less than 200 feet to the property line.
 - iii. Granting such a variance will not cause or contribute to a condition of air pollution.
 - e. Appeals of Determinations. The applicant or any party who is aggrieved by the decision issued by the Department may request an adjudicatory hearing on that determination in accordance with 310 CMR 1.00 and M.G.L. c. 30A.
 4. Site or install an outdoor hydronic heater that meets the emission standard defined in 310 CMR 7.26(53)(a) or 310 CMR 7.26(53)(b), unless it has a permanent stack extending two feet higher than the peak of any roof structure located within 150 feet of the outdoor hydronic heater, if the outdoor hydronic heater is installed less than 150 feet from the nearest occupied dwelling that it is not serving.
- (b) Existing Units. All operators of existing outdoor hydronic heaters shall comply with the following requirements:
1. 310 CMR 7.26(52)(c) through 310 CMR 7.26(52)(j); and

7.26: continued

2. have a permanent stack extending two feet higher than the peak of any roof structure located within 150 feet of the outdoor hydronic heater, if the outdoor hydronic heater is installed less than 150 feet from the nearest occupied dwelling that it is not serving. Such permanent stack shall be installed no later than March 1, 2009.
- (c) Seasonal Limitations. No person shall cause, suffer, allow or permit the operation of an outdoor hydronic heater from May 16th to September 30th unless the outdoor hydronic heater has been certified in accordance with 310 CMR 7.26(54) to meet the emission standard set forth in 310 CMR 7.26(53)(a) or 310 CMR 7.26(53)(b) as applicable or it is an existing unit installed at least 500 feet from the nearest occupied dwelling that it is not serving.
- (d) Prohibited Fuels. No person shall cause, suffer, allow or permit the burning of any of the following items in an outdoor hydronic heater:
1. Any wood that does not meet the definition of clean wood;
 2. garbage;
 3. tires;
 4. lawn clippings, leaves, brush trimmings, or general yard waste;
 5. materials containing asbestos,
 6. materials containing lead, mercury, or other heavy or toxic metals;
 7. materials containing plastic;
 8. materials containing rubber;
 9. waste petroleum products;
 10. paints and paint thinners;
 11. chemicals;
 12. coal;
 13. glossy or colored papers;
 14. construction and demolition debris;
 15. plywood;
 16. particleboard;
 17. salt water driftwood and other previously salt water saturated materials;
 18. manure;
 19. animal carcasses; and
 20. asphalt products.
- (e) Allowable Fuels. No person that operates an outdoor hydronic heater shall cause, suffer, allow or permit the use of a fuel other than the following:
1. Clean wood;
 2. Wood pellets made from clean wood;
 3. Home heating oil in compliance with the applicable sulfur content limit or natural gas may be used as starter fuels or substitute fuel in dual-fired outdoor hydronic heaters; and
 4. Other biomass fuels as approved by the Department.
- (f) Visible Emission Standard.
1. No person shall cause, suffer, allow or permit the emission of air contaminants from any residential-size outdoor hydronic heater or commercial-size outdoor hydronic heater to exceed an average of 20% opacity for two minutes in any one-hour period.
 2. No person shall cause, suffer, allow or permit the emission of air contaminants from any commercial-size outdoor hydronic heater to exceed at any time 40% opacity for the first six minutes during the startup period of a new fire. For the remainder of the startup period no person shall cause or allow the emission of air contaminants from any outdoor hydronic heater to exceed a 20% opacity standard in any consecutive two minute average period. 310 CMR 7.26(52)(f)2. only applies to the initial firing of the unit where no coal bed exists and does not apply to refueling.
- (g) No person shall cause, suffer, allow or permit the operation of any outdoor hydronic heater except in conformance with the manufacturer's operating and maintenance instructions.
- (h) No person shall operate an outdoor hydronic heater using a rain cap unless this device is required by the manufacturer specifications.
- (i) No person shall cause, suffer, allow or permit the operation of an outdoor hydronic heater in such a manner as to create a condition of air pollution as defined in 310 CMR 7.00.
- (j) Enforcement. An operator of an outdoor hydronic heater shall comply with all applicable regulations, and state and local laws, including but not limited to local bylaws, regulations, and local ordinances. Operators are subject to the enforcement provisions specified at 310 CMR 7.52.

7.26: continued

(53) Requirements for Sellers.

- (a) Particulate Matter Emission Standards for Residential-size Outdoor Hydronic Heaters. On and after December 26, 2008, no person shall import, distribute or sell, install or allow the installation of a residential-size outdoor hydronic heater for use in the Commonwealth, unless it has been certified to meet a particulate matter emission limit of 0.32 lb/MMBtu heat output. In addition, within each of the burn rate categories as established in EPA test method 28 WHH, no individual test run shall exceed 18 grams per hour.
- (b) Particulate Emission Standards Commercial-size Outdoor Hydronic Heaters. On and after December 26, 2008, no person shall import, distribute or sell, install or allow the installation of an outdoor hydronic heater for use in the Commonwealth, unless it has been certified to meet a particulate matter emission standard of 0.32 lb/MMBtu heat output. In addition, within each of the burn rate categories as established in EPA test method 28 WHH, no individual test run shall exceed 20 grams per hour.
- (c) Labeling. On and after December 26, 2008, no person shall import, distribute or sell, install or allow for installation an outdoor hydronic heater for use in the Commonwealth without meeting the labeling requirements in 310 CMR 7.26(54)(j).
- (d) Notice to Buyers. No person shall distribute or sell an outdoor hydronic heater for use in the Commonwealth, unless prior to any sale or lease agreement, the seller provides the buyer or lessee with a copy of 310 CMR 7.26(50) through (54), the owners manual, including operating and maintenance instructions, a written fact sheet provided by the Department and a copy of the certification as required by 310 CMR 7.26(54) of the model to be installed.
- (e) Enforcement. Sellers shall comply with all applicable regulations, and state and local laws including, but not limited to, local bylaws, regulations and ordinances. 310 CMR 7.26(53) is subject to the enforcement provisions specified at 310 CMR 7.52.

(54) Requirements for Manufacturers.

- (a) Certification Requirement.
1. On and after December 26, 2008, no person shall import, distribute or sell, install or allow the installation of an outdoor hydronic heater for use in the Commonwealth, unless the manufacturer has certified compliance with the requirements of 310 CMR 7.26(53)(a) or 310 CMR 7.26(53)(b) in accordance with the provisions of 310 CMR 7.26(54)(b). A certification submitted to the Department shall be valid for a period of five years, unless revoked by the Department under 310 CMR 7.26(54)(g).
 2. The date of certification shall be 30 days from the date postmarked on the envelope used to submit the certification to the Department, as required under 310 CMR 7.26(54)(b), unless the Department, within those 30 days, notifies the manufacturer that the date of certification shall be greater than 30 days.
- (b) Certification Procedure. For each model, a manufacturer shall have at least one outdoor hydronic heater tested by an accredited laboratory in order to demonstrate that the model meets the applicable emission standard(s). The manufacturer shall submit an executive summary to the Department. The Department may request, at its discretion, the entire test report including, but not limited to, the raw data and notes taken at the applicable laboratory. The certification shall include, but not be limited to, the following information that:
1. testing was conducted in accordance with EPA's test method 28 WHH or an alternative method approved by the Department;
 2. testing was conducted by an accredited laboratory;
 3. certification testing was performed for heating season use and/or year-round use;
 4. testing results indicated that the outdoor hydronic heater meets the emission standards as defined in 310 CMR 7.26(53)(a) and 310 CMR 7.26(53)(b);
 5. the manufacturer was not involved in conducting the testing procedures, except for providing specifications and assembly drawings;
 6. the accredited laboratory conducted a certification test on an outdoor hydronic heater similar in all material respects to other units of the model to be certified;
 7. the test data was reviewed in accordance with EPA's ETV Program or, alternatively, an independent contractor approved by the Department who has no conflict of interest or financial gain in the outcome of the testing or by the Department in its discretion solely or in coordination with other NESCAUM state representatives; and
 8. a responsible official certifies in accordance with 310 CMR 70.03(2) on forms prescribed and furnished by the Department.

7.26: continued

(c) Testing Requirements.1. Test Facility.

a. All emissions testing shall be conducted by an accredited, qualified, and independent testing laboratory that has no conflict of interest or financial gain in the outcome of the testing.

b. Manufacturers of outdoor hydronic heaters shall not involve themselves in the conduct of any emissions testing under 310 CMR 7.26(54)(c) or in the operation of the unit being tested, once actual testing has begun.

2. Test Method. Emission tests shall be conducted using one of the following:

a. EPA Test Method 28 WHH; or

b. An alternative method approved by the Department.

3. Btu Rating. Testing to determine the heat output in MMBtu/hr shall be conducted according to the test method defined in 310 CMR 7.26(54)(c)2.

4. Test Protocols. If there is any deviation from the test method defined in 310 CMR 7.26(54)(c)2.a., the manufacturer of the outdoor hydronic heater shall provide the Department, or equivalent authority approved by the Department, with a test protocol for approval in accordance with the testing requirements in 310 CMR 7.26(54)(c) 45 days prior to the emission testing for certification. The Department shall approve or disapprove the proposed test protocol in writing within 30 days.

(d) Approved Test Facilities. An accredited laboratory shall conduct all of the testing, test reporting, and product inspection requirements of 310 CMR 7.26(50) through (54), but the manufacturer shall be responsible for ensuring that all information required pursuant to 310 CMR 7.26(50) through (54) is provided to the Department. Emission test reviews for certification shall be conducted by EPA's ETV Program or, alternatively, an independent contractor approved by the Department, in writing who has no conflict of interest or financial gain in the outcome of the testing. The Department may in its discretion, with reasonable notice, perform the review of testing results for certification of a model or individual outdoor hydronic heater.

1. Laboratory Accreditation Requirements. A laboratory shall be accredited:

a. By the U.S. Environmental Protection Agency (EPA) for testing wood-burning residential space heaters in accordance with 40 CFR Part 60, Subpart AAA;

b. By the American National Standards Institute (ANSI) to the International Standards Organization (ISO) Standard ISO/IEC Guide 65 General Requirements for Bodies Operating Product Certification Systems; or

c. By a nationally recognized accreditation body to ISO/IEC 17025, General Requirements for the Competence of Testing and Calibration Laboratories.

i. The nationally recognized accrediting body itself shall be accredited to, and operate under ISO Guide 58 (Calibration and Testing Laboratory Accreditation Systems – General Requirements for Operation and Recognition), and

ii. By a nationally recognized accreditation body to the American Society for Testing and Materials (ASTM) Standard Practice D7036-04; Competence of Air Emission Testing Bodies.

(e) Change in Design Parameter. A model shall require a new certification whenever any change is made in the design that is presumed to affect the particulate emission rate for that model. Changes that are presumed to affect particulate emission rates for models include, but are not limited to:

1. Tolerance changes: any change in the indicated tolerances of any of the following components is presumed to affect particulate emission rates if that change exceeds ± 0.64 cm ($\pm 1/4$ "') for any linear dimension and $\pm 5\%$ for any cross-sectional area relating to air introduction systems and catalyst bypass gaps, unless other dimensions and cross-sectional areas are previously approved by the Department;

2. Firebox: dimensions;

3. Air Inductions Systems. cross-sectional area of restrictive air inlets, outlets and location, and method of control;

4. Baffles: dimensions and location;

5. Refractory/insulation: dimensions and location;

6. Catalyst: dimensions and location;

7. Catalyst bypass mechanism: dimensions, cross-sectional area, and location;

8. Flue gas exit: dimension and location;

9. Door and catalyst bypass gaskets: dimension and fit;

10. Outer shielding and coverings: dimension and location;

7.26: continued

11. Fuel feed system;
12. Forced air combustion system: location and horsepower of blower motors and fan blade size.

(f) Change in Materials. A model shall require a new certification whenever any change is made in the materials that is presumed to affect the particulate emission rate for that model. Any change in the materials used, including but not limited to, the following components is presumed to affect emissions:

1. refractory/insulation;
2. door and catalyst bypass gaskets;
3. for catalyst equipped units – change in catalyst make, model or composition;
4. heat exchanger;
5. heating fluids.

(g) Revocation. Certification of an outdoor hydronic heater may be revoked by the Department for the following reasons, including but not limited to:

1. The outdoor hydronic heater does not meet the applicable particulate emission standard in 310 CMR 7.26(53)(a) or 310 CMR 7.26(53)(b) based on test data from retesting the original unit used for certification testing;
2. A finding that the certification test was not valid;
3. A finding that the unit does not comply with the labeling requirements detailed in 310 CMR 7.26(54)(j);
4. Failure to comply with recordkeeping requirements pursuant to 310 CMR 7.26(54)(l);
5. Physical examination showing that more than 20% of production units inspected are not similar in all material respects to the model used for certification testing;
6. Failure of the manufacturer to conduct a quality assurance program as detailed in 310 CMR 7.26(54)(h); or
7. Repeated field observed opacity violations of residential-size and commercial-size units and a determination by the Department that the model cannot consistently comply.

(h) Quality Assurance Program – 310 CMR 7.26(54)(h) shall only be effective if EPA’s ETV Program is not the lead quality assurance verifier of outdoor hydronic heater lab certification testing procedures and emissions reporting for model/model line outdoor hydronic heater certifications. The manufacturer or its designee shall conduct a quality assurance program that, at a minimum, includes the following requirements:

1. The manufacturer or authorized representative shall have one in every 150 units produced of a model inspected to determine that the units are within applicable tolerances or to determine if there are any changes in material for all components that affect emissions as listed in 310 CMR 7.26(54)(e) and 310 CMR 7.26(54)(f). A qualified, independent third party contractor or consultant shall conduct the inspection.
2. The manufacturer or authorized representative shall be responsible for ensuring that an emission test is conducted by a qualified, independent third party testing contractor or consultant on a randomly selected unit produced of a model on the following schedule:

If certification test results were:	If yearly production per model is:	
	<500 total production	≥500 total production
>70% of the PM emission standard	When directed by the Department not to exceed one of every 500 units	Every 500 units or triennially (whichever is more frequent)
70% or less of the PM emission standard	When directed by the Department not to exceed one of every 1,000 units	Every 1,000 units or triennially (whichever is more frequent)
30% or less of the PM emission standard	Every 2,000 units	Every 2,000 units or annually (whichever is more frequent)

3. The emission test shall be conducted in conformity with 310 CMR 7.26(54)(c)2.
4. If the manufacturer uses a different material for the firebox, firebox component, or hydronic heating mechanism than the one used for certification testing, the first test shall be performed before 500 units of the modified unit are produced. The manufacturer shall submit an executive summary or if requested by the Department the entire testing results, including but not limited to, the raw data and notes taken by the lab technicians, documenting the results of this emission test to the Department within 45 days of completion of testing.

7.26: continued

- (i) Notification by Manufacturers.
1. By April 30th each year, and as outdoor hydronic heaters are certified, manufacturers shall provide the following information in writing to any person to whom the manufacturer has distributed, intends to distribute, or actually distributes or sells outdoor hydronic heaters for use in the Commonwealth:
 - a. A list of all models of outdoor hydronic heaters that it manufactures for use in the Commonwealth; and
 - b. A list of models that have received certification to meet the particulate matter emission standards as set forth in 310 CMR 7.26(53)(a) and 310 CMR 7.26(53)(b) and the certification requirements as set forth in 310 CMR 7.26(54)(b) for use in the Commonwealth.
 2. This information shall be kept by the manufacturer in accordance with 310 CMR 7.26(54)(l).
- (j) Labeling Requirements. On and after December 26, 2008, manufacturers of outdoor hydronic heaters shall meet the following labeling requirement for units distributed or sold, offered for sale or leased for use in the Commonwealth:
1. Permanent Label. Every outdoor hydronic heater shall have a permanent label that shall:
 - a. Be made of a material expected to last the lifetime of the outdoor wood boiler.
 - b. Be affixed in a readily visible or accessible location.
 - c. Be affixed in such a manner that it cannot be removed from the outdoor wood boiler without damage to the label.
 - d. Display the following information on the label:
 - i. name and address of the manufacturer;
 - ii. date of manufacture;
 - iii. model name and number;
 - iv. serial number;
 - v. thermal output rating in Btu/h;
 - vi. certified emission rate in heat output expressed as lb/MMBtu
 - vii. certified particulate emission rate in grams per hour; and
 - viii. a statement as to whether the unit is certified to be used year-round or only during the heating season or both.
 2. Temporary Label. All units shall have attached to them a temporary label that shall contain the following:
 - a. A statement indicating the certification status of the model;
 - b. A graphic representation of the composite particulate matter emission rate as determined in the certification test, or as determined by the Department;
 - c. A graphic representation of the efficiency of the model;
 - d. A numerical expression of the heat output range in British thermal units per hour (Btu/hr) rounded to the nearest 100 Btu/hr; and
 - e. Statements regarding the importance of proper operation and maintenance.
 3. The temporary label shall:
 - a. Not be combined with any other label or information; and
 - b. Be attached to the unit in such a manner that it can be easily removed by the consumer.
- (k) Owner's Manual. On and after December 26, 2008, each outdoor hydronic heater offered for sale or lease for use in the Commonwealth shall be accompanied by an owner's manual that shall be published by the manufacturer and contain all the following information:
1. Proper thermal output capacity for matching with the building's thermal demands;
 2. Proper installation information;
 3. Operation and maintenance information;
 4. Wood or other approved solid fuel loading procedures;
 5. List of approved solid fuels;
 6. List of prohibited fuels;
 7. Recommendations on wood or other approved solid fuel selection;
 8. Fire starting procedures;
 9. Proper use of air flow devices, if applicable;
 10. Ash removal procedures;
 11. For catalytic models, information pertaining to maintaining catalyst performance, maintenance procedures, procedures for determining catalyst failure or deterioration, procedures for replacement, and information on warranty rights; and

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

(PAGES 250.72.19 THROUGH 250.72.54 ARE RESERVED FOR FUTURE USE.)

7.26: continued

12. Persons operating this hydronic heater are responsible for operation of the hydronic heater so as not to cause a condition of air pollution as defined in 310 CMR 7.01(1).
- (l) Recordkeeping. Every manufacturer of an outdoor hydronic heater shall keep records demonstrating compliance 310 CMR 7.26(54). These records shall be kept and maintained by the manufacturer. These records shall be kept on site for a period not less than five years and shall be made available to the Department within 30 days of a written request.
- (m) Enforcement. A manufacturer of an outdoor hydronic heater shall comply with all applicable regulations, and state and local laws, including but not limited to local bylaws, regulations and ordinances. 310 CMR 7.26(54)(i) through (l) are subject to the enforcement provisions specified at 310 CMR 7.52.

7.29: Emissions Standards for Power Plants

(1) Purpose and Scope. The purpose of 310 CMR 7.29 is to control emissions of nitrogen oxides (NO_x), sulfur dioxide (SO₂), mercury (Hg), carbon monoxide (CO), carbon dioxide (CO₂) and fine particulate matter (PM 2.5) (together "pollutants") from affected facilities in Massachusetts. 310 CMR 7.29 accomplishes this by establishing output-based emission rates for NO_x, SO₂ and CO₂ and establishing a cap on CO₂ and Hg emissions from affected facilities. CO₂ emissions standards set forth in 310 CMR 7.29(5)(a)5.a. and b. shall not apply to emissions that occur after December 31, 2008.

(2) Definitions. The definitions in 310 CMR 7.00 apply to 310 CMR 7.29. However, the terms below have the following meanings when they appear in 310 CMR 7.29. If a term is defined both in 310 CMR 7.00 and in 310 CMR 7.29(2), the definition in 310 CMR 7.29(2) applies for the purpose of 310 CMR 7.29.

Actual Emissions for a facility means that facility's total annual emissions expressed in tons for each pollutant, as measured and reported in accordance with 310 CMR 7.29(7).

Affected Facility means a facility which emitted greater than 500 tons of SO₂ and 500 tons of NO_x during any of the calendar years 1997, 1998 or 1999 and which includes a unit which is a fossil fuel fired boiler or indirect heat exchanger that:

- (a) is regulated by 40 CFR Part 72 (the Federal Acid Rain Program);
- (b) serves a generator with a nameplate capacity of 100 MW or more;
- (c) was permitted prior to August 7, 1977; and
- (d) had not subsequently received a Plan Approval pursuant to 310 CMR 7.00: *Appendix A* or a Permit pursuant to the regulations for Prevention of Significant Deterioration, 40 CFR Part 52, prior to October 31, 1998.

Alternate Hg Designated Representative means, for a coal-fired affected facility and each coal-fired unit at the facility, the natural person who is authorized by the owners and operators of the facility and all such units at the facility in accordance with 40 CFR 60.4110 through 60.4114, to act on behalf of the Hg designated representative in matters pertaining to mercury monitoring, recordkeeping, reporting and compliance.

Alternative Monitoring System means a system or a component of a system designed to provide direct or indirect data of mass emissions per time period, pollutant concentrations, or volumetric flow, that is demonstrated to the Administrator as having the same precision, reliability, accessibility, and timeliness as the data provided by a certified CEMS or certified CEMS component in accordance with 40 CFR Part 75.

Ash means bottom ash, fly ash or ash generated by an ash reduction process derived from combustion of fossil fuels, carbon or other substances.

Automated Data Acquisition and Handling System or DAHS means that component of the mercury continuous emission monitoring system (CEMS), or other emissions monitoring system approved for use under 40 CFR 60.4170 through 60.4176, designed to interpret and convert individual output signals from pollutant concentration monitors, flow monitors, diluent gas monitors, and other component parts of the monitoring system to produce a continuous record of the measured parameters in the measurement units required by 40 CFR 60.4170 through 60.4176.

Block Hourly Average means the average of all valid emission concentrations when the affected unit is operating, measured over a one-hour period of time from the beginning of an hour to the beginning of the next hour.

Calendar Quarter means any consecutive three-month period (nonoverlapping) beginning January 1st, April 1st, July 1st or October 1st.

Calendar Year means any period beginning January 1st and ending December 31st.

Continuous Emission Monitoring System or CEMS means the equipment required by 40 CFR Part 75 used to sample, analyze, measure, and provide, by means of readings recorded at least once every 15 minutes (using an automated data acquisition and handling system (DAHS)), a permanent record of SO₂, NO_x or CO₂ emissions or stack gas volumetric flow rate.

7.29: continued

Historical Actual Emissions or Historical Actual Emission Rate means the average annual emissions or output-based emission rate averaged over 1997, 1998 and 1999. A different three-year period within the past five years may be used if requested by the owner of an affected facility, and if the Department determines that period is more representative of historical actual emissions.

Mercury (Hg) Designated Representative means, for a coal-fired affected facility and each coal-fired unit at the facility, the natural person who is authorized by the owners and operators of the facility and all such units at the facility, in accordance with 40 CFR 60.4110 through 60.4114, to represent and legally bind each owner and operator in matters pertaining to mercury monitoring, recordkeeping, reporting and compliance.

Mercury Continuous Emission Monitoring System or Mercury CEMS means the equipment required under 40 CFR 60.4170 through 60.4176 to sample, analyze, measure, and provide, by means of readings recorded at least once every 15 minutes (using an automated data acquisition and handling system (DAHS)), a permanent record of Hg emissions, stack gas volumetric flow rate, stack gas moisture content, and oxygen or carbon dioxide concentration (as applicable), in a manner consistent with 40 CFR Part 75. The following systems are the principal types of CEMS required under 40 CFR 60.4170 through 60.4176:

- (a) A flow monitoring system, consisting of a stack flow rate monitor and an automated data acquisition and handling system and providing a permanent, continuous record of stack gas volumetric flow rate, in units of standard cubic feet per hour (SCFH);
- (b) A Hg concentration monitoring system, consisting of a Hg pollutant concentration monitor and an automated data acquisition and handling system and providing a permanent, continuous record of Hg emissions in units of micrograms per dry standard cubic meter ($\mu\text{g}/\text{dscm}$);
- (c) A moisture monitoring system, as defined in 40 CFR 75.11(b)(2) and providing a permanent, continuous record of the stack gas moisture content, in percent H_2O .
- (d) A carbon dioxide monitoring system, consisting of a CO_2 concentration monitor (or an oxygen monitor plus suitable mathematical equations from which the CO_2 concentration is derived) and an automated data acquisition and handling system and providing a permanent, continuous record of CO_2 emissions, in percent CO_2 ; and
- (e) An oxygen monitoring system, consisting of an O_2 concentration monitor and an automated data acquisition and handling system and providing a permanent, continuous record of O_2 , in percent O_2 .

Mercury Monitoring System means a mercury continuous emission monitoring system, an alternative monitoring system, or a sorbent trap monitoring system under 40 CFR Part 60 or 75 but does not mean the low mass emissions excepted monitoring methodology in 40 CFR 75.81(d).

MWh means megawatt-hours of net electrical output.

Net Electrical Output of a Facility means the total actual net electrical output of the facility used by the New England Independent System Operator to determine settlement resources of energy market participants.

Output-based Emission Rate means an emission rate for any pollutant, expressed in terms of actual emissions in pounds over a specified time period per megawatt-hour of net electrical output produced over the same time period.

Output-based Emission Standard means the emission standards for each applicable pollutant, expressed in terms of pounds of pollutant emitted per megawatt-hour of net electrical output produced, as set forth in 310 CMR 7.29(5).

Repowering means:

- (a) Qualifying Repowering Technology as defined by 40 CFR Part 72 or,
- (b) The replacement of the heat or power from a unit subject to 40 CFR Part 72 at an affected facility with either a new combustion unit, regardless of the fuel used, or the purchase of heat or power from the owner of a new combustion unit, regardless of the fuel used, provided the replacement unit:

7.29: continued

1. (Regardless of owner) is on the same, or contiguous property as the replaced unit;
2. Has a maximum heat output rate or power output rate equal to or greater than the maximum heat output rate or power output rate of the replaced unit; and, the replaced unit is physically removed from the affected facility, or the heat or power available from the replaced unit is limited by limiting hours of operation, maximum heat input or some other method approved by the Department; and,
3. Incorporates technology capable of controlling multiple combustion pollutants simultaneously with improved fuel, boiler or generation efficiency and significantly greater waste reduction relative to the performance of technology in widespread commercial use as determined by the Department.

Rolling with respect to an average means the calculation of an average by dropping the earliest month or calendar quarter value and incorporating the latest month or calendar quarter value for the period over which an average is calculated.

Sorbent Trap Monitoring System means the equipment required by 40 CFR Part 75 for the continuous monitoring of mercury emissions, using paired sorbent traps containing iodinated charcoal (IC) or other suitable reagent(s). This excepted monitoring system consists of a probe, the paired sorbent traps, a heated umbilical line, moisture removal components, an airtight sample pump, a dry gas meter, and an automated data acquisition and handling system. The monitoring system samples the stack gas at a rate proportional to the stack gas volumetric flow rate. The sampling is a batch process. Using the sample volume measured by the dry gas meter and the results of the analyses of the sorbent traps, the average mercury concentration in the stack gas for the sampling period is determined, in units of micrograms per dry standard cubic meter ($\mu\text{g}/\text{dscm}$). Mercury mass emissions for each hour in the sampling period are calculated using the average mercury concentration for that period, in conjunction with contemporaneous hourly measurements of the stack gas flow rate, corrected for the stack gas moisture content.

Total Mercury means the sum of particulate-bound and vapor-phase (elemental and oxidized) mercury in combustion gases or emitted to the atmosphere.

(3) Applicability. The provisions of 310 CMR 7.29 apply to any person who owns, leases, operates or controls an affected facility.

(4) General Provisions.

(a) Each affected facility shall comply with the applicable emission standards established in 310 CMR 7.29(5).

(b) Any person subject to 310 CMR 7.29 shall comply with all other applicable regulations, including, but not limited to: 310 CMR 7.02, 310 CMR 7.19, 310 CMR 7.34, 310 CMR 7.70, 310 CMR 7.00: *Appendix A*, and 310 CMR 7.00: *Appendix C*. If provisions or requirements from any other regulation or permit conflict with a provision of 310 CMR 7.29, the more stringent of the provisions will apply unless otherwise determined by the Department in the affected facility's operating permit. Regardless of the Department's determination in the operating permit, any person subject to 310 CMR 7.29 shall comply with all applicable federal requirements.

(c) In the case of imminent threat to the reliability of New England's electricity system, the Department may promulgate an emergency regulation, as per M.G.L. c. 30A, §§ 2 and 3, to mitigate the emergency situation.

(5) Emission Requirements.

(a) Emission Standards for Affected Facilities.

1. Nitrogen Oxides Emission Standards.

a. Effective on the applicable date in 310 CMR 7.29(6)(c), emissions of nitrogen oxides shall not exceed an emission rate of 1.5 lbs./MWh calculated over any consecutive 12 month period, recalculated monthly; and,

b. Effective on the applicable date in 310 CMR 7.29(6)(c), emissions of nitrogen oxides shall not exceed an emission rate of 3.0 lbs./MWh calculated over any individual calendar month.

7.29: continued

2. Sulfur Dioxide Emission Standards.
 - a. Effective on the applicable date in 310 CMR 7.29(6)(c), emissions of sulfur dioxide shall not exceed an emission rate of 6.0 lbs./MWh calculated over any consecutive 12 month period, recalculated monthly.
 - b. Effective on the applicable date in 310 CMR 7.29(6)(c),
 - i. Emissions of sulfur dioxide shall not exceed an emission rate of 3.0 lbs./MWh calculated over any consecutive 12 month period, recalculated monthly; and,
 - ii. Emissions of sulfur dioxide shall not exceed an emission rate of 6.0 lbs./MWh calculated over any individual calendar month.
3. Mercury Emissions.
 - a. By December 1, 2002, the Department will complete an evaluation of the technological and economic feasibility of controlling and eliminating emissions of mercury from the combustion of solid fossil fuel in Massachusetts in accordance with the Mercury Action Plan of the Conference of New England Governors and Eastern Canadian Premiers.
 - b. Deleted.
 - c. The Emission Control Plan submitted to the Department under 310 CMR 7.29(6) shall demonstrate, and any person who owns, leases, operates or controls an affected facility shall ensure, that beginning at the time of the affected facility's earliest applicable compliance date in 310 CMR 7.29(6)(c), or at the time of the facility's earliest applicable Phase 1 NO_x and SO₂ compliance date under an administrative order existing prior to June 4, 2004, whichever is later, total annual mercury emissions from combustion of solid fuels in units subject to 40 CFR Part 72 located at an affected facility or from re-burn of ash in Massachusetts will not exceed the average annual emissions calculated using the results of the stack tests required in 310 CMR 7.29(5)(a)3.d.ii.. The average annual emissions calculated using the results of the stack tests required in 310 CMR 7.29(5)(a)3.d.ii. equal the average measured pounds of mercury emitted per million Btu consumed multiplied by the heat input in million Btu averaged over 1997, 1998 and 1999. A different three-calendar-year period within the five years prior to May 11, 2001 may be used if requested by the owner of an affected facility, and if the Department determines that the different period is more representative of historical actual heat input. Total annual mercury emissions equal the total emissions from:
 - i. combustion of solid fossil fuel in units subject to 40 CFR Part 72 located at an affected facility, determined using emissions testing at least every other calendar quarter from October 1, 2006 until a certified mercury monitoring system is used to demonstrate compliance with the standards in 310 CMR 7.29(5)(a)3.e. or f., and using a certified mercury monitoring system thereafter, and
 - ii. re-burn of ash, where such ash was produced by the combustion of fossil fuel or ash at any affected facility. When ash is re-burned at an affected facility, the associated mercury emissions shall be attributed to the affected facility at which the ash is re-burned. When ash produced by an affected facility is used in Massachusetts as a cement kiln fuel, as an asphalt filler, or in other high temperature processes that volatilize mercury,
 - (i) the mercury content of the utilized ash shall be measured weekly using a method acceptable to the Department,
 - (ii) all of the mercury in the utilized ash shall be assumed to be emitted, unless it can be demonstrated with data acceptable to the Department that a lesser amount of mercury is emitted,
 - (iii) the associated mercury emissions shall be attributed to the affected facility from which the ash is shipped to the cement kiln, asphalt batching plant or other high temperature processing location, and
 - (iv) a proposal shall be submitted for Department approval at least 45 days prior to such use, or at least 45 days prior to October 1, 2006, whichever is later, detailing the proposed measurement methods to be used to comply with 7.29(5)(a)3.c.ii.(i) and (ii).

7.29: continued

d. Fuel Sampling and Stack Testing.

i. Beginning on May 11, 2001 until August 1, 2002, any person who owns, leases, operates or controls an affected facility which combusts solid fossil fuel in a Part 72 unit shall test each shipment of coal at the time received. The test shall be conducted by a method approved by the Department, and report the mercury and chlorine content of the coal. The results of each interim fuel testing shall be reported to the Department with the results of the next stack test as required in 310 CMR 7.29(5)(a)3.d.ii.

ii. Any person who owns, leases, operates or controls an affected facility which combusts solid fossil fuel shall perform stack tests for mercury. The stack tests shall:

- Be conducted using a DEP-approved test method detailed in a test protocol submitted to the Department at least 45 days before commencement of testing, and notify the Department of the specific date the test will be conducted at least 30 days prior to conducting the test;

- Test the mercury concentrations and species before all add-on air pollution control equipment (inlet) and after (outlet);

- Be conducted as follows: One test shall be performed before August 1, 2001,

- A second test shall be performed after December 1, 2001 but not later than February 1, 2002,

- A third test shall be performed after June 1, 2002 but not later than August 1, 2002

- The results of each stack test shall be reported to the Department within 30 days after conducting each stack test.

iii. Until a certified mercury monitoring system is installed, stack tests for mercury shall consist at a minimum of three runs at full load on each unit firing solid fossil fuel or ash according to a testing protocol acceptable to the Department. Unless a mercury monitoring system that measures particulate-bound mercury, either combined with or separate from the measurement of vapor-phase mercury, is installed at a unit for purposes of determining compliance with the standards in 310 CMR 7.29(5)(a)3.c., e. and f., stack tests for mercury, and certification tests and Relative Accuracy Test Audits for mercury monitoring systems, shall determine total and particulate-bound mercury. Relative accuracy shall be calculated as specified in 40 CFR Part 75. The results of each stack test shall be reported to the Department within 45 days after conducting each stack test.

e. Effective on January 1, 2008, or 15 months after the facility's earliest applicable Phase 1 NO_x and SO₂ compliance date under an administrative order existing prior to June 4, 2004, whichever is later, any person who owns, leases, operates or controls an affected facility which combusts solid fossil fuel or ash shall comply with at least one of the following mercury emissions standards:

- i. a facility average total mercury removal efficiency of 85% or greater for those units combusting solid fossil fuel or ash. The mercury removal efficiency based on a mercury monitoring system shall be calculated based on the average historic mercury inlet emissions determined under 310 CMR 7.29(5)(a)3.d.ii. using the methodology approved by the Department in the monitoring plan required under 310 CMR 7.29(5)(a)3.g. and shall be calculated on a rolling 12 month basis; or

- ii. a facility average total mercury emissions rate of 0.0075 lbs./GWh or less for those units combusting solid fossil fuel or ash. The mercury emissions rate based on a mercury monitoring system shall be calculated using the mercury mass emissions methodology specified in 40 CFR Part 75 and approved by the Department in the monitoring plan required under 310 CMR 7.29(5)(a)3.g. and shall be calculated on a rolling 12 month basis.

7.29: continued

- iii. Notwithstanding 310 CMR 7.29(5)(a)3.e.i. and ii., any person who owns, leases, operates or controls an affected unit which combusts solid fossil fuel or ash and has an enforceable commitment with the Department to terminate operations by January 1, 2010, may comply with 310 CMR 7.29 (5)(a)3.e.i. or ii. through January 1, 2010 by complying with an approved 310 CMR 7.29 emission control plan modification achieving early or off-site reductions. To comply with the foregoing, such person shall propose under 310 CMR 7.29(6)(h)1. to amend the approved emission control plan. Such early or off-site reductions shall be in an amount of at least the equivalent mass of mercury reductions required under 310 CMR 7.29 (5)(a)3.e.i. or ii. Any early reductions shall be accrued on-site at the stack prior to the compliance date effective under 310 CMR 7.29(5)(a)3.e. Any off-site mercury air emission reductions shall be accrued on at least a one pound reduced for one pound credited basis from facilities located in the same DEP Region as the affected unit. Any other off-site mercury reductions shall be accrued on at least a ten pounds reduced for one pound credited basis from facilities located in the same DEP Region as the affected unit.
- f. Effective on October 1, 2012, any person who owns, leases, operates or controls an affected facility which combusts solid fossil fuel or ash shall comply with at least one of the following mercury emissions standards:
- i. a facility average total mercury removal efficiency of 95% or greater for those units combusting solid fossil fuel or ash. The mercury removal efficiency shall be calculated based on a mercury monitoring system as provided in 310 CMR 7.29(5)(a)3.e.i.; or
 - ii. an average total mercury emission rate of 0.0025 lbs./GWh or less for those units combusting solid fossil fuel or ash. The mercury emission rate shall be calculated based on a mercury monitoring system as provided in 310 CMR 7.29(5)(a)3.e.ii.
- g. Mercury Monitoring Systems.
- i. By January 1, 2008, any person who owns, leases, operates or controls an affected facility which combusts solid fossil fuel or ash shall install, certify, and operate a mercury monitoring system in accordance with 40 CFR Part 75 and 40 CFR 60.4106(b)(1) to measure mercury stack emissions from each solid fossil fuel- or ash-fired unit at a facility subject to 310 CMR 7.29. Any person required to install a mercury monitoring system shall submit a monitoring plan for Department approval and shall propose to amend the approved emission control plan in accordance with 310 CMR 7.29(6)(n)1. to incorporate the mercury monitoring approach at least 45 days prior to the commencement of initial certification testing.
 - ii. Affected facilities must include in their monitoring plan a proposed methodology to demonstrate compliance with the emission standards in 310 CMR 7.29(5)(a)3.e. and f.
 - iii. If a mercury monitoring system capable of measuring only vapor-phase mercury is installed at a unit for purposes of determining compliance with the standards in 310 CMR 7.29(5)(a)3.c., e. and f., total mercury shall be determined by taking into account the average particulate-bound mercury measured during the most recent stack test on that unit in combination with the total vapor-phase mercury measured by the mercury monitoring system until such time as a mercury monitoring system to measure particulate-bound mercury is installed and operational at a unit.
 - iv. (i) Notwithstanding 310 CMR 7.29(5)(a)3.g.i., a unit with an enforceable commitment to terminate operations by January 1, 2010 and that qualifies to use the mercury low mass emissions excepted monitoring methodology under 40 CFR 75.81(b) may choose between quarterly stack testing and a mercury monitoring system to document mercury emissions in the period from January 1, 2008 until the time such unit terminates operation or January 1, 2009, whichever is earlier.

7.29: continued

(ii) Notwithstanding 310 CMR 7.29(5)(a)3.g.i., a unit with an enforceable commitment to terminate operations by January 1, 2010 and that qualifies to use the mercury low mass emissions excepted monitoring methodology under 40 CFR 75.81(b) may choose between the low mass emissions excepted monitoring methodology with retests conducted at least every calendar quarter and a mercury monitoring system to document mercury emissions in the period from January 1, 2009 until the time such unit terminates operation or January 1, 2010, whichever is earlier; however, if such a unit must install a mercury monitoring system to meet a federal requirement, then the mercury monitoring system shall document mercury emissions instead of stack testing.

4. Carbon Monoxide Emission Standards. (Reserved.)
 5. Carbon Dioxide Emission Standards.
 - a. By September 1, 2009, any person who owns, leases, operates or controls an affected facility shall demonstrate that emissions of carbon dioxide from the affected facility in calendar years 2006, 2007, and 2008, expressed in tons, from Part 72 units located at the affected facility did not exceed historical actual emissions. If the Department has received a technically complete plan approval application under 310 CMR 7.02 for a new or repowered electric generating unit subject to 40 CFR Part 72 at an affected facility prior to May 11, 2001, then the emissions from the new or repowered unit may be included in the calculation of historical actual emissions. The calculation of historical actual emissions which includes emissions from a new or repowered unit shall not include emissions from any unit shutdown or removed from operation at the affected facility that is included in the technically complete plan approval application pursuant to 310 CMR 7.02. These emissions standards shall not apply to the emissions of CO₂ that occur after December 31, 2008.
 - b. By September 1, 2009, any person who owns, leases, operates or controls an affected facility shall demonstrate to the Department that the average emission rate of carbon dioxide from Part 72 units located at the affected facility did not exceed an emission rate of 1800 lbs./MWh in calendar year 2008. The average emission rate is calculated by dividing the total number of pounds of CO₂ emitted by the affected facility in the calendar year by the net electrical output for the affected facility for the same calendar year. These emissions standards shall not apply to the emissions of CO₂ that occur after December 31, 2008.
 - c. Compliance with 310 CMR 7.29(5)(a)5.a. may be demonstrated by using emission reductions, avoided emissions or sequestered emissions verified under 310 CMR 7.00: *Appendix B(7)* to offset emissions above the historical actual emissions, provided the Department determines such emission reductions, avoided emissions or sequestered emissions are real, additional, verifiable, permanent, and enforceable, as defined in 310 CMR 7.00: *Appendix B(7)* or by using the GHG Expendable Trust under the conditions specified in 310 CMR 7.00: *Appendix B(7)(d)5*.
 - d. Compliance with 310 CMR 7.29(5)(a)5.b. may be demonstrated by using emission reductions, avoided emissions or sequestered emissions verified under 310 CMR 7.00: *Appendix B(7)* to offset excess emissions, provided the Department determines such emission reductions, avoided emissions or sequestered emissions are real, additional, verifiable, permanent, and enforceable as defined in 310 CMR 7.00: *Appendix B(7)* or by using the GHG Expendable Trust under the conditions specified in 310 CMR 7.00: *Appendix B(7)(d)5*. Excess emissions are any emissions above the net electrical output of the facility times 1800 lbs./MWh.
 6. Fine Particulate Matter Emissions Standards. (Reserved.)
- (b) Compliance with the emission standards in 310 CMR 7.29(5)(a), may be demonstrated by any combination of the following:
1. Dividing the total emissions of each pollutant by the total net electrical output from all electric generating units subject to 40 CFR Part 72 located at the affected facility as of May 11, 2001 or repowered at the affected facility after May 11, 2001. For demonstrating compliance with the mercury emissions standards in 310 CMR 7.29(5)(a)3., the person who owns, leases, operates or controls an affected facility shall include in the calculation only units that fire solid fossil fuel or ash, or that repowered a unit that fired solid fossil fuel or ash.

7.29: continued

2. For the SO₂ emission standards in 310 CMR 7.29(5)(a)2., using SO₂ reductions at the affected facility below historical actual emissions which were made after May 11, 2001, and prior to the earliest applicable date set in 310 CMR 7.29(6). The total amount of tons produced through early reductions each year is calculated by multiplying the facility's net electrical output for that year times (the historical actual emission rate minus that year's actual emission rate in lbs./MWh) divided by 2000. The amount of early reductions, with supporting information, shall be provided to the Department prior to use for compliance with 310 CMR 7.29(5)(a)2.a.. Each ton of reduction may be used, once, to offset one ton of excess emissions from the facility. Excess emissions are any emissions above a level equal to the net electrical output of the facility times the applicable emission standard in 310 CMR 7.29(5)(a)2.
 3. For the emission standards in 310 CMR 7.29(5)(a)2.b., using SO₂ allowances created pursuant to 40 CFR Part 72 (the Federal Acid Rain Program). Three allowances shall be used to offset each ton of excess emissions above the emission standard. Such SO₂ allowances shall be in addition to those allowances used by the facility to comply with the requirements of 40 CFR part 72, and shall be transferred to the Department and retired for the benefit of the environment.
- (6) Emission Control Plans, Compliance Paths and Compliance Dates.
- (a) Emission Control Plan Deadline and General Provisions.
 1. Any person who owns, leases, operates or controls an affected facility shall submit an emission control plan for Department approval under 310 CMR 7.29 on or before January 1, 2002 regardless of the compliance path chosen.
 2. Any person who owns, leases, operates or controls an affected facility who is required to submit an application for a plan approval under 310 CMR 7.02 shall submit an application for plan approval pursuant to 310 CMR 7.02 on or before January 1, 2003.
 3. Any person who owns, leases, operates, or controls an affected facility which installs mercury control equipment that is not already contained in an emission control plan approval under 310 CMR 7.29 shall submit a mercury emissions control plan amendment application under 310 CMR 7.29(6)(h) at least 90 days before intended installation and may not install such equipment until receiving approval of the revision.
 4. Any person who owns, leases, operates or controls an affected facility which combusts solid fossil fuel shall by December 4, 2004, propose under 310 CMR 7.29(6)(h)1. to amend the approved emission control plan to incorporate the mercury emission cap established in 310 CMR 7.29(5)(a)3.c. Notwithstanding 310 CMR 7.29(5)(a)3.c., any facility with average annual emissions of less than five pounds, calculated using the results of the stack tests required in 310 CMR 7.29(5)(a)3.d.ii., may propose and be approved to use early or off-site reductions to demonstrate compliance with 310 CMR 7.29(5)(a)3.c. through September 30, 2012. Any early reductions shall be accrued on-site at the stack prior to the compliance date effective under 310 CMR 7.29(5)(a)3.c. Any off-site mercury air emission reductions shall be accrued on at least a one pound reduced for one pound credited basis from facilities located in the same DEP Region as the affected unit. Any other off-site mercury reductions shall be accrued on at least a ten pounds reduced for one pound credited basis from facilities located in the same DEP Region as the affected unit.
 - (b) Emission Control Plan Contents. The emission control plan submitted pursuant to 310 CMR 7.29(6) shall include, but is not limited to, the following:
 1. The name of the company and the affected facility.
 2. A list of units at the affected facility that will be used to demonstrate compliance with 310 CMR 7.29(5), including which units will be included in calculating historical actual emissions.
 3. The name of the company contact responsible for compliance with 310 CMR 7.29.
 4. A statement that the affected facility has a monitoring plan in place which meets the requirements of 40 CFR Part 72. Any modifications to an affected facility's monitoring methodology approved pursuant to the requirements of 40 CFR 72 are hereby incorporated into the approved emission control plan under 310 CMR 7.29.
 5. Signature of the company contact responsible for compliance with 310 CMR 7.29.

7.29: continued

6. Identification of the affected facility, including plant name and the ORIS or facility code assigned to the facility by the U.S. Energy Information Administration, if applicable.
 7. A description of how the affected facility will comply with the emission standards contained in 310 CMR 7.29(5), by the applicable compliance dates contained in 310 CMR 7.29(6)(c) including, but not limited to, the control equipment the affected facility intends to use.
 8. A proposed schedule with interim milestones for each activity leading to compliance with the requirements in 310 CMR 7.29(5). Such information shall include, but not be limited to, sufficient information to allow DEP to consult with the Division of Energy Resources and the Department of Telecommunications and Energy, to address any concerns with potential impacts to the reliability of the New England power system.
 9. A description of how emission reduction measures implemented to achieve reductions in one pollutant will optimize reductions in other pollutants.
 10. A description of the sampling and testing protocol(s) meeting the requirements of 310 CMR 7.29(5)(a)3.d.
 11. Any other information requested by the Department.
- (c) Compliance Paths and Compliance Dates.
1. Any person who owns, leases, operates or controls an affected facility who does not choose to comply with the emissions standards in 310 CMR 7.29(5) by repowering a unit subject to 40 CFR Part 72 at the affected facility, or is not required to receive a plan approval pursuant to 310 CMR 7.02 for construction, substantial reconstruction or alteration of a unit at the affected facility subject to 40 CFR Part 72 for the purpose of compliance with 310 CMR 7.29, shall begin to comply with the emission standards in 310 CMR 7.29(5) by the following dates:
 - a. For the emission standards in 310 CMR 7.29(5)(a)1.a. and (5)(a)2.a., October 1, 2004; and
 - b. For the emission standards in 310 CMR 7.29(5)(a)1.b., and (5)(a)2.b., October 1, 2006.
 2. Any person who owns, leases, operates or controls an affected facility who chooses to comply with the emissions standards in 310 CMR 7.29(5) by repowering at least one unit at the affected facility subject to 40 CFR Part 72, or is required to receive a plan approval pursuant to 310 CMR 7.02 for construction, substantial reconstruction or alteration of a unit at the affected facility subject to 40 CFR Part 72 for the purpose of compliance with 310 CMR 7.29, and submits, on or before January 1, 2003, an administratively complete application pursuant to 310 CMR 7.02, shall begin to comply with the emission standards in 310 CMR 7.29(5) by the following dates:
 - a. For the emissions standards contained in 310 CMR 7.29(5)(a)1.a. and (5)(a)2.a., October 1, 2006; and
 - b. For the emissions standards contained in 310 CMR 7.29(5)(a)1.b. and (5)(a)2.b., October 1, 2008.
 3. If an affected facility has units with different applicable compliance dates for a particular standard, the later compliance date applies to all units at the affected facility.
- (d) Interaction with 310 CMR 7.02. A plan approval under 310 CMR 7.02(1) may be required for construction, substantial reconstruction or alteration of a unit at an affected facility to comply with 310 CMR 7.29. If such construction, substantial reconstruction or alteration to the facility triggers any applicable section under 310 CMR 7.02(4)(a) and 310 CMR 7.02(5)(a), a plan approval under 310 CMR 7.02 is required. If a plan approval is required under 310 CMR 7.02, then upon the Department's issuance of the plan approval, the Department will modify the affected facility's emission control plan pursuant to 310 CMR 7.29(6)(g).
- (e) Public Comment. For each ECP application submitted pursuant to 310 CMR 7.29(6), the Department shall:
1. Provide a 30-day period for submittal of public comment;
 2. Post on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period, the following:
 - a. Notice of availability of the Department's proposed decision to approve or deny the ECP application and information on how to submit public comment;
 - b. The Department's proposed decision to approve or deny the ECP application; and

7.29: continued

- c. Information on how to access the administrative record for the Department's proposed decision to approve or deny the ECP application.
3. Send a copy of the notice required under 310 CMR 7.29(6)(e)2.a. to EPA.
- (f) Approval of the Emission Control Plan.
 1. After the close of the public comment period, and consideration of any public comments, the Department shall issue a disapproval of the emission control plan, a final approval of the ECP, or a final approval of the ECP with conditions, based on whether the ECP as submitted meets the requirements of 310 CMR 7.29.
 2. Upon final approval of an ECP, any person who owns, leases operates or controls an affected facility shall implement and comply with the approved ECP.

NON-TEXT PAGE

7.29: continued

(g) Modification to an Affected Facility's Operating Permit. For any person who owns, leases, operates or controls an affected facility's operating permit, will be modified upon approval of the ECP in accordance with the procedures in 310 CMR 7.00: *Appendix C(8)*. No additional application fee is necessary to modify the operating permit at the same time the ECP is approved.

(h) Modifications to an Affected Facility's Emission Control Plan.

1. Any person subject to 310 CMR 7.29 may propose amendments to the approved ECP. If the Department proposes to approve such amendments, or approve such amendments with conditions, then the Department shall:

a. Provide a 30-day period for submittal of public comment;

b. Post on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period, the following:

i. Notice of availability of the Department's proposed decision to approve or deny the ECP application and information on how to submit public comment;

ii. The Department's proposed decision to approve or deny the ECP application; and

iii. Information on how to access the administrative record for the Department's proposed decision to approve or deny the ECP application.

c. Send a copy of the notice required under 310 CMR 7.29(6)(h)1.b.i. to EPA.

Modifications to an affected facility's monitoring system approved pursuant to the requirements of 40 CFR Part 72 are not subject to such public comment prior to approval.

2. For the purposes of evaluating system performance, testing new technology or control technologies, diagnostic testing, or other related activities that are anticipated to reduce air pollution or advance the state-of-the-art technology for controlling facility mercury emissions, the Department may issue an ECP approval in the form of a limited amendment to the ECP for a limited period of time for the purpose of achieving compliance with the requirements of 310 CMR 7.29(5)(a)3.e. and f. The Department approval will detail the duration of the time period. The Department shall post a notice of public comment on the draft approval in accordance with the requirements of 310 CMR 7.29(6)(e)2. and 3. The Department shall provide a ten day public comment period following publication of the notice, and may hold a public hearing.

(7) Reporting, Compliance Certification, and Recordkeeping.

(a) By January 30 of the year following the earliest applicable compliance date for the affected facility under 310 CMR 7.29(6)(c), and January 30 of each calendar year thereafter, the company representative responsible for compliance at each affected facility shall submit a report to the Department demonstrating compliance with the emission standards contained in 310 CMR 7.29(5)(a) and in an approved emission control plan. The report shall demonstrate compliance with any applicable monthly emission rate for each month of the previous calendar year, and with any applicable 12-month emission rate for each of the 12 previous consecutive 12-month periods. For the mercury standards at 310 CMR 7.29(5)(a)3.c., the compliance reports due January 30, 2007 and 2008 shall include the quarterly emissions for each quarter beginning October 1, 2006. For the mercury standards at 310 CMR 7.29(5)(a)3.c., e., and f., the compliance report due January 30, 2009 and each report thereafter shall demonstrate compliance with any applicable annual standard for the previous calendar year and with any applicable 12-month standard for each of the 12 previous consecutive 12-month periods.

(b) The compliance report shall contain the following:

1. Actual emissions for each pollutant, expressed in tons for SO₂, CO₂, and NO_x, for each of the preceding 12 months and expressed in thousandths of ounces for mercury, for each of the preceding four calendar quarters beginning October 1, 2006 and preceding 12 months beginning January 1, 2008. Actual emissions shall be provided for individual units and as a facility total for all units included in the calculation demonstrating compliance. Actual emissions provided under 310 CMR 7.29 shall be reported in accordance with:

a. 40 CFR Part 75 for SO₂, CO₂, and NO_x, and, no later than January 1, 2009, for mercury;

7.29: continued

- b. for the standards at 310 CMR 7.29(5)(a)3.c.i. based on stack tests, by calculating the thousands of ounces of mercury from:
 - i. the average measured pounds of mercury emitted per million Btu consumed for the calendar year multiplied by
 - ii. the heat input determined under 40 CFR Part 75 for the calendar year. Affected facilities may choose to subtract the heat input attributable to combustion of fuels other than solid-fossil fuel and ash if such heat input is determined using the procedures of 40 CFR Part 75 Appendix D.
 - c. for the standards at 310 CMR 7.29(5)(a)3.c.ii., by assuming all of the mercury in the utilized ash is emitted, unless a lesser amount of mercury has been approved under 310 CMR 7.29(5)(a)3.c.ii.(iv).
 - d. Any particulate-bound mercury accounted for under the provisions of 310 CMR 7.29(5)(a)3.g.ii. shall be calculated from:
 - i. the most recent average measured pounds of particulate mercury emitted per million Btu consumed multiplied by
 - ii. the heat input determined under 40 CFR Part 75 for each calendar month. Affected facilities may choose to subtract the heat input attributable to combustion of fuels other than solid-fossil fuel and ash if such heat input is determined using the procedures of 40 CFR Part 75 Appendix D.
 - 2. Actual net electrical output for each of the preceding 12 months, expressed in megawatt-hours. Actual net electrical output shall be provided for individual units and as a facility total for all units included in the calculation demonstrating compliance.
 - 3. The resulting output-based emission rates for each of the preceding 12 months, and each of the 12 consecutive rolling month time periods, expressed in pounds per megawatt-hour for SO₂, CO₂, and NO_x and pounds per gigawatt-hour for mercury. Output-based emission rates shall be provided for individual units and as a facility total for all units included in the calculation demonstrating compliance.
 - 4. A compliance certification report, which shall contain the following elements:
 - a. A statement certifying that the monitoring data reflects operations at the affected facility.
 - b. A statement that all SO₂, CO₂, and NO_x emissions, and, beginning January 1, 2009, all mercury emissions, from the affected facility were accounted for, either through the applicable monitoring or through application of the appropriate missing data procedures and reported in the quarterly reports. If provisionally certified data were reported, the company representative responsible for compliance with 310 CMR 7.29 shall indicate whether the status of all provisionally certified data was resolved and all necessary quarterly reports were submitted.
 - c. A statement certifying that the MWhs of net electrical output used in compliance calculations reflect the total actual electrical output of the facility used by the New England Independent System Operator to determine settlement resources of energy market participants.
 - d. A statement notifying the Department of any changes in the method of operation at the affected facility or the method of monitoring the units at the affected facility during the previous year. If a change is reported, then specify the nature of the change, the reason for the change, when the change occurred, and how the facility's compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor re-certification.
 - e. A certification statement stating (verbatim): "I am authorized to make this submission on behalf of the owners, lessees, operators and controllers of the affected facilities for which the submission is made. I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines or imprisonment."
- (c) The Department may verify compliance by whatever means necessary, including but not limited to:
1. Inspection of a unit's operating records;

7.29: continued

2. Requiring the person who owns, leases, operates or controls an affected facility to submit information on actual electrical output of company generating units provided to that person by the New England Independent System Operator;
 3. Testing emission monitoring devices; and,
 4. Requiring the person who owns, leases, operates or controls an affected facility to conduct emissions testing under the supervision of the Department.
- (d) Any person who owns, leases, operates or controls an affected facility shall keep all measurements, data, reports and other information required by 310 CMR 7.29 for five years, or any other period consistent with the affected facility's operating permit.
- (e) For units that apply carbon or other sorbent injection for mercury control, the following records shall be kept until such time as a mercury monitoring system is installed at that unit:
1. The average carbon or other sorbent mass feed rate (in lbs/hr) estimated during the initial mercury optimization test and all subsequent mercury emissions tests, with supporting calculations.
 2. The average carbon or other sorbent mass feed rate (in lbs/hr) estimated for each hour of operation, with supporting calculations.
 3. The total carbon or other sorbent usage for each calendar quarter, with supporting calculations.
 4. The carbon or other sorbent injection system operating parameter data for the parameter(s) that are the primary indicator(s) of carbon or other sorbent feed rate.
 5. Identification of the calendar dates when the average carbon or other sorbent mass feed rate recorded under 310 CMR 7.29(7)(e)2. was less than the hourly carbon feed rate estimated during and recorded under 310 CMR 7.29(7)(e)1., with reasons for such feed rates and a description of corrective actions taken.
 6. Identification of the calendar dates when the carbon injection or other sorbent system operating parameter(s) that are the primary indicator(s) of carbon or other sorbent mass feed rate recorded under 310 CMR 7.29(7)(e)4. are below the level(s) estimated during the optimization tests for mercury with reasons for such occurrences and a description of corrective actions taken.
- (f) For units that apply technology other than carbon or other sorbent for mercury control, the operating parameter records to be kept until such time as a mercury monitoring system is installed at that unit shall be proposed to the Department in the emission control plan application required under 310 CMR 7.29(6)(a)3.
- (g) For mercury monitoring, recordkeeping and reporting, any person who owns, leases, operates or controls an EGU (as defined in 40 CFR 60.24(h)(8)) at an affected facility shall comply with all mercury monitoring, recordkeeping and reporting requirements in 40 CFR Part 75 and "Monitoring and Reporting" in 40 CFR Part 60 Subpart HHHH and any additional mercury monitoring, recordkeeping and reporting requirements the Department deems necessary and specifies in the facility's ECP or mercury monitoring plan approval. In implementing the provisions of 40 CFR Part 75 and 40 CFR Part 60 Subpart HHHH concerning monitoring of mercury mass emissions, the terms used therein shall have the meanings defined in 40 CFR Part 72 and Part 60 respectively; provided, however, that the term Permitting Authority shall mean the Department, the term Hg Budget Trading Program shall mean 310 CMR 7.02 and 7.29, and the term Hg Budget Unit shall mean an EGU (as defined in 40 CFR 60.24(h)(8)).
- (h) For selection of a Hg Designative Representative, any person who owns, leases, operates or controls an EGU (as defined in 40 CFR 60.24(h)(8)) at an affected facility must select a Hg Designated Representative for each affected facility, and may select an Alternate Hg Designated Representative, pursuant to the requirements of "Hg Designated Representative For Hg Budget Sources" in 40 CFR Part 60 Subpart HHHH. In implementing the provisions of 40 CFR Part 60 Subpart HHHH, the terms used in that subpart shall have the meanings defined in 40 CFR Part 60; provided, however, that the term Permitting Authority shall mean the Department, the term Hg Budget Trading Program shall mean 310 CMR 7.02 and 7.29, and the term Hg Budget Unit shall mean an EGU (as defined in 40 CFR 60.24(h)(8)).
- (i) Any person subject to 310 CMR 7.29(5)(a)3. shall submit the results of all mercury emissions, monitor, and optimization test reports, along with supporting calculations, to the Department within 45 days after completion of such testing.

7.30: MB Massport/Logan Airport Parking Freeze

(1) Applicability.

(a) 310 CMR 7.30 in its entirety is applicable to the Massachusetts Port Authority, the body politic and corporate, created by and existing pursuant to St. 1956, c. 465, hereafter referred to as Massport, which is the owner/operator of the Logan International Airport in Boston, Massachusetts, hereafter referred to as Logan Airport.

(b) 310 CMR 7.30 in its entirety applies to the parking of motor vehicles on property owned or leased by Massport at Logan Airport, as well as sections of Neptune Road, geographically described as follows and hereafter referred to as the Logan Airport Parking Freeze Area. This geographic area, as shown on a map approved and held by the Department, shall be bounded as follows:

Beginning at the intersection of the high water line of the Boston Inner Harbor and the Logan Airport boundary, in the vicinity of the intersection of Jeffries Street and Marginal Street;

then following along the westerly boundary of the Airport, which in this area generally northwesterly along Maverick Street, northeasterly along Geneva Street, and southeasterly, northeasterly, northwesterly around Memorial Stadium, as far as the Massachusetts Bay Transportation Authority (MBTA) Blue Line right-of-way, just north of the Airport Station;

then northeasterly along the Blue Line right-of-way to the intersection of the Blue Line right-of-way and the Airport boundary, in the vicinity of the southerly end of Moore Street;

then northeasterly along the boundary of the Airport and then northeasterly, southeasterly, southwesterly and northeasterly along the Airport boundary to the point of beginning (the "Logan Airport Parking Freeze Area").

(c) In the event any property within the boundaries of the Logan Airport Parking Freeze Area is conveyed in fee by Massport, such property shall be removed from the Logan Airport Parking Freeze Area and become part of the East Boston Parking Freeze area at the time of such conveyance.

(2) Terms of the Parking Freeze.

(a) Commercial and employee parking spaces within the Logan Airport Parking Freeze Area shall be limited to 26,088 parking spaces, except as otherwise provided by 310 CMR 7.30(5), of which there shall be:

1. No more than 2,448 employee parking spaces, as defined by 310 CMR 7.00; and
2. No fewer than 23,640 commercial parking spaces, as defined by 310 CMR 7.00; provided that:

a. The total of employee and commercial parking spaces never exceeds 26,088 parking spaces, except as otherwise provided by 310 CMR 7.30(5); and

b. Employee parking spaces are permanently converted into commercial parking spaces utilizing the process set forward by 310 CMR 7.30(4).

3. The parking spaces within the Logan Airport Parking Freeze area may increase above 26,088 spaces in accordance with 310 CMR 7.30(5), provided that the inventory of commercial and employee parking spaces subject to the Logan Airport Parking Freeze does not exceed 26,790 parking spaces.

(3) Parking Space Inventory.

(a) Every six months, by March 1st and September 1st of each calendar year, Massport shall submit to the Department a parking space inventory that describes the following:

1. all commercial, employee, and rental motor vehicle parking spaces available in the Logan Airport Parking Freeze Area; and
2. all restricted use parking spaces under 310 CMR 7.30(7) regardless of location. The parking space inventory shall include a map of sufficient detail to identify the type and quantity of parking spaces available by location.

(b) If the total inventory of on-airport commercial and employee parking spaces exceeds the number of on-airport commercial and employee parking spaces allowed under 310 CMR 7.30(2), then Massport shall identify the number of spaces by type and location that are immediately eliminated and the means by which this has been accomplished in order to ensure that the number of on-airport parking spaces complies with the requirements of 310 CMR 7.30(2).

7.30: continued

(c) If the total inventory of on-airport commercial and employee parking spaces is less than the number of on-airport commercial and employee spaces allowed under 310 CMR 7.30(2), Massport shall be certified by the Department as having a total of the number of on-airport commercial and employee spaces allowed under 310 CMR 7.30(2), upon the Department's receipt of the parking space inventory and provided that the inventory submittal includes an identification of the potential location and quantity of parking spaces that represent the difference between the existing parking spaces and the number of on-airport commercial and employee spaces allowed under 310 CMR 7.30(2).

(4) Employee Parking Reduction.

(a) Massport shall take feasible measures to reduce permanently the number of on-airport employee parking spaces either through relocating said parking spaces to locations outside of the Logan Airport Parking Freeze Area, which maximize regional and local air quality benefits, or through providing incentives to employees to use alternative means of transportation to access Logan Airport property.

(b) Massport may convert to commercial parking an equal number of parking spaces as have been permanently eliminated from the employee parking space inventory and shall annually submit documentation which supports this conversion, in accordance with the reporting requirements at 310 CMR 7.30(9).

(c) Employee parking relocated from the Logan Airport Parking Freeze Area shall not be located in another area subject to a parking freeze.

NON-TEXT PAGE

7.30: continued

(5) Park and Fly Parking. Notwithstanding any provisions herein to the contrary or any subsequent disposition of the property by Massport, in the event that Massport, or its nominee, acquires in fee, or leases for a term in excess of five years, property within the East Boston Parking Freeze on which Park and Fly Parking Spaces included in the East Boston Parking Freeze Area inventory, certified by the Department under 310 CMR 7.31(3), are located, such spaces, upon notification by Massport to the Department and the Boston Air Pollution Control Commission (BAPCC) will be automatically and permanently converted to Commercial Parking Spaces within the Logan Airport Parking Freeze Area. The Logan Airport Parking Freeze Area Commercial Parking Space inventory pursuant to 310 CMR 7.30(2)(a) will be permanently increased, and the East Boston Parking Freeze Park and Fly Parking Space inventory pursuant to 310 CMR 7.31(3) will be permanently decreased by the number of such converted spaces. All such converted spaces may be relocated and used as commercial parking spaces within the Logan Airport Parking Freeze Area.

((6) Rental Motor Vehicle Parking: Reserved).

(7) Restricted Use Parking.

(a) The category of restricted use parking spaces is created with the understanding that Massport experiences, at several times during the year, extreme peaks of air travel and corresponding demand for parking spaces. Restricted use parking spaces may be made available for use only at such times.

(b) Massport shall limit the use of restricted use parking spaces, defined at 310 CMR 7.00, to ten days in any calendar year. If this limitation is projected to be exceeded and/or in fact is exceeded in any given calendar year, then the requirements and procedures described at 310 CMR 7.30(7)(e) and (f) shall apply.

(c) Restricted use parking spaces may be located within the Logan Airport Parking Freeze Area, but shall not be located in the East Boston Parking Freeze Area or any other geographic area subject to a parking freeze.

(d) The category of restricted use parking spaces shall be subject to the following monitoring and reporting provisions:

1. On December 31st of each calendar year Massport shall submit to the Department a letter containing an estimate of the number of days and the dates on which Massport anticipates the need over the following calendar year to invoke the use of restricted use parking spaces, including the estimated number and location of said spaces.

2. Massport shall monitor and track the use of these spaces continuously throughout the year and on March 1st of the following year shall submit a report to the Department describing the actual dates, locations and numbers of restricted use parking spaces used in the preceding calendar year.

(e) Should the actual number of days when restricted use parking is invoked by Massport exceed six by July 1st of any year, Massport shall submit to the Department, on or before August 1st, a report outlining strategies Massport commits to undertake during the remainder of the calendar year so as not to have to invoke the use of the restricted use parking spaces more than four additional days that calendar year.

(f) Should Massport invoke the use of restricted use parking spaces for more than ten days during the calendar year, Massport shall submit to the Department, on or before March 1st of the following year, a report containing:

1. An explanation of why the ten day limit on use of restricted use parking spaces was exceeded.

2. A determination of whether this exceedence was temporary or may be expected to continue into future years and technical support for this determination.

3. A projection of future need to use restricted use parking spaces in terms of number of days and number of spaces, and an analysis of the air quality impacts of the projected use of the restricted use parking spaces.

4. A plan and schedule for initiating actions which will eliminate the projected need identified in 310 CMR 7.30(7)(f)3.

5. A commitment from Massport to implement the actions identified in 310 CMR 7.30(7)(f)4.

7.30: continued

(8) Transportation Management Studies and Programs.

(a) Massport shall complete the following studies, each within 24 months of June 30, 2017 to aid its efforts to reduce the air quality impacts of different ground access modes for travel to and from Logan Airport:

1. A study of the costs, feasibility and effectiveness of potential measures to improve high occupancy vehicle access to Logan Airport. The study shall consider, among other things, possible improvements to Logan Express bus service and the benefits of adding Silver Line buses with service to Logan Airport.
2. A study of costs and pricing for different modes of transportation to and from Logan Airport to identify a pricing structure and the use of revenues so generated to promote the use of high occupancy modes of transportation by Airport air travelers and visitors. The study shall include evaluation of short-term and long-term parking rates and their influence on different modes of airport transportation.
3. A study of the feasibility and effectiveness of potential operational measures to reduce non-high occupancy vehicle pick-up/drop-off modes of transportation to Logan Airport, including an evaluation of emerging ride-sharing and transportation network company modes.

(b) Massport shall make all reasonable efforts to identify, analyze, implement and communicate to the public the availability of transportation management programs including but not limited to:

1. Maintenance and improvement of current transportation management programs of remote parking/express bus service; infrastructure and leasing arrangements for the water shuttle service to and from Logan Airport; the one way toll program; and the commercial vehicle lane at Logan Airport.
2. Identification of additional suitable site(s) and implementation of additional remote parking/express bus service(s).
3. Identification and study of the feasibility and impact on transportation and air quality parameters of additional transportation management programs and ground access improvement projects.

(c) Massport shall report annually the status of studies, findings and commitments to implement in accordance with 310 CMR 7.30(9).

(9) Recordkeeping and Reporting. On or before March 1st of each year Massport shall submit a report detailing the progress and status of each provision of 310 CMR 7.30, in its entirety, during the preceding calendar year. Copies of said report shall be submitted to the Department, EPA, the Chairman of the Boston MPO, and the BAPCC. Massport may, with the consent of the Department, satisfy this reporting requirement through the submission of annual Environmental Data Reports or similar airport-wide documents pursuant to M.G.L. c. 30, §§ 61 through 62H, provided that the above parties receive copies of such reports.

(10) Enforcement. The Commissioner will enforce 310 CMR 7.30 under applicable law.

7.31: MB City of Boston/East Boston Parking Freeze

(1) Applicability

(a) 310 CMR 7.31 in its entirety is applicable to the City of Boston through the authority of the Boston Air Pollution Control Commission; the entity within the City of Boston Department of the Environment which through regulations and procedures adopted under authority vested in said Commission by M.G.L., c. 111, § 31C, and hereafter referred to as BAPCC, is responsible for administering local air pollution control programs including parking freezes within the geographic and political boundaries of the City of Boston.

7.31: continued

(b) 310 CMR 7.31 in its entirety applies to the parking of motor vehicles in the area of East Boston, geographically described as follows and hereafter referred to as the East Boston Parking Freeze Area. This geographic area, as shown on a map approved and held by the Department, shall be bounded as follows:

Beginning at the point where Waldemar Avenue meets Walley Street and continuing in a westerly direction along Waldemar Avenue to the William McClellan Highway and continuing in a northwesterly direction in a straight line to the Chelsea River; then southwesterly along the high water line of the River to the Boston Inner Harbor; then continuing generally southeasterly along the high water line of the Harbor to the Logan Airport boundary;

then following along the westerly boundary of the Airport, (which in this area runs generally northwesterly along Maverick Street, northeasterly along Geneva Street, and southeasterly, northeasterly, northwesterly around Memorial Stadium) to the Massachusetts Bay Transportation Authority (MBTA) Blue Line right-of-way, just north of the Blue Line Airport Station;

then northeasterly along the Blue Line right-of-way to the southerly edge of property known as the Robie Industrial Park;

then easterly, northerly and westerly along the boundary of said Park and extending along an imaginary straight line to the MBTA Blue Line right-of-way;

then northeasterly along the Blue Line right-of-way to the intersection between the Blue Line right-of-way and the Airport boundary, in the vicinity of the southerly end of Moore Street;

then southeasterly along the airport boundary to the high water mark of the harbor;

then northeasterly along the high water mark of the Harbor to the Belle Isle Inlet;

then generally northerly along the Belle Isle Inlet to Bennington Street in East Boston;

then southwesterly along Bennington Street to the intersection with Leverett Avenue;

then northwesterly along an imaginary straight line to the point of beginning (the "East Boston Parking Freeze Area").

In the event that property described herein as Robie Industrial Park shall be owned or leased by Massport at some point in the future, then at the time of such purchase or lease, the Robie Park parcel shall become part of the Logan Parking Freeze Area.

(c) In the event that any property located within the boundaries of Logan Airport Parking Freeze Area is conveyed in fee by Massport, such property will become part of the East Boston Parking Freeze Area at the time of such conveyance.

(2) Definition of the Parking Freeze.

(a) There is hereby established a freeze on the availability of Park and Fly parking spaces within the East Boston Parking Freeze Area. No owner, operator or lessee of Park and Fly parking spaces within the East Boston Parking Freeze Area shall allow for the parking of motor vehicles in excess of the number of Park and Fly parking spaces available for use and/or permitted as of the effective date of 310 CMR 7.00.

(b) There is hereby established a freeze on the availability of Rental Motor Vehicle parking spaces. No owner, operator or lessee of Rental Motor Vehicle parking spaces within the East Boston Parking Freeze Area shall allow for the parking of Rental Motor Vehicles in excess of the number of Rental Motor Vehicle parking spaces actively in use as of the date 310 CMR 7.31 is first published in the *Massachusetts Register* (11/24/89).

(c) Parking spaces of types and categories not specifically cited in 310 CMR 7.31(2) are excluded from the provisions of the East Boston Parking Freeze.

7.31: continued

(3) Parking Space Inventory.

(a) On or before June 30, 1990, the BAPCC shall submit to the Department an inventory of all Park and Fly and Rental Motor Vehicle parking spaces. Said document shall include a map and supporting descriptive material of sufficient detail to identify the type, location, and quantity of Park and Fly and Rental Motor Vehicle parking spaces located in the East Boston Parking Freeze Area.

(b) Within 60 days of receipt of said inventory, the Department, after review and consultation with interested parties, including but not limited to the BAPCC, Chairman of the Boston MPO, Massport and EPA, shall issue a finding of adequacy or inadequacy depending upon the results of the review. If found adequate, the number of spaces by category shall be the Department-certified parking freeze for the East Boston Parking Freeze Area. If found inadequate, the BAPCC, in consultation with the Department and other interested parties, shall have an additional 60 days to resolve the inadequacies, so that the Department may certify a freeze number for the area. If no agreement is reached, the Department shall, at the end of these additional 60 days, issue a number, based on information submitted to-date; said number shall be the Department-certified parking freeze for the East Boston Parking Freeze Area.

(c) The number of Park and Fly parking spaces certified by the Department in 310 CMR 7.31(3)(b) shall be the maximum number under 310 CMR 7.30(5) by which the Logan Airport Parking Freeze Area inventory of commercial parking spaces established by 310 CMR 7.30(2)(b), may be increased.

(d) Upon the conversion of any park and fly parking spaces under 310 CMR 7.30(5) from the East Boston Freeze Area to commercial parking spaces within the Logan Airport Parking Freeze Area, the number of park and fly parking spaces certified by the Department in 310 CMR 7.31(3)(b) shall be permanently reduced by the number of parking spaces relocated to the Logan Airport Parking Freeze Area.

(e) Upon the relocation of any rental motor vehicle parking spaces under 310 CMR 7.30(6) from the East Boston Freeze Area to the Logan Airport Parking Freeze Area, the number of rental motor vehicle parking spaces certified by the Department in 310 CMR 7.31(3)(b) shall be permanently reduced by the number of parking spaces relocated to the Logan Airport Parking Freeze Area.

(4) Parking Freeze Plan.

(a) On or before June 30, 1990, BAPCC shall develop and submit to the Department, with copies to the Chairman of the Boston MPO, Massport and EPA, an East Boston Parking Freeze plan, developed in coordination and consultation with the Boston Zoning Commission, the Boston Department of Transportation, Corporation Counsel, the Department, Massport, and the Chairman of the Boston MPO and other city and state authorities as may be appropriate. Said plan shall contain the following:

1. Authority and responsibilities of City entities supporting the implementation of each of the components of the East Boston Parking Freeze.
2. The identification of new local ordinances, rules, regulations and policies, or modifications to existing local ordinances, rules, regulations and policies, where needed, to enable the City to implement each of the components of the East Boston Parking Freeze.
3. A schedule for adopting each of these additions and/or changes identified in 310 CMR 7.31(4)(a)2.
4. An implementation plan describing the actions to be taken by the City of Boston, Massport, and any other applicable party to enable the relocation of Park and Fly parking spaces from the East Boston Parking Freeze Area to the Logan Airport Parking Freeze Area, described in 310 CMR 7.30(1).

(5) City of Boston "Procedures and Criteria for Issuance of Parking Freeze Permits".

(a) On or before December 31, 1990, BAPCC shall amend the existing "Procedures and Criteria for Issuance of Parking Freeze Permits" required by 40 CFR 52.1135(f), and submit these amendments to the Department for review and approval. Amendments shall incorporate the following additions and modifications:

1. The East Boston Freeze Area and the Department-certified parking freeze number.

7.31: continued

2. Modify procedures, as necessary, so as to delineate the administration and management of the East Boston Parking Freeze. Said modifications shall include provisions requiring approval by the BAPCC for any change in the location of the available parking spaces within the East Boston Parking Freeze Area.
- (6) Recordkeeping and Reporting.
 - (a) On or before March 1 of each year BAPCC shall submit a report detailing the progress and status of each provision of 310 CMR 7.31, in its entirety, during the preceding calendar year. Copies of said report shall be submitted to the Department, EPA, Chairman of the Boston MPO, and Massport.
 - (b) Copies of local ordinances adopted or modified in support of the East Boston Parking Freeze shall be submitted to the Department as they become effective.
 - (7) Enforcement. The Commissioner will enforce 310 CMR 7.31 under applicable law.

7.33: MB City of Boston/South Boston Parking Freeze

- (1) Applicability.
 - (a) 310 CMR 7.33 is applicable to the Massachusetts Port Authority, the body politic and corporate, created by and existing pursuant to St. 1956, c. 456, as amended, hereafter referred to as Massport. Massport shall be responsible for administering the South Boston Parking Freeze on all Massport owned property.
 - (b) 310 CMR 7.33 is applicable to the City of Boston which shall be responsible for administering the South Boston Parking Freeze on all lands other than Massport owned property under the authority of the Boston Air Pollution Control Commission (BAPCC). Under M.G.L., c. 111, § 31C, BAPCC is responsible for administering local air pollution control programs including parking freezes within the geographic and political boundaries of the City of Boston.
 - (c) 310 CMR 7.33 applies to the parking of motor vehicles in the South Boston Parking Freeze Area. The South Boston Parking Freeze area shall be divided into three zones defined as: (1) the South Boston Piers Zone, (2) the South Boston Industrial/Commercial Zone and (3) the South Boston Residential Zone. These geographic areas shall be bounded as follows:
The South Boston Piers Zone:
Beginning at the point where Mount Washington Street meets the high water line of the Fort Point Channel and continuing in a westerly direction to the center point of the Channel; then northeasterly along the imaginary center line of the Channel to the Boston Inner Harbor; then continuing southeasterly along the high water line to the southern most edge of the Boston Marine Industrial Park property; then easterly in a straight line to the center point of the Reserved Channel and continuing westerly in a straight line along the Channel to the point where it meets Summer Street; then following Summer Street in a northwesterly direction to a point where it meets Fargo Street; then following Summer Street in a northwesterly direction to a point along Fargo Street where it meets B Street; then westerly along an imaginary straight line back to the point where Mount Washington meets the high water line.

The South Boston Industrial/Commercial Zone:
Beginning at the point where Southampton Street meets the railroad tracks and continuing northerly along the railroad tracks, to the West Fourth Street Bridge; then southeasterly along the Bridge to the center point of the Fort Point Channel; then north and northeasterly along the center line of the Channel to the point where it meets the imaginary line extending to the point of the beginning of the Piers Zone; then following along the southeast boundary line of the Piers Zone to its end point where it meets the imaginary line extending easterly along the center line of the Reserved Channel and then southerly in a straight line to the point where it meets the northeastern edge of the residential Zone boundary line; then following said boundary line westerly, northerly, and southerly back to the point where Southampton Street meets the railroad tracks.

7.33: continued

The South Boston Residential Zone:

Beginning at the point where Southamptton Street meets Dorchester Avenue and continuing in a northerly direction along Dorchester Avenue to West Second Street; then southeasterly along West Second Street to B Street; then northwesterly along B Street to West First Street; then southeasterly along West First Street to the point where it meets East First Street and continuing along East First Street to the point where it meets O'Day Boulevard; then easterly along O'Day Boulevard to the high water line of Boston Harbor; then along the high water line of Boston Harbor around Castle Island to the point where it meets the rock jetty enclosing Pleasure Bay and continuing along to the point where it meets O'Day Boulevard; then following along O'Day Boulevard in a southwesterly direction to the point where it meets Preble Street and continuing along Preble Street back to the point where Southamptton Street meets Dorchester Avenue.

(2) Definition of the Parking Freeze. There is hereby established a freeze on the availability of motor vehicle parking spaces within the South Boston Piers Zone and the Industrial/Commercial Zone and a freeze on the availability of remote parking spaces within the South Boston Residential Zone within the South Boston Parking Freeze Area. No owner, operator or tenant within the South Boston Parking Freeze Area Piers Zone and Industrial/Commercial Zones shall allow for the parking of motor vehicles in excess of the allowed number of motor vehicle parking spaces established by the parking freeze. No person within the South Boston Parking Freeze Area Residential Zone shall allow for the parking of motor vehicles in excess of the allowed number of remote parking spaces established by the parking freeze.

(3) Parking Space Inventory.

(a) Not later than one year from the date 310 CMR 7.33 is first published in the *Massachusetts Register*, the BAPCC and Massport shall each submit to the Department, an inventory of all existing motor vehicle parking spaces and motor vehicle parking spaces which were part of any project submitted for review under the Massachusetts Environmental Policy Act process set forth in 301 CMR 11.00 or the Federal Environmental Review Process set forth in 42 U.S.C. 4321 *et seq.* as of August 1, 1990 and remote parking spaces for each of their respective areas. Said inventory shall include a map and supportive descriptive material of sufficient detail to identify the type, location, and quantity of motor vehicle parking spaces, including parking spaces for commercial, remote, employee, restricted use, off-peak uses and parking spaces eliminated during the Central Artery/Third Harbor Tunnel project construction, located in the South Boston Parking Freeze Area.

(b) Within 60 days of receipt of said inventory, the Department shall, after review and consultation with interested parties including, but not limited to, the BAPCC, Massport, Chairman of the Boston MPO, and the EPA, issue a finding of adequacy or inadequacy in writing. If found adequate, the number of motor vehicle parking spaces and remote parking spaces by zone shall be the Department-certified parking freeze base number for the South Boston Parking Freeze Area.

7.33: continued

(c) If found inadequate, the BAPCC and/or Massport, in consultation with the Department, shall have an additional 60 days to resolve the inadequacies. If no agreement is reached, the Department shall, at the end of the second 60 day period, certify a parking freeze base number for the South Boston Parking Freeze Area in writing. If within 60 days of receipt of said initial inventory, the Department has not issued a finding of adequacy or inadequacy, the inventory shall be deemed adequate.

(d) Property Transfers. In the event that Massport acquires any interest in property in the South Boston Freeze area, Massport shall assume responsibility for administering the freeze on the properties acquired and shall amend the Parking Space Inventory submitted pursuant to 310 CMR 7.33(3).

(4) Elimination of Parking Spaces During Central Artery/Third Harbor Tunnel Construction. Motor vehicle parking spaces removed or eliminated permanently during the Seaport Access Road and Third Harbor Tunnel construction project shall be incorporated into the parking space inventory submitted pursuant to 310 CMR 7.33(3).

(5) Establishment of Parking Freeze Banks.

(a) The number of motor vehicle parking spaces in the South Boston Parking Freeze Area will be limited to the base inventory of all motor vehicle parking spaces in each zone. From this base inventory of motor vehicle parking spaces, parking freeze banks shall be created equal to 10% of the base inventory of motor vehicle parking spaces. The Parking freeze banks shall be administered separately by the BAPCC and Massport and hereafter referred to as the BAPCC Bank and the Massport Bank.

(b) Motor vehicle parking spaces eliminated for use in the South Boston Parking Freeze Area shall be credited to the appropriate parking freeze bank for reallocation and are not privately transferrable.

(6) Parking Freeze Plan.

(a) Not later than one year from the date 310 CMR 7.33 is published in the *Massachusetts Register*, the BAPCC and Massport shall each submit a plan to the Department, with copies to the Governor, the Boston Metropolitan Planning Organization and the Environmental Protection Agency Region I, a South Boston Parking Freeze plan, developed in coordination and consultation with the Boston Zoning Board of Appeals, the Boston Department of Transportation, the Department and other city and state authorities as may be appropriate which sets forth the procedures by which the South Boston Parking Freeze shall be implemented and enforced and the permitting of parking facilities shall be administered. The plans shall, at a minimum, include the following elements:

1. identification of the city agencies, authorities or entities that will be responsible for the various components of the Freeze and authority and responsibilities of the City entities supporting the implementation and enforcement of each of the components of the South Boston Parking Freeze;
2. a description of modifications needed to local ordinances, rules, regulations and/or policies to enable the city and Massport to implement and enforce the freeze, and a schedule for their adoption;
3. procedures for allocation of motor vehicle parking spaces from the parking freeze banks which includes methods for determining the need for such spaces consistent with street and intersection capacity; consultation procedures between BAPCC and Massport for allocation of spaces; and incentives for High Occupancy Vehicle (HOV) parking;
4. proposed text of amendments to the current BAPCC "Procedures and Criteria for Issuance of Parking Freeze Permits" and similar procedures for Massport. These guidelines shall pertain to the permitting of parking facilities, taking into consideration land use, commitments to specific trip-reduction measures, and the availability of improved transit;
5. A procedure to relocate motor vehicle parking spaces from the South Boston Piers Zone to the South Boston Industrial/Commercial Zone.

7.33: continued

6. A procedure to ensure that motor vehicle parking spaces designated as off-peak parking spaces pursuant to 7.33(4) are not being utilized between the hours of 7:30 AM and 9:30 AM. Said procedures shall be enforced by the BAPCC and Massport upon approval by the Department of the Parking Freeze Plan required by 310 CMR 7.33(6).
- (b) Within 60 days of receipt of said Parking Freeze Plans, the Department, after review and a non-adjudicatory public hearing shall issue a finding of adequacy or inadequacy, depending upon the results of the review. If within 60 days of receipt of said Parking Freeze Plans, the Department has not issued a finding of adequacy or inadequacy, the Parking Freeze Plans shall be deemed adequate. If found inadequate, the BAPCC and/or Massport, in consultation with the Department, shall have an additional 60 days to resolve the inadequacies. Failure to submit an acceptable Parking Freeze Plan by the end of the second 60 day period may result in the Department issuing a Parking Freeze Plan which the BAPCC and Massport shall proceed to implement and enforce; provided, however that no parking spaces shall be allocated unless a Department-approved or Department-issued Parking Freeze Plan under 310 CMR 7.33 is in effect.
- (c) Following approval by the Department, the Parking Freeze Plans and Permitting Procedures shall be implemented and enforced by the BAPCC and Massport.
- (7) Off-Peak Parking.
- (a) A minimum of 10% of the existing motor vehicle parking spaces available in the South Boston Piers Zone shall be designated for use as off-peak parking spaces and shall not be open for entering customers between 7:30 A.M. and 9:30 A.M.. At the opening of service of the South Boston Transitway, 20% of the existing motor vehicle parking spaces available in the South Boston Piers Zone shall be designated for use as off-peak parking spaces and shall not be open for entering customers between 7:30 A.M. and 9:30 A.M..
- (8) Completion of Central Artery/Third Harbor Tunnel.
- (a) At such time that the Central Artery/Third Harbor Tunnel project is open for general public use, an inventory of existing motor vehicle parking spaces available in the South Boston Piers Zone shall be submitted by BAPCC and Massport to the Department following the procedures in 310 CMR 7.33(2). Following Department re-certification of the parking freeze number for the South Boston Piers Zone, 10% of the inventory of motor vehicle parking spaces shall be added to the BAPCC bank in the South Boston Piers Zone. Nothing in 310 CMR 7.33(8) shall prohibit the Department from requiring Massport and/or BAPCC to submit an updated inventory at any time prior to the opening of the Central Artery/Third Harbor Tunnel Project.
- (9) Restricted Use Parking.
- (a) Restricted Use parking may only be provided in the parking freeze area administered by the BAPCC in the South Boston Piers Zone or the South Boston Industrial/Commercial Zone for up to ten days per year on the conditions of 310 CMR 7.24. Massport is prohibited from providing restricted use parking in the South Boston Freeze area for any purpose. The provision of restricted use parking shall require substantial documentation including demand management plans and programs to be provided to the Department by the BAPCC to explain such use and to document how such use will be avoided in the future. The documentation requirements will be detailed by the BAPCC in the "Procedures and Criteria for Issuance of Parking Freeze Permits".
- (b) Restricted use parking spaces shall be subject to the following monitoring and reporting provisions:
1. On December 31 of each calendar year BAPCC shall submit to the Department a letter containing an estimate of the number of days and dates on which the BAPCC anticipates the need over the following calendar year to invoke the use of restricted use parking spaces, including the estimated number and location of said spaces;

7.33: continued

2. BAPCC shall monitor and track the use of these restricted use parking spaces continuously throughout the year and on March 1 of the following year shall submit a report to the Department describing actual dates, locations, and numbers of restricted use parking spaces used in the preceding calendar year.
 - (c) Should the actual number of days when restricted use parking spaces is invoked by the BAPCC exceed six days by July 1 of any year, BAPCC shall submit to the Department on or before August 1, a report outlining strategies the BAPCC commits to undertake during the remainder of the calendar year so as not to have to invoke the use of the of restricted use parking spaces more than the four additional days that calendar year.
 - (d) Should the BAPCC invoke the use of restricted use parking spaces for more than ten days during the calendar year, BAPCC shall submit to the Department, on or before March 1 of the following year, a report containing:
 1. an explanation of why the ten day limit on the use of restricted use parking spaces was exceeded;
 2. a determination of whether this exceedance was temporary or may be expected to continue into future years and technical support for this determination;
 3. a projection of future need to use restricted use parking spaces in terms of the number of days and the number of spaces;
 4. a plan and a schedule for initiating actions which will reduce the projected need identified in 310 CMR 7.22(3);
 5. a commitment from BAPCC to implement the identified actions.
- (10) Relocation of Parking Spaces. Relocation of motor vehicle parking spaces is not allowed into the South Boston Residential Freeze Zone or into the Industrial/Commercial Freeze Zone from the South Boston Freeze Piers Zone. To ensure greater flexibility in land use planning and development, a procedure shall be developed by the BAPCC and Massport, which will enable the relocation of motor vehicle parking spaces from the South Boston Piers Zone to the South Boston Industrial/Commercial Zone.
- (11) Remote Parking.
- (a) Additional remote parking spaces over and above the existing remote parking space inventory established in the parking space inventory approved by the Department pursuant to 310 CMR 7.33(3) shall not be allowed or permitted in the South Boston Parking Freeze Area. Remote parking facilities already in use upon the effective date of 310 CMR 7.00 shall be allowed to continue.
 - (b) Remote parking spaces which are eliminated for any purpose shall not be transferred to other owners, operators or tenants within the South Boston Freeze Area and shall return to the BAPCC Bank and Massport Bank for reallocation as motor vehicle parking spaces.
- (12) "Procedures and Criteria for Issuance of Parking Freeze Permits"
- (a) Two years from the date 310 CMR 7.33 is published in the *Massachusetts Register*, the BAPCC shall amend the existing "Procedures and Criteria for Issuance of Parking Freeze Permits", and submit these amendments to the Department for review and approval.
 - (b) Two years from the date 310 CMR 7.33 is published in the *Massachusetts Register*, Massport shall submit procedures and criteria for issuance of parking freeze permits to the Department for review and approval. Such procedures shall contain a process by which Massport shall consult with the BAPCC prior to allocating motor vehicle parking spaces from the Massport Bank, and shall provide BAPCC with a period of up to 30 days to comment on any proposed allocation of motor vehicle parking spaces from the Massport Bank. Massport shall respond in writing to any comments from BAPCC which Massport does not accept.

7.33: continued

(13) Record Keeping and Reporting.

(a) On or before June 15th of each year following submission of the parking freeze inventory pursuant to 310 CMR 7.33(3), BAPCC and Massport shall each submit a report to the Department and EPA Region I detailing the progress and status of each provision of 310 CMR 7.33 during the preceding calendar year.

(b) Every third year following the promulgation of the regulation, the annual status report submitted to the Department shall include an updated inventory of parking spaces in the South Boston Parking Freeze Area. The inventory conducted immediately following the completion of the Central Artery/Third Harbor Tunnel project shall establish a new three year reporting cycle.

(c) Copies of local ordinances adopted or modified in support of the South Boston Parking freeze shall be submitted to the Department as they become effective.

(14) Prohibitions. In the event the BAPCC and/or Massport fails to submit "Procedures and Criteria for Issuance of Parking Freeze Permits" by the date required pursuant to 310 CMR 7.33(12) or fails to follow a procedure once approved, no person shall develop motor vehicle parking spaces regulated herein until such time that a parking freeze permit is obtained in accordance with a permit program adopted under 310 CMR 7.33.

(15) Enforcement.

(a) The Department may enforce 310 CMR 7.33 under applicable law.

(b) The Department may enforce any requirement of 310 CMR 7.33, including but not limited to, the requirements of any Department approved parking freeze plan or parking freeze permit procedures adopted by BAPCC or Massport to satisfy the requirements of 310 CMR 33.00 in the event the BAPCC or Massport fail to do so.

(c) The failure of BAPCC or Massport to adequately comply with the requirements of the section may be cause for the Department to make a finding of nonconformity under Section 176(c) of the Clean Air Act Amendments of 1990, 42 U.S.C. 7506(c).

7.34: Massachusetts NO_x Ozone Season Program (MassNO_x)

(1) Massachusetts NO_x Ozone Season Program General Provisions.

(a) Purpose and Scope. The purpose of 310 CMR 7.34 is to control mass emissions of nitrogen oxides (NO_x) during the ozone season (May 1st through September 30th of each year). 310 CMR 7.34 establishes a statewide budget of 1,799 tons of NO_x mass emissions from MassNO_x Facilities for each ozone season.

(b) Applicability. The units listed in 310 CMR 7.34(7)(b): Table A shall be MassNO_x Units subject to the requirements of 310 CMR 7.34.

(c) Permanently Retired Units. The owner or operator of a MassNO_x Unit that is permanently retired after March 9, 2018 shall comply with the requirements of 310 CMR 7.34(4)(d) and (6)(c) and shall not be subject to the remaining requirements in 310 CMR 7.34.

(d) Averaging Emissions. For the purposes of determining the total ozone season NO_x mass emissions of a MassNO_x Facility, the owner or operator of a MassNO_x Facility shall not average the total NO_x ozone season mass emissions of a MassNO_x Unit with the ozone season NO_x mass emissions of another facility.

(2) Definitions. The terms used in 310 CMR 7.34 are defined at 310 CMR 7.34(2). Where a term is defined in both 310 CMR 7.00 and 7.34, the definition in 310 CMR 7.34 shall apply.

Acid Rain Program means a multi-state SO₂ and NO_x air pollution control and emission reduction program established by the Administrator under title IV of the Act and 40 CFR Parts 72 through 78.

Alternate MassNO_x Designated Representative means the person who has been authorized by the owner or operator of the facility in accordance with 310 CMR 7.34(5)(c) to act on behalf of the MassNO_x Designated Representative in matters pertaining to NO_x mass emissions monitoring and reporting for the MassNO_x program. If the MassNO_x Facility is also subject to the Acid Rain Program then this person shall be the same natural person as the Alternate Designated Representative under the Acid Rain Program. If the MassNO_x Facility is not subject to the Acid Rain Program then this person shall be the same natural person as the SIPNO_x Source Alternate Designated Representative.

7.34: continued

CAIR NO_x Ozone Season Allowances means a limited authorization that was issued by the Department to the owner or operator of a MassNO_x Unit under provisions of the State Implementation Plan that was approved under 40 CFR 51.123(aa)(1) or (2) and (bb)(1), (bb)(2), (dd), (ee), or under Subpart EEEE of 40 CFR Part 97 or 97.388, to emit a specified amount of tons of NO_x during the 2015 ozone season.

Combustion Turbine means:

- (a) An enclosed device comprising of a compressor, a combustor, and a turbine and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine; and
- (b) If the enclosed device is combined cycle, any associated duct burner, heat recovery steam generator, and steam turbine.

Cross-State Air Pollution Rule (CSAPR) means the regulation promulgated at 40 CFR 97 Subpart EEEEE CSAPR NO_x Ozone Season Group 2 Trading Program by the Administrator of the United States Environmental Protection Agency.

CSAPR NO_x Ozone Season Group 2 Allowance means a limited authorization issued and allocated or auctioned by the Administrator under 40 CFR 97 Subpart EEEEE or § 97.526(c), or by a State or permitting authority under a SIP revision approved by the Administrator under 40 CFR 52.38(b)(6), (7), (8), or (9), to emit one ton of NO_x during a control period of the specified calendar year for which the authorization is allocated or auctioned or any calendar year thereafter under the CSAPR NO_x Ozone Season Group 2 Trading program

MassNO_x Designated Representative means the person who has been authorized by the owner or operator of the MassNO_x Facility to represent and legally bind the owner or operator in matters pertaining to the MassNO_x program. If the MassNO_x Facility is also subject to the Acid Rain Program then this person shall be the same natural person as the Designated Representative under the Acid Rain Program. If the MassNO_x Facility is not subject to the Acid Rain Program then this person shall be the same natural person as the SIPNO_x Source Designated Representative.

MassNO_x Facility means a facility that has one or more MassNO_x Units on site.

MassNO_x Facility Emissions Budget means a budget amount of ozone season NO_x mass emissions assigned to a MassNO_x Facility as determined by the Department.

MassNO_x Unit means any unit listed in 310 CMR 7.34(7)(b): Table A.

Monitoring System means a monitoring system that meets the requirements of 310 CMR 7.34(3) including a continuous emissions monitoring system, an alternative monitoring system, or an accepted monitoring system under 40 CFR Part 75, or as otherwise approved by the Department or the Administrator.

Operator means any person who operates, controls, or supervises a MassNO_x Unit or a MassNO_x Facility including, but not be limited to, any holding company, utility system, or plant manager of such a MassNO_x Unit or MassNO_x Facility.

Owner means any of the following persons:

- (a) Any holder of any portion of the legal or equitable title in a MassNO_x Unit or a MassNO_x Facility; or
- (b) Any holder of a leasehold interest in a MassNO_x Unit or a MassNO_x Facility; or
- (c) Any purchaser of power from a MassNO_x Unit or a MassNO_x Facility under a life-of-the-unit, firm power contractual arrangement; provided that, unless expressly provided for in a leasehold agreement, owner shall not include a passive lessor, or a person who has an equitable interest through a passive lessor, whose rental payments are not based (either directly or indirectly) on the revenues or income from a MassNO_x Unit or a MassNO_x Facility.

7.34: continued

Ozone Season means the period beginning May 1st of a calendar year, and ending on September 30th of the same year.

Reference Method means any direct test method of sampling and analyzing for an air pollutant as specified in 40 CFR 75.22.

SIPNO_x Source means any MassNO_x Unit that is subject to;

- (a) The applicability requirements of 40 CFR 75.2 and is required, by the Administrator, to monitor and report NO_x mass emissions under 40 CFR 75 in the Emissions Collection and Monitoring System (ECMPS); or
- (b) The applicability requirements of 40 CFR 75.70 and is required, by the Department, to monitor and report NO_x mass emissions under 40 CFR 75 Subpart H in the Emissions Collection and Monitoring System (ECMPS).

Ton means 2,000 pounds. For the purpose of determining compliance with the state-wide emissions budget, total tons of NO_x mass emissions for an ozone season shall be calculated as the sum of all recorded hourly emissions (or the mass equivalent of the recorded hourly emission rates) in accordance with 310 CMR 7.34(3)(c), but with any remaining fraction of a ton equal to or greater than 0.50 tons deemed to equal one ton and any remaining fraction of a ton less than 0.50 tons deemed to equal zero tons.

(3) Monitoring Requirements.

- (a) Definitions and Terms. For purposes of complying with monitoring requirements, the definitions in 310 CMR 7.34(2), 40 CFR 75.2, and 40 CFR 75.70 shall apply, and the terms “affected unit”, “designated representative”, and “continuous emission monitoring system” (or “CEMS”) in 40 CFR Part 75 shall be deemed to refer to the terms “MassNO_x Unit”, “MassNO_x Facility”, “MassNO_x Designated Representative” and “monitoring system”, respectively, as defined in 310 CMR 7.34(2).
- (b) Monitoring Requirements. The owner or operator of a MassNO_x Unit, shall operate and maintain a monitoring system to measure NO_x ozone season mass emissions and heat input in accordance with the provisions 40 CFR Part 75 Subpart H.
- (c) Mass Emissions Determination. The owner or operator of a MassNO_x Unit shall maintain and operate all monitoring systems, including all systems required to monitor NO_x mass emission rate, NO_x concentration, stack gas moisture content, stack gas flow rate, CO₂ or O₂ concentration, fuel flow rate, and heat input, as applicable, in accordance with 40 CFR 75.71 and 40 CFR 75.72.
- (d) Out of Control Periods. Whenever a monitoring system fails to meet the quality-assurance and quality-control requirements or data validation requirements of 40 CFR 75, data shall be substituted using applicable missing data procedures of 40 CFR Part 75 Subpart D, or H, or 40 CFR 75 Appendix D or E.
- (e) Prohibitions. The owner or operator of a MassNO_x Unit shall not use any alternative monitoring system, alternative reference method, or any other alternative to any requirement of 310 CMR 7.34(3) without prior written approval from the Department and the Administrator.

(4) Reporting Requirements.

- (a) General Requirements. The owner or operator, and to the extent applicable, the MassNO_x Designated Representative, of a MassNO_x Unit, shall comply the reporting requirements of 40 CFR 75 Subpart H and 310 CMR 7.34(4).
- (b) Quarterly Emissions Reporting. The MassNO_x Designated Representative shall submit quarterly reports of NO_x mass emissions data and heat input data from the MassNO_x Facility to the Administrator on a quarterly basis or for the control period within 30 days following the end of the calendar quarter covered by the report in the manner specified in 40 CFR 75.73(f).

7.34: continued

(c) Compliance Certification Reporting. The MassNO_x Designated Representative shall submit a compliance certification to the Administrator in a format prescribed by the Administrator. The compliance certification shall be submitted in support of each quarterly report based on a reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. In the compliance certification the MassNO_x Designated Representative shall certify:

1. The monitoring data submitted was recorded in accordance with the applicable requirements of 310 CMR 7.34(3) and 40 CFR Part 75, including the quality assurance procedures and specifications;
2. For a MassNO_x Unit with add-on NO_x emission controls and for all hours where NO_x data are substituted in accordance with 40 CFR 75.34(a)(1), the add-on emission controls were operating within the range of parameters listed in the quality assurance/quality control program under 40 CFR Part 75: *Appendix B* and the substitute data values do not systematically underestimate NO_x emissions; and
3. For a unit that is reporting on a control period basis under 310 CMR 7.34(4)(b), the NO_x mass emission rate and NO_x concentration values substituted for missing data under Subpart D of 40 CFR Part 75 are calculated using only values from a control period and do not systematically underestimate NO_x emissions.

(d) Permanently Retired Unit Reporting. Within 30 days of the permanent retirement of the MassNO_x Unit, the MassNO_x Designated Representative shall submit a statement to the Department and a duplicate copy to the Administrator. In the statement the MassNO_x Designated Representative shall certify:

1. That the MassNO_x Unit was permanently retired;
2. The date on which the MassNO_x Unit was permanently retired.

(e) Certification of Reports. All reports submitted to the Department under the MassNO_x program must be signed and attested to by the MassNO_x Designated Representative or Alternate MassNO_x Designated Representative and must include the following statement:

"I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

(5) MassNO_x Designated Representatives and Alternate MassNO_x Designated Representatives.

(a) Authorized MassNO_x Designated Representative. Each MassNO_x Facility shall authorize one MassNO_x Designated Representative to act on behalf of the owner or operator with regard to all matters under the MassNO_x Program, the MassNO_x Facility, or any individual MassNO_x Unit.

(b) Certificate of Representation. The owner or operator of a MassNO_x Facility shall, in the format prescribed by the Administrator, submit to the Administrator a complete certificate of representation for a MassNO_x Designated Representative and/or an Alternate MassNO_x Designated Representative.

(c) Alternate MassNO_x Designated Representative. A certificate of representation under 310 CMR 7.34(5)(b) may designate one Alternate MassNO_x Designated Representative who may act on behalf of the MassNO_x Designated Representative. Upon receipt by the Administrator of a complete certificate of representation under 310 CMR 7.34(5)(b), any representation, action, inaction, or submission by the Alternate MassNO_x Designated Representative shall be deemed to be a representation, action, inaction, or submission by the MassNO_x Designated Representative.

(d) Change of the MassNO_x Designated Representative or Alternate MassNO_x Designated Representative. The owner or operator may change the MassNO_x Designated Representative or the Alternate MassNO_x Designated Representative at any time by submitting a certificate of representation under 310 CMR 7.34(5)(b); such change shall be effective upon receipt by the Administrator.

(6) Recordkeeping Requirements.

(a) General Requirements. An owner or operator of a MassNO_x Facility shall comply with all of the recordkeeping requirements of 40 CFR 75 Subpart H and 310 CMR 7.34(4).

7.34: continued

(b) On-site Record Retention. An owner or operator of a MassNO_x Facility shall keep on-site at the facility all records and reports required by 310 CMR 7.34(4) for a period of five years from the date the record or report is created. The Department may extend this period for cause, in writing, at any time before the end of the five years.

(c) Permanently Retired Units Record Retention. An owner or operator of a permanently retired MassNO_x Unit shall retain, at the MassNO_x Facility, records demonstrating that the MassNO_x Unit is permanently retired, for a period of five years from the date the record is created. The Department or the Administrator may extend this period for cause, in writing, at any time before the end of the five years.

(7) MassNO_x Ozone Season Emissions Budgets.

(a) Statewide Emissions Budget. Beginning May 1, 2017, and for each ozone season thereafter, the total statewide emissions budget for MassNO_x Facilities shall be 1,799 tons per ozone season. The statewide budget shall remain 1,799 tons for each ozone season regardless of any MassNO_x Facility or MassNO_x Unit retirement.

(b) MassNO_x Facility Emissions Budgets. Beginning May 1, 2017, the emissions budget in 310 CMR 7.34(7)(b): *Table A* shall apply to each listed facility.

310 CMR 7.34(7)(b): Table A

FACILITY NAME	ORIS CODE	UNIT(S)	MASSNO _x FACILITY EMISSIONS BUDGET (Tons of NO _x Per Ozone Season)
Braintree Electric	1660	3, 4, 5	23
Brayton Point Energy, LLC	1619	1, 2, 3, 4	989
Dartmouth Power Associates	52026	1, 2, 5	32
Essential Power Mass, LLC, Doreen St.	1631	1	0
Essential Power Mass, LLC, Woodland St.	1643	1	0
Essential Power West Springfield	1642	15, 17	9
Exelon Framingham	1586	FJ-1, FJ-2, FJ-3	0
Exelon New Boston	1589	NBJ1	0
Exelon West Medway	1592	J1T1, J1T2, J2T1, J2T2, J3T1, J3T2	1
General Electric Aircraft Engines	10029	99-5, 99-3	10
Harvard University Blackstone Steam Plant	1594	B11, B12	8
Kendall Green Energy, LLC	1595	2, 3, S6	67
Kneeland St. Station	880023	1, 2, 3, 4	60
Masspower	10726	1, 2	93
MBTA South Boston Power	10176	A, B	1
Milford Power, LLC	54805	1	76
MWRA Deer Island	10823	S42, S43	0
Mystic Station	1588	4, 10	42
NEA Bellingham	10307	1, 2	138
NRG Canal Station	1599	1, 2	143
Peabody Municipal Light Plant – Waters River	1678	1, 2	3
Pittsfield Generating Company, LP	50002	1, 2, 3	29
Stony Brook Energy Center	6081	1, 2, 3, 4, 5	60
Taunton Municipal Light Plant – Cleary Flood	1682	8, 9	15

(c) Permanently Retired Units. The owner or operator of a permanently retired MassNO_x Unit shall not operate the MassNO_x Unit during the ozone season. The retirement of a MassNO_x Unit shall not affect the MassNO_x Facility Emissions Budget listed in 310 CMR 7.34(7)(b).

7.34: continued

(d) Permanently Retired Facilities. The owner or operator of a permanently retired MassNO_x Facility shall not operate the MassNO_x Facility during the ozone season. The retirement of a MassNO_x Facility shall not affect the statewide budget in 310 CMR 7.34(7)(a) and the MassNO_x Facility's Emissions Budget listed in 310 CMR 7.34(7)(b) shall not be allocated to any other MassNO_x Facility.

(8) Statewide Emissions Budget Exceedance and Required Actions.

(a) If the Department determines that the state-wide emissions budget of 1,799 tons of NO_x per ozone season is exceeded, the Department shall notify the owner or operator of each MassNO_x Facility that emitted greater than the MassNO_x Facility Emissions Budget listed in 310 CMR 7.34(7)(b): *Table A*, no later than 30 days after the close of the ozone season.

(b) Within 60 days of being notified by the Department, each such MassNO_x Facility shall transfer to the Department CSAPR NO_x Ozone Season Group 2 Allowances, 2017 vintage or later, at a rate of one CSAPR NO_x Ozone Season Group 2 Allowance for every one ton of excess emissions above the MassNO_x Facility Emissions Budget.

(c) The Department may request NO_x emissions data or any additional related information from any MassNO_x Facility during or after the applicable ozone season for verification purposes.

7.36: U Transit System Improvements

(1) Applicability. 310 CMR 7.36 shall apply to the Massachusetts Department of Transportation, hereafter referred to as MassDOT, and any successor agency to MassDOT.

(2) Transit System Improvement Projects. MassDOT shall plan and construct and render available for public use, transit system improvement projects including the following projects in accordance with the schedules and requirements set forth in 310 CMR 7.36:

(a) Before December 31, 1992 construction of the following facilities shall be completed and opened to full public use:

1. Lynn Central Square Station and Parking Garage
2. North Station high platforms and new tracks
3. Lynn Transit Station Bus Terminal

(b) Before December 31, 1994 construction of the following facilities shall be completed and opened to full public use:

1. South Station Bus Terminal
2. South Station Track #12
3. Ipswich Commuter Rail Line extension to Newburyport

(c) Before December 31, 1996, construction of the following facilities shall be complete and opened to full public use:

1. Old Colony Commuter Rail Line Extensions to Middleboro and Plymouth
2. Framingham Commuter Rail line extension to Worcester
3. 10,000 Park and Ride and Commuter Rail Station parking spaces system-wide outside of the Boston core area as defined by a report to be submitted to the Department by MassDOT which identifies the location, size and market area of each facility constructed to satisfy this requirement. Said report will be submitted three months prior to the deadline for this project.

NON-TEXT PAGE

7.36: continued

(d) Before December 31, 1999 construction of the following facilities shall be completed and opened to full public use:

10,000 Park and Ride and Commuter Rail Station Parking spaces system-wide outside of the Boston Core Area in addition to those spaces developed pursuant to 310 CMR 7.36(2)(c)3. as defined by a report to be submitted to the Department by MassDOT which identifies the location, size and market area of each facility constructed to satisfy this requirement. Said report shall be submitted three months prior to the deadline for this project.

(e) Before December 31, 2001 construction of the following facility shall be completed and opened to full public use:

South Boston Piers Electric Bus Service

(f) Before December 31, 2007, construction of the following facility shall be completed and opened to full public use:

Old Colony Commuter Rail Line Extension to Scituate (Greenbush).

(g) Before December 31, 2008, construction of the following facility shall be completed and opened to full public use:

Blue Line Platform Lengthening and Modernization.

(h) Before December 31, 2011, construction of the following facilities shall be completed and opened to full public use:

1. Fairmount Line improvements consisting of enhancements of existing stations including, without limitation: platform extensions; improved lighting and improved access; a new station in the general location of Four Corners, and a new station in each of the neighborhoods of Dorchester, Mattapan and Roxbury; and bridge upgrades and other measures to improve service and increase ridership (the Fairmount Line project). MassDOT shall meet the following interim deadlines for the Fairmount Line Project:

a. One year from the effective date of 310 CMR 7.36, develop a Request for Proposals for a design consultant, complete the competitive procurement process, and issue a notice to proceed for a design consultant; and

b. Within two years following completion of the requirements of 310 CMR 7.36(2)(h)1.a., complete the requirements of 310 CMR 7.36(3)(e)1. through 6. and 310 CMR 7.36(3)(f).

2. 1000 new park and ride parking spaces serving commuter transit facilities, in addition to those required by 310 CMR 7.36(2)(c)3. and (d), within the 101 cities and towns constituting the Boston Metropolitan Planning Organization.

(i) Before December 31, 2014, construction of the following facilities shall be completed and opened to full public use:

1. The Green Line Extension from Lechmere Station to Medford Hillside; and

2. The Green Line Union Square spur of the Green Line Extension to Medford Hillside.

(3) Project Interim Deadlines. For each project required by 310 CMR 7.36(2)(h)2. and (i), MassDOT shall meet the following Interim Deadlines.

(a) On or before 18 months following June 1, 2007, MassDOT shall:

1. Develop a Request for Proposals for a design consultant;

2. Complete the competitive procurement process; and

3. Issue a Notice to Proceed for a design consultant.

(b) On or before 15 months following the interim deadline established by 310 CMR 7.36(3)(a), MassDOT shall:

1. Complete the Conceptual Design as contracted for under 310 CMR 7.36(3)(a); and

2. File an Environmental Notification Form (ENF) with MEPA.

(c) On or before two years following MEPA's issuance of a Scope for a Draft EIR or a Single EIR pursuant to 301 CMR 11.06(7): *Decision on ENF and Scope* or (8): *Decision Allowing Single EIR* MassDOT shall:

1. Complete preliminary design; and

2. File a Draft EIR or, where applicable, a Single EIR with MEPA.

(d) On or before one year following MEPA's issuance of a Scope for the Final EIR, MassDOT shall: Develop and file the Final EIR with MEPA.

(e) On or before 18 months following MEPA's issuance of a certificate on a Final EIR or a Single EIR, MassDOT shall:

7.36: continued

1. Complete final design necessary to begin the construction phase sufficient to make application for: all local, state, and federal permits; any necessary federal funds and grants; any legislation and public land application which will be required; and any private land takings;
 2. Identify all local, state, and federal approval, grants, permits, legislation, and other required actions necessary for completion of the final project construction and completion schedule required by 310 CMR 7.36(3)(f).
 3. Apply for all necessary local, state, and federal permits;
 4. Apply for necessary federal funds and grants;
 5. File required legislation and initiate public land acquisition; and
 6. Initiate private land takings to proceed to construction.
- (f) MassDOT shall make all reasonable efforts to obtain all necessary approvals, grants, permits, or legislation consistent with meeting these interim deadlines.
- (g) For the project required by 310 CMR 7.36(2)(i), following the completion of the requirements of 310 CMR 7.36(3)(a) through (f) and the receipt of all necessary approvals, grants, permits, or legislation, MassDOT and the Department shall establish a schedule for project construction and deadlines for project completion meaning that the project is opened to full public use. Final deadlines established under 310 CMR 7.36(3)(g) shall replace project deadlines included in 310 CMR 7.36(2)(i). However, interim emission reduction offset measures or projects shall be implemented for the period of delay from the project deadline included in 310 CMR 7.36(2)(i) until the project is completed and opened to full public use.

(4) Project Delays and Implementation of Interim Emission Reduction Offset Projects and Measures.

- (a) Provided that the requirements of 310 CMR 7.36(7) and 310 CMR 7.36(4)(b) and (c) are met, the projects listed in 310 CMR 7.36(2)(h) and (i) may be delayed beyond the project deadlines established pursuant to 310 CMR 7.36(2).
- (b) For delayed projects, MassDOT shall implement interim emission reduction offset projects or measures during the period of delay. Such interim emission offset projects or measures shall achieve emission reductions of NMHC, CO and NO_x equal to or greater than the emission reductions that would have been achieved had the project not been delayed. MassDOT shall meet the requirement of 310 CMR 7.36(4)(b) by either:
1. Implementing projects or measures that are not otherwise required by any contractual or other legal obligation, state or federal law or regulation including without limitation 310 CMR 7.36 and 7.38, or by any state or federal enforcement action; Such projects shall include providing new park and ride parking spaces serving commuter transit facilities or the retrofit of diesel engines with verified diesel retrofit technologies in the transit ridership area of the delayed project; or
 2. Implementing a project required by 310 CMR 7.36(2)(h) through (i) prior to its required completion date.
- (c) Following a disclosure pursuant to 310 CMR 7.36(7)(a)4. that a project will be delayed, MassDOT shall submit to the Department a petition to delay the project. Such petition shall include, without limitation, the reasons for project delay, the measures being taken to minimize such delays, the amount of time the project will be delayed, and, if required, identification of the interim offset project or measures that will be implemented pursuant 310 CMR 7.36 (4)(b). Following public review, such petition shall be subject to approval, approval with conditions, or denial by the Department, in writing.

(5) Substitute Transit System Improvement Projects.

- (a) Following MassDOT's completion of the requirements of 310 CMR 7.36(2)(h)1. and (3)(a) through (c), MassDOT may propose substitute projects for projects required by 310 CMR 7.36(2)(h)1. and (i) provided that:
- (b) Substitute projects shall be projects that enhance or improve existing public transit service, or provide new transit service in the areas listed in 310 CMR 7.36(5)(c) and (d).
- (c) Substitute projects proposed for the Fairmount Line project shall be within the Dorchester, Hyde Park, Mattapan, and Roxbury neighborhoods of the City of Boston.
- (d) Substitute projects proposed for the Green Line Extension and the Green Line Union Square spur of the Green Line Extension to Medford Hillside shall be within the municipalities of Boston, Cambridge, Somerville, and Medford.

7.36: continued

(e) Proposed substitute shall be prioritized for funding in the Regional Transportation Plan for the Boston Region and the Transportation Improvement Program of the Boston MPO.

(f) MassDOT shall submit to the Department a proposed project substitution determination that includes the following information:

1. The reasons for seeking a project substitution;
2. The proposed substitute project(s) that will be implemented and a proposed project implementation schedule that meets the requirements of 310 CMR 7.36(2)(h)1. and 310 CMR 7.36(3);
3. A demonstration that the proposed substitute project will achieve 110% of the emission reductions of NMHC, CO and NO_x that would have been achieved had all components of the project required by 310 CMR 7.36(2)(h)1. and (i) been completed; and
4. The interim emission reduction offset projects or measures that will be implemented until the substitute project(s) is completed. Such interim emission offset projects or measures shall achieve emission reductions of NMHC, CO and NO_x equal to or greater than the emission reductions that would have been achieved had all components of the project been completed by the deadlines established pursuant to 310 CMR 7.36(2)(h)1. and (i).

(g) MassDOT shall conduct a public meeting for the sole purpose of taking public comment on the proposed substitution determination and shall;

1. Provide public notice at least 30 days prior to the public meeting by publishing in a newspaper of general circulation in the Boston and surrounding area and in the *Environmental Monitor* pursuant to 301 CMR 11.15: *Public Notice and the Environmental Monitor* notice of the meeting and of the availability of the material identified in 310 CMR 7.36(5)(f) at the locations specified therein;
2. At least 30 days prior to the public meeting, make available to the public at the City Hall of Boston, Cambridge, Somerville, and Medford and at the State Transportation Library copies of the proposed substitution determination;
3. Following the close of the public comment period, summarize and respond to, in writing, all public comments.
4. Within 90 days following the close of the public comment period pursuant to 310 CMR 7.36(5)(g)1, MassDOT shall assemble and submit to the Department the administrative record, which shall include, without limitation, a copy of:
 - a. The public notice required pursuant to 310 CMR 7.36(5)(g)1.;
 - b. All written comments received by MassDOT within the public comment period; and
 - c. The summary of and response to public comments required pursuant to 310 CMR 7.36(5)(g)3.

(h) Within 90 days of receipt of MassDOT's submittal pursuant to 310 CMR 7.36(5)(g)4., the Department shall determine, in writing, whether the requirements of 310 CMR 7.36(5) have been met and whether the administrative record reasonably supports MassDOT's substitution determination.

(6) Transit System Improvement Studies.

(a) Before December 31, 1991, MassDOT shall draft and issue for public comment an initial study of transit improvement strategies which are in addition to those specified by 310 CMR 7.00, with the intent of incorporating the findings of said study in the Program for Mass Transportation.

(b) Development of the Program for Mass Transportation shall, in addition to the requirements of 310 CMR 7.36(6)(a), include for each strategy identified in 310 CMR 7.36(6)(a), an analysis of the following:

1. An analysis of funding implications and a comprehensive funding plan for transit projects and programs.
2. Estimates of transit project impacts on cities and towns.
3. Discussion of public education efforts that will be undertaken in implementing transit projects.

7.36: continued

(c) Before December 31, 1991, MassDOT shall draft and issue for public comment, studies of other transportation system improvements including but not limited to:

1. A study of the feasibility of using toll pricing to regulate single occupant vehicle trips to Logan Airport.
2. A study of the feasibility of relocating some of the existing Sumner Tunnel Toll booth to Route 1A.
3. A study of the feasibility of providing water shuttle service between Boston and communities on the North shore.
4. A study of transit system improvements which could be made in addition to those improvements listed in 310 CMR 7.36(2).
5. A study on the feasibility of constructing a rail connection between South Station and Logan Airport.
6. Expanding the size and number of suburban locations of Logan airport express service parking and transit facilities.
7. Expanding the high occupancy vehicle lanes and services within the boundaries of Logan Airport.

(d) Before December 31, 1994, MassDOT shall draft and issue for public comment a study of transit system improvements including but not limited to:

1. Connecting circumferential transit facilities and radial transit services.
2. Improving travel time and upgrading rail service to New York City, NY; Worcester, MA; Springfield, MA; Hartford, CT and Portland, ME.
3. Indexing transit fares so as to encourage maximum use of transit facilities.

(e) The studies identified in 310 CMR 7.36(6)(a) through (e) shall contain an analysis of the technical feasibility of each measure, an estimate of the time and cost involved in implementing the measure and an estimate of the potential air quality impacts of the measure. After providing an opportunity for final comment and consultation with other members of the Boston Metropolitan Planning Organization and the Department, the studies shall be released as final reports and submitted to the Department by no later than March 30th of the year following the deadline of the draft study. The final reports shall contain a recommendation and schedule for further action to be taken in regard to the measures contained in the studies.

(7) Public Process Requirements.

(a) By July 1st of each year beginning in 2007 and until all projects required by 310 CMR 7.36(2)(f) through (i) and any project implemented pursuant to 310 CMR 7.36(4) and (5) are complete, MassDOT, in consultation with the MBTA, shall develop and submit to the Department an update and status report for each project required by 310 CMR 7.36(2)(f) through (i) and any project implemented pursuant to 310 CMR 7.36(4) and (5). This report shall include:

1. Detailed information on the status of Project Interim Deadline requirements of 310 CMR 7.36(3);
2. Detailed information about project funding including a demonstration that all relevant planning documents, including the Regional Transportation Plan for the Boston Region, the Transportation Improvement Program for the Boston MPO, the MBTA's Program for Mass Transportation, and the MBTA's Capital Investment Program contain adequate funds to comply with the Project Interim Deadline requirements of 310 CMR 7.36(2)(h)1. and (3).
3. Detailed information about any actual or known funding, engineering, or other obstacles to meeting the Project Interim Deadline requirements of 310 CMR 7.36(2)(h)1. and (3) and measures being taken to address those obstacles;
4. Detailed information about any actual or known potential need and reasons for project delays or substitution;
5. Detailed information on any interim offset projects or measures implemented or proposed to be implemented pursuant to 310 CMR 7.36(4)(b) or (5)(g)4., including without limitation an air quality analysis demonstrating that the actual emission reductions meet or will meet the requirements of the delayed project.

7.36: continued

(b) Within 75 days of receipt of a report required by 310 CMR 7.36(7)(a), the Department shall conduct a public meeting to take public comment on the report. For each public meeting required by 310 CMR 7.36(7)(b), the Department shall:

1. Provide public notice at least 30 days prior to the public meeting by publishing in a newspaper of general circulation in the Boston and surrounding area and in the *Environmental Monitor* pursuant to 301 CMR 11.15: *Public Notice and the Environmental Monitor* notice of the meeting and the availability of the material identified in 310 CMR 7.36(7)(a) at the locations specified therein; and
2. At least 30 days prior to the public meeting, make available to the public copies of the report required by 310 CMR 7.36(7)(a).

(c) Within 120 days following each public meeting required by 310 CMR 7.36(7)(b), MassDOT shall submit a summary of and response to all public comments and a written certification to the Department, with copies to the U.S. Environmental Protection Agency and the Boston Metropolitan Planning Organization, that:

1. MassDOT has provided complete information for all requirements of 310 CMR 7.36(7)(a).
2. MassDOT has provided complete information about any actual or known potential need and reasons to delay any project required by 310 CMR 7.36(2)(f) through (i);
3. MassDOT has provided complete information about any actual or known potential need and reasons for a project substitution pursuant to 310 CMR 7.36(5); and
4. MassDOT has provided complete information on the interim offset projects implemented or proposed to be implemented pursuant to 310 CMR 7.36(4)(b) and (5)(g)4.

(d) Within 60 days of receipt of MassDOT's annual submission required by 310 CMR 7.36(7)(c), the Department shall make a determination, in writing, whether the public process and other requirements of 310 CMR 7.36(7) were met.

(8) Determination of Air Quality Emission Reductions.

(a) MassDOT shall determine baseline air quality emission reductions by:

1. Calculating the NMHC, CO, and NO_x emission reductions that would have been achieved by completion of each of the following projects, using latest planning assumptions and latest air quality emission models: the Green Line Arborway Restoration; the Blue Line Connection from Bowdoin Station to the Red Line at Charles Station; and the Green Line Extension to Ball Square/Tufts University; and
2. Adding 10% to the NMHC, CO, and NO_x emission reductions calculated in 310 CMR 7.36(8)(a)1.

(b) MassDOT shall determine the projected emissions reductions in NMHC, CO, and NO_x that will be achieved by implementation of each of the projects required by 310 CMR 7.36(2)(h) and (i), using latest planning assumptions and latest air quality emission models.

(c) On or before January 2, 2007, MassDOT shall complete a report with supporting rationale and documentation that includes:

1. A description of the modeling assumptions and analysis methodology employed under 310 CMR 7.36(8)(a) and (b);
2. The total NMHC, CO, and NO_x baseline emissions reductions derived pursuant to 310 CMR 7.36(8)(a) for each project;
3. A demonstration that the implementation of the projects required by 310 CMR 7.36(2)(h) and (i) are projected to achieve the total NMHC, CO, and NO_x baseline air quality emissions reductions determined under 310 CMR 7.36(8)(a);
4. The total NMHC, CO, and NO_x emission reductions as determined by 310 CMR 7.36(8)(b) for each of the projects required by 310 CMR 7.36(2)(h) and (i).
5. If MassDOT concludes that implementation of the projects listed in 310 CMR 7.36(2)(h) and (i) will not achieve the baseline air quality emission reductions established in 310 CMR 7.36(8)(a)1., MassDOT shall implement additional projects to achieve the baseline air quality emission reductions, on a schedule consistent with the deadlines established pursuant 310 CMR 7.36(2)(h) and (i). Such projects shall be implemented in the geographic areas consistent with 310 CMR 7.36(5)(c) and (d). Interim emission reduction offset measures or projects shall be implemented for any period of delay from the project deadlines included in 310 CMR 7.36(2)(h) and (i).

7.36: continued

(d) On or before January 2, 2007, MassDOT shall commence a 45-day public comment period on the report required pursuant to 310 CMR 7.36(8)(c) and shall:

1. Provide public notice of the public comment period by publishing in a newspaper of general circulation in the Boston and surrounding area and in the *Environmental Monitor* pursuant to 301 CMR 11.15: *Public Notice and the Environmental Monitor* notice of the availability of the material identified in 310 CMR 7.36(8)(d)2. at the locations specified in 310 CMR 7.36 (8)(d)2.;
2. At the commencement of the public comment period make available to the public at the City Hall of Boston, Cambridge, Somerville, and Medford and at the State Transportation Library the report with supporting rationale, and all information and documentation relied upon to support the results and conclusions of the report; and
3. Following the close of the public comment period summarize and respond to, in writing, all public comments.

(e) On or before March 1, 2007, MassDOT shall assemble and submit to the Department the administrative record, which shall include, without limitation a copy of:

1. The public notice required pursuant to 310 CMR 7.36(8)(d)1.;
2. The report, rationale, information, and documentation required pursuant to 310 CMR 7.36(8)(d)2;
3. All written comments received by MassDOT within the public comment period; and
4. The summary of and response to public comments required pursuant to 310 CMR 7.36(8)(d)3.

(f) Within 90 days of MassDOT's submittal pursuant to 310 CMR 7.36(8)(e), the Department shall determine, in writing, whether MassDOT has met the requirements of 310 CMR 7.36(8)(d) and (e) and whether the administrative record reasonably supports the results and conclusions of the report required pursuant to 310 CMR 7.36(8)(c).

(9) Demonstration of Air Quality Emission Reductions.

(a) When all projects required by 310 CMR 7.36 are substantially complete, as defined in the federal register at *Approval and Promulgation of Air Quality Implementation Plans: Massachusetts – Amendments to Massachusetts' SIP*, 59 Fed. Reg. 50,495-50,498 (1994), MassDOT shall complete an analysis of the total air quality benefits of such projects. Such analysis shall be performed in accordance with EPA requirements in effect at the time of the analysis.

(b) MassDOT shall submit the air quality analysis required by 310 CMR 7.36(9)(a) to the Department within four months following the substantial completion of all projects.

(c) Within 90 days of MassDOT's submittal pursuant to 310 CMR 7.36(9)(b), the Department shall determine, in writing, whether MassDOT has met the requirements of 310 CMR 7.36(9)(a) and (b).

7.37: MB High Occupancy Vehicle Lanes

(1) Definitions. As used in 310 CMR 7.37:

BASELINE ROADWAY CONDITIONS means the average weekday peak hour trip time in minutes for each roadway segment based on monitoring of traffic and recording of trip times during the 12 month period from April 1, 1992 to April 1, 1993.

FEASIBILITY STUDY means a study which analyzes the environmental, operational, engineering, right-of-way, construction, and financial issues affecting the implementation of high occupancy vehicle lanes on each roadway segment described in 310 CMR 7.37(3). The analysis of environmental issues shall include the impacts of HOV lanes on all mobile source emissions of CO, VOC and NOX as well as the impacts of such lanes on general purpose traffic flow. Operational issues may include enforcement and public safety issues. Notwithstanding the foregoing, in cases in which feasibility studies submitted to the Department on or before November 1, 1994 have not included an analysis of the impact of HOV lanes on NOx emissions, an analysis of such impacts will be submitted to the Department for inclusion in the Transportation Improvement Program for the metropolitan Boston area, as required by 23 CFR 450.

FINANCIAL as used in 310 CMR 7.37(1) and 7.37(8)(a) means the availability of funds from any federal, state or local sources for the design and construction of a high occupancy vehicle lane or facility.

PERFORMANCE STANDARDS means a level of roadway performance that at a minimum: 1. is equal to or better than a Level of Service C, and 2. will result in average HOV trip times that are at least one minute per mile less than average trip times on adjacent general purpose traffic lanes during peak hours of travel, as defined in 310 CMR 7.37(6)(b)2. Either the MHD or the MTA may propose substitute roadway performance standards which attempt to maximize: travel time savings, reductions in emissions of ozone precursors, operational efficiency, and person throughput, and which require vehicle throughput of no less than 400 HOVs per hour for a high occupancy vehicle lane provided that such standard provides for greater improvement in air quality for VOC, CO and NOX in the area where the HOV lane is targeted, in both the short and long term. The Department shall review any proposed substitute roadway performance standard, and shall either reject or accept it within 60 days after it has been submitted to the Department.

ROADWAY THRESHOLD STANDARDS means Baseline Roadway Conditions increased by 35%.

(2) Applicability. 310 CMR 7.37 applies where indicated, to the Executive Office of Transportation and Construction (EOTC), the Massachusetts Highway Department (MHD), and the Massachusetts Turnpike Authority (MTA).

(3) Feasibility Studies.

(a) By December 31, 1992, the MHD shall submit to the Department a study of the feasibility of establishing high occupancy vehicle lanes for the following roadways:

1. The northward extension of the existing southbound high occupancy vehicle lane on Interstate-93, north of the southern bank of the Charles River to I-95;
2. Interstate-93 northbound between the Charles River Crossing and Interstate-95; and
3. Interstate-93 northbound and southbound between Interstate-90 and Route 3 in Braintree.

(b) As part of the environmental review on the Charles River portion of the Central Artery/Tunnel project, the MHD shall complete a study of the feasibility of establishing high occupancy vehicle lanes for the Charles River Crossing. Said study shall be completed within 30 days from the date of the Federal Highway Administration issuance of a Record of Decision in connection with said review.

(c) By June 30, 1994, the MTA shall submit to the Department a study of the feasibility of establishing high occupancy vehicle lanes for Interstate-90 eastbound and westbound between Interstate-93 and Interstate-95. Said study shall include analyses of the feasibility of:

7.37: continued

1. Implementing full-scale high occupancy vehicle lanes;
2. Implementing a program of special high occupancy vehicle toll booths and full head-of-queue privileges including consideration of establishing specially demarcated lanes leading to high occupancy vehicle toll booths wherever found practical at appropriate turnpike interchanges; and
3. Installing electronic identification systems to facilitate high occupancy vehicle flow through turnpike toll booths.

(4) Implementation of Certain High Occupancy Vehicle Lanes.

(a) If the northward extension of the existing southbound high occupancy vehicle lane on Interstate-93 north of the Charles River is found to be feasible pursuant to the feasibility study to be completed in accordance with 310 CMR 7.37(3)(a), the MHD shall establish the high occupancy vehicle lane and make it available for public use according to a reasonable schedule, as defined in 310 CMR 7.37(4)(d), agreed upon between the Department and the MHD, but in no event later than November 1, 1994. The extension shall be subject to the following conditions:

1. The extension of the high occupancy vehicle lane shall not be accomplished by the addition of a new lane or lanes to Interstate-93.
2. Prior to the lane opening, MHD shall submit to the Department information relating to the length of the lane including a demonstration that the lane has been extended northward to the most appropriate geographical location.

(b) The final design of the Charles River Crossing portion of the Central Artery/Tunnel project on Interstate-93 shall include a high occupancy vehicle lane that shall be made available for public use at the time the Charles River Crossing of the Central Artery/Tunnel project is opened for public use. The high occupancy vehicle facility shall be located southbound on the I-93 mainline between the northernmost point appropriate to maximize use of the lane, and the Charles River crossing bridge. The northernmost terminus of the HOV lane shall be located at a point just south of the Mystic Avenue exit ramp in Medford.

(c) If high occupancy vehicle lanes northbound and southbound on Interstate-93 beginning at the intersection of Interstate-93 with Interstate-90 and extending to Route 3 in Braintree are found to be feasible pursuant to the feasibility study performed in accordance with 310 CMR 7.37(3), said high occupancy vehicle lanes shall be implemented and made available for public use according to a reasonable schedule, as defined in 310 CMR 7.37(4)(d), to be agreed upon by the Department and the MHD, but in no event later than November 15, 1995.

(d) A reasonable schedule for implementing a high occupancy vehicle lane shall include starting dates and ending dates of the following:

1. Public review of the feasibility study;
2. Environmental review, including any approvals required under the Massachusetts Environmental Policy Act, M.G.L. c. 30, § 61 *et seq.* or the National Environmental Policy Act, 42 U.S.C. section 4321 *et seq.*;
3. Final design approval;
4. Acquisition of required right of way; and
5. Construction of the high occupancy vehicle lane.

(5) Roadway Threshold Monitoring and Baseline Roadway Conditions.

(a) Beginning April 1, 1992, the MHD and the MTA shall monitor traffic volumes and trip times on the roadway segments identified for the MHD in 310 CMR 7.37(3)(a) and (b) and for the MTA in 310 CMR 7.37(3)(c) on a monthly basis. All records and data shall be maintained for a period of five years and shall be readily available for Department inspection.

(b) By May 1, 1993 the MHD shall complete collection of the information necessary to identify and document Baseline Roadway Conditions for the roadway segments identified in 310 CMR 7.37(3)(a) and (b), and the MTA shall complete collection of such information for the roadway segments identified in 310 CMR 7.37(3)(c).

(c) By July 1, 1993, the MHD shall submit to the Department a report that documents the Baseline Roadway Conditions for the roadway segments identified in 310 CMR 7.37(3)(a) and (b), and the MTA shall submit such a report for the roadway segments identified in 310 CMR 7.37(3)(c). The report shall contain appropriate traffic monitoring data and trip time records to support the Baseline Roadway Conditions documented in the report. Within

7.37: continued

60 days of receipt of a complete report, the Department shall review the report and take such action as it may deem appropriate. Any action taken on the report shall be in writing. Within 90 days of receipt of a complete report, the Department shall file a copy of the report and of any Department action taken, with the U.S. EPA, Region I and with the agency that filed the report.

(6) Addition of High Occupancy Vehicle Lanes.

(a) Should the Roadway Threshold Standards as defined in 310 CMR 7.37(1) be exceeded for three consecutive months, the MHD, for roadway segments identified in 310 CMR 7.37(3)(a) and the MTA for roadway segments identified in 310 CMR 7.37(3)(c), shall:

1. Notify the Department of the exceedance. The notice shall identify the roadway segment that has exceeded Roadway Threshold Standards and set out a reasonable schedule for implementing high occupancy vehicle lanes on the applicable roadway segment, and
2. Implement a high occupancy vehicle lane on the respective roadway segment according to a reasonable schedule as defined in 310 CMR 7.37(4)(d).

(b) The addition of high occupancy vehicle lanes pursuant to 310 CMR 7.37 shall be subject to the following conditions:

1. Additions of high occupancy vehicle lanes on Interstate-93 northbound and southbound between Interstate-90 and Route 3 in Braintree shall extend onto Route 3 if found feasible through the study conducted pursuant to 310 CMR 7.37(3)(a).
3. All high occupancy vehicle lanes shall be dedicated for exclusive high occupancy vehicle use during peak periods of travel. Peak periods of travel shall:
 - a. include at a minimum, three hours between the hours of 6:00 A.M. and 10:00 A.M. on the following:
 - i. the roadway segment described in 310 CMR 7.37(3)(a)1.;
 - ii northbound lanes of traffic on I-93 between I-90 and a Route 3 in Braintree, and
 - iii. eastbound lanes of traffic on I-90; and
 - b. shall also include at a minimum the hours of 3:00 P.M. to 7:00 P.M. on high occupancy vehicle lanes on the following:
 - i the roadway segment described in 310 CMR 7.37(3)(a)2.,
 - ii southbound lanes of traffic on I-93 between I-90 and Route 3, and
 - iii westbound lanes of traffic on I-90 demand forecasts.
3. Incorporation of additional high occupancy vehicle lanes shall not be accomplished by the addition of a new lane or lanes to Interstate-93 northbound beginning at the Charles River Crossing and extending north towards Interstate-95.
4. Incorporation of additional high occupancy vehicle lanes shall not be accomplished by the addition of a new lane or lanes to Interstate-90.

(c) Beginning January 1, 1994, the MHD and the MTA shall provide the Department with an annual assessment of the potential for exceedances of the Roadway Threshold Standards. The assessment shall be based on monitoring information collected and traffic projections using a method which has been agreed to in advance through consultation with the Department. The annual assessment shall, at a minimum, forecast when Roadway Threshold Standards will be exceeded on the roadway segments identified for the MHD in 310 CMR 7.37(3)(a) and (b) and for the MTA in 310 CMR 7.37(3)(c). If the Roadway Threshold Standards have already been exceeded as of one month prior to the date of submission of the annual assessment, the annual assessment shall also identify the time of day and travel conditions that were evident when Roadway Threshold Standards were exceeded.

(7) Attainment of Performance Standards.

(a) At the time that a new high occupancy vehicle lane or facility opens for public use, and at the time that any existing high occupancy vehicle lane is expanded, the MHD with respect to the roadway segments identified in 310 CMR 7.37(3)(a), and the MTA with respect to the roadway segments identified in 310 CMR 7.37(3)(c), shall monitor the high occupancy vehicle lane or facility performance, as measured by trip times, during peak periods of travel, to ensure that high occupancy vehicle performance standards are being met. Trip times shall

7.37: continued

be measured at least monthly and during at least five sample days each month. Measurements shall be taken on at least one Monday, Tuesday, Wednesday, Thursday and Friday during each month. On each of the sample days, a minimum of two time runs shall be made during peak hours of travel in each direction for each high occupancy vehicle lane roadway segment.

(b) The MHD and the MTA shall use all appropriate and feasible measures to maintain compliance with the high occupancy vehicle lane performance standards.

(c) Should high occupancy vehicle lane or facility performance standards for a given roadway segment be violated for 75% of the time runs in a particular month, the agency responsible for the operation of the lane shall file a written report describing the violations with the Department within ten days following the end of the month in which the violation was detected. This report shall describe the violations and shall describe a commitment by the responsible agency to take whatever measures are feasible and necessary to return the high occupancy vehicle lane to compliance with the performance standards, including but not limited to changes in high occupancy vehicle eligibility or high occupancy vehicle facility metering, and measures to increase the use of buses, car-pools and van-pools.

(d) Such reports shall be submitted to the Department for a period of two years following the opening of each HOV lane or facility. Thereafter the MHD and the MTA shall continue to monitor high occupancy vehicle lane and facility performance, to measure trip times as required by 310 CMR 7.37(7)(a), and to maintain records of such monitoring and measurements, and upon written request shall send reports to the Department containing the information and commitments described in 310 CMR 7.37(7)(c), provided however that trip times shall be measured at least quarterly and during at least five sample days each quarter, and provided further that compliance with performance standards during this later period shall be determined on a quarterly basis.

(8) Substitute High Occupancy Vehicle Projects.

(a) Based on the feasibility studies conducted pursuant to 310 CMR 7.37(3), if the MHD or the MTA can demonstrate to the Department that a specific HOV lane listed in 310 CMR 7.37(3) is not feasible due to adverse environmental impacts or associated engineering and financial issues, an alternative project shall be substituted in the following manner:

1. The MHD with respect to the roadway segments identified in 310 CMR 7.37(3)(a) and (b), and the MTA with respect to the roadway segments identified in 310 CMR 7.37(3)(c), must petition the Department to accept a substitute project. All such petitions shall be approved by EOTC prior to submission to the Department. All such petitions shall include a demonstration that the substitute project achieves equal or greater emission reductions of VOC, CO and NO_x from mobile sources, than the installation of an HOV lane, and that said substitute project provides for greater improvement in air quality for VOC, CO and NO_x in the area where the required high occupancy vehicle lane is targeted, in both the short and long terms. Park and ride facilities may be proposed as substitutes for the requirements for HOV lanes pursuant to the substitution provisions of 310 CMR 7.37(8). Any park and ride facilities which have been built to fulfill the requirements of, or are required to be built pursuant to 310 CMR 7.36(2), or are proposed and accepted as substitute projects pursuant to 310 CMR 7.36, cannot also be proposed as substitute projects pursuant to, 310 CMR 7.37(8).

2. Within 30 days of receipt of a petition and demonstration for project substitution, the Department shall make a determination whether all information necessary for review of said petition has been submitted, and shall notify the project proponent. The Department shall review the petition and shall, after notice and public hearing, accept or reject said petition in writing no later than 90 days after the Department determines that all information necessary to review the petition and demonstration has been submitted.

3. Within 30 days after the Department accepts or rejects such a petition and demonstration for project substitution, the Department shall file a copy of said petition and supporting documentation and a copy of the Department action with U.S. EPA, Region I.

(9) High Occupancy Vehicle Enforcement and Promotion.

(a) By January 31, 1993, the MHD and the MTA shall each prepare and submit to the Department a plan describing the general program for enforcement of the high occupancy

7.37: continued

vehicle lane system. These program submittals shall include a commitment to implementation of the enforcement program as defined therein. Within 30 days of receiving the enforcement program plans, the Department shall review and make recommendations regarding the plans. Said recommendations shall be incorporated by the MHD and the MTA into the final enforcement program plan for each agency. Specific enforcement measures applicable to a particular high occupancy vehicle lane shall be identified in the final design phase of the high occupancy vehicle system.

(b) By May 31, 1992, the MHD and the MTA shall prepare and submit to the Department a plan for a general program designed to promote high occupancy vehicle use. Said plan shall be based on a comprehensive review of techniques used to manage or promote high occupancy vehicle use in other locations throughout the United States and Canada. The MHD and the MTA shall, in said program, commit to implementation of selected measures to promote the use of the high occupancy vehicle system of each agency. A specific promotional plan for each roadway segment shall be prepared in conjunction with the final design for each high occupancy vehicle facility.

(10) High Occupancy Vehicle Expansion to the Local Roadway Network.

(a) EOTC and MHD shall encourage the City of Boston to incorporate high occupancy vehicle lanes and non-lane based incentives or mechanisms which promote the use of high occupancy vehicles.

(b) EOTC shall work with the Massachusetts Port Authority to conduct studies of high occupancy vehicle needs at Logan Airport.

(11) Reports Regarding Effects on Air Quality. Within two years from the opening for public use of each HOV lane or substitute project on any of the roadway segments described in 310 CMR 7.37(3), the MHD, for roadway segments described in 310 CMR 7.37(3)(a) and (b), and the MTA for roadway segments described in 310 CMR 7.37(3)(c) shall submit a report to the Department documenting the quantitative effects of such HOV lanes or projects on levels of VOC, CO and NOX in the areas affected. The method of determining the quantitative effects of such HOV lanes or substitute project on air quality shall be determined in consultation with the Department.

(12) HOV Lanes and Substitute Projects Permanent. All HOV lanes built pursuant to 310 CMR 7.37(1) through (7) and all substitute projects implemented pursuant to 310 CMR 7.37(8) shall be permanently operated and maintained by the MHD for all HOV lanes and projects built and implemented by it and by the MTA for all HOV lanes and projects built and implemented by it. Either transportation agency may petition the Department to either reduce or terminate the operation, maintenance or implementation of any HOV lane or substitute project built or implemented by it, by petitioning the Department to build another HOV lane, extend an existing HOV lane, or implement a substitute project by demonstrating that such lane or project will achieve equal or greater emission reductions of VOC, CO and NOX from mobile sources and will provide for greater improvement in air quality for VOC, CO and NOX in both the short and long term. The Department shall act upon such petitions as provided in 310 CMR 7.37(8)(a)2. and 3.

7.38: Certification of Tunnel Ventilation Systems in the Metropolitan Boston Air Pollution Control District

(1) Applicability.

(a) The requirements of 310 CMR 7.38 shall apply to the construction and operation of any tunnel ventilation system for highway projects proposed to be built in the Metropolitan Boston Air Pollution Control District, construction of which begins on or after January 1, 1991, including, but not limited to, the Central Artery/Third Harbor Tunnel project. The requirements of 310 CMR 7.38 apply in addition to requirements to implement guidelines of the Department to ensure comprehensive and systematic air quality analysis of highway projects, and all other review procedures applicable to highway projects pursuant to the State Implementation Plan (SIP), the purpose of said review to ensure the consistency of such projects with the requirements of the SIP. Tunnel ventilation systems subject to 310 CMR 7.38 are not subject to the requirements of 310 CMR 7.02.

(b) Any tunnel ventilation system which, when constructed, is subject to a federal New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants, shall be subject to such standard and shall operate in compliance with such standard.

7.38: continued

(2) Preconstruction Certification. No person shall cause, permit or allow the construction of any tunnel ventilation system and project roadway subject to 310 CMR 7.00 without first certifying to the Department, and receiving the Department's written acceptance of such certification, that any tunnel ventilation system, project roadway and roadway network within the project area, when operated in strict accordance with its design, standard operating and standard maintenance procedure, will not:

- (a) cause or exacerbate a violation of any National Ambient Air Quality Standard, as set forth at 40 CFR 50, or a Massachusetts Ambient Air Quality Standard as set forth at 310 CMR 6.00; or
- (b) cause or exacerbate a violation of the Department's one hour ambient NO₂ guideline of 320 ug/m³; or
- (c) result in an actual or projected increase in the total amount of non-methane hydrocarbons measured within the project area when compared with the no-build alternative.

(3) Preconstruction Department Certification Process.

(a) Any proponent of a project subject to 310 CMR 7.38 is required to submit such information sufficient for the Department to review the certification. Such information shall include, but is not limited to, the following:

1. an analysis of the existing and projected non-methane hydrocarbon emissions from the project area, including the emissions from the tunnel ventilation system, the project roadway and the roadway network in the project area;
2. a comparative analysis which quantifies the air quality impact within the project area predicted to occur after the project is built and the no-build alternative;
3. information concerning ventilation building heights and locations, conceptual site plan, design criteria for the proposed ventilation equipment and project roadway, standard operating procedures and standard maintenance procedures for the tunnel ventilation system;
4. an analysis of the projected vehicle miles traveled, average vehicle speeds and vehicle hours that are expected to occur within the project area when the project is completed compared with the projected vehicle miles traveled, projected average vehicle speeds, and projected vehicle hours travelled under the no-build alternative; and
5. an identification and analysis of feasible pollution prevention measures designed to reduce vehicle miles travelled including identification of the available short and long-term measures, commitments to implement said measures, and a schedule for implementing said measures.

(b) The Department shall within 30 days of receipt of a certification required by 310 CMR 7.38(2), make a determination whether all information necessary for review of said certification has been submitted. Upon making this determination, the Department shall notify the project proponent. The Department shall review the certification and shall, after notice and public hearing, accept or reject said certification in writing no later than 90 days after the Department determines that all information necessary to review the certification has been submitted. No construction on a tunnel ventilation system or project roadway shall commence until the certification has been accepted. The Department may impose such conditions on any acceptance of a certification issued pursuant to 310 CMR 7.38(3) as it deems are necessary to meet the criteria of 310 CMR 7.38(2)(a) through (c).

7.38: continued

(4) Operating Certification.

(a) Except as provided herein, no person shall operate any tunnel ventilation system or open for general public use any project roadway which is served by a tunnel ventilation system subject to 310 CMR 7.38, without receiving written acceptance of its certification to do so from the Department as provided for in 310 CMR 7.38(3). Any person who has received written acceptance of certification to construct a tunnel ventilation system pursuant to 310 CMR 7.38(3) may commence operation of said tunnel ventilation system and open the project roadway to general public use for a period not to exceed 18 months, provided that said person submits to the Department an operating certification. Said operating certification submission shall be no earlier than 12 nor later than 15 months after the commencement of full operation of said tunnel ventilation system or opening of the project roadway for general public use. Any operating certification shall demonstrate that the operation of the tunnel ventilation system shall, at a minimum, be in strict accordance with the certification criteria set forth in 310 CMR 7.38(2)(a) through (c) and the certification accepted by the Department pursuant to 310 CMR 7.38(3) as demonstrated through actual measured emissions and traffic data, or other approaches allowed by 310 CMR 7.38(8)(a).

(b) In addition to the demonstration of compliance with the certification criteria set forth in 310 CMR 7.38(2)(a) through (c) and the certification accepted by the Department pursuant to 310 CMR 7.38(3), the operating certificate submittal shall include a contingency plan consisting of measures which could be implemented in cases of exceedence of the emission limitations in the certification. Said contingency plan shall identify available contingency measures including, but not limited to, alternative tunnel ventilation system operations and maintenance, and transportation control measures; a commitment for implementing said measures; a schedule for implementing measures on a days-to-full effectiveness basis; and an analysis of the daily air quality impact of the measures on the emissions from the tunnel ventilation system and within the project area.

(c) Any operating certification accepted by the Department pursuant to 310 CMR 7.38(4) shall remain in effect for five years from the date of acceptance and shall contain such conditions as the Department deems necessary to meet the certification criteria established in 310 CMR 7.38(2)(a) through (c). Any operating certification accepted by the Department pursuant to 310 CMR 7.38(4) shall be subject to renewal upon application to the Department. The Department shall apply the same criteria that apply to the acceptance of pre-construction certification and the initial operating certification to the renewal of an operating certification. The requirement to obtain an operating certification, or renewal thereof, shall be in addition to the certification required in 310 CMR 7.38(2).

(5) Operating Certification Department Process. The Department shall, within 30 days of receipt of an initial operating certification or renewal of an operating certification required by 310 CMR 7.38(4), make a determination whether all information necessary for review of said certification has been submitted. Upon making this determination, the Department shall notify the project proponent. The Department shall review the certification and shall, after notice and public hearing, accept or reject said certification in writing no later than 90 days after the Department determines that all information necessary to review the certification has been submitted. The Department may impose such conditions on any acceptance of a certification issued pursuant to 310 CMR 7.38(5) as it deems are necessary to meet the criteria of 310 CMR 7.38(2)(a) through (c) and of the certification accepted pursuant to 310 CMR 7.38(3).

7.38: continued

(6) Mitigation Plan Review and Acceptance.

(a) If the Department finds, based upon a review of information submitted by the operator in support of any operating certification, and such other information as the Department has available to it, that one or more of the criteria set forth in 310 CMR 7.38(2)(a) through (c) or established in the acceptance of the certification pursuant to 310 CMR 7.38(3) through (5) are being violated, or are likely to be violated within the period for which the operating certification is valid, the operator of the tunnel ventilation system shall:

1. Implement the measures identified in the contingency plan submitted and accepted as part of the initial operating certificate pursuant to 310 CMR 7.38(4), and necessary,
2. Within four months after being notified of such a finding, submit to the Department for review and approval a mitigation plan which identifies specific measures the operator intends to implement to bring the tunnel ventilation system and associated project area into compliance with criteria set forth in 310 CMR 7.38(2)(a) through (c) and the conditions of the Department's acceptance of the certification set forth in 310 CMR 7.38(3) through (5). The mitigation plan shall at minimum contain the following:
 - a. a study that identifies the factors which are causing or contributing to the violation identified in any notice by the Department issued under 310 CMR 7.38(6);
 - b. identification and an affirmative demonstration of specific measures which will result in compliance with the criteria in 310 CMR 7.38(2)(a) through (c), and the Department's acceptance of the certification issued pursuant to 310 CMR 7.38(3) through (5).
 - c. a demonstration of adequate funding mechanisms for implementation of said measures; and
 - d. a schedule for implementing said measures.

(b) A mitigation plan submitted pursuant to 310 CMR 7.38(6) shall include examination of measures which address the operation of the ventilation system as well as examination of measures which address operation of the tunnel roadway and roadway network within the project area. The latter shall include, but not be limited to:

1. improvements in public transit,
2. programs to increase the use of high occupancy vehicles,
3. restriction of additional roads or lanes to high-occupancy vehicles,
4. employer-based transportation demand management plans,
5. expansion of fringe and transportation corridor parking facilities,
6. programs to limit or restrict vehicle use in downtown areas or other areas of high emission concentration particularly during periods of peak use,
7. ridesharing programs, and
8. other measures to shift demand to non-automotive modes of travel or to increase vehicle occupancy rates.

(c) The Department shall, within 30 days of receipt of the mitigation plan, make a determination that all information necessary for review of said plan has been submitted. Upon making this determination, the Department shall notify the project proponent. The Department shall review the mitigation plan and shall, after notice and public hearing, accept, or reject said plan in writing no later than 90 days after the Department determines that all information necessary to review the plan has been submitted. The Department may impose such conditions on any acceptance of the plan prepared pursuant to 310 CMR 7.38(6) as it deems are necessary to meet the criteria of 310 CMR 7.38(2)(a) through (c) and of the certification accepted pursuant to 310 CMR 7.38(3) through (5). The terms of the accepted plan shall be incorporated into the operating certification for the applicable renewal period.

7.38: continued

(7) Review of Operations. If at any time the Department finds that one or more of the criteria set forth in 310 CMR 7.38(2)(a) through (c) or the criteria established in the acceptance of certification issued pursuant to 310 CMR 7.38(3) through (5) is not being met, the Department may order the operator to implement the contingency measures and to submit a mitigation plan as set forth in 310 CMR 7.38(6) to bring the operation of the tunnel ventilation system into compliance with said criteria. Any plan submission made pursuant to 310 CMR 7.38(7) shall contain the same elements as required pursuant to 310 CMR 7.38(5) and (6) as well as such other information as the Department may require.

(8) Compliance Monitoring. Any person who constructs and operates a tunnel ventilation system on or after January 1, 1991 shall comply with the following monitoring requirements:

- (a) Emissions Monitoring. Any person who constructs and operates a tunnel ventilation system which is subject to the requirements of 310 CMR 7.38 shall, prior to commencing operation of the tunnel ventilation system or opening the project roadway for public use, develop and submit to the Department for review and approval an "Air Emissions Monitoring Protocol" and shall install and operate emissions monitoring and recording equipment in accordance with the approved protocol. Monitoring as approved by the Department shall be required at the exhaust stacks or exhaust plenums of ventilation buildings as well as at exit portals that utilize longitudinal ventilation. The Department will consider for approval hybrid monitoring systems that incorporate elements of the federal regulations for monitoring ambient air pollution, for monitoring stationary source emissions, and for pollutant emission trading (*i.e.*, 40 CFR Parts 58, 60, and 75) as practicable, as well as statistical analysis, computer modeling, and innovative technologies. The "Air Emissions Monitoring Protocol" may also be modified with prior written approval of the Department.
- (b) Traffic Monitoring. Any person who constructs and operates a tunnel ventilation system which is subject to the requirements of 310 CMR 7.38 shall install, operate and maintain traffic monitoring equipment within the project area, the numbers and locations of which shall be determined in consultation with the Department.

(9) Record Keeping and Reporting.

- (a) Any person who constructs and operates a tunnel ventilation system on or after January 1, 1991 shall comply with the following record keeping and reporting requirements:
1. All records and data from the continuous emissions monitors, recorders and traffic monitors shall be maintained for a period of five years. The most recent two years of data shall be readily available for Department inspection.
 2. Emissions Reporting. For the first year of operations monthly reports shall be filed with the Department no later than 30 days following the end of the preceding calendar month. Said monthly reports shall contain a summary of continuous monitoring data showing any excursions from allowable emission limitations contained in the Department's acceptance of the certification. In the event any of the reported data shows an excursion of the emission limitations set forth in the acceptance of certification, a written explanation of any excursion shall be included. Evidence of each calibration event on the monitoring devices shall be included in such monthly reports.
 3. Traffic Reporting. For the first year of operation monthly reports shall be filed with the Department no later than 30 days following the end of the preceding calendar month. Said monthly reports shall contain a summary of average daily and peak hour counts of vehicle miles travelled as well as average daily and peak hour vehicle speeds and vehicle hours travelled as identified through the traffic monitoring network established pursuant to 310 CMR 7.38(8).
 4. Tunnel Ventilation System Maintenance. For the first year of operations monthly reports shall be filed with the Department no later than 30 days following the end of the preceding calendar month. Said monthly reports shall contain a summary of routine maintenance checks performed, repairs of ventilation equipment, amount of time during which ventilation equipment was not operating in accordance with standard operating procedures and measures taken to remedy this situation.

7.38: continued

(b) After the first year of operation, the reports required by 310 CMR 7.38(9) shall be submitted to the Department on a quarterly basis, with the first such quarterly report being due no later than 30 days after the end of the quarter and every three months thereafter.

(10) Removal of Air Pollution Control and Monitoring Equipment. No person shall cause, suffer, allow, or permit the removal, alteration or shall otherwise render inoperative any air pollution control equipment or equipment used to monitor emissions or operations which has been installed as a requirement of 310 CMR 7.38, other than for routine maintenance periods or unexpected and unavoidable failure of the equipment, provided that the Department is notified of such failure. For the purpose of 310 CMR 7.38(10), the term, air pollution control equipment, shall mean the tunnel ventilation system as defined in 310 CMR 7.00.

(11) Public Participation. The purpose of the public hearings provided for in 310 CMR 7.38 shall be to allow any person to make their views known to the Department. Such a hearing shall not be adjudicatory in nature, but shall be in the nature of a public forum for the presentation of any comment that may be relevant to the consideration of a request for acceptance of pre-construction certification, operating certification, renewal of operating certification or acceptance of a mitigation plan. Any decision related to the review and acceptance or rejection of a preconstruction certification; review, acceptance or rejection of a request for operating certification; review, acceptance or rejection of the renewal of an operating certification; or review, acceptance or rejection of a mitigation plan in accordance with the provisions of 310 CMR 7.38, is not an adjudicatory proceeding within the meaning of M.G.L. c. 30A.

7.40: U Low Emission Vehicle Program

(1) U Applicability and Definitions.

(a) Under the authority of 42 U.S.C. 7507, M.G.L. c. 111, §§ 142A through 142M, and M.G.L. c. 21N the Department hereby adopts the California Code of Regulations sections cited in 310 CMR 7.40(1)(c): *Table 1* and *Table 2*.

(b) Definitions. When used in 310 CMR 7.40 or in communications, notices or orders relative thereto, the following words and phrases shall have the meanings ascribed to them below:

Add-on Part. As defined in Title 13 CCR § 1900.

Aftermarket Part. Any part of a motor vehicle emission control system sold for installation on a vehicle after the original retail sale of the vehicle.

California ARB. The California Air Resources Board.

California ARB Executive Order. A document issued by the California ARB certifying that a specified engine family, test group or model year vehicle has met all applicable Title 13 CCR requirements for certification and sale in California.

California Code of Regulations or CCR. The official compilation and publication of the regulations adopted, amended or repealed by California state agencies pursuant to the California Administrative Procedure Act.

Community-based Clean Mobility Program. A program that:

- (a) provides access to clean mobility solutions other than vehicle ownership including ZEV car sharing, ride-sharing, vanpools, ride-hailing, or on-demand first-mile/last-mile services;
- (b) serves a community in which at least 75% of the census block groups in the project area (where community residents live and services operate) are: a disadvantaged community, as defined in Massachusetts by 310 CMR 7.40(1)(b), a low-income community, as defined in Massachusetts by 310 CMR 7.40(1)(b), or a tribal community regardless of federal recognition; and

7.40: continued

(c) is implemented by a community-based organization; Native American Tribal government regardless of federal recognition; or a public agency or nonprofit organization that has received a letter of support from a project-related community-based organization or local community group that represents community members that will be impacted by the project or has a service background related to the type of project.

Consolidated Part. As defined in Title 13 CCR § 1900.

Disadvantaged Community.

- (a) A Neighborhood that meets one or more of the following criteria:
1. the annual median household income is not more than 65% of the statewide annual median household income;
 2. minorities comprise 40% or more of the population;
 3. 25% or more of households lack English language proficiency;
 4. minorities comprise 25% or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150% of the statewide annual median household income; or
- (b) a geographic portion of a Neighborhood designated by the Secretary as an Environmental Justice Population pursuant to M.G.L. c. 30, § 62; provided, however, that a Neighborhood or a geographic portion of a Neighborhood that the Secretary has determined shall not be designated an Environmental Justice Population pursuant to M.G.L. c. 30, § 62 shall not be considered an Environmental Justice Population.

Emergency Vehicle. Any publicly owned vehicle operated by a peace officer in performance of their duties, any authorized emergency vehicle used for fighting fires or responding to emergency fire calls, any publicly owned authorized emergency vehicle used by an emergency medical technician or paramedic, or used for towing or servicing other vehicles, or repairing damaged lighting or electrical equipment, any motor vehicle of mosquito abatement, vector control, or pest abatement agencies and used for those purposes, or any ambulance used by a private entity under contract with a public agency.

Emission Control Label. A paper, plastic, metal or other permanent material, welded, riveted or otherwise permanently attached to an area within the engine compartment (if any) or to the engine in such a way that it will be visible to the average person after installation of the engine.

Emissions-related Part. As defined in Title 13 CCR § 1900.

Environmental Performance Label. A decal securely affixed by the manufacturer to a window of vehicles which discloses information for the vehicle in accordance with Title 13 CCR § 1965.

Executive Officer. The Executive Officer of the California ARB or the Executive Officer's authorized representative.

Federal Fuel Economy and Environment Label. A label that is affixed by the manufacturer to a window on passenger cars, light-duty trucks, and medium-duty passenger vehicles in accordance with 40 CFR Parts 85, 86 and 600 as promulgated on July 6, 2011.

Financial Assistance Program. A vehicle purchase incentive program where approved dealerships accept a point-of-sale incentive for used ZEVs and PHEVs for lower-income consumers. Qualifying programs include the Massachusetts Offers Rebates for Electric Vehicles (MOR-EV), or successor or other State programs that the Department determines meet the Financial Assistance Program definition.

Greenhouse Gas. As defined in Title 13 CCR § 1961.3(f).

Heavy-duty Engine. As defined in Title 13 CCR § 1900.

Heavy-duty Vehicle. As defined in Title 13 CCR § 1900.

7.40: continued

Independent Low Volume Manufacturer. As defined in Title 13 CCR § 1900.

Intermediate Volume Manufacturer. As defined in Title 13 CCR § 1900.

Large Volume Manufacturer. As defined in Title 13 CCR § 1900.

Light-duty Truck. As defined in Title 13 CCR § 1900.

Low-income Community. A census block group in which the annual median household income is not more than 65% of the statewide annual median household income.

Mailout. A widely distributed general correspondence issued by the California ARB whenever said Board needs information from the public, or when it wishes to inform the public of new information.

Manufacturer. Any small volume manufacturer, intermediate volume manufacturer or large volume motor vehicle manufacturer which offers, delivers or arranges for the delivery of new motor vehicles for sale or lease in Massachusetts.

Manufacturers Advisory Correspondence. A document issued by the California ARB which is a policy interpretation for further clarification of the CCR.

Massachusetts Emission Control Waiver. An exemption from the requirements of 310 CMR 7.40 granted by the Department in conjunction with the MassDOT Registry of Motor Vehicles Division pursuant to M.G.L. c. 90, § 2.

Medium-duty Passenger Vehicle. As defined in Title 13 CCR § 1900.

Medium-duty Vehicle. As defined in Title 13 CCR § 1900.

Model Year. A manufacturer's annual production period which includes January 1st of a calendar year or, if the manufacturer has no annual production period, the calendar year. In the case of any vehicle manufactured in two or more stages, the time of manufacture shall be the date of completion of the chassis.

Modified Part. As defined in Title 13 CCR § 1900.

Motor Vehicle or Vehicle. Any passenger car, light-duty truck, medium-duty passenger vehicle, medium-duty vehicle or heavy-duty vehicle as appropriate.

Motor Vehicle Pollution Control System. The combination of emissions-related parts which controls air pollutant emissions from a motor vehicle or motor vehicle engine.

Near-zero-emission vehicle (NZEV). As defined in Title 13 CCR § 1963(c).

New Vehicle. Any vehicle with 7,500 miles or fewer on its odometer.

Passenger Car. As defined in Title 13 CCR § 1900.

Placed in Service. As defined in Title 13 CCR § 1962.1(i).

Recall. A manufacturer's issuing of notices directly to consumers that vehicles in their possession or control should be corrected or a manufacturer's efforts to actively locate and correct vehicles in the possession or control of consumers.

Recall Campaign. The plan approved by the California ARB or the Department, by which the manufacturer will effect the recall of noncomplying vehicles.

Replacement Part. As defined in Title 13 CCR § 1900.

7.40: continued

Small Volume Manufacturer. As defined in Title 13 CCR § 1900.

Smog Index Label. A decal securely affixed by the manufacturer to a window of all 2001 through 2009 model year passenger cars and light-duty trucks which discloses the smog index for the vehicle in accordance with Title 13 CCR 1965 and the "California Motor Vehicle Emission Control and Smog Index Label Specifications".

Test Vehicle. An experimental or prototype motor vehicle which appears to have very low emission characteristics or a used motor vehicle within which an experimental motor vehicle pollution control device is installed, and which has also received a test vehicle or fleet permit from the California ARB pursuant to Manufacturers Advisory Correspondence No. 8301.

Zero Emission Vehicle (ZEV). As defined in Title 13 CCR § 1962.2 for Advanced Clean Cars I, Title 13 CCR § 1962.4 for Advanced Clean Cars II and Title 13 CCR § 1963(c) for Advanced Clean Trucks.

(c) Wherever 310 CMR 7.40 refers to a specific section of the CCR, the reference is made to that version of the section as of the operative/effective date provided for that section in 310 CMR 7.40(1)(c): *Table 1* or *Table 2*. The Department hereby incorporates by reference each of the sections of Titles 13 and 17 CCR that are listed in 310 CMR 7.40(1)(c): *Table 1* and *Table 2*. Wherever 310 CMR 7.40 refers to Titles 13 or 17 CCR without a reference to a specific section of the CCR, the reference is made to all those sections listed in, and that version of those sections as of the operative/effective dates provided for in, 310 CMR 7.40(1)(c): *Table 1* or *Table 2*, respectively.

310 CMR 7.40(1)(c): *Table 1*

Title 13 CCR	Title	Section Operative/ Effective Date in California
Division 3. Air Resources Board.		
CHAPTER 1. Motor Vehicle Pollution Control Devices.		
Article 1. General Provisions.		
1900	Definitions.	12/22/21
Article 2. Approval of Motor Vehicle Pollution Control Devices (New Vehicles).		
1956.8	Exhaust Emissions Standards and Test Procedures - 1985 and Subsequent Model Heavy-duty Engines and Vehicles, 2021 and Subsequent Zero-emission Powertrains, and 2022 and Subsequent Model Heavy-duty Hybrid Powertrains.	12/22/21
1960.1	Exhaust Emissions Standards and Test Procedures - 1981 through 2006 Model Passenger Cars, Light-duty Trucks and Medium-duty Vehicles.	12/31/12
1960.1.5	Optional NO _x Standards for 1983 and Later Model Passenger Cars, and Light-duty Trucks and Medium-duty Vehicles Less than 4000 Lbs. Equivalent Inertia Weight (EIW) or 3751 Lbs. Loaded Vehicle Weight (LVW).	9/30/91
1960.5	Certification of 1983 and Subsequent Model-year Federally Certified Light-duty Motor Vehicles for Sale in California.	10/16/02
1961	Exhaust Emission Standards and Test Procedures – 2004 through 2019 Model Passenger Cars, Light-duty Trucks, and Medium-duty Vehicles.	12/31/12

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.40: continued

Title 13 CCR	Title	Section Operative/ Effective Date in California
1961.1	Greenhouse Gas Exhaust Emission Standards and Test Procedures – 2009 through 2016 Model Passenger Cars, Light-duty Trucks, and Medium-duty Vehicles.	8/7/12
1961.2	Exhaust Emission Standards and Test Procedures – 2015 through 2025 Model Year Passenger Cars and Light-duty Trucks, and 2015 through 2028 Model Year Medium-duty Vehicles.	11/30/22
1961.4	Exhaust Emission Standards and Test Procedures - 2026 and Subsequent Model Year Passenger Cars, Light-duty Trucks, and Medium-duty Vehicles.	11/30/22
1961.3	Greenhouse Gas Exhaust Emission Standards and Test Procedures 2017 and Subsequent Model Passenger Cars, Light-duty Trucks, and Medium-duty Passenger Vehicles.	11/30/22
1962(a), (b), (c), (d), (e), (f), (g)(1-7), (h), (i), (j)	Zero-emission Vehicle Standards for 2005 through 2008 Model Year Passenger Cars, Light-duty Trucks, and Medium-duty Vehicles, Including California Exhaust Emission Standards and Test Procedures for 2005 through 2008 Model Zero-emission Vehicles, and 2001 through 2008 and Subsequent Model Hybrid Electric Vehicles, in the Passenger Car, Light-duty Truck and Medium-duty Vehicle Classes, except for § C.7 and 8.	2/13/10
1962.1(a), (b), (c), (d), (f), (g)(1-7), (h), (i), (j), (l)	Zero-emission Vehicle Standards for 2009 through 2017 Model Year Passenger Cars, Light-duty Trucks, and Medium-duty Vehicles, Including California Exhaust Emission Standards and Test Procedures for 2009 through 2017 Model Zero-emission Vehicles Hybrid Electric Vehicles, in the Passenger Car, Light-duty Truck and Medium-duty Vehicle Classes, except for § C.7 and 8.	1/1/16
1962.2(a), (b), (c), (d), (g)(1) through (7), (h), (i), (j), (l)	Zero-emission Vehicle Standards for 2018 through 2025 Model Year Passenger Cars, Light duty Trucks, and Medium duty Vehicles, Including California Exhaust Emission Standards and Test Procedures for 2018 and Subsequent Model Zero emission Vehicles and Hybrid Electric Vehicles, in the Passenger Car, Light duty Truck and Medium duty Vehicle Classes, except for § C.7 and 8.	11/30/22
1962.3	Electric Vehicle Charging Requirements.	11/30/22
1962.4(a) through (m)(2), (n) and (o)	Zero-emission Vehicle Standards for 2026 and Subsequent Model Year Passenger Cars and Light-duty Trucks.	11/30/22
1962.5	Data Standardization Requirements for 2026 and Subsequent Model Year Light-duty Zero Emission Vehicles and Plug-in Hybrid Electric Vehicles.	11/30/22
1962.6	Battery Labeling Requirements.	11/30/22
1962.7	In-use Compliance, Corrective Action and Recall Protocols for 2026 and Subsequent Model Year Zero-emission and Plug-in Hybrid Electric Passenger Cars and Light-duty Trucks.	11/30/22
1962.8	Warranty Requirements for Zero-emission and Batteries in Plug-in Hybrid Electric 2026 and Subsequent Model Year Passenger Cars and Light-duty Trucks.	11/30/22
1963	Advanced Clean Trucks Purpose, Applicability, Definitions, and General Requirements.	3/15/21

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.40: continued

Title 13 CCR	Title	Section Operative/ Effective Date in California
1963.1	Advanced Clean Trucks Deficits.	3/15/21
1963.2	Advanced Clean Trucks Credit Generation, Banking, and Trading.	3/15/21
1963.3	Advanced Clean Trucks Compliance Determination.	3/15/21
1963.4	Advanced Clean Trucks Reporting and Recordkeeping.	3/15/21
1963.5(a)(1) through (3)	Advanced Clean Trucks Enforcement.	3/15/21
1964	Special Test Procedures for Certification and Compliance – New Modifier Certified Motor Vehicles.	2/23/90
1965	Emission Control, Smog Index, and Environmental Performance Labels – 1979 and Subsequent Model-year Motor Vehicles.	11/30/22
1968.1	Malfunction and Diagnostic System Requirements – 1994 and Subsequent Model-year Passenger Cars, Light-duty Trucks and Medium-duty Vehicles and Engines.	11/27/99
1968.2	Malfunction and Diagnostic System Requirements - 2004 and Subsequent Model-year Passenger Cars, Light-duty Trucks, and Medium-duty Vehicles and Engines.	11/30/22
1971.1	On-board Diagnostic System Requirements - 2010 and Subsequent Model-year Heavy-duty Engines.	12/22/21
1976	Standards and Test Procedures for Motor Vehicle Fuel Evaporative Emissions.	11/30/22
1978	Standards and Test Procedures for Vehicle Refueling Emissions.	11/30/22
Article 6. Emission Control System Warranty.		
2035	Purpose, Applicability, and Definitions.	12/22/21
2036	Defects Warranty Requirements for 1979 Through 1989 Model Passenger Cars, Light-duty Trucks, and Medium-duty Vehicles; 1979 and Subsequent Model Motorcycles and Heavy-duty Vehicles; and Motor Vehicle Engines Used in Such Vehicles; and 2020 and Subsequent Model Year Trailers.	12/22/21
2037	Defects Warranty Requirements for 1990 and Subsequent Model Passenger Cars, Light-duty Trucks, Medium-duty Vehicles, and Motor Vehicle Engines Used in Such Vehicles.	11/30/22
2038	Performance Warranty Requirements for 1990 and Subsequent Model Passenger Cars, Light-duty Trucks, and Medium-duty Vehicles and Motor Vehicle Engines Used in Such Vehicles.	11/30/22
2039	Emissions Control System Warranty Statement.	12/26/90
2040	Vehicle Owner Obligations.	10/1/19
2041	Mediation; Finding of Warrantable Condition.	12/26/90
Article 7. Procedures for Certifying Used Modifier-certified Motor Vehicles and Licensing Requirements for Vehicle Emission Test Laboratories.		
2047	Certification Procedures for Used Modifier-certified Motor Vehicles.	5/31/88

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.40: continued

Title 13 CCR	Title	Section Operative/ Effective Date in California
CHAPTER 2. Enforcement of Vehicle Emission Standards and Surveillance Testing.		
Article 1. Assembly-line Testing.		
2061	Assembly-line Test Procedures - 1983 and Subsequent Model Years.	10/23/96
2062	Assembly-line Test Procedures - 1998 and Subsequent Model Years.	8/7/12
Article 1.5 Enforcement of Vehicle Emission Standards and Surveillance Testing for 2005 and Subsequent Model Year Heavy-duty Engines and Vehicles.		
2065	Applicability of Chapter 2 to 2005 and Subsequent Model Year Heavy-duty Engines and Vehicles.	4/1/19
Article 2. Enforcement of New and In-use Vehicle Standards.		
2101	Compliance Testing and Inspection -New Vehicle Selection, Evaluation, and Enforcement Action.	11/27/99
2106	New Vehicle Assembly-line Inspection Testing.	11/27/99
2107	Assembly-line Quality-audit Testing.	11/27/99
2108	Order of Executive Officer.	12/30/83
2109	New Vehicle Recall Provisions.	12/30/83
2110	Remedial Action for Assembly-line Quality Audit Testing of Less Than a Full Calendar Quarter of Production Prior to the 2001 Model Year.	11/27/99
Article 2.1 Procedures for In-use Vehicle Voluntary and Influenced Recalls.		
2111	Applicability.	12/22/21
2112	Definitions.	11/30/22
2113	Initiation and Approval of Voluntary and Influenced Emission-related Recalls.	12/22/21
2114	Voluntary and Influenced Recall Plans.	12/22/21
2115	Eligibility for Repair.	12/22/21
2116	Repair Label.	12/22/21
2117	Proof of Correction Certificate.	12/22/21
2118	Notification.	12/22/21
2119	Recordkeeping and Reporting Requirements.	12/22/21
2120	Other Requirements Not Waived.	1/26/95
2121	Penalties.	12/22/21
Article 2.2. Procedures for In-use Vehicle Ordered Recalls.		
2122	General Provisions.	12/8/10
2123	Initiation and Notification of Ordered Emission-related Recalls.	12/22/21
2124	Availability of Public Hearing.	1/26/95
2125	Ordered Recall Plan.	12/22/21

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.40: continued

Title 13 CCR	Title	Section Operative/ Effective Date in California
2126	Approval and Implementation of Recall Plan.	12/22/21
2127	Notification of Owners.	12/22/21
2128	Repair Label.	12/22/21
2129	Proof of Correction Certificate.	12/22/21
2130	Capture Rates and Alternative Measures.	12/22/21
2131	Preliminary Tests.	12/22/21
2132	Communication with Repair Personnel.	1/26/95
2133	Recordkeeping and Reporting Requirements.	12/22/21
2134	Penalties.	1/26/95
2135	Extension of Time.	1/26/95
Article 2.3. In-use Vehicle Enforcement Test Procedures.		
2136	General Provisions.	12/8/10
2137	Vehicle, Engine, and Trailer Selection.	12/22/21
2138	Restorative Maintenance.	11/27/99
2139	Testing.	11/30/22
2140	Notification and Use of Test Results.	11/30/22
Article 2.4. Procedures for Reporting Failures of Emission-related Components.		
2141	General Provisions.	12/22/21
2142	Alternative Procedures.	12/22/21
2143	Failure Levels Triggering Recall and Corrective Action.	12/22/21
2144	Emission Warranty Information Report.	12/22/21
2145	Field Information Report.	12/22/21
2146	Emissions Information Report.	12/22/21
2147	Demonstration of Compliance with Emission Standards.	11/30/22
2148	Evaluation of Need for Recall.	12/22/21
2149	Notification and Subsequent Action.	12/22/21
Article 3. Surveillance Testing.		
2150	Assembly-line Surveillance.	12/30/83
2151	New Motor Vehicle Dealer Surveillance.	12/30/83
2152	Surveillance of Used Cars at Dealerships.	12/30/83
Article 5. Procedures for Reporting Failures of Emission-Related Equipment and Required Corrective Action.		
2166	General Provisions.	12/22/21
2166.1	Definitions.	12/22/21

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.40: continued

Title 13 CCR	Title	Section Operative/ Effective Date in California
2167	Required Recall and Corrective Action for Failures of Exhaust After-treatment Devices, Onboard Computers or Systems, Urea Dosers, Hydrocarbon Injectors, Exhaust Gas Recirculation Valves, Exhaust Gas Recirculation Coolers, Turbochargers, Fuel Injectors.	12/22/21
2168	Required Corrective Action and Recall for Emission-Related Component Failures.	12/22/21
2169	Required Recall or Corrective Action Plan.	12/22/21
2169.1	Approval and Implementation of Corrective Action Plan.	12/22/21
2169.2	Notifications of Owners.	12/22/21
2169.3	Repair Label.	12/22/21
2169.4	Proof of Correction Certificate.	12/22/21
2169.5	Preliminary Tests.	12/22/21
2169.6	Communication with Repair Personnel.	12/22/21
2169.7	Recordkeeping and Reporting Requirements.	12/22/21
2169.8	Extension of Time.	12/22/21
Chapter 4. Criteria for the Evaluation of Motor Vehicle Pollution Control Devices and Fuel Additives.		
Article 2. Aftermarket Parts.		
2221	Replacement Parts.	12/30/83
2222	Add-on Parts and Modified Parts	8/16/90
2224	Surveillance.	1/1/22

310 CMR 7.40(1)(c): *Table 2*

Title 17 CCR	Title	Section Operative/ Effective Date in California
Division 3. Air Resources.		
CHAPTER 1. Air Resources Board.		
Subchapter 10. Climate Change.		
Article 4. Regulations to Achieve Greenhouse Gas Emission Reductions.		
Subarticle 12. Greenhouse Gas Emission Requirements for New 2014 and Subsequent Model Heavy-duty Vehicles.		
95660	Purpose.	12/5/14
95661	Applicability.	12/5/14
95662	Definitions.	4/1/19
95663	Greenhouse Gas Exhaust Emission Standards and Test Procedures for New 2014 and Subsequent Model Heavy-duty Vehicles.	4/1/20

7.40: continued

(d) 310 CMR 7.40 is applicable to manufacturers and to persons who place in service, deliver for sale, sell, lease, offer for sale or lease, import, deliver, purchase, rent, acquire or receive, motor vehicles and motor vehicle engines in or into Massachusetts and are regulated by the following current programs:

1. Advanced Clean Cars I consisting of:
 - a. Low Emission Vehicle Program III as described in Title 13 CCR for:
 - i. Criteria pollutants is applicable for model years 2015 through 2025;
 - ii. Greenhouse gas pollutants is applicable starting with model year 2017; and
 - b. Zero Emission Vehicle Program as described in Title 13 CCR is applicable for model years 2018 through 2025.
 2. Greenhouse Gas Exhaust Emission Standards and Test Procedures as described in Titles 13 and 17 CCR is applicable starting with model year 2025.
 3. Advanced Clean Trucks as described in Title 13 CCR is applicable starting with model year 2025; early action credits as described in Advanced Clean Trucks may be earned starting with model year 2021.
 4. Heavy duty Omnibus as described in Title 13 CCR is applicable starting with model year 2025; NO_x credits as described in Heavy duty Omnibus may be earned starting with model year 2022.
 5. Advanced Clean Cars II consisting of:
 - a. Low Emission Vehicle Program IV as described in Title 13 CCR for criteria pollutants is applicable starting with model year 2026;
 - b. Zero Emission Vehicle Program as described in Title 13 CCR is applicable starting with model year 2026; early compliance vehicle values as described in the Zero Emission Vehicle Program may be earned starting with model year 2024.
- (e) All documentation referenced in the Titles 13 and 17 CCR sections listed in 310 CMR 7.40(1)(c): *Table 1* and *Table 2* including, but not limited to, California Test Procedures and 40 CFR Part 86, are hereby incorporated by reference.
- (f) Pursuant to the requirements of 42 U.S.C. 7507, the Department shall apply technical guidance issued by the California ARB relative to the implementation of Titles 13 and 17 CCR including, but not limited to, Manufacturers Advisory Correspondences and Mailouts to all vehicles subject to 310 CMR 7.40.
- (g) For purposes of applying the CCR sections and California Test Procedures incorporated by reference in 310 CMR 7.40, "California" shall mean "Massachusetts", unless the context clearly indicates otherwise. *For example*, "delivered for sale in California" and "placed in service in California" shall mean vehicles "delivered for sale in Massachusetts" or "placed in service in Massachusetts". Note that determinations of whether a manufacturer is a large, medium, small or independent low volume manufacturer are based on California sales.
- (h) For purposes of applying the CCR sections and California Test Procedures incorporated by reference in 310 CMR 7.40, "Executive Officer" shall mean "Commissioner," unless the context clearly indicates otherwise.
- (i) For purposes of enforcing the CCR sections and California Test Procedures incorporated by reference in 310 CMR 7.40, the Department shall conduct enforcement in accordance with 310 CMR 7.40(7).
- (j) For purposes of implementing Title 13 CCR § 1962.4, the definitions of "Community-based Clean Mobility Program" and "Financial Assistance Program" in Title 13 CCR § 1962.4(l) are replaced with those in 310 CMR 7.40(1)(b).

(2) Emissions Requirements and Prohibitions.

(a) No person or other entity, including manufacturers, shall place in service, deliver for sale, sell, import, deliver, purchase, lease, rent, acquire, or receive a new vehicle subject to 310 CMR 7.40 in or into Massachusetts unless the vehicle has received a California ARB Executive Order for all applicable requirements of Titles 13 and 17 CCR and complies with the requirements in 310 CMR 7.40, except if the vehicle is sold directly from one dealer to another dealer, sold for the purpose of being wrecked or dismantled, sold exclusively for off-highway use, or sold for registration out of state, and except as provided in 310 CMR 7.40(2)(c).

7.40: continued

(b) No motor vehicle dealer shall place in service, deliver for sale, sell, offer for sale or lease, or deliver in or into Massachusetts any new or used passenger car, light-duty truck, or medium-duty vehicle which is required to meet emission standards adopted pursuant to 310 CMR 7.40 unless said vehicle conforms to the standards below:

1. Ignition timing set to manufacturer's specifications with an allowable tolerance of $\pm 3^\circ$.
2. Idle speed is set to manufacturer's specifications with an allowable tolerance of ± 100 rpm;
3. All required exhaust and evaporative emission controls, including without limitation EGR valves, are operating properly;
4. All vacuum hoses and electrical wiring for emission controls are correctly routed; and
5. Idle mixture is set to manufacturer's specifications or according to manufacturer's recommended service procedure.

(c) Exceptions.

1. In addition to any exceptions or exemptions in Titles 13 and 17 CCR, motor vehicles held for daily lease or rental to the general public or engaged in interstate commerce which are registered and principally operated outside Massachusetts, shall not be subject to the requirements of 310 CMR 7.40(2)(a) and (b).
2. Passenger cars, light-duty trucks and medium-duty passenger vehicles defined as test vehicles, as emergency vehicles, or qualifying for exemption under Section 43656 of the California Health and Safety Code, incorporated herein by reference, shall not be subject to the requirements of 310 CMR 7.40(2)(a), (b), and (d).

(d) No person, or other entity shall place in service, deliver for sale, sell, lease, offer for sale or lease, import, deliver, purchase, rent, acquire or receive in or into Massachusetts any new passenger car, light-duty truck or medium-duty passenger vehicle subject to 310 CMR 7.40(2) unless said vehicle possesses one of the following:

1. A valid Emission Control Label pursuant to the requirements of Title 13 CCR § 1965; or
2. a Massachusetts Emission Control Waiver which may be granted by the Department in conjunction with the MassDOT Registry of Motor Vehicles Division prior to submitting a vehicle's registration application exempting the vehicle from the requirements of 310 CMR 7.40(2)(a), only in the following circumstances:
 - a. vehicle purchased by nonresident prior to establishing residency in Massachusetts; or
 - b. vehicle transfer by inheritance, or by decree of divorce, dissolution or legal separation entered by a court of competent jurisdiction; or
 - c. vehicle acquired by a resident of the Commonwealth for the purpose of replacing a vehicle registered to said resident which was damaged or inoperative, beyond reasonable repair, or was stolen while out of the Commonwealth; provided that such replacement vehicle is acquired out of the state at the time the previously registered vehicle became damaged or inoperative, beyond reasonable repair, or was stolen.

(e) Effective for model year 2021 and subsequent model years, no manufacturer shall deliver for sale to Massachusetts a new medium-duty vehicle that does not have an Environmental Performance Label securely affixed to a window of the vehicle in accordance with Title 13 CCR § 1965.

No motor vehicle dealer in Massachusetts shall remove or cause removal of an Environmental Performance Label affixed to any motor vehicle subject to 310 CMR 7.40(2)(e) prior to the sale or lease of the vehicle.

(f) Effective for model year 2009 and subsequent model years, no manufacturer shall deliver for sale to Massachusetts a new passenger car, light-duty truck, or medium-duty passenger vehicle subject to 310 CMR 7.40(2)(f) that does not have an Environmental Performance Label or a Federal Fuel Economy and Environment Label securely affixed to a window of the vehicle in accordance with Title 13 CCR § 1965. No motor vehicle dealer in Massachusetts shall remove or cause removal of an Environmental Performance Label or a Federal Fuel Economy and Environment Label affixed to any motor vehicle subject to 310 CMR 7.40(2)(f) prior to the sale or lease of the vehicle.

7.40: continued

(g) For model year 2001 through 2009, Smog Index Labels for passenger cars and light-duty trucks shall conform to the "California Motor Vehicle Emission Control and Smog Index Label Specifications".

No motor vehicle dealer in Massachusetts shall remove or cause removal of a Smog Index Label affixed to any motor vehicle subject to 310 CMR 7.40(2)(g) prior to the sale or lease of the vehicle.

(h) Anti-tampering Provisions.

1. No person shall disconnect, modify, or alter any emissions-related part, except for purposes of repair or replacement.

2. No person shall operate or leave standing upon any highway any motor vehicle subject to 310 CMR 7.40 and required to be equipped with an emission control device meeting the standards of 310 CMR 7.40, or subject to the motor vehicle pollution control device requirements pursuant to the Clean Air Act, 42 U.S.C. 7401 *et seq.*, and the standards and requirements promulgated thereunder, unless the motor vehicle is equipped with the required motor vehicle pollution control device which is correctly installed and in operating condition.

(3) Vehicle Testing.

(a) New Vehicle Certification Testing.

1. All new vehicle models subject to 310 CMR 7.40, sold or leased in Massachusetts, must be certified as meeting the motor vehicle emission requirements of Titles 13 and 17 CCR, as determined by testing conducted in accordance with the testing procedures incorporated in Titles 13 and 17 CCR.

2. For the purposes of compliance with 310 CMR 7.40(3)(a)1., New Vehicle Certification Testing determinations and findings made by the California ARB shall be applicable.

(b) Assembly Line Testing.

1. All manufacturers of new vehicles subject to 310 CMR 7.40, certified for sale in California and sold or leased in Massachusetts, shall conduct Quality Audit Testing in accordance with Title 13 CCR and in accordance with the testing procedures incorporated in Title 13 CCR.

2. All manufacturers of new vehicles subject to 310 CMR 7.40, certified for sale in California and sold or leased in Massachusetts, shall conduct Inspection Testing in accordance with Title 13 CCR and in accordance with the testing procedures incorporated in Title 13 CCR.

3. For the purposes of compliance with 310 CMR 7.40(3)(b)1. and 2., Inspection Testing and Quality Audit Testing determinations and findings made by the California ARB shall be applicable.

(c) New Vehicle Compliance Testing.

1. New vehicle models subject to 310 CMR 7.40, prior to their being offered for sale or lease in Massachusetts, shall meet the motor vehicle emission requirements of Titles 13 and 17 CCR, as determined by New Vehicle Compliance Testing, conducted in accordance with Titles 13 and 17 CCR and in accordance with the testing procedures incorporated in Titles 13 and 17 CCR.

2. For the purpose of compliance with 310 CMR 7.40(3)(c)1., New Vehicle Compliance Testing determinations and findings made by the California ARB shall be applicable.

(d) In-use Vehicle Enforcement Testing.

1. For the purposes of detection and repair of vehicles in Massachusetts failing to meet the applicable motor vehicle emission requirements of Titles 13 and 17 CCR, the Department may conduct, after consultation with the California ARB, In use Vehicle Enforcement Testing in accordance with the protocol and testing procedures in Titles 13 and 17 CCR and in accordance with the testing procedures incorporated in Titles 13 and 17 CCR.

2. For the purposes of compliance with 310 CMR 7.40(3)(d)1., In-use Vehicle Enforcement Testing determinations and findings made by the California ARB shall be applicable.

7.40: continued

- (e) In-use Surveillance Testing.
 1. For the purposes of testing and monitoring the overall effectiveness in Massachusetts of the program set forth in 310 CMR 7.40 in controlling emissions, the Department may conduct In-use Surveillance Testing after consultation with the California ARB.
 2. For the purposes of compliance with 310 CMR 7.40(3)(e)1., In-use Surveillance Testing determinations and findings made by the California ARB shall be applicable.

- (4) Warranty.
 - (a) Vehicle Manufacturer Obligations.
 1. Each manufacturer of new vehicles subject to 310 CMR 7.40 which are sold, leased, or offered for sale or lease, in Massachusetts shall warrant that each such vehicle shall comply over its period of warranty coverage with all requirements of Title 13 CCR.
 2. For the purposes of mediation of unresolved emission warranty disputes in Massachusetts, "Executive Officer" in Title 13 CCR § 2041 shall mean "Commissioner" as defined at 310 CMR 7.00.
 - (b) Vehicle Owner Obligations.
 1. The owner of any vehicle warranted pursuant to Title 13 CCR §§ 2035 through 2041 shall ensure all scheduled maintenance specified in the written instructions furnished to the owner is performed in a timely manner. Such maintenance may be performed by the owner, at a service establishment of the owner's choosing, or by a person or persons of the owner's choosing.
 2. Except as specified in 310 CMR 7.40(4)(b)2.a. and b., failure of the vehicle or engine owner to ensure the performance of such scheduled maintenance or to keep maintenance records shall not, per se, be grounds for disallowing a warranty claim.
 - a. The repair or replacement of any "warranted part" otherwise eligible for warranty coverage under 310 CMR 7.40(4)(b)1. and 2., shall be excluded from such warranty coverage if the vehicle or engine manufacturer demonstrates that the vehicle or engine has been abused, neglected, or improperly maintained, and that such abuse, neglect, or improper maintenance was the direct cause of the need for the repair or replacement of the part; and
 - b. For 1979 through 1989 model year passenger cars, light duty trucks, and medium duty vehicles; 1979 and subsequent model year motorcycles and heavy duty vehicles; and motor vehicle engines used in such vehicles: the repair of a "warranted part" otherwise eligible for warranty coverage under 310 CMR 7.40(4)(b)1. and 2., shall be excluded from such warranty coverage if such repair consists solely of adjustments to the idle air/fuel mixture ratio (for 1979 model year passenger cars, and 1979 and 1980 model year light duty trucks and medium duty vehicles), curb or high idle speed, ignition timing, valve lash, injection timing for diesel powered vehicles, or any combination thereof.

- (5) Reporting Requirements.
 - (a) Warranty Reporting. Each manufacturer shall submit to the Department Emission Warranty Information Reports, Field Information Reports and Emission Information Reports in accordance with Title 13 CCR §§ 2144 through 2146 for warranty claims in accordance with the methodology, timeline and format in Title 13 CCR §§ 2141 through 2149.
 - (b) Recall Reporting. Each manufacturer shall submit to the Department Recall Plans and Recall Campaign Progress Reports for in accordance with the methodology, timeline and format in Title 13 CCR §§ 2109 through 2148.
 - (c) All manufacturers offering vehicles for sale or lease in Massachusetts shall upon request, submit to the Department test results or reports obtained and prepared in compliance with 310 CMR 7.40(3) and in accordance with the reporting requirements incorporated in Titles 13 and 17 CCR.
 - (d) For the purposes of determining compliance with 310 CMR 7.40, the Department may require any motor vehicle manufacturer or dealer of vehicles subject to 310 CMR 7.40 to submit any documentation the Department deems necessary to the effective administration and enforcement of 310 CMR 7.40.
 - (e) For the purposes of determining compliance with the requirements of 310 CMR 7.40(1)(d), each manufacturer shall electronically submit to the Department reports using the same methodology, timeline and format used to report such information to California ARB.

7.40: continued

(6) Regional Document Repository.

(a) For the purposes of emissions testing in compliance with 310 CMR 7.40(3)(c) through (e), and record keeping, Massachusetts may, in conjunction with at least three other Northeast states which have adopted and are implementing the California Low Emission Vehicle Program under the authority of 42 U.S.C § 7507, enter into an agreement to establish a regional document repository.

(b) At such time as Massachusetts enters into an agreement pursuant to 310 CMR 7.40(6)(a), for the purposes of compliance and enforcement in Massachusetts, determinations and findings of the California ARB pursuant to 310 CMR 7.40(3)(c) through (e) shall be applicable, in addition to the determinations and findings obtained through any agreement under 310 CMR 7.40(6)(a).

(c) Should the Department determine that such testing is necessary or desirable, the Department reserves the right to conduct, after consultation with the California ARB, vehicle testing pursuant to 310 CMR 7.40(3)(c) through (e).

(7) Enforcement.

(a) The Department may conduct inspection and surveillance of new and used motor vehicles for the purposes of compliance with the requirements set forth in 310 CMR 7.40.

1. Inspections by the Department or its agents, pursuant to 310 CMR 7.40(7)(a) may be conducted on any premises owned, operated, used, leased, or rented by any vehicle dealer. Said inspection may extend to all emissions-related parts and operation and may require the on premises operation and testing of an engine or vehicle, and inspection of any related records, including records of emissions-related part repair performed under warranty.

2. The Department or its agents may perform functional tests, steady-state tests, and other tests as reasonably necessary.

(b) Any order or enforcement action taken by the State of California to correct noncompliance with any section of Title 13 CCR §§ 2109 through 2149, shall be applicable to all said vehicles subject to 310 CMR 7.40, sold or leased, offered for sale or lease, or registered in Massachusetts.

(c) Any voluntary or influenced emission-related recall campaign initiated by any manufacturer pursuant to Title 13 CCR §§ 2109 through 2149 shall extend to all applicable vehicles subject to 310 CMR 7.40, sold or leased, offered for sale or lease, or registered in Massachusetts.

(d) Massachusetts Recall. (Reserved.)

(e) The Department shall enforce the requirements of 310 CMR 7.40 in accordance with Titles 13 and 17 CCR and applicable federal and Massachusetts law including, but not limited to, the issuance of administrative orders and civil administrative penalties pursuant to M.G.L. c. 21A, § 16, 310 CMR 5.00: *Administrative Penalty* and M.G.L. c. 111, §§ 2C and 142A through 142M.

(f) Penalty for Failure to Meet ZEV Requirements in ACC I. Any manufacturer that fails to produce and deliver for sale in Massachusetts the required number of ZEVs or submit an appropriate amount of grams/mile ZEV credits and does not make up ZEV deficits within the specified time period allowed by Title 13 CCR § 1962.2(g)(7) shall be subject to penalties under M.G.L. c. 111, § 142K applicable to a manufacturer that sells a new motor vehicle that does not meet the applicable emission standards adopted in 310 CMR 7.40. The cause of action shall be deemed to accrue when the ZEV deficits are not balanced by the end of the specified time period allowed by Title 13 CCR § 1962.2(g)(7). The number of vehicles not meeting the general percentage ZEV requirement shall be calculated according to 13 CCR 1962.2(g)(8).

(g) Penalty for Failure to Meet ZEV Requirements in ACC II. Any manufacturer that fails to make up a ZEV deficit within the specified time allowed by Title 13 CCR § 1962.4(h) shall be subject to enforcement under M.G.L. c. 111, § 142K and M.G.L. c. 21A, § 16. The cause of action shall be deemed to accrue when the deficit is not balanced by the end of the specified time allowed by Title 13 CCR § 1962.4(h).

7.40: continued

(h) Penalty for Failure to Meet Advanced Clean Trucks Credit and Deficit Requirements. Any manufacturer that fails to retire an appropriate amount of ZEV or NZEV credits as specified in Title 13 CCR § 1963.3(c) and does not make up deficits within the specified time allowed by Title 13 CCR § 1963.3(b) shall be subject to enforcement under M.G.L. c. 111, § 142K and M.G.L. c. 21A, § 16. The cause of action shall be deemed to accrue when the deficit is not balanced by the end of the specified time allowed by Title 13 CCR § 1963.3(b). For the purposes of 310 CMR 7.40, the number of vehicles not meeting the standards or procedures of Title 13 CCR §§ 1963 through 1963.4 shall be equal to ½ of the manufacturer's outstanding deficit.

(8) Manufacturer Response to an Administrative Order.

(a) Upon receipt of an Administrative Order issued by the Department pursuant to 310 CMR 7.40, the manufacturer may request an adjudicatory hearing within ten days pursuant to the procedures set forth in 310 CMR 1.00: *Adjudicatory Proceedings*, to contest the determination of necessity for the ordered corrective action.

(b) If a manufacturer requests an adjudicatory hearing pursuant to 310 CMR 7.40(8), and if the determination of necessity is confirmed at the hearing, the manufacturer shall initiate the corrective action which has been approved by the California ARB pursuant to the requirements of Titles 13 and 17 for vehicles subject to 310 CMR 7.40, within 30 days of receipt of the decision resulting from the hearing.

(c) Failure by a manufacturer to comply with an enforcement action ordered by the Department pursuant to 310 CMR 7.40 shall constitute violation of an order issued under the authority of M.G.L. c. 111, § 142B.

(9) Emission Control System "Aftermarket" Parts.

(a) Applicability. 310 CMR 7.40(9) shall apply to all aftermarket parts which are sold, offered for sale, or advertised for sale or use on motor vehicles which are subject to Massachusetts or federal emissions standards.

(b) Prohibition.

1. No person engaged in a business which involves the selling of motor vehicle pollution control systems, or parts thereof, shall offer for sale, sell, or install, an air contaminant emission control system, or part thereof, unless it meets the regulations and standards set forth in 310 CMR 7.40(9).

2. No person shall install, sell, offer for sale, or advertise any device, apparatus, or mechanism intended for use with, or as a part of, any required motor vehicle pollution control system or device which alters or modifies the original design or performance of any such motor vehicle pollution control system or device. 310 CMR 7.40 shall not apply to an alteration, modification, or modifying device, apparatus or mechanism found by the Department to either:

a. Not reduce the effectiveness of any motor vehicle pollution control system or device; or

b. Result in emissions from any such modified or altered vehicle which are at levels which comply with existing state or federal standards for that model year of vehicle being modified or converted.

(c) Replacement Parts.

1. a. Any replacement part, including consolidated parts, offered for sale or sold in California and subject to Title 13 CCR §§ 2221, 2222 or 2224, shall be presumed to be in compliance with 310 CMR 7.40(9), unless California makes a finding to the contrary pursuant to Title 13 CCR § 2224(a).

b. Any replacement part, including consolidated parts, not offered for sale or sold in California, shall be presumed to be in compliance with 310 CMR 7.40(9)(c), unless the Commissioner makes a finding to the contrary in accordance with Title 13 CCR § 2224(a).

2. The manufacturer of any replacement part subject to the provisions of 310 CMR 7.40(9) shall maintain sufficient records, such as performance specifications, test data, or other information, to substantiate that such a replacement part is in compliance with 310 CMR 7.40(9). Such records shall be open for reasonable inspection by the Commissioner or his or her representative. All such records shall be maintained for four years from the year of manufacture of the replacement part.

7.40: continued

(d) Add-on and Modified Parts.

1. As used in 310 CMR 7.40, the terms "advertise" and "advertisement" include, but are not limited to, any notice, announcement, information, publication, catalog, listing for sale, or other statement concerning a product or service communicated to the public for the purpose of furthering the sale of the product or service.

2. a. No person or company doing business solely in Massachusetts or advertising only in Massachusetts shall advertise any device, apparatus, or mechanism which alters or modifies the original design or performance of any required motor vehicle pollution control device or system unless such part, apparatus, or mechanism has been exempted from the provisions of 310 CMR 7.40(9), and the limitations of the exemption, if any, are contained within the advertisement in type size to give reasonable notice of such limitations.

b. (i) No person shall advertise, offer for sale, or install a part as a motor vehicle pollution control system or device as an approved or certified device, when in fact such part is not a motor vehicle pollution control system or device or is not approved or certified by the Department or by California.

(ii) No person shall advertise, offer for sale, sell or install an add-on or modified part as a replacement part.

c. (i) Add-on and modified parts exempted in accordance with Title 13 CCR § 2222 are deemed exempt for purposes of 310 CMR 7.40(9)(d).

(ii) The Commissioner may exempt add-on and modified parts, including consolidated parts, that are not subject to Title 13 CCR § 2222. The Commissioner shall make this determination in accordance with Title 13 CCR § 2222.

(iii) Each person engaged in the business of retail sale or installation of an add-on or modified part which has not been exempted from 310 CMR 7.40(9)(d) shall maintain records of such activity which indicate date of sale, purchaser name and address, vehicle model and work performed if applicable. Such records shall be open for inspection by the Commissioner or his or her representative. All such records shall be maintained for four years from the date of sale or installation.

(e) Surveillance.

1. Replacement Parts. The Commissioner may require the manufacturer of any replacement part subject to the provisions of 310 CMR 7.40(9)(c) to submit any records relating to such part which are maintained pursuant to 310 CMR 7.40(9)(c)2. The Commissioner may require the manufacturer of any replacement part subject to the provisions of 310 CMR 7.40(9)(c) to submit a reasonable number of parts typical of the manufacturer's production for testing and evaluation. If, after a review of all records submitted by the manufacturer and of the results of any tests conducted by the Department staff, the Commissioner finds that such part is not in fact a replacement part, the Commissioner may invoke 310 CMR 7.40(9)(f). Replacement parts evaluated pursuant to 310 CMR 7.40 shall be compared with the specifications contained in the applicable vehicle manufacturer's application for certification.

2. Add-on Parts and Modified Parts. The Commissioner may require the manufacturer of any add-on or modified part subject to the provisions of 310 CMR 7.40(9)(d) to submit a reasonable number of parts typical of the manufacturer's production for testing and evaluation. If, after review of the results of any tests or evaluations conducted by the Department's staff and of any information submitted by the manufacturer, the Commissioner finds that an add-on part or a modified part does not conform to Title 13 CCR § 2222, the Commissioner may invoke 310 CMR 7.40(9)(f).

7.40: continued

(f) Corrective Action.

1. When 310 CMR 7.40(9)(f) is invoked pursuant to 310 CMR 7.40(9)(e) or other subsections of 310 CMR 7.40(9), the Commissioner may require the manufacturer to submit a plan for correcting any deficiencies found by the Department. The manufacturer shall submit the plan within 30 calendar days after notification. The Commissioner may require any of the actions contained in the plan, and/or may declare a part to be not in compliance with 310 CMR 7.40(9)(b)2., unless he or she finds the plan adequate to correct the deficiencies found by the Department. The manufacturer may be required to include in the plan such corrective actions as the cessation of sale of non-complying parts and corrective advertising to correct misleading information regarding the emission control capabilities of the device and to ensure compliance with Massachusetts laws. Nothing in 310 CMR 7.40 shall prevent the Commissioner from also seeking penalties for violations of 310 CMR 7.40(9).

2. The manufacturer, within ten calendar days of its receipt of the Commissioner's demand for corrective action, may request an adjudicatory hearing, pursuant to M.G.L. c. 30A, on the necessity for and scope of any corrective action required by the Commissioner.

(g) Repair Station. Any person holding a vendor's certificate of authority who sells or installs a motor vehicle pollution control system, or part thereof, in violation of 310 CMR 7.40(9)(b)2. shall thereafter be required to install a motor vehicle pollution control system, or part thereof, which is in compliance with the provisions of 310 CMR 7.40(9), upon demand of the purchaser or registered owner of the vehicle concerned, or at the election of the purchaser or registered owner to reimburse the purchaser or registered owner for the expense of replacement and installation of a motor vehicle pollution control system, or part thereof, which is in compliance.

(10) Severability. Each subsection of 310 CMR 7.40 shall be deemed severable, and in the event that any subsection of 310 CMR 7.40 is held invalid, the remainder shall continue in full force and effect.

REGULATORY AUTHORITY

310 CMR 7.40: M.G.L. c. 21A, §§ 2, 8 & 16; M.G.L. c. 21N; and M.G.L. c. 111, §§ 2C, 142A-142M.

NON-TEXT PAGE

7.51: continued

Request for Adjudicatory Hearing means the notice of claim for an adjudicatory hearing that is filed with the Office of Administrative Dispute Resolution in accordance with the requirements in 310 CMR 1.01: *Adjudicatory Proceedings*.

(b) Applicability. The provisions of 310 CMR 7.51(1) apply to any person(s) who submitted an application to the Department after March 9, 2018, and who is seeking to request an adjudicatory hearing to review any Department decision on an application submitted pursuant to 310 CMR 7.00, except as exempted in 310 CMR 7.51(1)(c).

(c) Exemptions. No person or ten persons group may file a request for an adjudicatory hearing pursuant to the requirements in 310 CMR 7.51(1) for the following actions:

1. Administrative orders issued by the Department for violations of any provision of 310 CMR 7.00 that shall be appealed within ten days of issuance pursuant to the procedures and requirements of 310 CMR 7.51(3).
2. Administrative penalty assessments issued pursuant to M.G.L. c. 21A, § 16 and 310 CMR 5.00: *Administrative Penalty* for violations of any provisions of 310 CMR 7.00 shall be appealed in accordance with the provisions of 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection* and 310 CMR 5.00.
3. Tunnel Ventilation Certifications issued by the Department pursuant to 310 CMR 7.38 that require appeals to Superior Court.
4. Approvals or disapprovals or portions of approvals or disapprovals, issued by the Department pursuant to 40 CFR 52.21 (PSD).
5. Notifications, certifications and other submittals to the Department on which the Department does not issue decisions including, but not limited to, the certification required pursuant to 310 CMR 7.02(7)(c), Facility Emission Cap Notifications pursuant to 310 CMR 7.02(11), notifications regarding demolition/renovation operations pursuant to 310 CMR 7.09, notifications regarding asbestos abatement activities pursuant to 310 CMR 7.15, notifications and certifications pursuant to 310 CMR 7.24, and/or certifications pursuant to 310 CMR 7.26.
6. Department requests for and approval of monitoring, modeling and compliance protocols, actions, and results pursuant to 310 CMR 7.00 including, but not limited to, stack testing pursuant to 310 CMR 7.13, and emissions monitoring pursuant to 310 CMR 7.14.
7. Department approvals or denials of waivers or variances under 310 CMR 7.00 including, but not limited to, notification waivers and nontraditional work practice approvals issued pursuant to 310 CMR 7.15.
8. Approvals of administrative amendments to plan approvals issued by the Department pursuant to 310 CMR 7.02(13) and minor modifications to Operating Permits issued by the Department pursuant to 310 CMR 7.00: *Appendix C(8)*.

(d) Comments on Proposed Decisions. If the Department provides a public comment period on the proposed decision, then any person or ten persons group may file written comments on the proposed decision during the public comment period provided by 310 CMR 7.00. Failure by an aggrieved person or ten persons group to submit written comments as provided herein shall result in the waiver of any right to request an adjudicatory hearing. Where the Department is not required under 310 CMR 7.00 to provide a public comment period on the proposed decision, then an aggrieved person or ten persons group is not required to submit public comments as a prerequisite for obtaining the right to request an adjudicatory hearing.

(e) Copy of Department's Decision. Any person or ten persons group who wants to receive a copy of a decision on the date the Department issues the decision to the applicant shall submit a written request to the Department's contact person's electronic mail address and/or mailing address listed in the public notice.

(d) Final Decision. The Department's decision to issue an approval or disapproval is final either:

1. 22 days from the issuance date; or
2. If an aggrieved person or a ten persons group files a request for an adjudicatory hearing in accordance with 310 CMR 7.51(1)(h) within 21 days from the issuance date, then when the Commissioner issues a Final Decision pursuant to 310 CMR 1.01(14): *Decisions*.

After the issuance of final decision, a stay of the final decision shall be governed by M.G.L. c. 30A, § 14.

7.51: continued

(g) Persons Who Have a Right to Request an Adjudicatory Hearing. The following persons shall have the right to request an adjudicatory hearing on the Department decision:

1. The applicant.
2. An aggrieved person who has submitted written comments in accordance with 310 CMR 7.51(1)(d), where applicable.
3. A ten persons group that has submitted written comments in accordance with 310 CMR 7.51(1)(d), where applicable.

(h) Process for Requesting an Adjudicatory Hearing.

1. To request an adjudicatory hearing, a person who has the right to request an adjudicatory hearing shall file a notice of claim for an adjudicatory hearing pursuant to 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection* within 21 days from the date of issuance.
2. The notice of claim for an adjudicatory hearing shall meet all the requirements contained in 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection*. An aggrieved person, or a ten persons group, shall send a copy of the request for an adjudicatory hearing by first class mail to the applicant and to the Department's contact person listed in the decision.
3. An aggrieved person who files a request for an adjudicatory hearing shall have the burden of proof to establish his or her status as an aggrieved person as defined in 310 CMR 7.00 and shall state with specificity in the request for adjudicatory hearing the basis of his or her claim of aggrievement and the relief sought.
4. A ten persons group that files a request for an adjudicatory hearing shall clearly and specifically state the facts and grounds for the appeal and the relief sought, and each person shall file an affidavit stating the intent to be a part of the group and to be represented by its authorized representative.

(i) Limitation on Matters Raised In Request for Adjudicatory Hearing.

1. The issues that may be raised in a request for an adjudicatory hearing are limited to the subject matter of the Department's decision.
2. If the Department provided a public comment period, the issues that may be raised in a request for an adjudicatory hearing are further limited to the matters raised during the public comment period; provided, however, that a matter may be raised upon showing that it was not reasonably possible with due diligence to have raised such matter during the public comment period or for good cause shown.

(2) Hearings on Facilities Regulated by the Department of Public Utilities. Upon receipt of a proposal for the construction, substantial reconstruction or alteration and subsequent operation of any facility regulated by the Department of Public Utilities, insofar as the facility may have an impact on air quality, the Department shall hold a public hearing prior to consideration for approval or disapproval of said facility.

(3) Enforcement Provisions and Appeals of Certain Orders.

(a) General. A person whose activities are governed by M.G.L. c. 111, §§ 142A through 142O and 310 CMR 7.00, or by M.G.L. c. 111, § 150A as it relates to 310 CMR 7.08(2), or by M.G.L. c. 21C or 21E as they relate to sections of 310 CMR 7.00 as cited therein, who fails to comply fully with the provisions of such statutes and regulations, or to comply fully with the terms and conditions of any order, permit, authorization, determination, or approval issued thereunder, or who acts without an order, permit, authorization, determination, or approval where one is required, shall be in violation of said statutes and 310 CMR 7.00. Nothing in 310 CMR 7.00, or in any order issued pursuant thereto, shall be construed to limit any right of the Department to take enforcement action pursuant to any other authority.

(b) Action by the Department. Without limitation, whenever the Department has cause to believe that a violation has occurred, it may:

1. Order the owner or operator of a site or facility, and/or any other person responsible for the violation, to cease all illegal activity and comply fully with the provisions of M.G.L. c. 111, §§ 142A through 142O and 310 CMR 7.00, and M.G.L. c. 111, § 150A as it relates to 310 CMR 7.08(2), and M.G.L. c. 21C and 21E, and 310 CMR 7.00, and any order, permit, authorization, determination or approval;

7.51: continued

2. Order the owner or operator of a site or facility, and/or any other person responsible for the violation, to take appropriate measures to come into compliance or to protect public health, safety or the environment;
 3. Commence proceedings to rescind, suspend, revoke, or modify an order, permit, authorization, determination or approval;
 4. Issue a notice of non-compliance pursuant to M.G.L. c. 21A, § 16 and 310 CMR 5.00: *Administrative Penalty*;
 5. Assess a civil administrative penalty pursuant to M.G.L. c. 21A, § 16 and 310 CMR 5.00: *Administrative Penalty*; and/or
 6. Take such other action provided by 310 CMR 7.00 or other applicable statutory or regulatory authority as the Department deems appropriate.
- (c) Service of Notices and Orders. Service in all civil administrative penalty actions is governed by 310 CMR 5.00: *Administrative Penalty*. The Department may serve an order issued pursuant to 310 CMR 7.51(3)(b)1. or 2. according to any of the following procedures except for processes, notices, and orders issued in the course of an adjudicatory hearing which are governed by the provisions of 310 CMR 1.01 *Adjudicatory Proceedings*:
1. Service of an order is complete when it is hand delivered by an employee or agent of the Department to the person to be served or to any officer, employee, responsible official or agent of the person. The fact and date of service is established by the return or affidavit of the person making service.
 2. Service of an order when made by any form of mail requiring the return of a receipt signed by the person to be served is complete upon delivery to the person or to any officer, employee, responsible official or agent of the person. The fact and date of service is established by the returned receipt.
 3. The Department may make service of an order in any other manner, including any form of electronic mail, facsimile or other electronic medium, national overnight carrier, regular mail to the last known address, or other publication or method of delivery. The Department uses such alternative or substitute methods of service only when exigent circumstances require it doing so or when the person to be served declines to accept receipt or mail is returned from either of the service methods specified in 310 CMR 7.51(3)(c)1. and 2. The fact of service in such cases is established by such records as may be available. The date of service shall be the date on which the Department initiates electronic transmission, the date of publication, one day after the date of overnight mailing or three days after the date of regular mailing.
- (d) Right to Request an Adjudicatory Hearing. Pursuant to M.G.L. c. 111, § 142B, a person who is the subject of an order issued pursuant to 310 CMR 7.51(3)(b)1. or 2. shall have the right to request an adjudicatory hearing on such order within ten calendar days of the date of service of the order by the procedures set forth herein and in 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection*. Any right to an adjudicatory hearing concerning assessment of a civil administrative penalty shall be determined in accordance with the provisions of 310 CMR 1.01 and 310 CMR 5.00: *Administrative Penalty*.
- (e) Waiver of Right to Request an Adjudicatory Hearing. Any person who is the subject of an order issued pursuant to 310 CMR 7.51(3)(b)1. or 2. shall be deemed to have waived the right to request an adjudicatory hearing unless within ten calendar days of the date of service of the order the Department receives a written statement setting forth the basis for the request for an adjudicatory hearing that complies with 310 CMR 1.01: *Adjudicatory Proceedings*.

7.52: U Enforcement Provisions.

Any police department, fire department, or board of health official, acting within his or her jurisdictional area is hereby authorized by the Department to enforce, as provided for in M.G.L. c. 111, § 142B, any regulation in which specific reference to 310 CMR 7.52 is cited.

7.54: U Large Combustion Emission Units

(1) Applicability. As set forth in 310 CMR 7.02(3) and (5)(a)11., a Comprehensive Plan Application is required from any person prior to substantially reconstructing one or more large combustion emission units resulting in a major modification. The requirements of 310 CMR 7.54 shall not apply to a pollutant if the facility is located in an area designated as non-attainment under the Clean Air Act, § 107 (42 U.S.C. 7407), for that pollutant.

(2) Definitions. The definitions in 310 CMR 7.00 apply to 310 CMR 7.54. However, the following terms have the following meanings when they appear in 310 CMR 7.54. If a term is defined both in 310 CMR 7.00 and .54(2), the definition in 310 CMR 7.54(2) applies for purposes of 310 CMR 7.54.

7.54: continued

Actual Emissions means the actual rate of emissions of a pollutant from an emissions unit, as determined in accordance with 310 CMR 7.54: Actual Emissions(a) through (c).

(a) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a two-year period which precedes the particular date and which is representative of normal operation. The Department shall allow the use of a different time period upon a determination that it is more representative of normal operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.

(b) For any emissions unit (other than an electric utility steam generating unit specified in 310 CMR 7.54: Actual Emissions(c)), which has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.

(c) For an electric utility steam generating unit (other than a new unit or the replacement of an existing unit), actual emissions of the unit following the physical or operational change shall equal the representative actual annual emissions of the unit, provided the facility owner or operator maintains and submits to the Department on an annual basis for a period of five years from the date the unit resumes regular operation, information demonstrating that the physical or operational change did not result in an emissions increase. A longer period, not to exceed ten years, may be required by the Department if it determines such a period to be more representative of normal facility post-change operations.

Allowable Emissions means the emissions rate of a facility calculated using the maximum rated capacity of the LCEU(s) (unless the LCEU is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent emission standard, including one with a future compliance date.

Begin Actual Construction means, in general, initiation of physical on-site construction activities on an LCEU, which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying underground pipe work and construction of permanent storage structures. With respect to a change in method of operations, this term refers to those on-site activities other than preparatory activities which mark the initiation of the change.

Commence as applied to construction of an LCEU means that the owner or operator has all necessary plan approvals required pursuant to 310 CMR 7.02 and either has:

(a) Begun, or caused to begin, a continuous program of actual on-site construction of the LCEU, to be completed within a reasonable time; or

(b) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the LCEU to be completed within a reasonable time.

Complete means, in reference to an application for a plan approval, that the application contains all of the information necessary for processing the application.

Construction means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) which would result in a change in actual emissions.

Electric Utility Steam Generating Unit means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

7.54: continued

Indirect Heat Exchanger means combustion equipment in which the flame or the products of combustion are separated from any contact with the principal material in the process by metallic or refractory walls. It includes, but is not limited to, steam boilers (including combustion turbines with Heat Recovery Steam Generators), vaporizers, melting pots, heat exchangers, column reboilers, fractioning column feed preheaters, reactor feed preheaters, fuel-fired reactors such as steam hydrocarbon reformer heaters and pyrolysis heaters.

Large Combustion Emission Unit (LCEU) means either:

- (a) an indirect heat exchanger with an energy input capacity greater than or equal to 250,000,000 Btu per hour, or
- (b) a municipal waste combustor with a capacity greater than 250 tons per day of municipal solid waste.

Major Modification means any physical change or change in the method of operation of large combustion emission unit(s) at a facility that would result in a significant net emissions increase of any pollutant subject to regulation under the Clean Air Act. A physical change or change in the method of operation shall not include:

- (a) Routine maintenance, repair and replacement;
- (b) Use of an alternative fuel or raw material by an LCEU which:
 1. The LCEU was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable condition which was established after January 6, 1975; or
 2. The LCEU is approved to use under any plan approval issued under 310 CMR 7.02;
- (c) An increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable condition which was established after January 6, 1975; or
- (d) Any change in ownership at a facility; or
- (e) The addition, replacement or use of a pollution control project at an existing LCEU, unless the Department determines that such addition, replacement, or use renders the unit less environmentally beneficial; or
- (f) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with all applicable requirements.

Net Emissions Increase means the amount by which the sum of the following exceeds zero:

- (a) Any increase in actual emissions from a particular physical change or change in method of operation of LCEU(s) at the facility; and
- (b) Any other increases and decreases in actual emissions from LCEUs at the facility that are contemporaneous with the particular change and are otherwise creditable.
- (c) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between:
 1. The date five years before construction of the particular change commences; and
 2. The date that the increase from the particular change occurs.
- (d) An increase or decrease in actual emissions is creditable only if:
 1. the Department has not relied on it in issuing a plan approval required pursuant to 310 CMR 7.54, or a PSD (Prevention of Significant Deterioration) permit pursuant to 40 CFR 52.21 (Note: Prior to March 3, 2003 the Department issued PSD permits in Massachusetts), and
 2. the plan approval or PSD permit is in effect when the increase in actual emissions from the particular change occurs.
- (e) With respect to particulate matter, only PM-10 emissions can be used to evaluate the net emissions increase for PM-10.
- (f) An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.
- (g) A decrease in actual emissions is creditable only to the extent that:
 1. The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions;
 2. It is federally enforceable at and after the time that actual construction of the particular change begins; and
 3. It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change.

7.54: continued

(h) An increase that results from a physical change at a facility occurs when the LCEU on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days.

Pollution Control Project means any activity or project undertaken on an LCEU for purposes of reducing emissions from such unit. Such activities or projects are limited to:

- (a) The installation of conventional or innovative pollution control technology, including but not limited to:
 1. conventional or advanced flue gas desulfurization, sorbent injection for sulfur dioxide, nitrogen oxides or mercury controls; or
 2. electrostatic precipitators or fabric filters; or
 3. selective catalytic reduction or non-selective catalytic reduction for control of oxides of nitrogen.
- (b) An activity or project to accommodate switching to a fuel which is less polluting than the fuel in use prior to the activity or project, including, but not limited to natural gas or coal re-burning, or the co-firing of natural gas and other fuels for the purpose of controlling emissions.

Potential to Emit means the maximum capacity of a facility or emission unit to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or emission unit to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Fugitive emissions, to the extent they are quantifiable, are included in determining potential to emit. Secondary emissions do not count in determining the potential to emit of a facility.

Representative Actual Annual Emissions means the average rate, in tons per year, at which the LCEU is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within ten years after that change, where the Department determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the Department shall:

- (a) Consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans under Title IV of the Clean Air Act (42 U.S.C. 7651 through 7651(o)); and
- (b) Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole.

Significant means, in reference to a net emissions increase, or the potential of a facility to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates:

Pollutant and Emissions Rate:

- (a) Carbon monoxide: 100 tons per year (tpy);
- (b) Nitrogen oxides: 40 tpy;
- (c) Sulfur dioxide: 40 tpy;
- (d) Particulate matter:
 1. 25 tpy of particulate matter emissions;
 2. 15 tpy of PM10 emissions.
- (e) Ozone: 40 tpy of volatile organic compounds;
- (f) Lead: 0.6 tpy;

7.54: continued

- (g) Fluorides: 3 tpy;
- (h) Sulfuric acid mist: 7 tpy;
- (i) Hydrogen sulfide (H₂ S): 10 tpy;
- (j) Total reduced sulfur (including H₂ S): 10 tpy;
- (k) Reduced sulfur compounds (including H₂ S): 10 tpy;
- (l) Municipal waste combustor organics (measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans): 3.2×10^{-6} megagrams per year (3.5×10^{-6} tons per year);
- (m) Municipal waste combustor metals (measured as particulate matter): 14 megagrams per year (15 tons per year);
- (n) Municipal waste combustor acid gases (measured as sulfur dioxide and hydrogen chloride): 36 megagrams per year (40 tons per year).

7.60: U Severability

Each section of 310 CMR 7.00 shall be construed as separate to the end that if any regulation or sentence, clause, or phrases thereof shall be held invalid for any reason, the remainder of 310 CMR 7.00 and all other regulations shall continue in full force.

7.70: Massachusetts CO₂ Budget Trading Program

(1) CO₂ Budget Trading Program General Provisions.

(a) Purpose. 310 CMR 7.70 establishes the Massachusetts CO₂ Budget Trading Program, which is designed to reduce anthropogenic emissions of CO₂, a greenhouse gas, from CO₂ budget sources in an economically efficient manner.

(b) Definitions.

Account Number. The identification number given by the Department or its agent to each CO₂ Allowance Tracking System account.

Acid Rain Emissions Limitation. As defined in 40 CFR 72.2, a limitation on emissions of sulfur dioxide or nitrogen oxides under the Acid Rain Program under Title IV of the Clean Air Act.

Acid Rain Program. Acid Rain Program means a multi-state sulfur dioxide and nitrogen oxides air pollution control and emission reduction program established by the Administrator under Title IV of the Clean Air Act, 42 U.S.C. 7401 *et seq.* and 40 CFR Parts 72 through 78.

Administrator. Administrator means the Administrator of the United States Environmental Protection Agency or the Administrator's authorized representative.

Allocate or Allocation. The determination by the Department of the number of CO₂ allowances to be recorded in the Voluntary Renewable Energy Account, or the Massachusetts Auction Account.

Allocation Year. A calendar year for which the Department allocates or awards CO₂ allowances pursuant to 310 CMR 7.70(5). The allocation year is the first year a CO₂ allowance or a CO₂ offset allowance can be used to demonstrate compliance with 310 CMR 7.70. The allocation year of each CO₂ allowance is reflected in the unique identification number given to the allowance pursuant to 310 CMR 7.70(6)(d)4.

Allowance Auction or Auction. An auction in which DOER offers CO₂ allowances for sale, in accordance with 225 CMR 13.00: *DOER CO₂ Budget Trading Program Auction Regulation.*

7.70: continued

Automated Data Acquisition and Handling System or DAHS. That component of the continuous emissions monitoring system, or other emissions monitoring system approved for use under 310 CMR 7.70(8), designed to interpret and convert individual output signals from pollutant concentration monitors, flow monitors, diluent gas monitors, and other component parts of the monitoring system to produce a continuous record of the measured parameters in the measurement units required by 310 CMR 7.70(8).

Billing Meter. The measurement device used to measure electric or thermal output for commercial billing under a contract where the facility selling the electric or thermal output has a different owner(s) from the owner(s) of the party purchasing the electric or thermal output.

Boiler. An enclosed fossil or other fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam, or other medium.

CO₂ Allowance. A limited authorization by the Department or a participating state under the CO₂ Budget Trading Program to emit up to one ton of CO₂, subject to all applicable limitations contained in 310 CMR 7.70 or equivalent regulations in other participating states.

CO₂ Allowance Deduction or Deduct CO₂ Allowances. The permanent withdrawal of CO₂ allowances by the Department or its agent from a CO₂ Allowance Tracking System compliance account to account for the number of tons of CO₂ emitted from a CO₂ budget source for a control period or an interim control period, determined in accordance with 310 CMR 7.70(8), or for the forfeit or retirement of CO₂ allowances as provided by 310 CMR 7.70.

CO₂ Allowances Held or Hold CO₂ Allowances. The CO₂ allowances recorded by the Department or its agent, or submitted to the Department or its agent for recordation, in accordance with 310 CMR 7.70(6) and (7), in a CO₂ Allowance Tracking System account.

CO₂ Allowance Tracking System (COATS). The system by which the Department or its agent records allocations, deductions, and transfers of CO₂ allowances under the CO₂ Budget Trading Program. The tracking system may also be used to track CO₂ emissions offset projects, CO₂ allowance prices and emissions from affected sources.

CO₂ Allowance Tracking System Account. An account in the CO₂ Allowance Tracking System established by the Department or its agent for purposes of recording the allocation, holding, transferring, or deducting of CO₂ allowances.

CO₂ Allowance Transfer Deadline. Midnight of the March 1st occurring after the end of the relevant control period and each relevant interim control period or, if that March 1st is not a business day, midnight of the first business day thereafter and is the deadline by which CO₂ allowances must be submitted for recordation in a CO₂ budget source's compliance account in order for the source to meet the CO₂ requirements under 310 CMR 7.70(1)(e)3. for the control period and each interim control period immediately preceding such deadline.

CO₂ Authorized Account Representative. For a CO₂ budget source and each CO₂ budget unit at the source, the natural person who is authorized by the owners and operators of the source and all CO₂ budget units at the source, in accordance with 310 CMR 7.70(2), to represent and legally bind each owner and operator in matters pertaining to the CO₂ Budget Trading Program or, for a general account, the natural person who is authorized, under 310 CMR 7.70(6), to transfer or otherwise dispose of CO₂ allowances held in the general account. If the CO₂ budget source is also subject to the Acid Rain Program then, for a CO₂ Budget Trading Program compliance account, this natural person shall be the same person as the designated representative under the Acid Rain Program.

7.70: continued

CO₂ Authorized Alternate Account Representative. For a CO₂ budget source and each CO₂ budget unit at the source, the alternate natural person who is authorized by the owners and operators of the source and all CO₂ budget units at the source, in accordance with 310 CMR 7.70(2), to represent and legally bind each owner and operator in matters pertaining to the CO₂ Budget Trading Program or, for a general account, the alternate natural person who is authorized, under 310 CMR 7.70(6), to transfer or otherwise dispose of CO₂ allowances held in the general account. If the CO₂ budget source is also subject to the Acid Rain Program, then, for a CO₂ Budget Trading Program compliance account, this alternate natural person shall be the same person as the alternate designated representative under the Acid Rain Program.

CO₂ Budget Emissions Control Plan. The legally binding permit issued by the Department pursuant to 310 CMR 7.70(1)(e)1. and (3) to a CO₂ budget source or CO₂ budget unit which specifies the CO₂ Budget Trading Program requirements applicable to the CO₂ budget source, to each CO₂ budget unit at the CO₂ budget source, and to the owners and operators and the CO₂ authorized account representative of the CO₂ budget source and each CO₂ budget unit.

CO₂ Budget Emissions Limitation. For a CO₂ budget source, the tonnage equivalent, in CO₂ emissions in a control period or an interim control period, of the CO₂ allowances available for compliance deduction for the source for a control period or an interim control period.

CO₂ Budget Source. A source that includes one or more CO₂ budget units.

CO₂ Budget Trading Program. A multi-state CO₂ air pollution control and emissions reduction program established by regulation in several states, including Massachusetts pursuant to 310 CMR 7.70, for the purpose of reducing emissions of CO₂ from CO₂ budget sources.

CO₂ Budget Unit. A unit that is subject to the CO₂ Budget Trading Program requirements under 310 CMR 7.70(1)(d).

CO₂ Cost Containment Reserve Allowance or CO₂ CCR Allowance. A CO₂ allowance that is offered for sale at an auction by DOER in accordance with 225 CMR 13.00: *DOER CO₂ Budget Trading Program Auction Regulation* for the purpose of containing the cost of CO₂ allowances. CO₂ CCR allowances offered for sale at an auction are separate from and additional to CO₂ allowances from the CO₂ Budget Trading Program base budget. CO₂ CCR allowances are subject to all applicable limitations contained in 310 CMR 7.70 or equivalent regulations in other participating states.

CO₂ Cost Containment Reserve (CCR) Trigger Price. The CCR trigger price is the minimum price at which CO₂ CCR allowances are offered for sale in an auction. The CCR trigger prices shall be established by DOER in 225 CMR 13.03: *Table 1*.

CO₂ Emissions Containment Reserve Allowance or CO₂ ECR Allowance. A CO₂ allowance that is withheld from sale at an auction by DOER in accordance with 225 CMR 13.00: *DOER CO₂ Budget Trading Program Auction Regulation* for the purpose of additional emission reduction in the event of lower than anticipated emission reduction costs.

CO₂ Emissions Containment Reserve (ECR) Trigger Price. The ECR trigger price is the price below which CO₂ allowances will be withheld from sale at an auction. The ECR trigger prices shall be established by DOER in 225 CMR 13.03: *Table 2*.

CO₂ Offset Allowance. A CO₂ allowance that is awarded to the sponsor of a CO₂ emissions offset project in any of the participating states that have an emissions offset program, and is subject to the relevant compliance deduction limitations of 310 CMR 7.70(6)(e)1.c.

Combined Cycle System. A system comprised of one or more combustion turbines, heat recovery steam generators, and steam turbines configured to improve overall efficiency of electricity generation or steam production.

7.70: continued

Combined Heat and Power (CHP) CO₂ Budget Source. A CO₂ Budget Source that contains one or more CO₂ Budget Units which generate electricity and useful thermal energy in a single integrated system.

Combustion Turbine. An enclosed fossil or other fuel-fired device that is comprised of a compressor (if applicable), a combustor, and a turbine, and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine.

Commence Commercial Operation. With regard to a unit that serves a generator, the date of commercial operation shall be when the unit begins to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation. For a unit that is a CO₂ budget unit under 310 CMR 7.70(1)(d) on the date the unit commences commercial operation, such date shall remain the unit's date of commencement of commercial operation even if the unit is subsequently modified, reconstructed, or repowered. For a unit that is not a CO₂ budget unit under 310 CMR 7.70(1)(d) on the date the unit commences commercial operation, the date the unit becomes a CO₂ budget unit under 310 CMR 7.70(1)(d) shall be the unit's date of commencement of commercial operation.

Commence Operation. To begin any mechanical, chemical, or electronic process, including, with regard to a unit, startup of a unit's combustion chamber. For a unit that is a CO₂ budget unit under 310 CMR 7.70(1)(d) on the date of commencement of operation, such date shall remain the unit's date of commencement of operation even if the unit is subsequently modified, reconstructed, or repowered. For a unit that is not a CO₂ budget unit under 310 CMR 7.70(1)(d) on the date of commencement of operation, the date the unit becomes a CO₂ budget unit under 310 CMR 7.70(1)(d) shall be the unit's date of commencement of operation

Compliance Account. A CO₂ Allowance Tracking System account, established by the Department or its agent for a CO₂ budget source under 310 CMR 7.70(6), in which are held CO₂ allowances available for use by the source for a control period and each interim control period for the purpose of meeting the CO₂ requirements of 310 CMR 7.70(1)(e)3.

Continuous Emissions Monitoring System or CEMS. The equipment required under 310 CMR 7.70(8) to sample, analyze, measure, and provide, by means of readings recorded at least once every 15 minutes (using an automated DAHS), a permanent record of stack gas volumetric flow rate, stack gas moisture content, and oxygen or carbon dioxide concentration (as applicable), in a manner consistent with 40 CFR Part 75 and 310 CMR 7.70(8).

Control Period. The control period is a three-calendar-year time period. The first control period is from January 1, 2009 through December 31, 2011. Each subsequent sequential three-calendar-year period is a separate control period. The first two calendar years of each control period are each defined as an interim control period, beginning on January 1, 2015.

Department. The Massachusetts Department of Environmental Protection (pursuant to St. 1989, c. 240, § 101, "...the department of environmental quality engineering shall be known as the department of environmental protection").

Eligible Biomass. Eligible biomass includes sustainably harvested woody and herbaceous fuel sources that are available on a renewable or recurring basis (excluding old-growth timber), including dedicated energy crops and trees, agricultural food and feed crop residues, aquatic plants, unadulterated wood and wood residues, animal wastes, other clean organic wastes not mixed with other solid wastes, and biogas derived from such fuel sources. Liquid biofuels do not qualify as eligible biomass. Sustainably harvested shall be determined by the Department.

Excess Emissions. Any tonnage of CO₂ emitted by a CO₂ budget source during a control period that exceeds the CO₂ budget emissions limitation for the source.

7.70: continued

Excess Interim Emissions. Any tonnage of CO₂ emitted by a CO₂ budget source during an interim control period multiplied by 0.50 that exceeds the CO₂ budget emissions limitation for the source.

First Control Period Adjustment for Banked Allowances. An adjustment applied to the CO₂ Budget Trading Program base budget for allocation years 2014 through 2020 to address the surplus allocation year 2009, 2010, and 2011 allowances held in general and compliance accounts, including compliance accounts established pursuant to 310 CMR 7.70(6), but not including accounts opened by participating states, that are in addition to the aggregate quality of first control period CO₂ emissions from all CO₂ budget sources in all of the participating states.

Fossil Fuel. Natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel derived from such material.

Fossil Fuel-fired.

- (a) With regard to a unit that commenced operation prior to January 1, 2005, the combustion of fossil fuel, alone or in combination with any other fuel, where the fossil fuel combusted comprises, or is projected to comprise, more than 50% of the annual heat input on a Btu basis during any year.
- (b) With regard to a unit that commenced or commences operation on or after January 1, 2005, the combustion of fossil fuel, alone or in combination with any other fuel, where the fossil fuel combusted comprises, or is projected to comprise, more than 5% of the annual heat input on a Btu basis during any year.

General Account. A CO₂ Allowance Tracking System account, established under 310 CMR 7.70(6), that is not a compliance account.

Gross Generation. The electrical output (in MWe) at the terminals of the generator.

Interim Control Period. An interim control period is a one-calendar-year time period, during each of the first and second calendar years of each three year control period. The first interim control period starts on January 1, 2015 and ends on December 31, 2015. The second interim control period starts on January 1, 2016 and ends on December 31, 2016, inclusive. Each successive three-year control period will have two interim control periods, comprised of each three of the first two calendar years of that control period.

Life-of-the-unit Contractual Arrangement. A unit participation power sales agreement under which a customer reserves, or is entitled to receive, a specified amount or percentage of nameplate capacity and/or associated energy from any specified unit pursuant to a contract:

- (a) For the life of the unit;
- (b) For a cumulative term of no less than 30 years, including contracts that permit an election for early termination; or
- (c) For a period equal to or greater than either 25 years, or 70% of the economic useful life of the unit determined as of the time the unit is built, with option rights to purchase or release some portion of the nameplate capacity and associated energy generated by the unit at the end of the period.

Massachusetts Auction Account. An account administered by DOER for purposes of auctioning CO₂ allowances in accordance with 225 CMR 13.00: *DOER CO₂ Budget Trading Program Auction Regulation*.

Massachusetts CO₂ Budget Trading Program Adjusted Budget. The Massachusetts CO₂ Budget Trading Program adjusted budget is determined in accordance with 310 CMR 7.70(5)(c)2. CO₂ CCR allowances offered for sale at an auction are separate from and additional to CO₂ allowances allocated from the Massachusetts CO₂ Budget Trading Program adjusted budget.

7.70: continued

Massachusetts CO₂ Budget Trading Program Base Budget. The Massachusetts CO₂ Budget Trading Program base budget is specified in 310 CMR 7.70(5)(a). CO₂ CCR Allowances offered for sale at auction are separate from and additional to CO₂ allowances allocated from the Massachusetts CO₂ Budget Trading Program base budget.

Massachusetts Department of Energy Resources or DOER. The Massachusetts agency established pursuant to M.G.L. c. 25A, §§ 1 through 13.

Maximum Potential Hourly Heat Input. An hourly heat input used for reporting purposes when a unit lacks certified monitors to report heat input. If the unit intends to use Appendix D of 40 CFR Part 75 to report heat input, this value should be calculated, in accordance with 40 CFR Part 75, using the maximum fuel flow rate and the maximum gross calorific value. If the unit intends to use a flow monitor and a diluent gas monitor, this value should be reported, in accordance with 40 CFR Part 75, using the maximum potential flowrate and either the maximum carbon dioxide concentration (in percent CO₂) or the minimum oxygen concentration (in percent O₂).

Monitoring System. Any monitoring system that meets the requirements of 310 CMR 7.70(8), including a continuous emissions monitoring system, an excepted monitoring system, or an alternative monitoring system.

Nameplate Capacity. The maximum electrical output (in MWe) that a generator can sustain over a specified period of time when not restricted by seasonal or other deratings as measured in accordance with the United States Department of Energy standards.

Net-electric Output. The amount of gross generation the generator(s) produce (including, but not limited to, output from steam turbine(s), combustion turbine(s), and gas expander(s)), as measured at the generator terminals, less the electricity used to operate the plant (*i.e.*, auxiliary loads); such uses include fuel handling equipment, pumps, fans, pollution control equipment, other electricity needs, and transformer losses as measured at the transmission side of the step up transformer (*e.g.*, the point of sale).

Non-CO₂ Budget Unit. A unit that does not meet the applicability criteria of 310 CMR 7.70(1)(d).

Operator. Any person who operates, controls, or supervises a CO₂ budget unit or a CO₂ budget source and shall include, but not be limited to, any holding company, utility system, or plant manager of such a unit or source.

Owner. Any of the following persons:

- (a) Any holder of any portion of the legal or equitable title in a CO₂ budget unit; or
- (b) Any holder of a leasehold interest in a CO₂ budget unit, other than a passive lessor, or a person who has an equitable interest through such lessor, whose rental payments are not based, either directly or indirectly, upon the revenues or income from the CO₂ budget unit; or
- (c) Any purchaser of power from a CO₂ budget unit under a life-of-the-unit contractual arrangement in which the purchaser controls the dispatch of the unit; or
- (d) With respect to any general account, any person who has an ownership interest with respect to the CO₂ allowances held in the general account and who is subject to the binding agreement for the CO₂ authorized account representative to represent that person's ownership interest with respect to the CO₂ allowances.

Participating State. A state that is a member of the CO₂ Budget Trading Program and has promulgated a regulation consistent with 310 CMR 7.70.

Receive or Receipt of. When referring to the Department or its agent, to come into possession of a document, information, or correspondence (whether sent in writing or by authorized electronic transmission), as indicated in an official correspondence log, or by a notation made on the document, information, or correspondence, by the Department or its agent in the regular course of business.

7.70: continued

Recordation, Record, or Recorded. With regard to CO₂ allowances, the movement of CO₂ allowances by the Department or its agent from one CO₂ Allowance Tracking System account to another.

Second Control Period Adjustment for Banked Allowances. An adjustment applied to the Massachusetts CO₂ Budget Trading Program base budget for allocation years 2015 through 2020 to address the allocation year 2012 and 2013 allowances held in general and compliance accounts, including compliance accounts established pursuant to the CO₂ Budget Trading Program, but not including accounts opened by participating states, that are in addition to the aggregate quantity of 2012 and 2013 emissions from all CO₂ budget sources in all of the participating states.

Serial Number. When referring to CO₂ allowances, the unique identification number assigned to each CO₂ allowance by the Department or its agent under 310 CMR 7.70(6)(d)4.

Source. Any governmental, institutional, commercial, or industrial structure, installation, plant, building, or facility that emits or has the potential to emit any air pollutant. A “source,” including a “source” with multiple units, shall be considered a single “facility.”

State. A U.S. State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, and American Samoa and includes the Commonwealth of the Northern Mariana Islands.

Submit or Serve. To send or transmit a document, information, or correspondence to the person specified in accordance with the applicable regulation:

- (a) In person;
- (b) By United States Postal Service;
- (c) By other means of dispatch or transmission and delivery; or
- (d) Compliance with any “submission”, “service”, or “mailing” deadline shall be determined by the date of dispatch, transmission, or mailing and not the date of receipt.

Third Adjustment for Banked Allowances. An adjustment applied to the Massachusetts CO₂ Budget Trading Program base budget for allocation years 2021 through 2025 to address allowances held in general and compliance accounts, including compliance accounts established pursuant to the CO₂ Budget Trading Program, but not including accounts opened by participating states, that are in addition to the aggregate quantity of emissions from all CO₂ budget sources in all of the participating states at the end of the fourth control period in 2020 and as reflected in the CO₂ Allowance Tracking System on March 15, 2021.

Ton or Tonnage. Any “short ton”, or 2,000 pounds. For the purpose of compliance with the CO₂ requirements of 310 CMR 7.70(1)(e)3., total tons for a control period and each interim control period shall be calculated as the sum of all recorded hourly emissions (or the tonnage equivalent of the recorded hourly emissions rates) in accordance with 310 CMR 7.70(8), with any remaining fraction of a ton equal to or greater than 0.50 ton deemed to equal one ton and any fraction of a ton less than 0.50 ton deemed to equal zero tons. A short ton is equal to 0.9072 metric tons.

Undistributed CO₂ Allowances. CO₂ allowances originally allocated to an account pursuant to 310 CMR 7.70(5)(c) that were not distributed.

Unit. A fossil fuel-fired stationary boiler, combustion turbine, or combined cycle system.

Unit Operating Day. A calendar day in which a unit combusts any fuel.

Useful Net Thermal Energy. Energy:

- (a) in the form of direct heat, steam, hot water, or other thermal form that is used in production and beneficial measures for heating, cooling, humidity control, process use, or other valid thermal end use energy requirements, excluding thermal energy used in the power production process (*e.g.*, house loads, parasitic loads); and

7.70: continued

- (b) for which fuel or electricity would otherwise be consumed.

Useful Thermal Energy Account. An account established for the purpose of retiring allowances pursuant to 310 CMR 7.70(5)(c)5.b.

Unsold CO₂ Allowances. CO₂ allowances that have been made available for sale in an auction conducted by DOER, but not sold.

Voluntary Renewable Energy Account. An account established for the purpose of retiring allowances pursuant to 310 CMR 7.70(5)(c)1.a.iii.

(c) Measurements, Abbreviations and Acronyms. Measurements, abbreviations, and acronyms used in 310 CMR 7.70 are defined as follows:

1. CO₂ – carbon dioxide;
2. hr – hour;
3. lb – pounds;
4. MMBtu – one million British thermal units;
5. MW – megawatt;
6. MWe – megawatt electrical;
7. Mwh – megawatt hours;
8. scf – standard cubic feet.

(d) Applicability. Any unit that, at any time on or after January 1, 2005, serves an electricity generator with a nameplate capacity equal to or greater than 25 MWe shall be a CO₂ budget unit, and any source that includes one or more such units shall be a CO₂ budget source, subject to the requirements of 310 CMR 7.70.

(e) Standard Requirements.

1. CO₂ Budget Emission Control Plan Requirements.

- a. The CO₂ authorized account representative of each CO₂ budget source shall:
 - i. Submit to the Department a complete CO₂ budget emission control plan under 310 CMR 7.70(3)(c) in accordance with the deadlines specified in 310 CMR 7.70(3)(b); and
 - ii. Submit in a timely manner any supplemental information that the Department determines is necessary in order to review and approve or deny the CO₂ budget emission control plan.
- b. The owners and operators of each CO₂ budget source and each CO₂ budget unit for the source shall have an approved CO₂ budget emission control plan and operate the CO₂ budget source and the CO₂ budget unit at the source in compliance with such approved CO₂ budget emission control plan.

2. Monitoring Requirements.

- a. The owners and operators and, to the extent applicable, the CO₂ authorized account representative of each CO₂ budget source and each CO₂ budget unit at the source shall comply with the monitoring requirements of 310 CMR 7.70(8).
- b. The emissions measurements recorded and reported in accordance with 310 CMR 7.70(8) shall be used to determine compliance by the unit with the CO₂ requirements of 310 CMR 7.70(1)(e)3.

3. CO₂ Requirements.

- a. The owners and operators of each CO₂ budget source and each CO₂ budget unit at the source shall hold CO₂ allowances available for compliance deductions under 310 CMR 7.70(6)(e), as of the CO₂ allowance transfer deadline, in the source's compliance account in an amount not less than the total CO₂ emissions for the control period from all CO₂ budget units at the source, minus the CO₂ allowances deducted to meet the requirements of 310 CMR 7.70(1)(e)3.b., as determined in accordance with 310 CMR 7.70(6) and (8).
- b. The owners and operators of each CO₂ budget source and each CO₂ budget unit at the source shall hold CO₂ allowances available for compliance deductions under 310 CMR 7.70(6)(e), as of the CO₂ allowance transfer deadline, in the CO₂ budget source's compliance account in an amount not less than the total CO₂ emissions for the interim control period from all CO₂ budget units at the CO₂ budget source multiplied by 0.50, as determined in accordance with 310 CMR 7.70(6) and (8).

7.70: continued

- c. Each ton of CO₂ emitted in excess of the CO₂ budget emissions limitation for a control period shall constitute a separate violation of 310 CMR 7.70 and applicable state law.
 - d. Each ton of excess interim emissions shall constitute a separate violation of 310 CMR 7.70 and applicable state law.
 - e. A CO₂ budget unit shall be subject to the requirements under 310 CMR 7.70(1)(e)3.a. on January 1, 2009 or the date on which the unit commences operation, whichever comes later.
 - f. CO₂ allowances shall be held in, deducted from, or transferred among CO₂ Allowance Tracking System accounts in accordance with 310 CMR 7.70(5) through (7).
 - g. A CO₂ allowance shall not be deducted in order to comply with the requirements under 310 CMR 7.70(1)(e)3.a. and b. for a control period or interim control period that ends prior to the year for which the CO₂ allowance was allocated. A CO₂ offset allowance shall not be deducted in order to comply with the requirements under 310 CMR 7.70(1)(e)3.a. beyond the applicable percent limitations set out in 310 CMR 7.70(6)(e)1.c.
 - h. A CO₂ allowance under the CO₂ Budget Trading Program is a limited authorization by the Department or a participating state to emit one ton of CO₂ in accordance with the CO₂ Budget Trading Program. No provision of the CO₂ Budget Trading Program, the application for a CO₂ budget emissions control plan, or the approved CO₂ budget emissions control plan, or any provision of law shall be construed to limit the authority of the State to terminate or limit such authorization.
 - i. A CO₂ allowance under the CO₂ Budget Trading Program does not constitute a property right.
4. Excess Emissions Requirements. The owners and operators of a CO₂ budget source that has excess emissions in any control period or excess interim emissions in any interim control period shall:
- a. Forfeit the CO₂ allowances required for deduction under 310 CMR 7.70(6)(e)4.a., provided CO₂ offset allowances may not be used to cover any part of such excess emissions; and,
 - b. Pay any fine, penalty, or assessment or comply with any other remedy imposed under 310 CMR 7.70(6)(e)4.b.
5. Recordkeeping and Reporting Requirements.
- a. Unless otherwise provided, the owners and operators of the CO₂ budget source and each CO₂ budget unit at the source shall keep on site at the source each of the following documents for a period of ten years from the date the document is created. This period may be extended for cause, at any time prior to the end of ten years, in writing by the Department.
 - i. The account certificate of representation for the CO₂ authorized account representative for the source and each CO₂ budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with 310 CMR 7.70(2)(d), provided that the certificate and documents shall be retained on site at the source beyond such ten-year period until such documents are superseded because of the submission of a new account certificate of representation changing the CO₂ authorized account representative.
 - ii. All emissions monitoring information, in accordance with 310 CMR 7.70(8) and 40 CFR 75.57.
 - iii. Copies of all reports, compliance certifications, and other submissions and all records made or required under the CO₂ Budget Trading Program.
 - iv. Copies of all documents used to complete an application for a CO₂ budget emissions control plan and any other submission under the CO₂ Budget Trading Program or to demonstrate compliance with the requirements of the CO₂ Budget Trading Program.

7.70: continued

- b. The CO₂ authorized account representative of a CO₂ budget source and each CO₂ budget unit at the source shall submit the reports and compliance certifications required under the CO₂ Budget Trading Program, including those under 310 CMR 7.70(4).
6. Liability.
- a. No revision to a CO₂ budget emissions control plan shall excuse any violation of the requirements of the CO₂ Budget Trading Program that occurs prior to the date that the revision takes effect.
- b. Any provision of the CO₂ Budget Trading Program that applies to a CO₂ budget source (including a provision applicable to the CO₂ authorized account representative of a CO₂ budget source) shall also apply to the owners and operators of such source and of the CO₂ budget units at the source.
- c. Any provision of the CO₂ Budget Trading Program that applies to a CO₂ budget unit (including a provision applicable to the CO₂ authorized account representative of a CO₂ budget unit) shall also apply to the owners and operators of such unit.
7. Effect on Other Authorities.
- a. No provision of the CO₂ Budget Trading Program, a CO₂ budget emissions control plan application, or an approved CO₂ budget emissions control plan, shall be construed as exempting or excluding the owners and operators and, to the extent applicable, the CO₂ authorized account representative of a CO₂ budget source or CO₂ budget unit from compliance with any other provisions of applicable State and Federal law and regulations.
8. New CO₂ Budget Unit and CO₂ Budget Sources. The owner or operator of a CO₂ budget unit that commences commercial operation on or after July 1, 2008 shall hold CO₂ allowances available for compliance deductions under 310 CMR 7.70(6)(e), in an amount not less than the total CO₂ emissions from the date of the initial certification of the monitor or the date of the provisional certification of the monitor, as required under 310 CMR 7.70(8)(b), whichever is earlier.
- (f) Computation of Time.
1. Unless otherwise stated, any time period scheduled under the CO₂ Budget Trading Program to begin on the occurrence of an act or event shall begin on the day the act or event occurs.
2. Unless otherwise stated, any time period scheduled under the CO₂ Budget Trading Program to begin before the occurrence of an act or event shall be computed so that the period ends the day before the act or event occurs.
3. Unless otherwise stated, if the final day of any time period under the CO₂ Budget Trading Program falls on a weekend or a Massachusetts or Federal holiday, the time period shall be extended to the next business day.
- (g) Severability. If any provision of 310 CMR 7.70, or its application to any particular person or circumstances, is held invalid, the remainder of 310 CMR 7.70, and the application thereof to other persons or circumstances, shall not be affected thereby.
- (h) Exemption for Any Combined Heat and Power CO₂ Budget Source.
1. Applicability. Notwithstanding 310 CMR 7.70(1)(d), any entity owning, operating, or controlling a combined heat and power CO₂ budget source that sells its useful net thermal energy shall comply with all of the provisions of 310 CMR 7.70, except that it may subtract from its total CO₂ emissions recorded for compliance under 310 CMR 7.70(6) the amount of CO₂ emissions attributable to the production of useful net thermal energy as long as it complies with all of the provisions in 310 CMR 7.70(1)(h).
2. Compliance. Any entity owning, operating, or controlling a combined heat power CO₂ budget source shall comply with the requirements in 310 CMR 7.70(6)(e)2.
3. Monitoring and Reporting. Any entity owning, operating, or controlling a combined heat and power CO₂ budget source shall monitor and report the amount of annual CO₂ mass emissions (expressed in tons) associated with the production of useful net thermal energy pursuant to 310 CMR 7.70(8)(i) for the control period beginning 2015 and each year thereafter.

7.70: continued

4. Change to Previously Reported Emissions. Any entity owning, operating, or controlling a combined heat and power CO₂ budget source that previously reported its annual CO₂ emissions for the interim control periods of 2015 and 2016 pursuant to 310 CMR 7.70(4)(a), but did not deduct its CO₂ emissions associated with the production of useful net thermal energy as allowed for under 310 CMR 7.70(1)(h), may submit revised compliance certification reports to the Department under 310 CMR 7.70(4)(a)3.d. and e., so that the Department may deduct the amount of CO₂ mass emissions attributable to the production of useful net thermal energy for the interim control periods of 2015 and 2016 as quantified under 310 CMR 7.70(8)(i).
- (2) CO₂ Authorized Account Representative for CO₂ Budget Sources.
 - (a) Authorization and Responsibilities of the CO₂ Authorized Account Representative.
 1. Except as provided under 310 CMR 7.70(2)(b), each CO₂ budget source, including all CO₂ budget units at the source, shall have one and only one CO₂ authorized account representative, with regard to all matters under the CO₂ Budget Trading Program concerning the source or any CO₂ budget unit at the source.
 2. The CO₂ authorized account representative of the CO₂ budget source shall be selected by an agreement binding on the owners and operators of the source and all CO₂ budget units at the source and shall act in accordance with the certificate of representation under 310 CMR 7.70(2)(d).
 3. Upon receipt by the Department or its agent of a complete account certificate of representation under 310 CMR 7.70(2)(d), the CO₂ authorized account representative of the source shall represent and, by his or her representations, actions, inactions, or submissions, legally bind each owner and operator of the CO₂ budget source represented and each CO₂ budget unit at the source in all matters pertaining to the CO₂ Budget Trading Program, notwithstanding any agreement between the CO₂ authorized account representative and such owners and operators. The owners and operators shall be bound by any decision or order issued to the CO₂ authorized account representative by the Department or a court regarding the source or unit.
 4. No CO₂ budget emissions control plan shall be issued, and no CO₂ Allowance Tracking System account shall be established for a CO₂ budget source, until the Department or its agent has received a complete account certificate of representation under 310 CMR 7.70(2)(d) for a CO₂ authorized account representative of the source and the CO₂ budget units at the source.
 5. Each submission under the CO₂ Budget Trading Program shall be submitted, signed, and certified by the CO₂ authorized account representative for each CO₂ budget source on behalf of which the submission is made. Each such submission shall include the following certification statement by the CO₂ authorized account representative: "I am authorized to make this submission on behalf of the owners and operators of the CO₂ budget sources or CO₂ budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."
 6. The Department or its agent shall accept or act on a submission made on behalf of owners or operators of a CO₂ budget source or a CO₂ budget unit only if the submission has been made, signed, and certified in accordance with 310 CMR 7.70(2)(a)5.
 - (b) CO₂ Authorized Alternate Account Representative.
 1. An account certificate of representation may designate one and only one CO₂ authorized alternate account representative who may act on behalf of the CO₂ authorized account representative. The agreement by which the CO₂ authorized alternate account representative is selected shall include a procedure for authorizing the CO₂ authorized alternate account representative to act in *lieu* of the CO₂ authorized account representative.

7.70: continued

2. Upon receipt by the Department or its agent of a complete account certificate of representation under 310 CMR 7.70(2)(d), any representation, action, inaction, or submission by the CO₂ authorized alternate account representative shall be deemed to be a representation, action, inaction, or submission by the CO₂ authorized account representative.

3. Except in 310 CMR 7.70(2)(b) and 310 CMR 7.70(2)(a)1., (c), (d), and (6)(b), whenever the term "CO₂ authorized account representative" is used in 310 CMR 7.70, the term shall be construed to include the CO₂ authorized alternate account representative.

(c) Changing the CO₂ Authorized Account Representative and the CO₂ Authorized Alternate Account Representative; Changes in the Owners and Operators.

1. Changing the CO₂ Authorized Account Representative. The CO₂ authorized account representative may be changed at any time upon receipt by the Department or its agent of a superseding complete account certificate of representation under 310 CMR 7.70(2)(d). Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous CO₂ authorized account representative or alternate CO₂ authorized account representative prior to the time and date when the Department or its agent receives the superseding account certificate of representation shall be binding on the new CO₂ authorized account representative and the owners and operators of the CO₂ budget source and the CO₂ budget units at the source.

2. Changing the CO₂ Authorized Alternate Account Representative. The CO₂ authorized alternate account representative may be changed at any time upon receipt by the Department or its agent of a superseding complete account certificate of representation under 310 CMR 7.70(2)(d). Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous CO₂ authorized account representative or CO₂ authorized alternate account representative prior to the time and date when the Department or its agent receives the superseding account certificate of representation shall be binding on the new CO₂ authorized alternate account representative and the owners and operators of the CO₂ budget source and the CO₂ budget units at the source.

3. Changes in the Owners and Operators.

a. In the event a new owner or operator of a CO₂ budget source or a CO₂ budget unit is not included in the list of owners and operators submitted in the account certificate of representation, such new owner or operator shall be deemed to be subject to and bound by the account certificate of representation, the representations, actions, inactions, and submissions of the CO₂ authorized account representative and any CO₂ authorized alternate account representative of the source or unit, and the decisions, orders, actions, and inactions of the Department, as if the new owner or operator were included in such list.

b. Within 30 days following any change in the owners and operators of a CO₂ budget source or a CO₂ budget unit, including the addition of a new owner or operator, the CO₂ authorized account representative or CO₂ authorized alternate account representative shall submit a revision to the account certificate of representation amending the list of owners and operators to include the change.

(d) Account Certificate of Representation.

1. A complete account certificate of representation for a CO₂ authorized account representative or a CO₂ authorized alternate account representative shall include the following elements in a format prescribed by the Department or its agent:

a. Identification of the CO₂ budget source and each CO₂ budget unit at the source for which the account certificate of representation is submitted;

b. The name, address, email address, telephone number, and facsimile transmission number of the CO₂ authorized account representative and any CO₂ authorized alternate account representative;

c. A list of the owners and operators of the CO₂ budget source and of each CO₂ budget unit at the source;

7.70: continued

d. The following certification statement by the CO₂ authorized account representative and any CO₂ authorized alternate account representative: “I certify that I was selected as the CO₂ authorized account representative or CO₂ authorized alternate account representative, as applicable, by an agreement binding on the owners and operators of the CO₂ budget source and each CO₂ budget unit at the source. I certify that I have all the necessary authority to carry out my duties and responsibilities under the CO₂ Budget Trading Program on behalf of the owners and operators of the CO₂ budget source and of each CO₂ budget unit at the source and that each such owner and operator shall be fully bound by my representations, actions, inactions, or submissions and by any decision or order issued to me by the Department or a court regarding the source or unit.”; and,

e. The signature of the CO₂ authorized account representative and any CO₂ authorized alternate account representative and the dates signed.

2. Unless otherwise required by the Department or its agent, documents of agreement referred to in the account certificate of representation shall not be submitted to the Department or its agent. Neither the Department nor its agent shall be under any obligation to review or evaluate the sufficiency of such documents, whether or not submitted.

(e) Objections Concerning the CO₂ Authorized Account Representative.

1. Once a complete account certificate of representation under 310 CMR 7.70(2)(d) has been submitted and received, the Department and its agent shall rely on the account certificate of representation unless and until the Department or its agent receives a superseding complete account certificate of representation under 310 CMR 7.70(2)(d).

2. Except as provided in 310 CMR 7.70(2)(c)1. or 2., no objection or other communication submitted to the Department or its agent concerning the authorization, or any representation, action, inaction, or submission of the CO₂ authorized account representative shall affect any representation, action, inaction, or submission of the CO₂ authorized account representative or the finality of any decision or order by the Department or its agent under the CO₂ Budget Trading Program.

3. Neither the Department nor its agent shall adjudicate any private legal dispute concerning the authorization or any representation, action, inaction, or submission of any CO₂ authorized account representative, including private legal disputes concerning the proceeds of CO₂ allowance transfers.

(f) Delegation by CO₂ Authorized Account Representative and CO₂ Authorized Alternate Account Representative.

1. A CO₂ authorized account representative may delegate, to one or more natural persons, his or her authority to make an electronic submission to the Department or its agent under 310 CMR 7.70.

2. A CO₂ authorized alternate account representative may delegate, to one or more natural persons, his or her authority to make an electronic submission to the Department or its agent under 310 CMR 7.70.

3. In order to delegate authority to make an electronic submission to the Department or its agent in accordance with 310 CMR 7.70(2)(f)1. and 2., the CO₂ authorized account representative or CO₂ authorized alternate account representative, as appropriate, shall submit to the Department or its agent a notice of delegation, in a format prescribed by the Department that includes the following elements:

a. The name, address, email address, telephone number, and facsimile transmission number of such CO₂ authorized account representative or CO₂ authorized alternate account representative;

b. The name, address, email address, telephone number and facsimile transmission number of each such natural person, herein referred to as the “electronic submission agent”;

c. For each such natural person, a list of the type of electronic submissions under 310 CMR 7.70(2)(f)1. and 2. for which authority is delegated to him or her; and,

d. The following certification statements by such CO₂ authorized account representative or CO₂ authorized alternate account representative:

7.70: continued

- i. "I agree that any electronic submission to the Department or its agent that is by a natural person identified in this notice of delegation and of a type listed for such electronic submission agent in this notice of delegation and that is made when I am a CO₂ authorized account representative or CO₂ authorized alternate account representative, as appropriate, and before this notice of delegation is superseded by another notice of delegation under 310 CMR 7.70(2)(f)4. shall be deemed to be an electronic submission by me."
- ii. "Until this notice of delegation is superseded by another notice of delegation under 310 CMR 7.70(2)(f)4., I agree to maintain an email account and to notify the Department or its agent immediately of any change in my email address unless all delegation authority by me under 310 CMR 7.70(2)(f) is terminated."
4. A notice of delegation submitted under 310 CMR 7.70(2)(f)3. shall be effective, with regard to the CO₂ authorized account representative or CO₂ authorized alternate account representative identified in such notice, upon receipt of such notice by the Department or its agent and until receipt by the Department or its agent of a superseding notice of delegation by such CO₂ authorized account representative or CO₂ authorized alternate account representative as appropriate. The superseding notice of delegation may replace any previously identified electronic submission agent, add a new electronic submission agent, or eliminate entirely any delegation of authority.
5. Any electronic submission covered by the certification in 310 CMR 7.70(2)(f)3.d.i. and made in accordance with a notice of delegation effective under 310 CMR 7.70(2)(f)4. shall be deemed to be an electronic submission by the CO₂ authorized account representative or CO₂ authorized alternate account representative submitting such notice of delegation.
6. A CO₂ authorized account representative may delegate, to one or more natural persons, his or her authority to review information in the CO₂ allowance tracking system under 310 CMR 7.70.
7. A CO₂ authorized alternate account representative may delegate, to one or more natural persons, his or her authority to review information in the CO₂ allowance tracking system under 310 CMR 7.70.
8. In order to delegate authority to review information in the CO₂ allowance tracking system in accordance with 310 CMR 7.70(2)(f) and (g), the CO₂ authorized account representative or CO₂ authorized alternate account representative, as appropriate, must submit to the Department or its agent a notice of delegation, in a format prescribed by the Department that includes the following elements:
 - a. The name, address, e-mail address, telephone number, and facsimile transmission number of such CO₂ authorized account representative or CO₂ authorized alternate account representative;
 - b. The name, address, e-mail address, telephone number and facsimile transmission number of each such natural person, herein referred to as the "reviewer";
 - c. For each such natural person, a list of the type of information under 310 CMR 7.70(2)(f) or (g) for which authority is delegated to him or her; and
 - d. The following certification statements by such CO₂ authorized account representative or CO₂ authorized alternate account representative:
 - (i) "I agree that any information that is reviewed by a natural person identified in this notice of delegation and of a type listed for such information accessible by the reviewer in this notice of delegation and that is made when I am a CO₂ authorized account representative or CO₂ authorized alternate account representative, as appropriate, and before this notice of delegation is superseded by another notice of delegation under 310 CMR 7.70(2)(f)9. shall be deemed to be a reviewer by me."
 - (ii) "Until this notice of delegation is superseded by another notice of delegation under 310 CMR 7.70(2)(f)9., I agree to maintain an email account and to notify the Department or its agent immediately of any change in my e-mail address unless all delegation authority by me under section 310 CMR 7.70(2)(f) is terminated."

7.70: continued

9. A notice of delegation submitted under 310 CMR 7.70(2)(f)8. shall be effective, with regard to the CO₂ authorized account representative or CO₂ authorized alternate account representative identified in such notice, upon receipt of such notice by the Department or its agent and until receipt by the Department or its agent of a superseding notice of delegation by such CO₂ authorized account representative or CO₂ authorized alternate account representative as appropriate. The superseding notice of delegation may replace any previously identified reviewer, add a new reviewer, or eliminate entirely any delegation of authority.

(3) CO₂ Budget Emission Control Plan Requirements.

(a) CO₂ Budget Emission Control Plan Requirements. The owners and operators of CO₂ budget sources shall have an approved CO₂ budget emission control plan issued by the Department pursuant to 310 CMR 7.70(1)(e)1. that contains all applicable CO₂ Budget Trading Program requirements under 310 CMR 7.70(3)(c). Owners and operators of CO₂ budget sources shall comply with the approved CO₂ budget emission control plan.

(b) Submission of CO₂ Budget Emission Control Plan. For any CO₂ budget source, the CO₂ authorized account representative shall submit a complete CO₂ budget emission control plan under 310 CMR 7.70(3)(c) covering such CO₂ budget source to the Department on or before August 1, 2008 or 12 months before the date on which the CO₂ budget source, or a new unit at the source, commences operation, whichever is later.

(c) CO₂ Budget Emission Control Plan Contents. A complete CO₂ budget emission control plan shall include the following elements concerning the CO₂ budget source in a format prescribed by the Department:

1. Identification of the CO₂ budget source, including plant name and the ORIS (Office of Regulatory Information Systems) or facility code assigned to the source by the Energy Information Administration of the United States Department of Energy, if applicable;
2. Identification of each CO₂ budget unit at the CO₂ budget source;
3. A compliance account identification number for each CO₂ budget source;
4. For CO₂ budget sources subject to 40 CFR Part 72, a statement that the CO₂ authorized account representative shall ensure that the CO₂ budget unit will have an EPA approved monitoring plan in place that meets the requirements of 310 CMR 7.70(8) prior to operation. Any modification to a CO₂ budget unit's monitoring methodology approved pursuant to the requirements of 40 CFR Part 72, and meeting the requirements of 310 CMR 7.70(8), are hereby incorporated into the approved emission control plan under 310 CMR 7.70;
5. For CO₂ budget sources not subject to 40 CFR Part 72, a statement that the CO₂ authorized account representative shall ensure that the CO₂ budget unit will have an EPA approved monitoring plan in place that meets the requirements of 310 CMR 7.70(8) prior to operation;
6. For CO₂ budget sources that have an approved output monitoring plan as of March 9, 2018, a statement that the CO₂ budget sources have an output monitoring plan that meets the requirements in 310 CMR 7.70(8);
7. For CO₂ budget sources that do not have an approved output monitoring plan as of March 9, 2018, a detailed output monitoring plan that meets the requirements of 310 CMR 7.70(8);
8. The standard requirements under 310 CMR 7.70(1)(e); and
9. Any other information requested by the Department.

(d) Approval of CO₂ budget emission control plans. After reviewing the proposed CO₂ budget emissions control plan, the Department shall:

1. Issue a proposed disapproval of the CO₂ budget emission control plan, a proposed approval of the CO₂ budget emissions control plan, or a proposed approval of the CO₂ budget emission control plan with conditions, based on whether the CO₂ budget emission control plan as submitted meets the requirements of 310 CMR 7.70;
2. Notify the public of the Department's proposed action by publishing a notice in the *Environmental Monitor*;
3. Make available on its website all related materials;
4. Allow not less than 21 days for public comment;
5. Make all comments available for public inspection; and
6. Notify the applicant and publish on the Department's website the final approval of the CO₂ budget emission control plan, the final approval of the CO₂ budget emission control plan with conditions, or a disapproval of the CO₂ budget emission control plan.

7.70: continued

(e) CO₂ budget emission control plan approvals issued to a CO₂ budget source that changes ownership are binding upon the new owner.

(f) Revisions to CO₂ Budget Emission Control Plans.

1. At any time, the Department may require a CO₂ budget source to submit a revision to its CO₂ budget emission control plan.

2. If the CO₂ budget source required to submit a detailed monitoring plan pursuant to 310 CMR 7.70(3)(c)5. or 7. proposes a change in the monitoring methodology, then that CO₂ budget source shall submit a revised monitoring plan to the Department and obtain approval of the change to the CO₂ budget emission control plan by the Department prior to making the modification. The Department will modify the CO₂ budget emission control plan upon approval of the revised monitoring plan.

3. At any time, a CO₂ budget source may propose a change to its CO₂ budget emissions control plan.

(g) Operating Permits. If the CO₂ budget source is required to have an Operating Permit under 310 CMR 7.00: *Appendix C*, such Operating Permit shall be modified in accordance with the procedures in 310 CMR 7.00: *Appendix C(8)*.

(4) Compliance Certification.

(a) Compliance Certification Report.

1. Applicability and Deadline. For each control period in which a CO₂ budget source is subject to the CO₂ requirements of 310 CMR 7.70(1)(e)3., the CO₂ authorized account representative of the source shall submit to the Department, by the March 1st following the relevant control period, a compliance certification report. A compliance certification report is not required as part of the compliance obligation during an interim control period.

2. Contents of Report. The CO₂ authorized account representative shall include in the compliance certification report under 310 CMR 7.70(4)(a)1. the following elements, in a format prescribed by the Department:

a. Identification of the source and each CO₂ budget unit at the source;

b. At the CO₂ authorized account representative's option, the serial numbers of the CO₂ allowances that are to be deducted from the source's compliance account under 310 CMR 7.70(6)(e) for the control period, including the serial numbers of any CO₂ offset allowances that are to be deducted subject to the limitations of 310 CMR 7.70(6)(e)1.c.; and

c. The compliance certification under 310 CMR 7.70(4)(a)3.

3. Compliance Certification. In the compliance certification report under 310 CMR 7.70(4)(a)1., the CO₂ authorized account representative shall certify, based on reasonable inquiry of those persons with primary responsibility for operating the source and the CO₂ budget units at the source in compliance with the CO₂ Budget Trading Program, whether the source and each CO₂ budget unit at the source for which the compliance certification is submitted was operated during the calendar years covered by the report in compliance with the requirements of the CO₂ Budget Trading Program, including:

a. Whether the source was operated in compliance with the CO₂ requirements of 310 CMR 7.70(1)(e)3.;

b. Whether the monitoring plan applicable to each unit at the source has been maintained to reflect the actual operation and monitoring of the unit, and contains all information necessary to attribute CO₂ emissions to the unit, in accordance with 310 CMR 7.70(8);

c. Whether all the CO₂ emissions from the units at the source were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including whether conditional data were reported in the quarterly reports in accordance with 310 CMR 7.70(8). If conditional data were reported, the owner or operator shall indicate whether the status of all conditional data has been resolved and all necessary quarterly report resubmissions have been made;

d. Whether the facts that form the basis for certification under 310 CMR 7.70(8) of each monitor at each unit at the source, or for using an excepted monitoring method or alternate monitoring method approved under 310 CMR 7.70(8), if any, have changed; and

7.70: continued

e. If a change is required to be reported under 310 CMR 7.70(4)(a)3.d., specify the nature of the change, the reason for the change, when the change occurred, and how the unit's compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor recertification.

(b) Department's Action on Compliance Certifications.

1. The Department or its agent may review and conduct independent audits concerning any compliance certification or any other submission under the CO₂ Budget Trading Program and make appropriate adjustments to the information in the compliance certifications or other submissions.

2. The Department or its agent may deduct CO₂ allowances from or transfer CO₂ allowances to a source's compliance account based on the information in the compliance certifications or other submissions, as adjusted under 310 CMR 7.70(4)(b)1.

(5) CO₂ Allowance Allocations.

(a) Massachusetts CO₂ Budget Trading Program Base Budget.

1. For 2018, the Massachusetts CO₂ Budget Trading Program base budget is 13,083,598 tons.

2. For 2019, the Massachusetts CO₂ Budget Trading Program base budget is 12,756,508 tons.

3. For 2020, the Massachusetts CO₂ Budget Trading Program base budget is 12,437,596 tons.

4. For 2021, the Massachusetts CO₂ Budget Trading Program base budget is 11,944,355 tons.

5. For 2022, the Massachusetts CO₂ Budget Trading Program base budget is 11,582,404 tons.

6. For 2023, the Massachusetts CO₂ Budget Trading Program base budget is 11,220,454 tons.

7. For 2024, the Massachusetts CO₂ Budget Trading Program base budget is 10,858,504 tons.

8. For 2025, the Massachusetts CO₂ Budget Trading Program base budget is 10,496,554 tons.

9. For 2026, the Massachusetts CO₂ Budget Trading Program base budget is 10,134,604 tons.

10. For 2027, the Massachusetts CO₂ Budget Trading Program base budget is 9,772,654 tons.

11. For 2028, the Massachusetts CO₂ Budget Trading Program base budget is 9,410,704 tons.

12. For 2029, the Massachusetts CO₂ Budget Trading Program base budget is 9,048,753 tons.

13. For 2030, the Massachusetts CO₂ Budget Trading Program base budget is 8,686,803 tons.

14. For 2031, and future years, the Massachusetts CO₂ Budget Trading Program base budget will be established through amendments following future program review.

(b) CO₂ Allowance Allocations.

1. General Allocations.

a. Voluntary Renewable Energy (VRE) Account.

i. The Department shall establish a retirement account to address the voluntary purchase of Massachusetts RPS-eligible Renewable Energy Certificates by retail customers in Massachusetts. CO₂ allowances transferred into this account cannot be removed, unless they are transferred in error.

ii. Beginning in 2010, DOER will submit to the Department a report, certified by DOER, documenting:

(i) The number of Massachusetts RPS-eligible Renewable Energy Certificates purchased voluntarily by retail customers in Massachusetts in the preceding year, in Mwh;

7.70: continued

- (ii) The annual average CO₂ emission rate for electricity generation, in lbs. CO₂/MWh as provided in the most recently available version of the *ISO New England Electric Generator Air Emissions Report* published annually by the Independent System Operator of New England;
 - (iii) The total number of CO₂ allowances to be retired for such voluntary purchases in Massachusetts of said Massachusetts RPS-eligible Renewable Energy Certificates; and,
 - (iv) All calculations used to determine the amount referenced in 310 CMR 7.70(5)(c)1.a.ii.(iii).
- iii. After review of the certified report submitted to the Department pursuant to 310 CMR 7.70(5)(c)1.a.ii., the Department will allocate to the VRE Account the number of CO₂ allowances reported pursuant to 310 CMR 7.70(5)(c)1.a.ii.(iii), or 200,000 CO₂ allowances, whichever is fewer.
- iv. The Department will periodically review provisions related to the VRE Account in consultation with DOER.
- b. Massachusetts Auction Account.
- i. The Department shall establish a Massachusetts Auction Account.
 - ii. The Department shall allocate all CO₂ allowances not allocated under 310 CMR 7.70(5)(c)1.a. to the Massachusetts Auction Account.
 - iii. The Department shall allocate into the Massachusetts Auction Account CO₂ CCR Allowances in the quantity specified in 310 CMR 7.70(5)(c)3.
- c. CO₂ Allowances Available for Allocation. For allocation years 2014 through 2020, the Massachusetts CO₂ Budget Trading Program adjusted budget shall be the maximum number of allowances available for allocation in a given allocation year, except for CO₂ CCR allowances.
2. Determination of 2014 through 2020 Adjusted Budgets.
- a. First Control Period Adjustment for Banked Allowances. By January 15, 2014, the Department established the first control period adjustment for banked allowances quantity for allocation years 2014 through 2020. Those adjustment quantities are shown in the following table:

First Control Period Adjustment for Banked Allowances						
2014	2015	2016	2017	2018	2019	2020
1,324,595	1,324,595	1,324,595	1,324,595	1,324,595	1,324,595	1,324,595

- b. Second Control Period Adjustment for Banked Allowances. On March 15, 2014, the Department established the second control period adjustment for banked allowances quantity for allocation years 2015 through 2020. Those adjustment quantities are shown in the following table:

Second Control Period Adjustment for Banked Allowances					
2015	2016	2017	2018	2019	2020
2,208,353	2,208,353	2,208,353	2,208,353	2,208,353	2,208,353

- c. Third Adjustment for Banked Allowances. On March 15, 2021, the Department shall establish the third adjustment for banked allowances quantity for allocation years 2021 through 2025 through the application of the following formula:

$$TABA = ((TA - TAE)/5) \times RS\%$$

Where:

TABA is the third adjustment for banked allowances quantity in tons.

TA, third adjustment, is the total quantity of allowances of vintage years prior to 2021 held in general and compliance accounts, including compliance accounts established pursuant to the CO₂ Budget Trading Program, but not including accounts opened by participating states, as reflected in the CO₂ Allowance Tracking System on March 15, 2021.

7.70: continued

TAE, third adjustment emissions, is the total quantity of 2018, 2019 and 2020 emissions from all CO₂ budget sources in all participating states, reported pursuant to CO₂ Budget Trading Program as reflected in the CO₂ Allowance Tracking System on March 15, 2021.

RS% is the Massachusetts 2021 Base Budget/The total of the 2021 Base Budgets for all the Participating States.

d. CO₂ Budget Trading Program Adjusted Budgets for 2018 through 2020. On April 15, 2014 the Department established the Massachusetts CO₂ Budget Trading Program adjusted budgets for allocation years 2018 through 2020. Those Adjusted Budgets are shown in the following table:

Massachusetts CO ₂ Budget Trading Adjusted Budgets		
2018	2019	2020
9,550,650	9,223,560	8,904,648

e. CO₂ Budget Trading Program Adjusted Budgets for 2021 through 2025. On April 15, 2021 the Department shall establish the Massachusetts CO₂ Budget Trading Program adjusted budgets for the 2021 through 2025 allocation years by the following formula:

$$AB = BB - TABA$$

Where:

AB is the Massachusetts CO₂ Budget Trading Program adjusted budget.

BB is the Massachusetts CO₂ Budget Trading Program base budget.

TABA is the third adjustment for banked allowances quantity in tons.

f. After making the determinations in 310 CMR 7.70(5)(c)2., the Department or its agent will publish on the Department’s website the CO₂ trading program adjusted base budgets for the 2021 through 2025 allocation years.

3. Cost Containment Reserve (CCR) Allocation. Starting in the calendar year 2014 and each calendar year thereafter, the Department shall allocate CO₂ CCR allowances into the Massachusetts Auction Account, separate from and additional to, the CO₂ allowances allocated under the Massachusetts CO₂ Budget Trading Program base budget set forth in 310 CMR 7.70(5)(a). The CCR allocation is for the purpose of containing the cost of CO₂ allowances. The Department shall allocate CO₂ CCR allowances into the Massachusetts Auction Account in the following manner:

a. The Department shall initially allocate 806,984 CO₂ CCR allowances for calendar year 2014.

b. On or before January 1, 2015 and of each calendar year thereafter through 2020, the Department shall allocate CO₂ CCR allowances in an amount equal to 1,613,968, minus the number of CO₂ CCR allowances that remain in the Massachusetts Auction Account at the end of the prior calendar year. CO₂ CCR allowances that remain in the Massachusetts Auction Account at the end of the calendar year will be converted into new, current vintage year CO₂ CCR allowances pursuant to 310 CMR 7.70(5)(c)3.f.

c. On or before January 1, 2021 and each year thereafter, the Department shall allocate current vintage year CO₂ CCR allowances equal to the quantity in the table below, minus the number of CO₂ CCR allowances that remain in the Massachusetts Auction Account at the end of the prior calendar year that are converted into new CO₂ CCR allowances pursuant to 310 CMR 7.70(5)(c)3.f.

7.70: continued

Table 1. Massachusetts CCR Allowances from 2021 Forward									
2021	2022	2023	2024	2025	2026	2027	2028	2029	2030 and each year thereafter
1,194,435	1,158,240	1,122,045	1,085,850	1,049,655	1,013,460	977,265	941,070	904,875	868,680

d. CO₂ CCR allowances shall be offered for sale at an auction in which total demand for allowances, above the CCR trigger price, exceeds the number of CO₂ allowances available for purchase at the auction, not including any CO₂ CCR allowances.

e. After all of the CO₂ CCR allowances in the Massachusetts Auction Account have been sold in a given calendar year, no additional CO₂ CCR allowances will be transferred into the Massachusetts Auction Account that calendar year.

f. At the end of the calendar year, the Department shall calculate the quantity of undistributed CO₂ CCR allowances remaining in the Massachusetts Auction Account. CO₂ CCR allowances equal to or less than the size of the CCR allowances limit in 310 CMR 7.70(5)(c)3.b. or c. for the following calendar year shall be converted into CO₂ CCR allowances for the following year. Any remaining CO₂ CCR allowances in the Massachusetts Auction Account not converted into CO₂ CCR allowances for the following year shall be transferred into the Cost Containment Reserve Retirement Account established pursuant to 310 CMR 7.70(5)(c)7.

4. Emissions Containment Reserve (ECR) Withholding. Starting in calendar year 2021 and each year thereafter, DOER shall withhold CO₂ allowances from sale at an auction for the purpose of additional emission reductions in the event of lower than anticipated emission reduction costs. CO₂ allowances shall be withheld in accordance with the following:

a. CO₂ allowances shall be withheld from an auction if the demand for allowances would result in an auction clearing price that is less than the ECR trigger price shown in 225 CMR 13.03: *Table 2*.

b. If the CO₂ ECR trigger price is met, then the maximum quantity of CO₂ allowances that may be withheld from that auction will be equal to the quantity shown in the following table, minus the total quantity of CO₂ allowances that have been withheld from any prior auction in that calendar year.

Table 2. Massachusetts ECR Allowances 2021 Forward									
2021	2022	2023	2024	2025	2026	2027	2028	2029	2030 and each year thereafter
1,194,436	1,158,240	1,122,045	1,085,850	1,049,655	1,013,460	977,265	941,070	904,875	868,680

c. CO₂ allowances withheld from the auction because the ECR trigger price was met shall not be resold in any future auction.

d. At the end of the calendar year, DOER shall submit to the Department a report documenting the number of CO₂ allowances withheld from the auction in the preceding year because of a trigger of the Emission Containment Reserve and the Department shall transfer any CO₂ allowances withheld from the auction in that year into the Emission Containment Reserve Retirement Account established pursuant to 310 CMR 7.70(5)(c)8.

5. Undistributed and Unsold CO₂ Allowances.

a. The Department or DOER may retire undistributed CO₂ allowances at the end of each control period.

b. The Department or DOER may retire unsold CO₂ allowances at the end of each control period.

7.70: continued

- c. The Department may create one or more retirement accounts in the CO₂ Allowance Tracking System for the purpose of retiring CO₂ allowances. CO₂ allowances transferred into retirement accounts cannot be removed, unless they are transferred in error.
6. Useful Net Thermal Energy Retirement Account.
- a. Pursuant to 310 CMR 7.70(5)(c)4.c., the Department shall create a useful net thermal energy retirement account in the RGGI CO₂ Allowance Tracking System for the purpose of retiring CO₂ allowances equal to the amount of CO₂ emissions attributable to the production of useful net thermal energy from combined heat and power CO₂ budget sources.
- b. Each year, the Department shall retire CO₂ allowances equal to the amount of CO₂ emissions attributed to the production of useful net thermal energy during the prior calendar year, as quantified and reported by the CO₂ authorized account representative pursuant to under 310 CMR 7.70(8)(i).
7. Pursuant to 310 CMR 7.70(5)(c)3.f., the Department shall create a Cost Containment Reserve Retirement Account in the RGGI CO₂ Allowance Tracking System for the purpose of retiring CO₂ CCR allowances not converted into CO₂ CCR allowances for the following year pursuant to 310 CMR 7.70(5)(c)3.f.
8. Pursuant to 310 CMR 7.70(5)(c)4.d., the Department shall create an Emission Containment Reserve Retirement Account in the RGGI CO₂ Allowance Tracking System for the purpose of retiring CO₂ allowances equal to the amount of CO₂ allowances withheld from auction pursuant to 310 CMR 7.70(5)(c)4.d.
- (6) CO₂ Allowance Tracking System.
- (a) CO₂ Allowance Tracking System Accounts.
1. Compliance Accounts. Consistent with 310 CMR 7.70(6)(b)1., the Department or its agent shall establish one compliance account for each CO₂ budget source. Deductions or transfers of CO₂ allowances pursuant to 310 CMR 7.70(4)(b), (6)(e), (6)(g), or (7) shall be recorded in the compliance accounts in accordance with 310 CMR 7.70(6).
2. General Accounts. Consistent with 310 CMR 7.70(6)(b)2., the Department or its agent shall establish, upon request, a general account for any person. Transfers of CO₂ allowances pursuant to 310 CMR 7.70(7) shall be recorded in the general account in accordance with 310 CMR 7.70(6).
- (b) Establishment of Accounts.
1. Compliance Accounts. Upon receipt of a complete account certificate of representation under 310 CMR 7.70(2)(d), the Department or its agent shall establish a compliance account for each CO₂ budget source for which the account certificate of representation was submitted.
2. General Accounts.
- a. Application for General Account. Any person may apply to open a general account for the purpose of holding and transferring CO₂ allowances. An application for a general account may designate one and only one CO₂ authorized account representative and one and only one CO₂ authorized alternate account representative who may act on behalf of the CO₂ authorized account representative. The agreement by which the CO₂ authorized alternate account representative is selected shall include a procedure for authorizing the CO₂ authorized alternate account representative to act in *lieu* of the CO₂ authorized account representative. A complete application for a general account shall be submitted to the Department or its agent and shall include the following elements in a format prescribed by the Department or its agent:
- i. Name, address, email address, telephone number, and facsimile transmission number of the CO₂ authorized account representative and any CO₂ authorized alternate account representative;
 - ii. At the option of the CO₂ authorized account representative, organization name and type of organization;
 - iii. A list of all persons subject to a binding agreement for the CO₂ authorized account representative or any CO₂ authorized alternate account representative to represent their ownership interest with respect to the CO₂ allowances held in the general account;

7.70: continued

- iv. The following certification statement by the CO₂ authorized account representative and any CO₂ authorized alternate account representative: “I certify that I was selected as the CO₂ authorized account representative or the CO₂ alternate authorized account representative, as applicable, by an agreement that is binding on all persons who have an ownership interest with respect to CO₂ allowances held in the general account. I certify that I have all the necessary authority to carry out my duties and responsibilities under the CO₂ Budget Trading Program on behalf of such persons and that each such person shall be fully bound by my representations, actions, inactions, or submissions and by any order or decision issued to me by the Department or its agent or a court regarding the general account.”;
 - v. The signature of the CO₂ authorized account representative and any CO₂ authorized alternate account representative and the dates signed; and
 - vi. Unless otherwise required by the Department or its agent, documents of agreement referred to in the application for a general account shall not be submitted to the Department or its agent. Neither the Department nor its agent shall be under any obligation to review or evaluate the sufficiency of such documents, whether or not submitted.
- b. Authorization of CO₂ Authorized Account Representative.
- i. Upon receipt by the Department or its agent of a complete application for a general account under 310 CMR 7.70(6)(b)2.a.:
 - (i) The Department or its agent shall establish a general account for the person or persons for whom the application is submitted.
 - (ii) The CO₂ authorized account representative and any CO₂ authorized alternate account representative for the general account shall represent and, by his or her representations, actions, inactions, or submissions, legally bind each person who has an ownership interest with respect to CO₂ allowances held in the general account in all matters pertaining to the CO₂ Budget Trading Program, notwithstanding any agreement between the CO₂ authorized account representative or any CO₂ authorized alternate account representative and such person. Any such person shall be bound by any order or decision issued to the CO₂ authorized account representative or any CO₂ authorized alternate account representative by the Department or its agent or a court regarding the general account.
 - (iii) Any representation, action, inaction, or submission by any CO₂ authorized alternate account representative shall be deemed to be a representation, action, inaction, or submission by the CO₂ authorized account representative.
 - ii. Each submission concerning the general account shall be submitted, signed, and certified by the CO₂ authorized account representative or any CO₂ authorized alternate account representative for the persons having an ownership interest with respect to CO₂ allowances held in the general account. Each such submission shall include the following certification statement by the CO₂ authorized account representative or any CO₂ authorized alternate account representative: “I am authorized to make this submission on behalf of the persons having an ownership interest with respect to the CO₂ allowances held in the general account. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.”
 - iii. The Department or its agent shall accept or act on a submission concerning the general account only if the submission has been made, signed, and certified in accordance with 310 CMR 7.70(6)(b)2.b.ii.

7.70: continued

c. Changing CO₂ Authorized Account Representative and CO₂ Authorized Alternate Account Representative; Changes in Persons with Ownership Interest.

i. The CO₂ authorized account representative for a general account may be changed at any time upon receipt by the Department or its agent of a superseding complete application for a general account under 310 CMR 7.70(6)(b)2.a. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous CO₂ authorized alternate account representative, or the previous CO₂ authorized alternate account representative, prior to the time and date when the Department or its agent receives the superseding application for a general account shall be binding on the new CO₂ authorized account representative and the persons with an ownership interest with respect to the CO₂ allowances in the general account.

ii. The CO₂ authorized alternate account representative for a general account may be changed at any time upon receipt by the Department or its agent of a superseding complete application for a general account under 310 CMR 7.70(6)(b)2.a. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous CO₂ authorized alternate account representative, or the previous CO₂ authorized alternate account representative, prior to the time and date when the Department or its agent receives the superseding application for a general account shall be binding on the new CO₂ authorized alternate account representative and the persons with an ownership interest with respect to the CO₂ allowances in the general account.

iii. In the event a new person having an ownership interest with respect to CO₂ allowances in the general account is not included in the list of such persons in the application for a general account, such new person shall be deemed to be subject to and bound by the application for a general account, the representations, actions, inactions, and submissions of the CO₂ authorized account representative and any CO₂ authorized alternate account representative, and the decisions, orders, actions, and inactions of the Department or its agent, as if the new person were included in such list.

iv. Within 30 days following any change in the persons having an ownership interest with respect to CO₂ allowances in the general account, including the addition or deletion of persons, the CO₂ authorized account representative or any CO₂ authorized alternate account representative shall submit a revision to the application for a general account amending the list of persons having an ownership interest with respect to the CO₂ allowances in the general account to include the change.

d. Objections Concerning CO₂ Authorized Account Representative.

i. Once a complete application for a general account has been submitted and received under 310 CMR 7.70(6)(b)2.a., the Department or its agent shall rely on the application unless and until a superseding complete application for a general account under 310 CMR 7.70(6)(b)2.a. is received by the Department or its agent.

ii. Except as provided in 310 CMR 7.70(6)(b)2.c.i. and ii., no objection or other communication submitted to the Department or its agent concerning the authorization, or any representation, action, inaction, or submission of the CO₂ authorized account representative or any CO₂ authorized alternate account representative for a general account shall affect any representation, action, inaction, or submission of the CO₂ authorized account representative or any CO₂ authorized alternate account representative or the finality of any decision or order by the Department or its agent under the CO₂ Budget Trading Program.

iii. Neither the Department nor its agent shall adjudicate any private legal dispute concerning the authorization or any representation, action, inaction, or submission of the CO₂ authorized account representative or any CO₂ authorized alternate account representative for a general account, including private legal disputes concerning the proceeds of CO₂ allowance transfers.

e. Delegation by CO₂ Authorized Account Representative and CO₂ Authorized Alternate Account Representative.

i. A CO₂ authorized account representative may delegate, to one or more natural persons, his or her authority to make an electronic submission to the Department or its agent provided for under 310 CMR 7.70(6) and (7).

7.70: continued

ii. A CO₂ authorized alternate account representative may delegate, to one or more natural persons, his or her authority to make an electronic submission to the Department or its agent provided for under 310 CMR 7.70(6) and (7).

iii. In order to delegate authority to make an electronic submission to the Department or its agent in accordance with 310 CMR 7.70(6)(b)2.e.i and ii., the CO₂ authorized account representative or CO₂ authorized alternate account representative, as appropriate, must submit to the Department or its agent a notice of delegation, in a format prescribed by the Department that includes the following elements:

(i) The name, address, e-mail address, telephone number, and facsimile transmission number of such CO₂ authorized account representative or CO₂ authorized alternate account representative;

(ii) The name, address, e-mail address, telephone number and facsimile transmission number of each such natural person, herein referred to as “electronic submission agent”;

(iii) For each such natural person, a list of the type of electronic submissions under 310 CMR 7.70(6)(b)2.e.i. or ii. for which authority is delegated to him or her; and

(iv) The following certification statements by such CO₂ authorized account representative or CO₂ authorized alternate account representative:

-1. “I agree that any electronic submission to the Department or its agent that is by a natural person identified in this notice of delegation and of a type listed for such electronic submission agent in this notice of delegation and that is made when I am a CO₂ authorized account representative or CO₂ authorized alternate account representative, as appropriate, and before this notice of delegation is superseded by another notice of delegation under 310 CMR 7.70(6)(b)2.e.iv. shall be deemed to be an electronic submission by me.”

-2. “Until this notice of delegation is superseded by another notice of delegation under 310 CMR 7.70(6)(b)2.e.iv., I agree to maintain an email account and to notify the Department or its agent immediately of any change in my email address unless all delegation authority by me under 310 CMR 7.70(6)(b)2.e. is terminated.”

iv. A notice of delegation submitted under 310 CMR 7.70(6)(b)2.e.iii. shall be effective, with regard to the CO₂ authorized account representative or CO₂ authorized alternate account representative identified in such notice, upon receipt of such notice by the Department or its agent and until receipt by the Department or its agent of a superseding notice of delegation by such CO₂ authorized account representative or CO₂ authorized alternate account representative as appropriate. The superseding notice of delegation may replace any previously identified electronic submission agent, add a new electronic submission agent, or eliminate entirely any delegation of authority.

v. Any electronic submission covered by the certification in 310 CMR 7.70(6)(b)2.e.iii.(iv)-1. and made in accordance with a notice of delegation effective under 310 CMR 7.70(6)(b)2.e.iv. shall be deemed to be an electronic submission by the CO₂ authorized account representative or CO₂ authorized alternate account representative submitting such notice of delegation.

3. Account Identification. The Department or its agent shall assign a unique identifying number to each account established under 310 CMR 7.70(6)(b)1. or 2.

(c) CO₂ Allowance Tracking System Responsibilities of CO₂ Authorized Account Representative. Following the establishment of a CO₂ Allowance Tracking System account, all submissions to the Department or its agent pertaining to the account including, but not limited to, submissions concerning the deduction or transfer of CO₂ allowances in the account, shall be made only by the CO₂ authorized account representative for the account.

(d) Recordation of CO₂ Allowance Allocations.

1. On or before January 31st of each year, the Department or its agent shall record in the Massachusetts Auction Account the CO₂ allowances for that calendar year.

7.70: continued

2. On or before January 31st of each year, the Department or its agent shall record CO₂ allowances allocated pursuant to 310 CMR 7.70(5)(c)1.a. in the Voluntary Renewable Energy (VRE) Account for the allocation year three years in the future.
 3. Serial Numbers for Allocated CO₂ Allowances. When allocating CO₂ allowances to, and recording them in, an account, the Department or its agent shall assign each CO₂ allowance a unique identification number that includes digits identifying the year for which the CO₂ allowance is allocated.
- (e) Compliance.
1. Allowances Available for Compliance Deduction. CO₂ allowances that meet the following criteria are available to be deducted in order for a CO₂ budget source to comply with the CO₂ requirements of 310 CMR 7.70(1)(e)3. for a control period or an interim control period.
 - a. The CO₂ allowances, other than CO₂ offset allowances, are of allocation years that fall within a prior control period, the same control period, or the same interim control period for which the allowances will be deducted.
 - b. The CO₂ allowances are held in the CO₂ budget source's compliance account as of the CO₂ allowance transfer deadline for that control period or interim control period are transferred into the compliance account by a CO₂ allowance transfer correctly submitted for recordation under 310 CMR 7.70(7)(a) by the CO₂ allowance transfer deadline for that control period or interim control period.
 - c. For CO₂ offset allowances, the number of CO₂ offset allowances that are available to be deducted in order for a CO₂ budget source to comply with the CO₂ requirements of 310 CMR 7.70(1)(e)3. for a control period or interim control period may not exceed 3.3% of the CO₂ budget source's CO₂ emissions for that control period, or 3.3% of 0.50 times the CO₂ budget source's emissions for an interim control period, as determined in accordance with 310 CMR 7.70(6) and (8); and
 - d. CO₂ allowances that are not necessary for deductions for excess emissions for a prior control period under 310 CMR 7.70(6)(e)4.
 2. Deductions for Compliance. Following the recordation, in accordance with 310 CMR 7.70(7)(b), CO₂ allowance transfers submitted for recordation in the CO₂ budget source's compliance account by the CO₂ allowance transfer deadline for a control period or interim control period, the Department or its agent shall deduct CO₂ allowances available under 310 CMR 7.70(6)(e)1. to cover the source's CO₂ emissions (as determined in accordance with 310 CMR 7.70(8)) for the control period or interim control period, as follows:
 - a. Until the amount of CO₂ allowances deducted equals the number of tons of total CO₂ emissions (or 0.50 times the number of tons of total CO₂ emissions for the interim control period), less any CO₂ emissions attributable to the burning of eligible biomass or the production of useful net thermal energy, determined in accordance with 310 CMR 7.70(8), from all CO₂ budget units at the CO₂ budget source for the control period or interim control period; or
 - b. If there are insufficient CO₂ allowances to complete the deductions in 310 CMR 7.70(6)(e)2.a., until no more CO₂ allowances available under 310 CMR 7.70(6)(e)1. remain in the compliance account.
 - c. After making the deductions for compliance, the Department or its agent shall notify the CO₂ authorized account representative if it believes that the CO₂ budget source exceeded its CO₂ budget emissions limitation.
 3. Identification of Available CO₂ Allowances by Serial Number; Default Compliance Deductions.
 - a. The CO₂ authorized account representative for a source's compliance account may request that specific CO₂ allowances, identified by serial number, in the compliance account be deducted for emissions or excess emissions for a control period or interim control period in accordance with 310 CMR 7.70(6)(e)2. or 4. Such identification shall be made in the compliance certification report submitted in accordance with 310 CMR 7.70(4)(a).
 - b. The Department or its agent shall deduct CO₂ allowances for a control period or interim control period from the CO₂ budget source's compliance account, in the absence of an identification or in the case of a partial identification of available CO₂ allowances by serial number under 310 CMR 7.70(6)(e)3.a., in the following descending order:

7.70: continued

- i. First, subject to the relevant compliance deduction limitations under 310 CMR 7.70(6)(e)1.c. and 4.a., CO₂ offset allowances. CO₂ offset allowances shall be deducted in chronological order (*i.e.*, CO₂ offset allowances from earlier allocation years shall be deducted before CO₂ offset allowances from later allocation years). In the event that some, but not all, CO₂ offset allowances from a particular allocation year are to be deducted, CO₂ offset allowances shall be deducted by serial number, with lower serial number allowances deducted before higher serial number allowances.
 - ii. Second, any CO₂ allowances, other than CO₂ offset allowances, that are available for deduction under 310 CMR 7.70(6)(e)1. CO₂ allowances shall be deducted in chronological order (*i.e.*, CO₂ allowances from earlier allocation years shall be deducted before CO₂ allowances from later allocation years). In the event that some, but not all, CO₂ allowances from a particular allocation year are to be deducted, CO₂ allowances shall be deducted by serial number, with lower serial number allowances deducted before higher serial number allowances.
4. Deductions for Excess Emissions.
 - a. After completing the procedures in 310 CMR 7.70(6)(e)2., the Department or its agent shall deduct from the CO₂ budget source's compliance account a number of CO₂ allowances, equal to three times the number of the source's excess emissions. In the event that a source has insufficient CO₂ allowances to cover three times the number of the source's excess emissions, the source shall be required within 14 calendar days of receipt of notice by the Department or its agent to transfer sufficient allowances into its compliance account. No CO₂ offset allowances may be deducted to account for the source's excess emissions.
 - b. Any CO₂ allowance deduction required under 310 CMR 7.70(6)(e)4.a. shall not affect the liability of the owners and operators of the CO₂ budget source or the CO₂ units at the source for any fine, penalty, or assessment, or their obligation to comply with any other remedy, for the same violation, as ordered under applicable State law. In assessing fines, penalties or other obligations, each ton of excess emissions or excess interim emissions is a separate violation.
 - c. The propriety of the Department's determination that a CO₂ budget source had excess emissions and the concomitant deduction of CO₂ allowances from that CO₂ budget source's account may be later challenged in the context of the initial administrative enforcement, or any civil or criminal judicial action, arising from or encompassing that excess emissions violation. The commencement or pendency of any administrative enforcement, or civil or criminal judicial action arising from or encompassing that excess emissions violation, shall not act to prevent the Department or its agent from initially deducting the CO₂ allowances resulting from the Department's original determination that the relevant CO₂ budget source has had excess emissions. Should the Department revise its determination of the existence or extent of the CO₂ budget source's excess emissions either by a settlement or final conclusion of any administrative or judicial action, the Department shall act as follows.
 - i. In any instance where the Department's determination of the extent of excess emissions was too low, the Department shall take further action under 310 CMR 7.70(6)(e)4.a. and b. to address the expanded violation.
 - ii. In any instance where the Department's determination of the extent of excess emissions was too high, the Department shall distribute to the relevant CO₂ budget source a number of CO₂ allowances equaling the number of CO₂ allowances deducted which are attributable to the difference between the original and final quantity of excess emissions. Should such CO₂ budget source's compliance account no longer exist, the CO₂ allowances shall be provided to a general account selected by the owner or operator of the CO₂ budget source.
5. The Department or its agent shall record in the appropriate compliance account all deductions from such an account pursuant to 310 CMR 7.70(6)(e)2. and 4.
6. Action by the Department on Submissions.
 - a. The Department may review and conduct independent audits concerning any submission under the CO₂ Budget Trading Program and make appropriate adjustments of the information in the submissions.

7.70: continued

- b. The Department may deduct CO₂ allowances from or transfer CO₂ allowances to a source's compliance account based on information in the submissions, as adjusted under 310 CMR 7.70(6)(e)6.a.
- (f) Banking. Each CO₂ allowance that is held in a compliance account or a general account shall remain in such account unless and until the CO₂ allowance is deducted or transferred under 310 CMR 7.70(4)(b), (6)(e), (6)(g), or (7).
- (g) Account Error.
1. The Department or its agent may, at its sole discretion and on its own motion, correct any error in any CO₂ Allowance Tracking System account. Within ten business days of making such correction, the Department or its agent shall notify the CO₂ authorized account representative for the account.
 2. At any time the CO₂ authorized account representative may notify the Department if it believes that a mistake has been made.
- (h) Closing of General Accounts.
1. A CO₂ authorized account representative of a general account may instruct the Department or its agent to close the account by submitting a statement requesting deletion of the account from the CO₂ Allowance Tracking System and by correctly submitting for recordation under 310 CMR 7.70(7)(a) a CO₂ allowance transfer of all CO₂ allowances in the account to one or more other CO₂ Allowance Tracking System accounts.
 2. If a general account shows no activity for a period of one year or more and does not contain any CO₂ allowances, the Department or its agent may notify the CO₂ authorized account representative for the account that the account shall be closed in the CO₂ Allowance Tracking System 30 business days after the notice is sent. The account shall be closed after the 30-day period unless before the end of the 30-day period the Department or its agent receives a correctly submitted transfer of CO₂ allowances into the account under 310 CMR 7.70(7)(a) or a statement submitted by the CO₂ authorized account representative demonstrating to the satisfaction of the Department or its agent good cause as to why the account should not be closed. The Department or its agent will have sole discretion to determine if the owner or operator of the unit demonstrated that the account should not be closed.
- (7) CO₂ Allowance Transfers.
- (a) Submission of CO₂ Allowance Transfers. The CO₂ authorized account representative who is the transferor shall submit the transfer to the Department or its agent. To be considered correctly submitted, the CO₂ allowance transfer shall include the following elements in a format specified by the Department or its agent:
1. The numbers identifying both the transferor and transferee accounts;
 2. A specification by serial number of each CO₂ allowance to be transferred;
 3. The printed name and signature of the CO₂ authorized account representative of the transferor account and the date signed;
 4. The date of the completion of the last sale or purchase transaction for the allowance, if any; and
 5. The purchase or sale price of the allowance that is the subject of a sale or purchase transaction under 310 CMR 7.70(7)(a)4.
- (b) Recordation.
1. Within five business days of receiving a CO₂ allowance transfer, except as provided in 310 CMR 7.70(7)(b)2., the Department or its agent shall record a CO₂ allowance transfer by moving each CO₂ allowance from the transferor account to the transferee account as specified by the request, provided that:
 - a. The transfer is correctly submitted under 310 CMR 7.70(7)(a); and
 - b. The transferor account includes each CO₂ allowance identified by serial number in the transfer.
 2. A CO₂ allowance transfer into or out of a compliance account that is submitted for recordation following the CO₂ allowance transfer deadline and that includes any CO₂ allowances that are of allocation years that fall within a control period prior or interim control period or the same as the control period or interim control period to which the CO₂ allowance transfer deadline applies shall not be recorded until after completion of the process pursuant to 310 CMR 7.70(6)(e)2.

7.70: continued

3. Where a CO₂ allowance transfer submitted for recordation fails to meet the requirements of 310 CMR 7.70(7)(b)1., the Department or its agent shall not record such transfer.

(c) Notification.

1. Notification of Recordation. Within five business days of recordation of a CO₂ allowance transfer under 310 CMR 7.70(7)(b), the Department or its agent shall notify each party to the transfer. Notice shall be given to the CO₂ authorized account representatives of both the transferor and transferee accounts.

2. Notification of Non-recordation. Within ten business days of receipt of a CO₂ allowance transfer that fails to meet the requirements of 310 CMR 7.70(7)(b)1., the Department or its agent shall notify the CO₂ authorized account representatives of both accounts subject to the transfer of:

- a. A decision not to record the transfer; and
- b. The reasons for such non-recordation.

3. Nothing in 310 CMR 7.70(7) shall preclude the submission of a CO₂ allowance transfer for recordation following notification of non-recordation.

(8) Monitoring and Reporting.

(a) General Requirements. The owners and operators, and to the extent applicable, the CO₂ authorized account representative of a CO₂ budget unit, shall comply with the monitoring, recordkeeping and reporting requirements as provided in 310 CMR 7.70(8) and all applicable sections of 40 CFR Part 75. Where referenced in 310 CMR 7.70(8), the monitoring requirements of 40 CFR Part 75 shall be adhered to in a manner consistent with the purpose of monitoring and reporting CO₂ mass emissions pursuant to 310 CMR 7.70. For purposes of complying with such requirements, the definitions in 310 CMR 7.70(1)(b) and in 40 CFR 72.2 shall apply, and the terms “affected unit,” “designated representative,” and “continuous emissions monitoring system” (or “CEMS”) in 40 CFR Part 75 shall be replaced by the terms “CO₂ budget unit,” “CO₂ authorized account representative,” and “continuous emissions monitoring system” (or “CEMS”), respectively, as defined in 310 CMR 7.70(1)(b). For units not subject to an acid rain emissions limitation, the term “Administrator” in 40 CFR Part 75 shall be replaced with “the Department or its agent.” Owners or operators of a CO₂ budget unit who monitor a non-CO₂ budget unit pursuant to the common, multiple, or bypass stack procedures in 40 CFR 75.72(b)(2)(ii), or 40 CFR 75.16 (b)(2)(ii)(B) as pursuant to 40 CFR 75.13, for purposes of complying with 310 CMR 7.70, shall monitor and report CO₂ mass emissions from such non-CO₂ budget units according to the procedures for CO₂ budget units established in 310 CMR 7.70(8)(a) through (g).

1. Requirements for Installation, Certification, and Data Accounting. The owner or operator of each CO₂ budget unit shall meet the following requirements:

- a. Install all monitoring systems necessary to monitor CO₂ mass emissions in accordance with 40 CFR Part 75, except for equation G-1. Equation G-1 in Appendix G shall not be used to determine CO₂ emissions under 310 CMR 7.70(8). This may require systems to monitor CO₂ concentration, stack gas flow rate, O₂ concentration, heat input, and fuel flow rate;
- b. Successfully complete all certification tests required under 310 CMR 7.70(8)(b) and meet all other requirements of 310 CMR 7.70(8) and 40 CFR Part 75 applicable to the monitoring systems under 310 CMR 7.70(8)(a)1.a.; and,
- c. Record, report and quality-assure the data from the monitoring systems under 310 CMR 7.70(8)(a)1.a.

2. Compliance Dates. The owner or operator of a CO₂ budget unit shall meet the monitoring system certification and other requirements of 310 CMR 7.70(8)(a)1.a. through 1.c. on or before the following dates. The owner or operator of a CO₂ budget unit shall record, report and quality-assure the data from the monitoring systems under 310 CMR 7.70(8)(a)1.a. on and after the following dates.

- a. The owner or operator of a CO₂ budget unit, except for a CO₂ budget unit under 310 CMR 7.70(8)(a)2.b., that commences commercial operation before July 1, 2008, must comply with the requirements of 310 CMR 7.70(8) by January 1, 2009.
- b. The owner or operator of a CO₂ budget unit that commences commercial operation on or after July 1, 2008 must comply with the requirements of 310 CMR 7.70(8) by the later of the following dates:

7.70: continued

- i. January 1, 2009; or
 - ii. 180 calendar days after the date on which the unit commences commercial operation.
- c. For the owner or operator of a CO₂ budget unit for which construction of a new stack or flue installation is completed after the applicable deadline under 310 CMR 7.70(8)(a)2.a. or 2.b. by the earlier of:
 - i. 90 unit operating days after the date on which emissions first exit to the atmosphere through the new stack or flue; or,
 - ii. 180 calendar days after the date on which emissions first exit to the atmosphere through the new stack or flue.
- 3. Reporting Data.
 - a. Except as provided in 310 CMR 7.70(8)(a)3.b., the owner or operator of a CO₂ budget unit that does not meet the applicable compliance date set forth in 310 CMR 7.70(8)(a)2.a., 2.b., and 2.c. for any monitoring system under 310 CMR 7.70(8)(a)1.a. shall, for each such monitoring system, determine, record, and report maximum potential (or as appropriate minimum potential) values for CO₂ concentration, CO₂ emissions rate, stack gas moisture content, fuel flow rate, heat input, and any other parameter required to determine CO₂ mass emissions in accordance with 40 CFR 75.31(b)(2) or (c)(3), or section 2.4 of Appendix D of 40 CFR Part 75, as applicable.
 - b. The owner or operator of a CO₂ budget unit that does not meet the applicable compliance date set forth in 310 CMR 7.70(8)(a)2.c. for any monitoring system under 310 CMR 7.70(8)(a)1.a. shall, for each such monitoring system, determine, record, and report substitute data using the applicable missing data procedures in Subpart D or Appendix D of 40 CFR Part 75, in lieu of the maximum potential (or as appropriate minimum potential) values for a parameter if the owner or operator demonstrates that there is continuity between the data streams for that parameter
 - c. Low Mass Emissions (LME) Units.
 - i. CO₂ budget units subject to an acid rain emissions limitation that qualify for the optional SO₂, NO_x, and CO₂ emissions calculations for low mass emissions (LME) units under 40 CFR 75.19 and report emissions for such programs using the calculations under 40 CFR 75.19, shall also use the CO₂ emissions calculations for LME units under 40 CFR 75.19 for purposes of compliance with 310 CMR 7.70.
 - ii. CO₂ budget units subject to an acid rain emissions limitation that do not qualify for the optional SO₂, NO_x, and CO₂ emissions calculations for LME units under 40 CFR 75.19, shall not use the CO₂ emissions calculations for LME units under 40 CFR 75.19 for purposes of compliance with 310 CMR 7.70.
 - iii. CO₂ budget units not subject to an acid rain emissions limitation shall qualify for the optional CO₂ emissions calculation for LME units under 40 CFR 75.19, provided that they emit less than 100 tons of NO_x annually and no more than 25 tons of SO₂ annually.
- 4. Prohibitions.
 - a. No owner or operator of a CO₂ budget unit shall use any alternate monitoring system, alternate reference method, or any other alternate for the required continuous emissions monitoring system without having obtained prior written approval in accordance with 310 CMR 7.70(8)(f).
 - b. No owner or operator of a CO₂ budget unit shall operate the unit so as to discharge, or allow to be discharged, CO₂ emissions to the atmosphere without accounting for all such emissions in accordance with the applicable provisions of 310 CMR 7.70(8) and 40 CFR Part 75.
 - c. No owner or operator of a CO₂ budget unit shall disrupt the continuous emissions monitoring system, any portion thereof, or any other approved emissions monitoring method, and thereby avoid monitoring and recording CO₂ mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed in accordance with the applicable provisions of 310 CMR 7.70(8) and 40 CFR Part 75.

7.70: continued

d. No owner or operator of a CO₂ budget unit shall retire or permanently discontinue use of the continuous emissions monitoring system, any component thereof, or any other approved emissions monitoring system under 310 CMR 7.70(8), except under any one of the following circumstances:

- i. The owner or operator is monitoring emissions from the unit with another certified monitoring system approved, in accordance with the applicable provisions of 310 CMR 7.70(8) and 40 CFR Part 75, by the Department for use at that unit that provides emissions data for the same pollutant or parameter as the retired or discontinued monitoring system; or,
- ii. The CO₂ authorized account representative submits notification of the date of certification testing of a replacement monitoring system in accordance with 310 CMR 7.70(8)(b)4.c.i.

(b) Initial Certification and Recertification Procedures.

1. The owner or operator of a CO₂ budget unit shall be exempt from the initial certification requirements of 310 CMR 7.70(8)(b) for a monitoring system under 310 CMR 7.70(8)(a)1.a. if the following conditions are met:

- a. The monitoring system has been previously certified in accordance with 40 CFR Part 75; and,
- b. The applicable quality assurance and quality-control requirements of 40 CFR 75.21 and Appendix B and Appendix D of 40 CFR Part 75 are fully met for the certified monitoring system described in 310 CMR 7.70(8)(b)1.a.

2. The recertification provisions of 310 CMR 7.70(8)(b) shall apply to a monitoring system under 310 CMR 7.70(8)(a)1.a. exempt from initial certification requirements under 310 CMR 7.70(8)(b)1.

3. Notwithstanding 310 CMR 7.70(8)(b)1., if the Administrator has previously approved a petition under 40 CFR 75.72(b)(2)(ii), or 40 CFR 75.16(b)(2)(ii)(B) as pursuant to 40 CFR 75.13 for apportioning the CO₂ emissions rate measured in a common stack or a petition under 40 CFR 75.66 for an alternate requirement in 40 CFR Part 75, the CO₂ authorized account representative shall submit the petition to the Department under 310 CMR 7.70(8)(f)1. to determine whether the approval applies under this program.

4. Except as provided in 310 CMR 7.70(8)(b)1., the owner or operator of a CO₂ budget unit shall comply with the following initial certification and recertification procedures for a continuous emissions monitoring system and an excepted monitoring system under Appendix D of 40 CFR Part 75 and under 310 CMR 7.70(8)(a)1.a. The owner or operator of a unit that qualifies to use the low mass emissions excepted monitoring methodology in 40 CFR 75.19 or that qualifies to use an alternate monitoring system under Subpart E of 40 CFR Part 75 shall comply with the procedures in 310 CMR 7.70(8)(b)5. or 6., respectively.

a. Requirements for Initial Certification. The owner or operator shall ensure that each continuous emissions monitoring system required under 310 CMR 7.70(8)(a)1.a. (which includes the automated data acquisition and handling system) successfully completes all of the initial certification testing required under 40 CFR 75.20 by the applicable deadlines specified in 310 CMR 7.70(8)(a)2. In addition, whenever the owner or operator installs a monitoring system in order to meet the requirements of 310 CMR 7.70(8) in a location where no such monitoring system was previously installed, initial certification in accordance with 40 CFR 75.20 is required.

b. Requirements for Recertification.

- (i) Whenever the owner or operator makes a replacement, modification, or change in a certified continuous emissions monitoring system under 310 CMR 7.70(8)(a)1.a. that the Administrator or the Department determines significantly affects the ability of the system to accurately measure or record CO₂ mass emissions or to meet the quality-assurance and quality-control requirements of 40 CFR 75.21 or Appendix B to 40 CFR Part 75, the owner or operator shall recertify the monitoring system according to 40 CFR 75.20(b).

7.70: continued

(ii) For systems using stack measurements such as stack flow, stack moisture content, or CO₂ or O₂ monitors, whenever the owner or operator makes a replacement, modification, or change to the flue gas handling system or the unit's operation that the Administrator or the Department determines to significantly change the flow or concentration profile, the owner or operator shall recertify the continuous emissions monitoring system according to 40 CFR 75.20(b). Examples of changes which require recertification include: replacement of the analyzer, change in location or orientation of the sampling probe or site, or changing of flow rate monitor polynomial coefficients.

c. Approval Process for Initial Certifications and Recertification. 310 CMR 7.70(8)(b)4.c.i through iv. apply to both initial certification and recertification of a monitoring system under 310 CMR 7.70(8)(a)1.a. For recertifications, replace the words "certification" and "initial certification" with the word "recertification," replace the word "certified" with "recertified," and proceed in the manner prescribed in 40 CFR 75.20(b)(5) and (g)(7) in lieu of 310 CMR 7.70(8)(b)4.c.v.

i. Notification of Certification. The CO₂ authorized account representative shall submit to the Department or its agent, the appropriate EPA Regional Office, and the Administrator a written notice of the dates of certification in accordance with 310 CMR 7.70(8)(d).

ii. Certification Application. The CO₂ authorized account representative shall submit to the Department or its agent a certification application for each monitoring system. A complete certification application shall include the information specified in 40 CFR 75.63.

iii. Provisional Certification Data. The provisional certification date for a monitor shall be determined in accordance with 40 CFR 75.20(a)(3). A provisionally certified monitor may be used under the CO₂ Budget Trading Program for a period not to exceed 120 days after receipt by the Department of the complete certification application for the monitoring system or component thereof under 310 CMR 7.70(8)(b)4.c.ii. Data measured and recorded by the provisionally certified monitoring system or component thereof, in accordance with the requirements of 40 CFR Part 75, shall be considered valid quality-assured data (retroactive to the date and time of provisional certification), provided that the Department does not invalidate the provisional certification by issuing a notice of disapproval within 120 days of receipt of the complete certification application by the Department.

iv. Certification Application Approval Process. The Department shall issue a written notice of approval or disapproval of the certification application to the owner or operator within 120 days of receipt of the complete certification application under 310 CMR 7.70(8)(b)4.c.ii. In the event the Department does not issue such a notice within such 120-day period, each monitoring system that meets the applicable performance requirements of 40 CFR Part 75 and is included in the certification application shall be deemed certified for use under the CO₂ Budget Trading Program.

(i) Approval Notice. If the certification application is complete and shows that each monitoring system meets the applicable performance requirements of 40 CFR Part 75, then the Department shall issue a written notice of approval of the certification application within 120 days of receipt.

(ii) Incomplete Application Notice. If the certification application is not complete, then the Department shall issue a written notice of incompleteness that sets a reasonable date by which the CO₂ authorized account representative must submit the additional information required to complete the certification application. If the CO₂ authorized account representative does not comply with the notice of incompleteness by the specified date, then the Department may issue a notice of disapproval under 310 CMR 7.70(8)(b)4.c.iv.(iii). The 120-day review period shall not begin before receipt of a complete certification application.

7.70: continued

(iii) Disapproval Notice. If the certification application shows that any monitoring system or component thereof does not meet the performance requirements of 40 CFR Part 75, or if the certification application is incomplete and the requirement for disapproval under 310 CMR 7.70(8)(b)4.c.iv.(ii) is met, then the Department shall issue a written notice of disapproval of the certification application. Upon issuance of such notice of disapproval, the provisional certification is invalidated by the Department and the data measured and recorded by each uncertified monitoring system or component thereof shall not be considered valid quality assured data beginning with the date and hour of provisional certification. The owner or operator shall follow the procedures for loss of certification in 310 CMR 7.70(8)(b)4.c.v. for each monitoring system, or component thereof, which is disapproved for initial certification.

(iv) Audit Decertification. The Department may issue a notice of disapproval of the certification status of a monitor in accordance with 310 CMR 7.70(8)(c)2.

v. Procedures for Loss of Certification. If the Department issues a notice of disapproval of a certification application under 310 CMR 7.70(8)(b)4.c.iv.(iii) or a notice of disapproval of certification status under 310 CMR 7.70(8)(b)4.c.iv.(iv), then:

(i) The owner or operator shall substitute the following values for each disapproved monitoring system, for each hour of unit operation during the period of invalid data beginning with the date and hour of provisional certification and continuing until the time, date, and hour specified under 40 CFR 75.20(a)(5)(i) or 40 CFR 75.20(g)(7):

-1. For units monitoring, or intending to monitor, for CO₂ mass emissions using heat input or for units using the low mass emissions excepted methodology under 40 CFR 75.19, the maximum potential hourly heat input of the unit; or

-2. For units monitoring, or intending to monitor, for CO₂ mass emissions using a CO₂ pollutant concentration monitor and a flow monitor, the maximum potential concentration of CO₂ and the maximum potential flow rate of the unit under section 2.1 of Appendix A of 40 CFR Part 75.

(ii) The CO₂ authorized account representative shall submit a notification of certification retest dates and a new certification application in accordance with 310 CMR 7.70(8)(b)4.c.i. and ii.; and

(iii) The owner or operator shall repeat all certification tests or other requirements that were failed by the monitoring system, as indicated in the Department's notice of disapproval, no later than 30 unit operating days after the date of issuance of the notice of disapproval.

5. Initial Certification and Recertification Procedures for Low Mass Emissions Units Using the Excepted Methodologies under 310 CMR 7.70(8)(a)3.c. The owner or operator of a unit qualified to use the low mass emissions excepted methodology under 310 CMR 7.70(8)(a)3.c. shall meet the applicable certification and recertification requirements of 40 CFR 75.19(a)(2), 40 CFR 75.20(h) and 310 CMR 7.70(8)(b). If the owner or operator of such a unit elects to certify a fuel flow meter system for heat input determinations, the owner or operator shall also meet the certification and recertification requirements in 40 CFR 75.20(g).

6. Certification/Recertification Procedures for Alternate Monitoring Systems. The CO₂ authorized account representative for each unit for which the owner or operator intends to use an alternate monitoring system approved by the Administrator and, if applicable, the Department under Subpart E of 40 CFR Part 75 shall comply with the applicable notification and application procedures of 40 CFR 75.20(f).

(c) Out-of-control Periods.

1. Whenever any monitoring system fails to meet the quality assurance and quality control requirements or data validation requirements of 40 CFR Part 75, data shall be substituted using the applicable procedures in Subpart D or Appendix D of 40 CFR Part 75.

7.70: continued

2. Audit Decertification. Whenever both an audit of a monitoring system and a review of the initial certification or recertification application reveal that any monitoring system should not have been certified or recertified because it did not meet a particular performance specification or other requirement under 310 CMR 7.70(8)(b) or the applicable provisions of 40 CFR Part 75, both at the time of the initial certification or recertification application submission and at the time of the audit, the Department or Administrator shall issue a notice of disapproval of the certification status of such monitoring system. For the purposes of this 310 CMR 7.70(8)(c)2., an audit shall be either a field audit or an audit of any information submitted to the Department or the Administrator. By issuing the notice of disapproval, the Department or Administrator revokes prospectively the certification status of the monitoring system. The data measured and recorded by the monitoring system shall not be considered valid quality assured data from the date of issuance of the notification of the revoked certification status until the date and time that the owner or operator completes subsequently approved initial certification or recertification tests for the monitoring system. The owner or operator shall follow the initial certification or recertification procedures in 310 CMR 7.70(8)(b) for each disapproved monitoring system.
- (d) Notifications. The CO₂ authorized account representative for a CO₂ budget unit shall submit written notice to the Department and the Administrator in accordance with 40 CFR 75.61.
- (e) Recordkeeping and Reporting.
1. General Provisions. The CO₂ authorized account representative shall comply with all recordkeeping and reporting requirements in 310 CMR 7.70(8)(e), the applicable record keeping and reporting requirements under 40 CFR 75.73 and with the requirements of 310 CMR 7.70(2)(a)5.
 2. Monitoring Plans. The owner or operator of a CO₂ budget unit required to submit a monitoring plan shall submit such monitoring plan in the manner prescribed in 40 CFR 75.62.
 3. Certification Applications. The CO₂ authorized account representative shall submit an application to the Department within 45 days after completing all CO₂ monitoring system initial certification or recertification tests required under 310 CMR 7.70(8)(b) including the information required under 40 CFR 75.63 and 40 CFR 75.53(e) and (f).
 4. Quarterly Reports. The CO₂ authorized account representative shall submit quarterly reports, as follows:
 - a. The CO₂ authorized account representative shall report the CO₂ mass emissions data for the CO₂ budget unit, in an electronic format prescribed by the Administrator, unless otherwise prescribed by the Department, for each calendar quarter beginning with:
 - i. For a unit that commences commercial operation before July 1, 2008, the calendar quarter covering January 1, 2009 through March 31, 2009; or
 - ii. For a unit commencing commercial operation on or after July 1, 2008, the calendar quarter corresponding to the earlier of the date of provisional certification or the applicable deadline for initial certification under 310 CMR 7.70(8)(a)2.
 - b. The CO₂ authorized account representative shall submit each quarterly report to the Department's agent within 30 days following the end of the calendar quarter covered by the report. Quarterly reports shall be submitted in the manner specified in Subpart H of 40 CFR Part 75 and 40 CFR 75.64. Quarterly reports shall be submitted for each CO₂ budget unit (or group of units using a common stack), and shall include all of the data and information required in Subpart G of 40 CFR Part 75, except for opacity, NO_x and SO₂ provisions.
 - c. Compliance Certification. The CO₂ authorized account representative shall submit to the Department or its agent a compliance certification in support of each quarterly report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The certification shall state that:

7.70: continued

- i. The monitoring data submitted were recorded in accordance with the applicable requirements of 310 CMR 7.70(8) and 40 CFR Part 75, including the quality assurance procedures and specifications;
 - ii. For a unit with add-on CO₂ emissions controls and for all hours where data are substituted in accordance with 40 CFR 75.34(a)(1), the add-on emissions controls were operating within the range of parameters listed in the quality assurance/quality control program under appendix B of 40 CFR Part 75 and the substitute values do not systematically underestimate CO₂ emissions; and
 - iii. The CO₂ concentration values substituted for missing data under Subpart D of 40 CFR Part 75 do not systematically underestimate CO₂ emissions.
- (f) Petitions.
1. Except as provided in 310 CMR 7.70(8)(f)3., the CO₂ authorized account representative of a CO₂ budget unit that is subject to an Acid Rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the Department requesting approval to apply an alternate to any requirement of 310 CMR 7.70(8). Application of an alternate to any requirement of 40 CFR Part 75 is in accordance with 310 CMR 7.70(8) only to the extent that the petition is approved in writing by the Administrator, and subsequently approved in writing by the Department.
 2. Petitions for a CO₂ budget unit that is not subject to an Acid Rain emissions limitation.
 - a. The CO₂ authorized account representative of a CO₂ budget unit that is not subject to an Acid Rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the Department requesting approval to apply an alternate to any requirement of 40 CFR Part 75. Application of an alternate to any requirement of 40 CFR Part 75 is in accordance with 310 CMR 7.70(8) only to the extent that the petition is approved in writing by the Administrator, and subsequently approved in writing by the Department.
 - b. In the event that the Administrator declines to review a petition under 310 CMR 7.70(8)(f)2.a., the CO₂ authorized account representative of a CO₂ budget unit that is not subject to an Acid Rain emissions limitation may submit a petition to the Department requesting approval to apply an alternate to any requirement of 310 CMR 7.70(8). That petition shall contain all of the relevant information specified in 40 CFR 75.66. Application of an alternate to any requirement of 310 CMR 7.70(8) is in accordance with 310 CMR 7.70(8) only to the extent that the petition is approved in writing by the Department.
 3. The CO₂ authorized account representative of a CO₂ budget unit that is subject to an Acid Rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the Department requesting approval to apply an alternate to a requirement concerning any additional CEMS required under the common stack provisions of 40 CFR 75.72 or a CO₂ concentration CEMS used under 40 CFR 75.71(a)(2). Application of an alternate to any such requirement is in accordance with 310 CMR 7.70(8) only to the extent the petition is approved in writing by the Administrator, and subsequently approved in writing by the Department.
- (g) CO₂ Budget Units That Co-fire Eligible Biomass.
1. The CO₂ authorized account representative of a CO₂ budget unit that co-fires eligible biomass as a compliance mechanism under 310 CMR 7.70 shall report the following information to the Department or its agent for each calendar quarter:
 - a. For each shipment of solid eligible biomass fuel fired at the CO₂ budget unit, the total eligible biomass fuel input, on an as-fired basis, in pounds.
 - b. For each shipment of solid eligible biomass fuel fired at the CO₂ budget unit, the moisture content, on an as-fired basis, as a fraction by weight.
 - c. For each distinct type of gaseous eligible biomass fuel fired at the CO₂ budget unit, the density of the biogas, on an as-fired basis, in pounds per standard cubic foot.
 - d. For each distinct type of gaseous eligible biomass fuel fired at the CO₂ budget unit, the moisture content of the biogas, as a fraction by total weight.
 - e. For each distinct type of gaseous eligible biomass fuel fired at the CO₂ budget unit, the total eligible biomass fuel input, in standard cubic feet.
 - f. For each distinct type of eligible biomass fuel fired at the CO₂ budget unit, the dry basis carbon content of the fuel type, as a fraction by dry weight.

7.70: continued

- g. For each distinct type of eligible biomass fuel fired at the CO₂ budget unit, the dry basis higher heating value, in MMBtu per dry pound.
 - h. For each distinct type of eligible biomass fuel fired at the CO₂ budget unit, the total dry basis eligible biomass fuel input, in pounds, calculated in accordance with 310 CMR 7.70(8)(g)2.
 - i. The total amount of CO₂ emitted from the CO₂ budget unit due to firing eligible biomass fuel, in tons, calculated in accordance with 310 CMR 7.70(8)(g)3.
 - j. For each distinct type of eligible biomass fuel fired at the CO₂ budget unit, the total eligible biomass fuel heat input, in MMBtu, calculated in accordance with 310 CMR 7.71(8)(g)4.a.
 - k. The total amount of heat input to the CO₂ budget unit due to firing eligible biomass fuel, in MMBtu, calculated in accordance with 310 CMR 7.71(8)(g)4.b.
 - l. Description and documentation of monitoring technology employed, and description and documentation of fuel sampling methodology employed, including sampling frequency; and
 - m. For each distinct type of eligible biomass fuel fired at the CO₂ budget unit, chemical analysis, including heating value and carbon content.
2. An owner or operator of a CO₂ budget unit shall calculate and submit to the Department or its agent on a quarterly basis the total dry weight for each distinct type of eligible biomass fired by the CO₂ budget unit during the reporting quarter. The total dry weight shall be determined for each fuel type as follows:

a. For Solid Fuel Types:

$$F_j = \sum_{i=1}^m (1 - M_i) \times F_i$$

where:

F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j;

F_i = Eligible biomass as-fired fuel input (lbs) for fired shipment i;

M_i = Moisture content (fraction) for fired shipment i;

I = fired fuel shipment;

j = fuel type; and

m = number of shipments.

b. For Gaseous Fuel Types:

$$F_j = D_j \times V_j \times (1 - M_j)$$

where:

F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j;

D_j = Density of biogas (lbs/scf) for fuel type j;

V_j = Total volume (scf) for fuel type j;

M_j = Moisture content (fraction) for fuel type j,

j = fuel type.

3. CO₂ emissions due to firing of eligible biomass shall be determined as follows:
- a. For any full calendar quarter during which no fuel other than eligible biomass is combusted at the CO₂ budget unit, as measured and recorded in accordance with 310 CMR 7.70(8)(a) through (f); or

7.70: continued

b. For any full calendar quarter during which fuels other than eligible biomass are combusted at the CO₂ budget unit, as determined using the following equation:

$$\text{CO}_2 \text{ tons} = \sum_{j=1}^n F_j \times C_j \times O_j \times 44/12 \times 0.0005$$

where:

- CO₂ tons = CO₂ emissions due to firing of eligible biomass for the reporting quarter;
 F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j, as calculated in 310 CMR 7.70(8)(g)2.;
 C_j = Carbon fraction (dry basis) for fuel type j;
 O_j = Oxidation factor for eligible biomass fuel type j, derived for solid fuels based on the ash content of the eligible biomass fired and the carbon content of this ash, as determined pursuant to 310 CMR 7.70(8)(g)1.i. for gaseous eligible biomass fuels, a default oxidation factor of 0.995 may be used;
 44/12 = The number of tons of carbon dioxide that are created when one ton of carbon is combusted (44/12);
 0.0005 = The number of short tons which is equal to one pound;
 j = fuel type; and
 n = number of distinct fuel types.

4. Heat input due to firing of eligible biomass for each quarter shall be determined as follows:

a. For Each Distinct Fuel Type:

- H_j = F_j x HHV_j
 where:
 H_j = Heat input (MMBtu) for fuel type j;
 F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j, as calculated in 310 CMR 7.71(8)(g)2.;
 HHV_j = Higher heating value (MMBtu/lb), dry basis, for fuel type j, as determined through chemical analysis;
 j = fuel type.

b. For All Fuel Types:

$$\text{Heat Input MMBtu} = \sum_{j=1}^n H_j$$

where:

- H_j = Heat input (MMBtu) for fuel type j;
 j = fuel type; and,
 n = number of distinct fuel types.

5. Fuel sampling methods and fuel sampling technology shall be consistent with the *New York State Renewable Portfolio Standard Biomass Guidebook*, May 2006.

(h) Additional Requirements to Provide Output Data.

1. CO₂ budget source shall submit to the Department or its agent net electrical output.
2. CO₂ budget sources selling steam should use billing meters to determine net steam output. A CO₂ budget source whose steam output is not measured by billing meters or whose steam output is combined with output from a non-CO₂ budget unit prior to measurement by the billing meter shall propose to the Department an alternate method for quantification of net steam output. If data for steam output is not available, the CO₂ budget source may report heat input providing useful steam output as a surrogate for steam output.
3. Monitoring. The owner or operator of each CO₂ budget unit required to submit an output monitoring plan pursuant to 310 CMR 7.70(3)(c) shall propose a method for quantification of net energy output in such output monitoring plan, including:

7.70: continued

- a. A diagram that includes the following features where applicable:
 - i. All CO₂ budget units and all generators served by each CO₂ budget unit and the relationship between CO₂ budget units and generators. If a generator served by a CO₂ budget unit is also served by a non-CO₂ budget unit, the non-CO₂ budget unit and its relationship to each generator should be indicated on the diagram as well. The diagram should indicate where the net electric output is measured and should include all electrical inputs and outputs to and from the CO₂ budget source. If net electric output is determined using a billing meter, the diagram should show each billing meter used to determine net sales of electricity and should show that all electricity measured at the point of sale is generated by the CO₂ budget units.
 - ii. If the CO₂ budget unit monitors net thermal output, the diagram should include all steam or hot water coming into the net steam system, including steam from CO₂ budget units and non-CO₂ budget units, and all exit points of steam or hot water from the net steam system. In addition, each input and output stream shall have an estimated temperature, pressure and phase indicator, and an enthalpy in Btu/lb. The diagram of the net steam system should identify all useful loads, house loads, parasitic loads, any other steam loads and all boiler feedwater returns. The diagram shall represent all energy losses in the system as either usable or unusable losses. The diagram shall also indicate all flow meters, temperature or pressure sensors or other equipment used to calculate gross thermal output. If a sales agreement is used to determine net thermal output, the diagram should show the monitoring equipment used to determine the sales of steam.
 - b. A description of each output monitoring system. The description of the output monitoring system shall include a written description of the output system and the equations used to calculate output. For net thermal output systems, descriptions and justifications of each useful load shall be included.
 - c. A detailed description of all quality assurance/quality control activities that will be performed to maintain the output system in accordance with 310 CMR 7.70(8)(h)5.
 - d. Documentation supporting any output value(s) to be used as a missing data value should there be periods of invalid output data. The missing data output value shall be either zero or an output value that is likely to be lower than a measured value and that is approved as part of the monitoring plan required under 310 CMR 7.70(8)(h)3.
4. Initial Certification. A certification statement shall be submitted by the CO₂ authorized account representative stating that either the output monitoring system consists entirely of billing meters or that the output monitoring system meets one of the accuracy requirements for non-billing meters at 310 CMR 7.70(8)(h)4.b. The certification shall be submitted in accordance with the compliance deadlines established in 310 CMR 7.70(3)(b).
- a. Billing Meters. The billing meter shall record the electric or thermal output. Any electric or thermal output values that the facility reports shall be the same as the values used in billing for the output. Any output measurement equipment used as a billing meter in commercial transactions requires no additional certification or testing.
 - b. Non-billing Meters. For non-billing meters and systems that include a mixture of billing meters and non-billing meters, the output monitoring system shall meet either of the accuracy criteria in 310 CMR 7.70(8)(h)4i. and ii.
 - i. System Approach to Accuracy. The system approach to accuracy shall include a determination of how the system accuracy of within less than or equal to 10% of the reference value is achieved using the individual components in the system and should include data loggers and any wattmeters used to calculate the final net electric output data and/or any flowmeters for steam or condensate, temperature measurement devices, absolute pressure measurement devices, and differential pressure devices used for measuring thermal energy.

7.70: continued

- ii. Component Approach to Accuracy. If testing a piece of output measurement equipment shows that the output readings are not accurate to within less than or equal to 3.0% of the full scale value, then the equipment shall be repaired or replaced to meet that requirement. Data shall remain invalid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes the accuracy test.
- 5. Ongoing QA/QC. The following ongoing quality assurance/quality control activities must be performed in order to maintain the output system:
 - a. Billing Meters. In the case where billing meters are used to determine output, no QA/QC activities beyond what are already performed are required.
 - b. Non-billing Meters. Certain types of equipment such as potential transformers, current transformers, nozzle and venturi type meters, and the primary element of an orifice plate only require an initial certification of calibration and do not require periodic recalibration unless the equipment is physically changed. However, the pressure and temperature transmitters accompanying an orifice plate shall require periodic retesting. For such pressure and temperature transmitters, and other types of equipment, either recalibrate or reverify the meter accuracy at least once every two years (*i.e.*, every eight calendar quarters), unless a consensus standard allows for less frequent calibrations or accuracy tests. The output monitoring system shall either meet an accuracy of within 10% of the reference value, or each component monitor for the output system shall meet an accuracy of within 3.0% of the full scale value, whichever is less stringent. If testing a piece of output measurement equipment shows that the output readings are not accurate to within 3.0% of the full scale value, then the equipment should be repaired or replaced to meet that requirement.
 - c. Out-of-control Periods. If testing a piece of output measurement equipment shows that the output readings are not accurate to the certification value, data remain invalid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes the accuracy test. All invalid data shall be replaced by either zero or an output value that is likely to be lower than a measured value and that is approved as part of the monitoring plan required under 310 CMR 7.70(8)(h)3.
- 6. Recordkeeping and Reporting.
 - a. General Provisions. The CO₂ authorized account representative shall comply with all recordkeeping and reporting requirements in 310 CMR 7.70(8)(h) and with the requirements of 310 CMR 7.70(1)(e)5. and (2)(a)5.
 - b. Recordkeeping. Facilities shall retain data used to monitor, determine, or calculate net generation for ten years from the date reported.
 - c. Annual Reports. The CO₂ authorized account representative shall submit annual output reports in a spreadsheet, as follows. The data shall be sent both electronically and in hardcopy by March 1st for the immediately preceding calendar year to the Department or its agent. The annual report shall include the annual total unit level MWh, the annual total useful steam output and a certification statement from the CO₂ authorized account representative stating the following, "I am authorized to make this submission on behalf of the owners and operators of the CO₂ budget sources or CO₂ budget units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."
- (i) CO₂ Budget Units That Generate Useful Net Thermal Energy.
 - 1. The CO₂ authorized account representative of a combined heat and power CO₂ budget source that generates useful net thermal energy shall report the following information for the combined heat and power CO₂ budget source to the Department or its agent for each calendar quarter:

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

(PAGES 250.102.53 THROUGH 250.102.74 ARE RESERVED FOR FUTURE USE.)

7.70: continued

- a. The total amount of useful net thermal energy output produced by CO₂ budget units expressed in MMBtu, the total volume of steam output produced by CO₂ budget units expressed in cubic feet, the average pressure of the steam output produced by CO₂ budget units expressed in pounds per square inch, and the average temperature of the steam expressed in degrees Fahrenheit. The amount of useful net thermal energy output shall be determined in a manner as approved by the Department in the CO₂ Budget Emission Control Plan consistent with the requirements of 310 CMR 7.70(3) and (8)(h).
 - b. The total amount of CO₂ emissions from CO₂ budget units attributable to the production of useful net thermal energy, in tons, calculated in accordance with 310 CMR 7.70(8)(i)2.
2. The quantity of CO₂ emissions attributable to the production of useful net thermal energy shall be determined by the following equation (rounded to the nearest whole ton):

$$\text{UNTE}/.80 \times 122 \text{ lb/MMBtu}$$

$$2000 \text{ lb/ton}$$

Where:

UNTE = useful net thermal energy (in MMBtu output) generated by CO₂ budget units at the combined heat and power CO₂ budget source during each calendar quarter.

7.71: Reporting of Greenhouse Gas Emissions

(1) Purpose. The purpose of 310 CMR 7.71 is to implement the reporting and verification requirement for statewide greenhouse gas emissions and to monitor and ensure compliance with the reporting provisions of M.G.L. c. 21N, the Climate Protection and Green Economy Act, St. 2008, c. 298, § 6.

(2) Definitions. The definitions in 310 CMR 7.00: *Definitions* apply to 310 CMR 7.71. The following additional terms have the following meanings when they appear in 310 CMR 7.71. Where a term defined in 310 CMR 7.00: *Definitions* also appears in 310 CMR 7.71, the definition in 310 CMR 7.71 is applicable for the purpose of 310 CMR 7.71.

Carbon Dioxide Equivalent. The amount of carbon dioxide by weight that would produce the same amount of global warming impact as a given weight of another greenhouse gas, based on the best available science, including information from the Intergovernmental Panel on Climate Change. The global warming potentials included in 40 CFR Part 98 shall be used to quantify and report greenhouse gas emissions in carbon dioxide equivalents pursuant to 310 CMR 7.71.

Entity. A person that owns or operates, in whole or in part, a source of greenhouse gas emissions from a generator of electricity or a commercial or industrial site including, but not limited to, a transportation fleet.

Facility. A building, structure or installation located on contiguous or adjacent properties of an entity, or a natural gas facility.

Greenhouse Gas. Any chemical or physical substance that is emitted into the air and that the Department may reasonably anticipate will cause or contribute to climate change including, but not limited to, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and any other gas for which 40 CFR Part 98 includes a method for calculating greenhouse gas emissions from any stationary emissions source.

Method. A way of calculating greenhouse gas emissions provided in 40 CFR Part 98 and any related monitoring, reporting, and recordkeeping requirements included in 40 CFR Part 98, but does not mean a reporting threshold, specific source category exemption, or any other type of requirement.

7.71: continued

Natural Gas Facility. A collection of interconnected natural gas containing equipment (e.g., transmission and distribution pipelines, service lines, customer meters, compressors, tanks, metering stations, regulating stations, and any other interconnected equipment that contains natural gas) that is owned or operated by an entity.

Short Ton. 2000 pounds or 0.9072 metric tons.

Stationary Emission Source. Any individual stationary piece of equipment or other stationary point from which any greenhouse gas is emitted to the ambient air. For the purpose of reporting greenhouse gas emissions pursuant to 310 CMR 7.71, a source of greenhouse gas emissions located within the facility is a stationary emission source if 40 CFR Part 98 includes a method for calculating greenhouse gas emissions that can be used to quantify emissions from the source.

(3) Applicability.

(a) Any entity owning, operating, or controlling a facility is subject to the requirements of 310 CMR 7.71(4) and (5) if:

1. said facility is required to report air emissions data to the Department pursuant to 310 CMR 7.00: *Appendix C* (The Air Operating Permit Program) and had stationary emission sources that emitted greenhouse gases during the previous calendar year;
2. said facility has one or more stationary emission sources that collectively emitted greenhouse gases in excess of 5,000 short tons of greenhouse gases in carbon dioxide equivalents during the previous calendar year. In determining whether a facility has one or more stationary emission sources that collectively emit greenhouse gases in excess of 5,000 short tons, all greenhouse gas emissions from all stationary emission sources at the facility shall be included; or
3. said facility was subject to the requirements of 310 CMR 7.71 (3)(a)1. or 2. in any past year.

(b) Exemption for Facilities with Low or Reduced Emissions.

1. Notwithstanding 310 CMR 7.71(3)(a)3., any entity may petition the Department to be exempted from the requirement to report greenhouse gas emissions from a facility provided the following requirements are met. Said petition shall be submitted using a form provided by the Department.
 - a. The entity is not required to report greenhouse gas emissions from the facility pursuant to 310 CMR 7.71(3)(a)1. or 2.;
 - b. The entity is unlikely to be required to report greenhouse gas emissions from the facility pursuant to 310 CMR 7.71(3)(a)1. or 2. for any future year; and,
 - c. At least one greenhouse gas emission report documenting greenhouse gas emissions from said facility of less than or equal to 5,000 short tons of greenhouse gases in carbon dioxide equivalents has been submitted pursuant to 310 CMR 7.71(4) and (5).
2. The Department may approve a petition submitted pursuant to 310 CMR 7.71 (3)(b) only if the Department determines that all of the requirements set forth in 310 CMR 7.71(3)(b)1. have been met. In determining whether to approve or deny a petition pursuant to 310 CMR 7.71(3)(b), the Department may consider any information contained in said petition, and any other relevant information.
3. If the Department has approved a petition in accordance with 310 CMR 7.71(3)(b)2., the annual reporting requirement in 310 CMR 7.71(3)(a)3. shall not apply to said facility until such time as the reporting of greenhouse gas emissions from said facility is again required pursuant to 310 CMR 7.71(3)(a)1. or 2.

(4) Annual Reporting by Facilities that Emit Greenhouse Gases.

(a) Any entity owning, operating or controlling a facility that is required to report greenhouse gas emissions to the Department pursuant to 310 CMR 7.71, and is not subject to Source Registration at 310 CMR 7.12, shall annually report, certify, and verify greenhouse gas emissions from stationary emission sources for the previous calendar year in accordance with 310 CMR 7.71(4) and (5) by April 15, 2010, and April 15th of each year thereafter.

7.71: continued

(b) Any entity owning, operating or controlling a facility that is required to report greenhouse gas emissions to the Department pursuant to 310 CMR 7.71 and is subject to Source Registration at 310 CMR 7.12 shall annually report, certify and verify greenhouse gas emissions from stationary emission sources for the previous calendar year in accordance with 310 CMR 7.71(4) and (5) and the following schedule:

1. By April 1st, if the facility is required to submit Source Registration every three years in accordance with 310 CMR 7.12(2)(b).
2. By May 1st for a facility subject to 310 CMR 7.00: Appendix C.
3. By June 1st for a facility that:
 - a. Has an RES permit issued by the Department pursuant to 310 CMR 7.02(9);
 - b. Had actual emissions of lead equal to or greater than 0.5 tons in the previous calendar year, or actual emissions of NOx or VOC equal to or greater than 25 tons per year in the previous calendar year;
 - c. Emits an air contaminant subject to a NESHAP or is subject to a MACT standard defined at 40 CFR Part 61 and Part 63, for which the Department has received delegation from EPA; and/or
 - d. Is required, as a condition of a plan approval issued by the Department since January 1, 1990 to submit a Source Registration annually in accordance with 310 CMR 7.12.

(c) Greenhouse gas emissions from stationary emission sources shall be reported in accordance with methods specified in 40 CFR Part 98.

(d) Greenhouse gas emissions shall be reported electronically to the Department in a format specified by the Department.

(e) If required by the Department, the reporting entity shall report emissions in metric tons. One metric ton equals 1.102 short tons.

(f) Once a facility files a report pursuant to 310 CMR 7.71(4) on or after January 1, 2011, it is considered to be a registered reporter unless the Department approves a petition pursuant to 310 CMR 7.71(3)(b)2.

(5) Requirements for Certification and Recordkeeping.

(a) Entities subject to the requirement to report greenhouse gas emissions in accordance with 310 CMR 7.71(4) shall certify and verify the truth, accuracy, and completeness of their greenhouse gas emissions reports using a format specified by the Department. The information shall include, but not be limited to, the following:

1. Any information deemed necessary by the Department to identify the reporting facility.
2. The following certification statement: "I certify that I have personally examined the greenhouse gas emissions report for this facility and am familiar with the information contained in that report and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."
3. The authorized signature and contact information of a responsible official of the entity subject to the requirement to report greenhouse gas emissions in accordance with 310 CMR 7.71(4).

(b) Copies of documents and other information supplied to the Department to comply with 310 CMR 7.71(4) shall be retained at the facility for five years from the date of submittal.

(c) All supporting documentation and calculations related to quantifying and reporting greenhouse gas emissions from the facility shall be retained at the facility for five years from the date of submittal and made available to the Department upon request.

(6) Voluntary Reporting by Facilities. Any entity owning, controlling or operating a facility that is not subject to 310 CMR 7.71(4)(a) may voluntarily report greenhouse gas emissions from that facility in accordance with 310 CMR 7.71(4), provided that the facility is located in Massachusetts and that the entity complies with all requirements of 310 CMR 7.71(4) through (6).

7.72: Reducing Sulfur Hexafluoride Emissions from Gas-insulated Switchgear

(1) Purpose, Scope and Authority. The purpose of 310 CMR 7.72 is to assist the Commonwealth in achieving the greenhouse gas emissions reduction goals adopted pursuant to M.G.L. c. 21N, § (3)(b) by reducing sulfur hexafluoride (SF₆) emissions from gas-insulated switchgear through the imposition of declining annual aggregate emission limits and other measures on gas-insulated switchgear. 310 CMR 7.72 is promulgated pursuant to M.G.L. c. 21N, § 3(d) and is also promulgated pursuant to M.G.L. c. 21A, §§ 2, 8 and 16, and M.G.L. c. 111, §§ 2C and 142A through 142E, to prevent and abate conditions of air pollution from greenhouse gas emissions.

(2) Definitions. The terms used in 310 CMR 7.72 are defined in 310 CMR 7.72(2) and 7.00: *Definitions*. Where a term is defined in 310 CMR 7.00: *Definitions* and 7.72, the definition in 310 CMR 7.72 shall apply.

Active GIS Equipment means non-hermetically sealed SF₆ gas-insulated switchgear that is:

- (a) Connected through busbars or cables to the GIS owner's electrical power system; or

7.72: continued

(b) Fully-charged, ready for service, located at the site in which it will be activated, and employs a mechanism to monitor SF₆ emissions.

Active GIS Equipment does not include equipment in storage.

Electrical Power System means the combination of electrical generators (*e.g.*, power plants), transmission and distribution lines, equipment, circuits, and transformers used to generate and transport electricity from the generators to consumption areas or to adjacent electrical power systems.

Federal Reporting GIS Owner means a GIS Owner who has ever been required or who is currently required to report SF₆ emissions to US EPA pursuant to 40 CFR Part 98, Subpart DD (§ 98.300 through 308).

Gas-insulated Switchgear or GIS means all electrical power system equipment insulated with SF₆ gas. Gas-insulated switchgear or GIS includes switches, stand-alone gas-insulated equipment, and any combination of electrical disconnects, fuses, electrical transmission lines, transformers and/or circuit breakers used to isolate gas-insulated electrical power system equipment.

GIS Owner means the person who owns, leases, operates, or controls gas-insulated switchgear used in Massachusetts. GIS owner excludes temporary possession by the following persons:

- (a) the original equipment manufacturer during GIS equipment transport and installation at a customer's site; and
- (b) a qualified person who hauls the GIS for reuse, recycle or destruction.

Hermetically Sealed Gas-insulated Switchgear means switchgear that is designed to be gas-tight and sealed for life. This type of switchgear is pre-charged with SF₆, sealed at the factory, and cannot be refilled by its user.

(3) Applicability.

- (a) Any federal reporting GIS owner is subject to 310 CMR 7.72(1) through (9).
- (b) Any GIS owner that is not a federal reporting GIS owner is subject to 310 CMR 7.72(1) through (4), (8), and (9), and not subject to 310 CMR 7.72(5) through (7).

(4) General Requirements for All GIS Owners.

- (a) Any newly manufactured GIS that is placed under the ownership, lease, operation, or control of any GIS owner on or after January 1, 2015 must be represented by the manufacturer to have a 1.0% maximum annual leak rate.
- (b) Any GIS owner that places GIS under ownership, lease, operation, or control on or after January 1, 2015 shall comply with any manufacturer-recommended maintenance procedures or industry best practices that have the effect of reducing leakage of SF₆.
- (c) If any particular piece of active GIS equipment placed under the ownership, lease, operation, or control of any GIS owner on or after January 1, 2015 does not meet the 1.0% maximum annual leak rate, the GIS owner shall, by April 15th of the year following the calendar year during which the SF₆ was added, provide documentation to the Department demonstrating compliance with 310 CMR 7.72(4)(a) and (b) and describing any additional actions taken or anticipated actions that are expected to reduce the emission rate in the future.
 - 1. GIS owners shall use data recorded pursuant to 310 CMR 7.72(8)(b) to determine whether the 1.0% maximum annual leak rate is met.
 - 2. For the purpose of determining whether GIS meets the 1.0% maximum annual leak rate, GIS owners shall determine an annual average by dividing the amount of SF₆ added to a piece of active GIS equipment by the number of years since the previous addition of SF₆.
 - 3. For the purpose of determining whether GIS meets the 1.0% maximum annual leak rate, GIS owners may disregard the first time SF₆ is added after the GIS becomes active GIS equipment.
 - 4. GIS owners may apply the requirements of 310 CMR 7.72(4)(c) to any group of commonly owned, leased, operated, or controlled pieces of active GIS equipment located in Massachusetts, instead of a single piece of active GIS equipment.
- (d) Upon removal of any GIS containing SF₆ from the ownership, lease, operation, or control of a GIS owner, the GIS owner shall provide for the secure storage, re-use, recycling, or destruction of the SF₆.

7.72: continued

(e) GIS owners are responsible for compliance with 310 CMR 7.72(4) with respect to any GIS that is under their ownership, lease, operation, or control in Massachusetts. Documentation provided to GIS owners by qualified persons, such as manufacturers, suppliers, and maintenance contractors, is sufficient to demonstrate compliance with all provisions of 310 CMR 7.72(4).

(5) Limits to Annual SF₆ Emissions.

(a) Rate Limit. For each calendar year specified below, each federal reporting GIS owner shall ensure that the annual SF₆ emission rate for all of its active GIS equipment, as calculated pursuant to 310 CMR 7.72(6)(b)8., shall not exceed the following:

Maximum Annual SF ₆ Emission Rate	
Calendar Year	Maximum Allowable SF ₆ Emission Rate
2015	3.5%
2016	3.0%
2017	2.5%
2018	2.0%
2019	1.5%
2020, and each calendar year thereafter	1.0%

(b) Mass Limit.

1. For each calendar year specified below, each federal reporting GIS owner shall ensure that the annual SF₆ emissions from all of its active GIS equipment, as calculated pursuant to 310 CMR 7.72(6)(b)6., shall not exceed the following:

Maximum Annual SF ₆ Emissions - National Grid	
Calendar Year	Maximum Allowable SF ₆ Emissions (lbs.)
2018	2,644
2019	2,082
2020	1,457

Maximum Annual SF ₆ Emissions - Eversource	
Calendar Year	Maximum Allowable SF ₆ Emissions (lbs.)
2018	3,115
2019	2,800
2020	2,460

2. The mass emissions limits listed in 310 CMR 7.72(5)(b) are designed such that aggregate annual SF₆ emissions from all active GIS equipment owned or operated by all federal reporting GIS owners subject to 310 CMR 7.72(5), as calculated pursuant to 310 CMR 7.72(6)(b)6., shall not exceed the following:

Maximum Annual SF ₆ Emissions - Aggregate	
Calendar Year	Maximum Allowable SF ₆ Emissions (lbs.)
2018	5,759
2019	4,882
2020	3,917

7.72: continued

(6) Annual Reporting Requirements.

(a) By April 15, 2016 and each year thereafter, each federal reporting GIS owner must submit an annual report to the Department for emissions that occurred during the previous calendar year.

(b) The annual report shall be submitted electronically in a format specified by the Department, and must contain all of the following information:

1. The federal reporting GIS owner's name, physical address, and mailing address;
2. The location of records and documents;
3. The name and contact information including e-mail address and telephone number of the responsible official submitting the report, and the person primarily responsible for preparing the report;
4. The year for which the information is submitted;
5. The authorized signature of a responsible official of the federal reporting GIS owner, and the following certification statement: "I certify that I have personally examined the report for this facility and am familiar with the information contained in that report and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."
6. The number of pounds of SF₆ emitted from GIS equipment owned, leased, operated, or controlled by the federal reporting GIS owner and located in Massachusetts during the year, as calculated using the equation specified in 40 CFR § 98.303 and procedures for estimating missing data specified in 40 CFR § 98.305, adjusted to account for any emergency events reported pursuant to 310 CMR 7.72(7);
7. The total nameplate capacity of SF₆-containing active GIS equipment owned, leased, operated, or controlled by the federal reporting GIS owner and located in Massachusetts at the end of the year, as calculated in a manner consistent with the data reporting requirement specified in 40 CFR § 98.306(a)(1);
8. The annual SF₆ emission rate for active GIS equipment owned, leased, operated, or controlled by the federal reporting GIS owner and located in Massachusetts, as calculated by dividing the number of pounds of SF₆ emitted during the year by the nameplate capacity of SF₆-containing active GIS equipment at the end of the year, as calculated pursuant to 310 CMR 7.72(6)(b)6. and 7.;
9. All other related information submitted to US EPA in accordance with 40 CFR § 98.306, except for any information that the Department obtains directly from US EPA; and
10. Any information required to comply with 310 CMR 7.72(7)(b).

(7) Emergency Event Exemption.

(a) If a federal reporting GIS owner wishes to exempt a particular release of SF₆ emissions from its annual calculation of the emissions limit (rate or mass), the federal reporting GIS owner must meet its burden of proof to demonstrate, and the Department must determine, that such release of SF₆ was:

1. Caused by a sudden, unforeseeable emergency event, including, but not limited to: fire, flood, earthquake, or act of vandalism; and could not have been prevented by the exercise of prudence, diligence, and care; and was beyond the control of the federal reporting GIS owner; or
2. Necessary to avoid an immediate electrical system outage.

(b) In order for the Department to determine that an emergency event exemption is warranted, a federal reporting GIS owner must submit the following information in its annual report:

1. A detailed, chronological, narrative description of the sudden, unforeseeable, emergency event or of the specific circumstances necessitating a release of SF₆ in order to avoid an electrical system outage. Such description shall include, but is not limited to, the following:
 - a. The nature of the event (*e.g.*, fire, flood, earthquake);
 - b. The date and time the event occurred;
 - c. The location of the event;
 - d. The equipment that was affected by the event;
 - e. The function of the affected equipment within the facility's system;
 - f. The amount of SF₆ released (in pounds);

7.72: continued

- g. The specific event which resulted in the release of SF₆; and
 - h. The precautions taken to prevent the reported release of SF₆.
2. Information and documentation (including, but not limited to, witness statements, photographs, analysis of damaged equipment, accident reconstruction, or other evidence) that can demonstrate by a preponderance of evidence the requirements for exemption set forth in 310 CMR 7.72(7)(a); and
 3. Any other information specified in the Department's annual reporting form.
- (c) If the Department determines that the federal reporting GIS owner has failed to demonstrate that the event meets the criteria provided at 310 CMR 7.72(7)(a), the Department will notify the federal reporting GIS owner, and the federal reporting GIS owner shall amend the relevant annual emission report to include SF₆ emissions resulting from the event.
- (8) Monitoring, Q/A, and Recordkeeping Requirements.
- (a) All federal reporting GIS owners shall comply with all requirements of 40 CFR § 98.304 and 307 with respect to equipment and containers used in Massachusetts.
 - (b) All GIS owners shall record, no less than annually, the amount of SF₆ added, if any, to each piece of active GIS equipment that was placed under their ownership, lease, operation, or control on or after January 1, 2015.
 - (c) All GIS owners shall retain for five years documentation sufficient to demonstrate compliance with 310 CMR 7.72 and shall provide such documentation to the Department on request. The documentation shall be submitted in a format and within the time limit requested by the Department.
- (9) Compliance Verification and Enforcement.
- (a) If a federal reporting GIS owner exceeds the applicable Maximum Annual SF₆ Emissions limits set forth in 310 CMR 7.72(5)(b)1.: *Table*, any such excess emissions shall be deemed a release into the environment without the authorization or approval of the Department and shall be presumed to constitute a significant impact to public health, welfare, safety, and the environment. A federal reporting GIS owner shall be deemed to be in non-compliance only if such owner exceeds the applicable individual limit provided in 310 CMR 7.72(5)(b)1.
 - (b) The Department shall enforce the requirements of 310 CMR 7.72 in accordance with applicable federal and Massachusetts law, including but not limited to M.G.L. c. 21A, § 16, and 310 CMR 5.00: *Administrative Penalty*; M.G.L. c. 111, § 2C; M.G.L. c. 111, §§ 142A through 142M; and M.G.L. c. 21N, § 7(d).
 - (c) Compliance Verification. The Department may verify compliance with 310 CMR 7.72 by conducting inspections, requesting information and records and requiring the collection of information not previously required; provided that this section does not limit the authority of the Department as otherwise provided by law or in an authorization, determination, modification, permit, or other approval, or by the terms of any order or other enforcement document.
 1. Access to Information. Where necessary to ascertain compliance with 310 CMR 7.72, including actual or potential SF₆ emissions, the Department may request of a GIS Owner information or records. The GIS Owner shall, within ten business days of the request, furnish the requested information or records and shall permit Department personnel or authorized representatives to have access to and to take images of such records.
 2. Requirement to Collect Information. When the Department has reason to believe that a GIS Owner has exceeded its SF₆ emissions limit or violated any other condition in 310 CMR 7.72, the Department may require a GIS Owner to submit the necessary information or records to determine compliance. In doing so, the Department may require a GIS Owner to:
 - a. Perform audits on SF₆ emissions records using standard procedures and methods;
 - b. Quantify SF₆ emissions in accordance with the procedures, and methods as the Department may prescribe;
 - c. Make periodic reports to the Department, as necessary, to assure continuous compliance with 310 CMR 7.72; and
 - d. Maintain other records and provide any other information as the Department might reasonably require.

7.73: Reducing Methane Emissions from Natural Gas Distribution Mains and Services

(1) Purpose, Scope and Authority. The purpose of 310 CMR 7.73 is to assist the Commonwealth in achieving the greenhouse gas emissions reduction goals adopted pursuant to M.G.L. c. 21N, § (3)(b) by reducing methane (CH₄) emissions from natural gas distribution mains and services through the imposition of declining annual aggregate emission limits on certain sources of greenhouse gas emissions in the natural gas distribution pipeline sector in the Commonwealth. 310 CMR 7.73 is promulgated pursuant to M.G.L. c. 21N, § 3(d) and is also promulgated pursuant to M.G.L. c. 21A, §§ 2, 8 and 16, and M.G.L. c. 111, §§ 2C and 142A through 142E, to prevent and abate conditions of air pollution from the greenhouse gas emissions from the area sources specified in 310 CMR 7.73.

(2) Definitions. The terms used in 310 CMR 7.73 are defined in 310 CMR 7.73(2) and in 310 CMR 7.00: *Definitions*. Where a term is defined in 310 CMR 7.00: *Definitions* and 310 CMR 7.73 the definition in 310 CMR 7.73 shall apply.

Calendar Year means January 1st through December 31st.

Designated Representative means the person who has been authorized by the gas operator to represent and legally bind the owner or operator in matters pertaining to the 310 CMR 7.73.

Distribution Line means a pipeline other than a gathering or transmission line.

Gas Operator means every Massachusetts gas operator with a Gas System Enhancement Plan applicable to its mains and services approved by the Massachusetts Department of Public Utilities (DPU) pursuant to M.G.L. c. 164, § 145 as of August 11, 2017, the corporate successor of such gas operator and/or the purchaser of the mains and services that are subject to a DPU-approved Gas System Enhancement Plan.

Main means a distribution line that serves as a common source of supply for more than one service.

Service means a distribution line that transports gas from a common source of supply to an individual customer, to two adjacent or adjoining residential or small commercial customers, or to multiple residential or small commercial customers served through a meter header or manifold. A service ends at the inlet of the customer meter or at the connection to a customer's piping, whichever is further upstream, or at the connection to customer piping if there is no meter.

(3) Applicability. Every Massachusetts gas operator.

(4) Annual CH₄ Emission Limits.

(a) Individual Operator Limits. For each calendar year specified in 310 CMR 7.73(4)(a): *Tables 1 through 6*, each named gas operator shall ensure that the annual CH₄ emissions from all of its active mains and services, as calculated pursuant to 310 CMR 7.73(5)(b)7., shall not exceed the following maximum allowable annual CH₄ emission limits:

Table 1 - Maximum Annual CH ₄ Emission Limits - Boston Gas Company and Colonial Gas Company each d/b/a National Grid	
Calendar Year	Maximum Allowable CH ₄ Emissions (metric tons of carbon dioxide equivalent)
2020	108,647
2021	106,817
2022	102,699
2023	98,561
2024	94,532

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.73: continued

Table 2a - Maximum Annual CH ₄ Emission Limits - Bay State Gas Company d/b/a Columbia Gas of Massachusetts and Eversource Gas Company of Massachusetts	
Calendar Year	Maximum Allowable CH ₄ Emissions (metric tons of carbon dioxide equivalent)
2020	24,399

Table 2b - Maximum Annual CH ₄ Emission Limits - Eversource Gas Company of Massachusetts	
Calendar Year	Maximum Allowable CH ₄ Emissions (metric tons of carbon dioxide equivalent)
2021	25,341
2022	23,039
2023	20,825
2024	18,567

Table 3 - Maximum Annual CH ₄ Emission Limits - The Berkshire Gas Company	
Calendar Year	Maximum Allowable CH ₄ Emissions (metric tons of carbon dioxide equivalent)
2020	3,490
2021	3,112
2022	2,945
2023	2,776
2024	2,605

Table 4 - Maximum Annual CH ₄ Emission Limits - Fitchburg Gas and Electric Light Company d/b/a Unitil	
Calendar Year	Maximum Allowable CH ₄ Emissions (metric tons of carbon dioxide equivalent)
2020	1,981
2021	1,713
2022	1,618
2023	1,541
2024	1,477

Table 5 - Maximum Annual CH ₄ Emission Limits - Liberty Utilities (New England Natural Gas Company) Corp.	
Calendar Year	Maximum Allowable CH ₄ Emissions (metric tons of carbon dioxide equivalent)
2020	5,445
2021	5,066
2022	4,670
2023	4,273
2024	3,877

7.73: continued

Table 6 - Maximum Annual CH ₄ Emission Limits - NSTAR Gas Company d/b/a Eversource Energy	
Calendar Year	Maximum Allowable CH ₄ Emissions (metric tons of carbon dioxide equivalent)
2020	25,358
2021	23,939
2022	22,212
2023	20,486
2024	18,756

(b) Sum of Individual Operator Limits. For each calendar year, 310 CMR 7.73(4)(b): *Table 7* lists the sum of the annual CH₄ emission limits from all active mains and services of gas operators named in 310 CMR 7.73(4)(a): *Tables 1* through *6*:

Table 7 - Sum of Annual CH ₄ Emission Limits from Mains and Services of Gas Operators named in 310 CMR 7.73(4)(a): <i>Tables 1</i> through <i>6</i>	
Calendar Year	CH ₄ Emissions (metric tons of carbon dioxide equivalent)
2020	169,320
2021	165,988
2022	157,183
2023	148,468
2024	139,814

(c) CH₄ Emissions Set-aside, Aggregate Limits and Petition Process for Modifying CH₄ Emission Limit.

1. The Department has set-aside the quantities of CH₄ in 310 CMR 7.73(4)(c): *Table 8* for each calendar year for gas operators that petition to modify their limits in 310 CMR 7.73(4) based on 310 CMR 7.73(4)(c)3. For each calendar year specified in 310 CMR 7.73(4)(c): *Table 8*, the annual CH₄ emission limits from all active mains and services of gas operators named in 310 CMR 7.73(4)(a): *Tables 1* through *6* shall not exceed the maximum allowable annual aggregate CH₄ emission limits in 310 CMR 7.73(4)(c): *Table 8*.

Table 8 - CH ₄ Emissions Set-aside and Maximum Annual Aggregate CH ₄ Emission Limit		
Calendar Year	CH ₄ Emissions Set-aside	Maximum Allowable Annual Aggregate CH ₄ Emission Limit
	(metric tons of carbon dioxide equivalent)	
2020	39,509	208,829
2021	37,990	203,978
2022	37,550	194,733
2023	37,114	185,576
2024	36,682	176,496

7.73: continued

2. Upon written petition from a gas operator, the Department may modify the CH₄ emission limits and allocate additional CH₄ in excess of the limits in 310 CMR 7.73(4)(a) provided that the set-aside amount of CH₄ in each calendar year in 310 CMR 7.73(4)(c): *Table 8* is not exceeded.
 3. The basis for the petition shall be the Annual Report for Calendar Year 20[XX] Gas Distribution System submitted by the gas operator to the United States Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA).
 4. Requirements for the Petition.
 - a. The gas operator shall submit the petition to the Department no later than the April 15th after the end of the calendar year for which the gas operator seeks to have additional CH₄ allocated, and include a copy of the Annual Report submitted to PHMSA.
 - b. The petition shall be signed and certified in accordance with the requirements at 310 CMR 7.73(5)(b)9.
 5. In its sole discretion, the Department will approve or deny the petition in writing within 60 days of receipt of the petition. During the 60-day review period, the Department may request additional information from the gas operator. Depending on when the Department receives the information, and the volume of the information, the Department may extend the 60-day review period.
 - a. If the Department approves the petition, calculates a modified or new limit, and/or allocates additional CH₄, the modified CH₄ emission limit(s) in the approval letter shall be enforceable in *lieu* of the CH₄ emission limit in 310 CMR 7.73(4)(a).
 - b. If the Department denies the petition, the gas operator may request an adjudicatory hearing on the decision, by filing a notice of claim with the Department within 21 days of the date of issuance of the Department's denial of the petition pursuant to 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection*.
- (5) Annual Reporting Requirements.
- (a) By April 15, 2021 and on April 15th of each year thereafter, each gas operator must submit an annual report to the Department for emissions that occurred during the previous calendar year.
 - (b) The annual report shall be submitted electronically in a format specified by the Department, and must contain all of the following information:
 1. The gas operator's name, physical address, and mailing address;
 2. The location of records and documents;
 3. The name and contact information including e-mail address and telephone number of the designated representative submitting the report, and the person(s) primarily responsible for preparing the report;
 4. The year for which the information is submitted;
 5. The miles of mains and number of services owned, leased, operated, or controlled by the gas operator and located in Massachusetts by each material type listed in 310 CMR 7.73(5)(b): *Table 9*, as recorded in the *Annual Report* to PHMSA;
 6. The miles of mains and number of services owned, leased, operated, or controlled by the gas operator and located in Massachusetts by age and each material type listed in 310 CMR 7.73(5)(b): *Table 9*;
 7. The number of metric tons of CH₄, in carbon dioxide equivalents, by each material type listed in 310 CMR 7.73(5)(b)8.: *Table 9*, emitted from mains and services owned, leased, operated, or controlled by the gas operator and located in Massachusetts during the year, as calculated by multiplying the miles of mains and number of services by the appropriate emission factor in 310 CMR 7.73(5)(b)8.: *Table 9*;
 8. Any other information requested by the Department; and
 9. The authorized signature of a designated representative of the gas operator, and the following certification statement: "I certify that I have personally examined the report for this facility and am familiar with the information contained in that report and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

7.73: continued

Table 9 - Methane Emission Factors by Material Type	
Mains	Metric tons of carbon dioxide equivalent/ mile-year
Cast or wrought iron	28.663225
Ductile iron	
Copper	
Steel, cathodically unprotected and uncoated	20.281978
Steel, cathodically unprotected and coated	
Other	
Steel, cathodically protected and uncoated	1.804054
Steel, cathodically protected and coated	
Plastic	0.215583
Services	Metric tons of carbon dioxide equivalent/ service-year
Steel, cathodically unprotected and uncoated	0.129589
Steel, cathodically unprotected and coated	
Cast or wrought iron	
Ductile iron	
Other	
Steel, cathodically protected and uncoated	0.055982
Steel, cathodically protected and coated	
Plastic	0.005136
Copper	0.121920

(6) Monitoring, Q/A, and Recordkeeping Requirements. All gas operators shall retain for five years documentation sufficient to demonstrate compliance with 310 CMR 7.73 and shall provide such documentation to the Department on request. The documentation shall be submitted in the format and within the time limit requested by the Department.

(7) Compliance Verification. The Department may verify compliance with 310 CMR 7.73 by conducting inspections, requesting information and records and requiring the collection of information not previously required; provided that 310 CMR 7.73(7) does not limit the authority of the Department as otherwise provided by law or in an authorization, determination, modification, permit, or other approval, or by the terms of any order or other enforcement document.

(a) Access to Information. Where necessary to ascertain compliance with 310 CMR 7.73 including actual or potential CH₄ emission, the Department may request of a gas operator information or records. The gas operator shall, within a reasonable time, furnish the requested information or records and shall permit Department personnel or authorized representatives to have access to and to take images of such records.

(b) Requirement to Collect Information. When the Department has reason to believe that a gas operator has exceeded its CH₄ emission limit or violated any other condition in 310 CMR 7.73, the Department may require the gas operator to submit the necessary information or records to determine compliance. In doing so, the Department may require a gas operator to:

7.73: continued

1. Perform audits on CH₄ emissions records using standard procedures and methods;
2. Quantify CH₄ emissions in accordance with the procedures and methods as the Department may prescribe;
3. Make periodic reports to the Department, as necessary, to assure continuous compliance with 310 CMR 7.73; and
4. Maintain other records and provide any other information as the Department might reasonably require.

(8) Enforcement.

(a) If a gas operator exceeds the Maximum Annual CH₄ Emission limits set forth in the applicable table provided in 310 CMR 7.73(4)(a), as amended by a petition approved under 310 CMR 7.73(4)(c)5.a., any such excess emissions shall be deemed to be a release of air pollutants into the environment without the authorization or approval of the Department, and shall be presumed to constitute a significant impact to public health, welfare, safety, and the environment.

(b) The Department shall enforce the requirements of 310 CMR 7.73 in accordance with applicable federal and Massachusetts law including, but not limited to, M.G.L. c. 21A, § 16, 310 CMR 5.00: *Administrative Penalty*, M.G.L. c. 111, § 2C, §§ 142 A through 142M; and M.G.L. c. 21N, § 7(d).

(9) Program Review. Not later than December 31, 2024, the Department shall complete a review, including an opportunity for public comment on the program review, of the requirements of 310 CMR 7.73 to determine whether the program should be amended or extended. This review shall evaluate whether to require the use of feasible technologies to detect and quantify gas leaks and any other information relevant to review of the program.

7.74: Reducing CO₂ Emissions from Electricity Generating Facilities

(1) Purpose, Authority and Scope. The purpose of 310 CMR 7.74, promulgated in conjunction with 310 CMR 7.75, is to assist the Commonwealth in achieving the greenhouse gas emissions reduction goals adopted pursuant to M.G.L. c. 21N, § 3(b), by establishing declining annual aggregate CO₂ emissions limits that will reduce CO₂ emissions from electricity generating facilities. To achieve those goals, the Executive Office of Energy and Environmental Affairs (EEA) and the Department pursuant to M.G.L. c. 21A, §§ 2 and 8 and M.G.L. c. 21N, §§ 3(c), 4 and 7 hereby jointly promulgate 310 CMR 7.74, following consultation with the Department of Energy Resources and based on the considerations specified in M.G.L. c. 21N, § 3(c). 310 CMR 7.74 is also promulgated pursuant to M.G.L. c. 21A, § 16, M.G.L. c. 21N, § 3(d) and M.G.L. c. 111, §§ 2C and 142A through 142E. In exercising their broad authority and discretion under M.G.L. c. 21N, §§ 3(c) and 3(d), EEA and MassDEP have determined that additional emissions limits on in-state electricity generating facilities' greenhouse gas emissions, along with other climate policies and programs, will ensure achievement of the greenhouse gas emissions limits as established under M.G.L. c. 21N, and that the 310 CMR 7.74 limits are consistent with, and take account of, regional programs such as the Regional Greenhouse Gas Initiative (RGGI) and the Renewable Portfolio Standard (RPS). The CO₂ emissions limits set forth in 310 CMR 7.74(5) are applicable for the years 2021 through 2050 beginning January 1, 2021.

(2) Definitions. The terms used in 310 CMR 7.74 are defined in 310 CMR 7.74(2) and 310 CMR 7.00: *Definitions*. Where a term is defined in 310 CMR 7.00: *Definitions* and 310 CMR 7.74, the definition in 310 CMR 7.74 shall apply.

Allowance means a limited authorization to emit one metric ton of CO₂ in compliance with 310 CMR 7.74.

Allowance Registry means the database that tracks allowances held by electricity generating facilities and used for compliance. The Department shall establish an account in the allowance registry for each electricity generating facility.

7.73: continued

Annual CO₂ Emissions means the total amount of CO₂ emissions measurements recorded and reported for a calendar year in accordance with the Massachusetts CO₂ Budget Trading Program at 310 CMR 7.70(8)(e)4., converted from short tons to metric tons and adjusted, as applicable, for the production of useful net thermal energy pursuant to the Massachusetts CO₂ Budget Trading Program at 310 CMR 7.70(8)(i).

Bidder means a party qualified, pursuant to 310 CMR 7.74(6)(h)4.a., to participate in an auction.

Calendar Year or Year means January 1st through December 31st.

Deduct or Deduction means the permanent removal of allowances from an account in the allowance registry.

Designated Representative means the person who is authorized by the owner and operator of an electricity generating facility to represent and legally bind the owner and operator in matters pertaining to 310 CMR 7.74.

Electricity Generating Facility means a facility that includes one or more electricity generating units for which the owner or operator is required to report CO₂ emissions pursuant to the Massachusetts CO₂ Budget Trading Program at 310 CMR 7.70(8); provided, however, that the following facilities are not electricity generating facilities for purposes of 310 CMR 7.74: MWRA Deer Island and MBTA South Boston Power.

Emergency means a period during when the regional transmission organization has issued an alert that an abnormal condition affecting the reliability of the power system exists or is anticipated in Massachusetts.

NON-TEXT PAGE

7.74: continued

Existing Electricity Generating Facility means an electricity generating facility listed in 310 CMR 7.74(5)(b): *Table B*.

Existing Facility Aggregate CO₂ Emissions Limit means, with respect to calendar year 2018, the sum of all existing facilities' CO₂ emissions limits, as listed in 310 CMR 7.74(5)(a): *Table A*.

Massachusetts CO₂ Budget Trading Program means the program the Department promulgated at 310 CMR 7.70 to reduce greenhouse gas emissions from CO₂ Budget Sources as defined in 310 CMR 7.70.

New Electricity Generating Facility means, with respect to calendar year 2018, 2019 and 2020, an electricity generating facility that is not an existing electricity generating facility.

New Facility Aggregate CO₂ Emissions Limit means, with respect to calendar year 2018, the sum of all new electricity generating facility CO₂ emissions limits, as listed in 310 CMR 7.74(5)(a): *Table A*.

Offset means to use allowances to cover CO₂ emissions from an electricity generating facility pursuant 310 CMR 7.74.

Operator means any person or group of persons who operates, controls, or supervises an electricity generating facility including, but not limited to, any holding company, utility system, plant manager, or operations manager of the electricity generating facility.

Owner means any of the following persons or group of persons:

- (a) Any holder(s) of any portion of the legal or equitable title in an electricity generating facility; or
- (b) Any holder(s) of a leasehold interest in an electricity generating facility.

Reserve Price means the minimum acceptable price for each allowance in a specific auction.

Sealed Bid, Uniform Price Auction means a single or multiple round sealed-bid auction in which bidders may submit multiple bids at different prices; the price paid by all awarded bidders will be uniform.

Serial Number means, when referring to allowances, the unique identification number assigned by the Department to each allowance.

Total Aggregate CO₂ Emissions Limit means, with respect to a particular calendar year, the maximum allowable aggregate limit on CO₂ emissions from all electricity generating facilities subject to 310 CMR 7.74, as listed in 310 CMR 7.74(5)(a): *Table A*.

(3) Applicability. 310 CMR 7.74 applies to all owners and operators of an electricity generating facility.

(4) Compliance with CO₂ Emissions Limits. The owner or operator of an electricity generating facility shall offset annual CO₂ emissions using allowances in its allowance registry account pursuant to 310 CMR 7.74(6) and (7).

(5) CO₂ Emissions Limits.

- (a) Total Aggregate CO₂ Emissions Limits. The total aggregate CO₂ emissions limit for 2018 is 9,149,979 metric tons of CO₂. The total aggregate CO₂ emissions limit for 2019 is 8,731,175. The total aggregate CO₂ emissions limit declines by 223,876 metric tons each year thereafter until it reaches 8,507,299 metric tons of CO₂ in 2020 and 1,791,019 metric tons of CO₂ in 2050. For 2018, the existing facility aggregate CO₂ emissions limit and the new facility aggregate CO₂ emissions limit were calculated from the total aggregate CO₂ emissions limit, such that their sum equals the total aggregate CO₂ emissions limit. The existing facility aggregate CO₂ emissions limit, and new facility aggregate CO₂ emissions limit for calendar year 2018 are shown in 310 CMR 7.74(5)(a): *Table A*.

7.74: continued

310 CMR 7.74(5)(a): *Table A*
 2018 Existing Facility Aggregate and New Facility Aggregate
 CO₂ Emissions Limits in Metric Tons

Year	Existing Facility Aggregate CO ₂ Emissions Limit	New Facility Aggregate CO ₂ Emissions Limit
2018	7,649,979	1,500,000

(b) Existing Individual Electricity Generating Facility CO₂ Emissions Limits for 2018. The CO₂ emissions limits for existing electricity generating facilities are shown in 310 CMR 7.74(5)(b): *Table B*.

310 CMR 7.74(5)(b): *Table B*
 Existing Individual Electricity Generating Facility CO₂ Emissions Limits in Metric Tons

Facility	Limit
ANP Bellingham	860,250
ANP Blackstone	787,429
Bellingham	233,789
Berkshire Power	437,049
Braintree Electric	24,425
Canal Station	101,922
Cleary Flood	50,453
Dartmouth Power	48,348
Dighton	330,396
Fore River Energy	1,433,568
Kendall Square	502,191
MASSPOWER	304,108
Medway Station	1,603
Milford Power, LLC	148,912
Millennium Power	667,082
Mystic	1,516,066
Pittsfield Generating	79,959
Stony Brook	68,844
Tanner Street	36,655
Waters River	1,587
West Springfield	15,343

(c) Apportionment of New Facility Aggregate CO₂ Emissions Limit for 2018. By February 15, 2019, the Department shall apportion the 2018 new facility aggregate CO₂ emissions limit among electricity generating facilities. The apportionment shall be based on CO₂ emissions reported by new electricity generating facilities pursuant to 310 CMR 7.74(7) by February 1, 2019, and shall be completed pursuant to 310 CMR 7.74(5)(c)1. through 3.

1. New Electricity Generating Facilities' CO₂ Emissions Limits for 2018. The Department shall determine whether the sum of CO₂ emissions from new electricity generating facilities reported pursuant to 310 CMR 7.74(7) is less than, equal to, or greater than the new facility aggregate CO₂ emissions limit for 2018.

7.74: continued

- a. If the sum of new electricity generating facility CO₂ emissions is less than or equal to the new facility aggregate CO₂ emissions limit for 2018, then the Department shall set each new electricity generating facility's 2018 emissions limit equal to its CO₂ emissions for 2018.
 - b. If the sum of new electricity generating facility CO₂ emissions is greater than the new facility aggregate CO₂ emissions limit for 2018, the Department shall ensure that the sum of all new facility CO₂ emissions limits equals the new facility aggregate CO₂ emissions limit for the year by completing the following calculations:
 - i. Calculate a discount factor by dividing the new facility aggregate CO₂ emissions limit by the total amount of CO₂ emitted by all new electricity generating facilities in 2018; and
 - ii. Calculate each new electricity generating facility's 2018 limit as the product of the facility's CO₂ emissions and the discount factor.
2. Distribution of Excess New Facility CO₂ Emissions Limit. If the Department determines pursuant to 310 CMR 7.74(5)(c)1. that the sum of CO₂ emissions from new electricity generating facilities is less than the new facility aggregate CO₂ emissions limit for 2018, then the Department shall:
- a. Calculate the difference between the new facility aggregate CO₂ emissions limit and the sum of CO₂ emissions from new electricity generating facilities;
 - b. Calculate the product of such difference and each existing electricity generating facility's fraction of the existing facility aggregate CO₂ emissions limit for 2018; and
 - c. Deposit allowances equal to the product, minus any allowances distributed pursuant to 310 CMR 7.74(5)(c)3., in the allowance registry account of each existing electricity generating facility.
3. Early Distribution of Excess New Facility CO₂ Emissions Limit. By November 15, 2018, the Department may determine that the sum of CO₂ emissions from new electricity generating facilities will be less than the new facility aggregate CO₂ emissions limit for the year. In making this determination, the Department shall consider CO₂ emissions reported pursuant to the Massachusetts CO₂ Budget Trading Program at 310 CMR 7.70(8)(e)4. for the months of January through September 2018, and any physical or permitted limits on the potential for the facility to emit (*e.g.*, on hourly fuel combustion) during the months of October through December 2018. If the Department determines that the sum of CO₂ emissions from new electricity generating facilities will be less than the new facility aggregate CO₂ emissions limit for 2018, then by December 1, 2018 the Department shall:
- a. Calculate the minimum possible difference between the new facility aggregate CO₂ emissions limit and the sum of CO₂ emissions from new electricity generating facilities for 2018;
 - b. Calculate the product of such minimum possible difference and each existing electricity generating facility's fraction of the existing facility aggregate CO₂ emissions limit for 2018; and
 - c. Deposit allowances equal to the product in the allowance registry account of each existing electricity generating facility.
- (6) Allocation, Transfer, and Use of Allowances.
- (a) Allocation of Allowances.
1. Allocation of Allowances for 2018. For 2018, the Department shall allocate allowances to new and existing electricity generating facilities in accordance with the quantities, processes, and schedule for establishing individual facility CO₂ emissions limits specified in 310 CMR 7.74(5)(b) through (c), and deposit them in the allowance registry accounts of the electricity generating facilities.
 2. Allocation of Allowances for 2019 and 2020.
 - a. For 2019 and 2020, the Department shall allocate allowances equal to 25% and 50%, respectively, of the total aggregate CO₂ emissions limit for the year, subject to adjustment pursuant to 310 CMR 7.74(6)(f), using an auction in accordance with 310 CMR 7.74(6)(h). The exact number of allowances allocated using an auction for each year is specified in 310 CMR 7.74(6)(a)2: *Table C* ("Auction" line).

7.74: continued

b. For 2019 and 2020, allowances not allocated using an auction shall be allocated in accordance with the processes and schedule for establishing 2018 individual facility CO₂ emissions limits specified in 310 CMR 7.74(6)(a)1. and 7.74(5)(b) through (c), except that:

i. The quantities specified in 310 CMR 7.74(6)(a)2.: *Table C* for the facilities listed by name shall be used in place of quantities specified for establishing 2018 CO₂ emissions limits for existing electricity generating facilities in 310 CMR 7.74(5)(a): *Table A* and (b): *Table B*. Allocations to facilities listed by name in 310 CMR 7.74(6)(a)2.: *Table C* shall occur on April 1, 2019 (for 2019), and April 1, 2020 (for 2020).

ii. The quantities specified in 310 CMR 7.74(6)(a)2.: *Table C* ("New Facilities" line) shall be used in place of the quantity specified in 310 CMR 7.74(5)(a): *Table A* for establishing the 2018 the new facility aggregate CO₂ emissions limit. Each process specified for establishing 2018 CO₂ emissions limits for new electricity generating facilities in 310 CMR 7.74(5)(c) shall be repeated one year later than specified in 310 CMR 7.74(5)(c) to complete the 2019 allocation, and two years later to complete the 2020 allocation.

310 CMR 7.74(6)(a)2: *Table C*
Allowance Allocations for 2019 and 2020

	2019 Allocation	2020 Allocation
Auction	2,182,794	4,253,650
New Facilities	1,125,000	750,000
ANP Bellingham	609,866	393,990
ANP Blackstone	558,240	360,638
Bellingham	165,743	107,074
Berkshire Power	309,842	200,166
Braintree Electric	17,316	11,187
Canal Station	72,257	46,680
Cleary Flood	35,768	23,107
Dartmouth Power	34,276	22,143
Dighton	234,231	151,320
Fore River Energy	1,016,315	656,566
Kendall Square	356,024	230,001
MASSPOWER	215,595	139,280
Medway Station	1,136	734
Milford Power, LLC	105,570	68,201
Millennium Power	472,922	305,520
Mystic	1,074,800	694,349
Pittsfield Generating	56,686	36,621
Stony Brook	48,806	31,530
Tanner Street	25,986	16,788
Waters River	1,125	727
West Springfield	10,877	7,027
(Total)	8,731,175	8,507,299

7.74: continued

3. Allocation of Allowances for 2021 and All Future Years. For 2021 and all future years, the Department shall allocate allowances equal to the total aggregate CO₂ emissions limit for the year, subject to adjustment pursuant to 310 CMR 7.74(6)(f), using an auction in accordance with 310 CMR 7.74(6)(h).
 4. Once allocated, allowances may be used or transferred pursuant to 310 CMR 7.74(6)(b) or (c), regardless of the year or method of allocation.
- (b) Use of Allowances.
1. The owner or operator of an electricity generating facility may use allowances to offset CO₂ emissions for a particular year pursuant to 310 CMR 7.74(6)(e), provided that the allowances used are in the electricity generating facility's allowance registry account on March 1st of the year following the year in which the CO₂ emissions occurred.
 2. Allowances may be used exclusively by the owners or operators of electricity generating facilities to comply with 310 CMR 7.74 and are not property rights.
- (c) Transfer of Allowances.
1. The owner or operator of an electricity generating facility may transfer allowances to the owner or operator of another electricity generating facility by submitting a notice of transfer to the Department at any time except during the month of March.
 2. The notice of transfer shall include the name of the electricity generating facility, the number of allowances to be transferred, the serial numbers of the allowances to be transferred, the name and account number of the electricity generating facility to which the allowances will be transferred, and the certification statement required by 310 CMR 7.74(7)(b) that has been signed by the designated representative of the transferring electricity generating facility, or his or her designee, allowing the transfer of allowances.
 3. The Department may require reporting of a price for transfers of allowances between electricity generating facilities that have different owners or operators through submission of a form as specified by the Department.
 4. If requested by the Department, a notice of transfer may also be used to initiate a deduction pursuant to 310 CMR 7.74(6)(g).
- (d) Emergency Deferred Compliance. If an electricity generating facility emits CO₂ during an emergency that occurs on or after January 1, 2018, the electricity generating facility owner or operator may choose to defer for one year a portion or the entirety of the electricity generating facility's compliance obligation with respect to CO₂ emissions emitted during such emergency, provided that such CO₂ emissions shall be offset in the following year on a two-for-one basis pursuant to 310 CMR 7.74(6)(e)2.
1. If an electricity generating facility owner or operator chooses to defer the electricity generating facility's compliance obligation with respect to any CO₂ emissions emitted during an emergency pursuant to 310 CMR 7.74(6)(e), then the owner or operator shall complete the following steps:
 - a. Identify the quantity of such CO₂ emissions emitted during the emergency, and the hours and dates during which the emergency occurred, in its compliance certification report submitted pursuant to 310 CMR 7.74(7)(a) for the calendar year during which the CO₂ emissions occurred; and
 - b. Offset such CO₂ emissions on a two-for-one basis pursuant to 310 CMR 7.74(6)(e)2. by identifying the necessary number of allowances in its compliance certification report submitted pursuant to 310 CMR 7.74(7)(a) for the following calendar year.
 2. In order to ensure that the use of emergency deferred compliance does not reduce the total number of allowances available for use by facilities to comply with 310 CMR 7.74, the Department shall, during the month of March of any year, determine the total amount of emissions for which compliance has been deferred from the prior year pursuant to 310 CMR 7.74(6)(d), and adjust the number of allowances available for sale by auction for the year upward by that amount.
- (e) Compliance with CO₂ Emissions Limits. On March 1st of each year, each electricity generating facility's allowance registry account shall hold a number of allowances that is equal to or greater than the sum of:
1. The amount of annual CO₂ emissions that the electricity generating facility emitted during the prior calendar year, minus any emissions for which compliance is being deferred pursuant to 310 CMR 7.74(6)(d); and

7.74: continued

2. Twice the amount of CO₂ emissions that the electricity generating facility emitted during the year before the prior calendar year (*e.g.*, on March 1, 2020 for 2018 emissions), but was not offset because compliance was deferred pursuant to 310 CMR 7.74(6)(d).
- (f) Banking of Allowances. Allowances may be retained for use in future years, provided that the total amount of CO₂ emitted by all electricity generating facilities in any year is less than the total aggregate CO₂ emissions limit for the prior year, before accounting for any emergency deferred compliance. In order to enforce this limitation on banking, the Department shall complete the following steps during the month of March of each year:
1. Determine the total quantity of allowances remaining in all allowance registry accounts after deducting allowances pursuant to 310 CMR 7.74(6)(g).
 2. Subtract 223,875 from the quantity determined pursuant to 310 CMR 7.74(6)(f)1. to determine the adjustment required to enforce the limitation on banking.
 3. Adjust the number of allowances available for sale by auction for the year pursuant to 310 CMR 7.74(6)(h) by the amount calculated pursuant to 310 CMR 7.74(6)(f)2.
- (g) Deduction of Allowances for Compliance. During the month of March of each year, the Department shall deduct allowances from each electricity generating facility's allowance registry account in the following order:
1. To address any emergency deferred compliance obligation accrued during the year before the prior calendar year pursuant to 310 CMR 7.74(6)(e); and
 2. To offset annual CO₂ emissions that occurred during the prior calendar year.
- (h) Allowance Auctions. For the years 2019 through 2050, the Department shall conduct a series of auctions pursuant to 310 CMR 7.74(6)(h) to sell allowances to be used by owners or operators of electricity generating facilities to offset annual CO₂ emissions.

7.74: continued

1. Allowance Auction Procedures.

- a. Auctions shall be conducted quarterly, but the Department may adjust the frequency of such auctions as it deems necessary to effectuate the objectives 310 CMR 7.74, provided at least one auction is conducted annually.
- b. The implementation of any auction conducted pursuant to 310 CMR 7.74 may be transferred by the Department to an agent deemed qualified by the Department to conduct such auction, provided that such agent shall perform all such duties under the direction and oversight of the Department.
- c. The auction format shall be a Sealed Bid, Uniform Price Auction.
- d. Prior to the end of each calendar year, allowances in a quantity equal to the number specified in 310 CMR 7.74(6)(a)2. and 3., subject to adjustment pursuant to 310 CMR 7.74(6)(f), will be available for sale by auction. Such allowances will be available for sale by auction for each calendar year. The Department may require that allowances are sold in minimum lot sizes. In such event, such lot sizes shall be published in the auction notice pursuant to 310 CMR 7.74(6)(h)2. No more than 50% of the allowances from a calendar year may be available for sale in advance of the respective calendar year, up to four years in advance of such calendar year.
- e. The Department shall post a calendar of proposed auction dates on its web site. The calendar shall include the auction format and the number and years of allowances to be auctioned at each auction. The Department may periodically modify the contents of the calendar, provided that the information relevant to the next scheduled auction shall be fixed in the auction notice no later than 45 calendar days prior to such auction, consistent with 310 CMR 7.74(6)(h)2.a.
- f. Auctions of allowances may be held with a reserve price. The Department is not obligated to sell allowances if the reserve price is not met.
- g. No bidder, including any affiliate or agent of such bidder, shall purchase more than 50% of the allowances offered for sale in any one auction. Such limitation shall be published in the auction notice pursuant to 310 CMR 7.74(6)(h)2., and may be reduced or set equal to zero by the Department for one or more bidders after consultation with a qualified agent or market monitor employed pursuant to 310 CMR 7.74(6)(h)1.b. or 5.a.
- h. The Department may periodically evaluate the auction program performance and may retire any allowances that were offered for sale by auction but were not sold.
- i. Proceeds of such auctions shall be paid to the Department and deposited in a segregated account and administered by a Trustee appointed by EEA and the Department. The funds shall be expended to further the goals of M.G.L. c. 21N by supporting programs or projects to reduce greenhouse gas emissions in order to mitigate the impacts of climate change including, but not limited to, clean energy and vehicle electrification projects; programs and projects to support adaptation to the impacts of climate change; mitigation or adaptation programs or projects involving communities that are already adversely impacted by air pollution including, but not limited to, environmental justice communities; and for the administration of any such programs or projects. Auction proceeds may also be used for the administration of 310 CMR 7.74. Auction proceeds shall be expended at the direction of the Trustee, in consultation with EEA and the Department. The Trustee, EEA and the Department may consult with and enter into agreements with other agencies within the EEA Secretariat to assist in the administration and expenditure of auction proceeds.

2. Auction Notice.

- a. Notice of each auction shall be published no later than 45 calendar days prior to such auction, and may be transmitted electronically to parties requesting such notification.
- b. Each notice shall include, but not be limited to, the following information:
 - i. Date, time and location of the auction, including the internet address or electronic address for auction location, as applicable;
 - ii. Auction format;
 - iii. Categories of bidders who will be eligible to bid;
 - iv. Quantity and years of allowances to be auctioned;
 - v. Reserve Price;

7.74: continued

- vii. Instructions for submitting the qualification application;
 - viii. Instructions for submitting acceptable financial surety;
 - ix. Procedures for the conduct of the auction;
 - x. Participation limitations; and
 - xi. Other pertinent rules or procedures of the auction as may be required to ensure a transparent, fair and competitive auction.
3. Participant Eligibility. Only owners and operators of electricity generating facilities are eligible to participate in auctions.
4. Bid Submittal Requirements.
- a. Qualification Application.
 - i. Only qualified bidders will be permitted to submit bid(s) or otherwise participate in any auction.
 - ii. Only parties with accounts in the allowance registry may participate in the auction.
 - iii. Potential bidders shall submit a qualification application to the Department at least 30 calendar days prior to the bid submittal date of such auction or by such deadline as the Department shall stipulate in the auction notice. Qualification applications shall contain the information set forth in 310 CMR 7.74(6)(h)4.a. and the auction notice.
 - iv. The applicant shall provide information and documentation relating to its corporate structure, financial ability to participate in the auction and authority to execute bids and honor contractual obligations. Such information may include, but is not limited to the following:
 - (i) Documentation regarding the corporate identity, ownership, and capital structure of the applicant; identification of any agency relationship between the applicant and any third party related to the auction;
 - (ii) Audited annual reports and credit reports of the applicant and/or the entity represented by the applicant;
 - (iii) Corporate background and recent adverse conditions, which may include:
 - 1. Identification of any indictment or felony conviction of the applicant, or any member, director, principle, partner or officer of the applicant or any affiliate or related entity;
 - 2. A statement by the applicant as to prior findings of non-responsibility with regard to any state procurement including findings under state law or regulation;
 - 3. A statement by the applicant as to certification under any state tax registration requirement;
 - 4. Identification of any previous or pending investigation with respect to any alleged violation any rule, regulation, or law associated with any commodity market or exchange;
 - 5. Evidence demonstrating that such applicant has an allowance registry account;
 - 6. Identification of relationships with any other account holder.
 - v. The Department shall review each qualification application and make determinations as to whether the applicant is qualified to submit bids in the auction. Applicants may be denied eligibility based on the information provided or upon information obtained independent of the application process. Failure to provide the required information may result in the qualification application being declared incomplete or otherwise deficient. The Department shall notify applicants in writing or by electronic mail if the qualification application is complete and meets the requirements for participation in the auction. If the qualification application does not meet such requirements, notification shall include the reasons therefore, and applicants will be given a reasonable opportunity to provide additional information to cure such deficiencies.
 - vi. Once an application has been approved, that bidder shall be eligible to participate in all subsequent auctions, provided there has been no material change to the information provided in the qualification application, and provided that the applicant meets the eligibility criteria of 310 CMR 7.74(6)(h)3. If there is any material change to the information submitted in the bidder's qualification application, the qualification expires and a new qualification application is required to be submitted.

7.74: continued

- vii. The Department may suspend or revoke its approval of a qualification application if the bidder fails to comply with 310 CMR 7.74(6)(h)4.
- viii. In order to reduce the administrative burden for the Department and electricity generating facilities, the Department may, on a case-by-case basis, consider applicants that have been approved as bidders by DOER pursuant to 225 CMR 13.09(e) to be qualified bidders pursuant to 310 CMR 7.74(6)(h)4.a.v.
- b. Surety Requirement.
 - i. Bidders shall be required to provide financial surety in the form of a bond, cash, certified funds, or an irrevocable stand-by letter of credit, in a form acceptable to the Department. A bidder's eligibility to bid in any auction shall be limited to the level of financial security provided. Financial surety may be forfeited to and retained by the Department in the event the bidder's offer is accepted in an auction and the bidder fails to tender payment of the full amount when due.
 - ii. Bidders may request return of their surety at any time prior to or following any auction, and the Department shall return said surety provided that the Commonwealth has no current or pending claim to such surety as a result of a failure of the bidder to comply with 310 CMR 7.74(6)(h)4.b. or to pay the full amount of its accepted bid when due. Return of such surety to the bidder voids the bidder's ability to participate in subsequent auctions unless a new surety is submitted to the Department pursuant to the provisions of 310 CMR 7.74(6)(h)4.
 - iii. The surety requirements of 310 CMR 7.74(6)(h)4. may be modified by the Department at any time prior to the applicable auction date, and shall be published no later than 45 calendar days prior to such auction.
 - iv. In the event that the Department modifies the surety requirements, bidders shall meet the new surety requirements before the next auction.
- c. Bid Submittal.
 - i. Once an application has been approved, and provided there has been no material change to the information provided in the application, bidders seeking to bid in any subsequent auction shall complete and submit an intent to bid on or before the deadline specified in the Auction Notice.
 - ii. All bids shall be on a form prescribed by the Department, which shall be made available electronically.
 - iii. All bids submitted shall be considered binding offers for the purchase of allowances under the rules of the auction.
 - iv. All qualified maximum bids shall be limited to the amount of financial surety provided by the qualified bidder pursuant to 310 CMR 7.74(6)(h)4.b.
 - v. Bids shall be submitted on-line and shall conform to the format and protocol of bid submission as set forth in the auction notice pursuant to 310 CMR 7.74(6)(h)2.
 - vi. If the Department determines that a bidder has provided false or misleading information, fails to honor an accepted bid, or has withheld pertinent information in its qualification documentation, or has otherwise failed to comply with any material provision of 310 CMR 7.74(6)(h)4., the surety amount may be forfeited to the Commonwealth, and the bidder may be prohibited from participating in any future auctions.
- 5. Bid Selection.
 - a. The Department may employ a market monitor to observe the conduct and outcome of each auction. As a condition to participation in any auction, bidders shall agree to provide, and shall provide on request, any data to the Department that the Department deems necessary to support this function and the proper monitoring of such auctions.
 - b. The Department will rank all bids. Allowances will be sold in the quantities specified in the accepted bids until there are no remaining allowances available for the specified auction. In the event that there is more than one winning bidder submitting the same price and the total number of allowances requested in all such winning bids exceeds the number of allowances remaining, the Department may award the remaining allowances randomly, or based on the *pro rata* share of the number of allowances bid on by each winning bidder.
 - c. The Department shall approve or disapprove the outcome of the auction following the completion of the auction event.

7.74: continued

6. Transfer of Allowances. Following approval of the outcome of the auction and upon payment in full of the amount owed by the successful bidders, the Department shall transfer allowances into the corresponding bidders' allowance registry account, provided that transfers resulting from auctions that occur before March 1st of a calendar year shall occur during the month of March.

7. Return of Unsuccessful Bids. Subject to 310 CMR 7.74(6)(h)4.b.ii. and 310 CMR 7.74(6)(h)4.c.vi., following each auction the Department will return upon written request all financial securities or payments to unsuccessful bidders and to bidders unwilling to purchase fewer allowances than requested in its bid.

8. Announcement of Results. The Department reserves the right to publish the names of qualified bidders, the closing price, and the total quantity of allowances sold at each auction.

(7) Reporting Requirements.

(a) Compliance Certification Reporting. By March 1, 2019, and March 1st of each year thereafter, the owner or operator of an electricity generating facility subject to 310 CMR 7.74 shall demonstrate compliance with the electricity generating facility's CO₂ emission limit by submitting a compliance certification report covering the CO₂ emissions from the prior calendar year. The compliance certification report shall include, among other information as requested by the Department, the following:

1. The name, address, contact person, and phone number of the electricity generating facility;
2. The electricity generating facility's assigned CO₂ emissions limit for 2018;
3. The electricity generating facility's annual CO₂ emissions for the prior calendar year as reported pursuant to 310 CMR 7.70(8), in short tons and metric tons;
4. The amount, if any, of CO₂ emissions for the prior calendar year for which compliance will be deferred pursuant to 310 CMR 7.74(6)(d), in short and metric tons, and the hours during which such CO₂ emissions occurred during the emergency.
5. The total number of allowances in the electricity generating facility's allowance registry account on March 1st;
6. The number of allowances in the electricity generating facility's allowance registry account that the owner or operator of the facility is using to offset CO₂ emissions that occurred during the prior calendar year;
7. The number of allowances in the electricity generating facility's allowance registry account that the owner or operator of the electricity generating facility is using to offset CO₂ emissions that occurred during an emergency in the year before the prior calendar year, on a two-for-one basis pursuant to 310 CMR 7.74(6)(d);
8. The total number of allowances remaining in the electricity generating facility's allowance registry account after offsetting CO₂ emissions pursuant to 310 CMR 7.74(7)(a)6. and 7.; and
9. The electronic signature of the designated representative submitting the form and certification by the designated representative in accordance with 310 CMR 7.74(7)(b).

(b) Certification of Reports, Documents, and Information. All reports, documents, and information submitted to the Department under 310 CMR 7.74 must be signed and attested to by the designated representative and shall include the following statement: "I certify that I have personally examined the information that I am submitting and I am familiar with the information submitted and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

(c) Submission Format and Process. The Department may specify the format and process for any submission required pursuant to 310 CMR 7.74, including electronic submission requirements.

(d) Compliance Verification. The Department may verify compliance with 310 CMR 7.74 by conducting inspections, requesting information and records, and requiring the collection of information. 310 CMR 7.74(7)(d) does not limit the authority of the Department as otherwise provided by law or in an authorization, determination, modification, permit, or other approval, or by the terms of any order or other enforcement document.

7.74: continued

1. Access to Information. Where necessary to ascertain compliance with 310 CMR 7.74, including actual or potential CO₂ emissions, the Department may request information or records from any owner or operator of an electricity generating facility. The owner or operator shall, within a reasonable time, furnish the requested information or records and shall permit Department personnel or authorized representatives to have access to and to take images of such records.

2. Requirement to Collect Information. When the Department determines that any electricity generating facility has failed to offset its CO₂ emissions limit or violated any other condition in 310 CMR 7.74, the Department may require the owner or operator of said electricity generating facility to submit the necessary information or records. In doing so, the Department may require the electricity generating facility owner or operator to:

- a. Establish and maintain records;
- b. Perform audits on CO₂ emissions records or monitoring equipment using standard procedures and methods;
- c. Quantify CO₂ emissions in accordance with any procedures and methods that the Department may prescribe;
- d. Keep records on control equipment parameters, production variables, and other indirect data when direct monitoring of CO₂ emissions is not practical;
- e. Perform additional CO₂ emissions monitoring, including conducting stack tests in accordance with 310 CMR 7.13 when continuous CO₂ emissions monitoring equipment information is unavailable;
- f. Make periodic reports to the Department, as necessary, to assure continuous compliance with 310 CMR 7.74; and
- g. Maintain other records and provide any other information the Department requires.

(8) Recordkeeping Requirements. The owner or operator of an electricity generating facility shall keep on-site at the electricity generating facility all records, data, reports and other information required by 310 CMR 7.74 for a period of three years from the date the record is created. The Department may extend this period for cause, in writing, at any time before the end of the three years.

(9) Authorized Designated Representative.

(a) Assigning an Authorized Designated Representative. The owner and operator of an electricity generating facility shall authorize one designated representative to act on behalf of the owner and operator with regard to all matters under 310 CMR 7.74.

(b) Responsibilities of Designated Representative. The designated representative shall be responsible for submitting and updating electronically all of the following:

1. The name, address, email address, and telephone number of the designated representative;
2. A list of the owner(s) and operator(s) of the electricity generating facility;
3. A notice of transfer of allowances;
4. A CO₂ emissions report;
5. The Compliance Certification Report;
6. The name, address, email address, and telephone number of any persons authorized to submit notices of transfer of allowances pursuant to 310 CMR 7.74(9)(c); and
7. Any other reports, documents, or information requested by the Department.

(c) Delegation by Designated Representative. A designated representative may delegate his or her authority to submit a notice of transfer of allowances by submitting the information specified in 310 CMR 7.74(9)(b)6. and signing the following certification statement: "I certify any notice of transfer of allowances submitted by any person identified by me as authorized to submit a notice of transfer of allowances under 310 CMR 7.74 shall be deemed a notice of transfer of allowances submitted by me."

(d) Certification of Representation. The owner or operator of an electricity generating facility shall submit to the Department a complete certificate of representation that identifies the designated representative acting on behalf of the owner and operator for the electricity generating facility. The submission shall be on a form prescribed by the Department, and shall include the following information:

1. Identification of the electricity generating facility;

7.74: continued

2. The name of the designated representative;
3. The address, email address, and telephone number of the designated representative at the time of submission of the Certificate of Representation;
4. A list of the owner(s) and operator(s) of the electricity generating facility at the time of submission of the Certificate of Representation;
5. The following certification statements by the designated representative.
 - a. "I certify I was selected as the designated representative, by an agreement binding on the owner and operator of the facility."
 - b. "I certify that I have all the necessary authority to carry out my duties and responsibilities under 310 CMR 7.74 on behalf of the owner and operator of the facility and that the owner and operator shall be fully bound by my representations, action, inactions, or submissions";
6. The signature of the designated representative and the date signed; and
7. If applicable, a list of persons authorized to submit Notices of Transfer of allowances pursuant to 310 CMR 7.74(9)(c) at the time of submission of the Certificate of Representation, and the following:
 - a. The name, address, email address, and telephone number of such persons.
 - b. The following certification statement by the designated representative. "I certify any notice of transfer of allowances submitted by any person identified by me as authorized to submit a notice of transfer of allowances under 310 CMR 7.74 shall be deemed a notice of transfer of allowances submitted by me."

(10) Penalties and Enforcement.

- (a) The failure of an owner or operator to offset its CO₂ emissions limit in compliance with 310 CMR 7.74(6)(e) shall be deemed a release of air pollutants into the environment without the approval or authorization of the Department and shall be presumed to constitute a significant impact to public health, welfare, safety, or the environment.
- (b) If the owner or operator of an electricity generating facility is not holding sufficient allowances in its allowance registry account by March 1st of each year to offset its CO₂ emissions as calculated in accordance with the requirements of 310 CMR 7.74(6)(e), then within 14 calendar days of receipt of notice by the Department, the owner or operator shall transfer into the electricity generating facility's allowance registry account, three additional allowances for every one ton of CO₂ emissions not offset, and then the Department will deduct the allowances from the allowance registry account.
- (c) In addition to the requirements of 310 CMR 7.74(10)(a) and (b), the Department may enforce the requirements of 310 CMR 7.74 in accordance with applicable federal and Massachusetts law including, but not limited to, M.G.L. c. 21A, § 16, and 310 CMR 5.00: *Administrative Penalty*; M.G.L. c. 111, § 2C; M.G.L. c. 111, §§ 142A through 142E and M.G.L. c. 21N, § 7(d).

(11) Program Review. Not later than December 31, 2021 and every ten years thereafter, the Department shall complete a review, including an opportunity for public comment, of the requirements of 310 CMR 7.74 to determine whether the program should be amended. This review shall evaluate CO₂ emissions, costs, consistency with statewide CO₂ emissions limits established pursuant to M.G.L. c. 21N, and any other information relevant to review of the program.

(12) Declining CO₂ Emissions Limits in Existing Plan Approvals. The requirements in 310 CMR 7.74 supersede the declining annual GHG or CO₂ emissions limits in an electricity generating facility's plan approval issued pursuant to 310 CMR 7.02. All other terms and conditions of such plan approval remain in effect unless a modification of such plan approval is issued by the Department in accordance with 310 CMR 7.02.

(13) Compliance with All Applicable Requirements. An owner or operator of an electricity generating facility subject to 310 CMR 7.74 shall comply with all other state and federal applicable statutes and regulations.

(14) Owner and Operator Responsible for Compliance. Whenever any provision in 310 CMR 7.74 requires an action to be taken by an owner or operator, any owner or operator of an electricity generating facility may take the action; provided that all owners and operators of the electricity generating facility are responsible for ensuring that the proper action is taken, and all owners and operators are jointly and severally liable for compliance with 310 CMR 7.74.

7.75: Clean Energy Standard

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

(1) Purpose, Authority and Scope. The purpose of 310 CMR 7.75, promulgated in conjunction with 310 CMR 7.74, is to assist the Commonwealth in achieving the greenhouse gas emissions reduction goals adopted pursuant to M.G.L. c. 21N, § 3(b), by establishing a clean energy standard (CES) that will increase the level of clean electricity that is purchased from the regional electric grid for consumption in Massachusetts. To achieve those goals, the Executive Office of Energy and Environmental Affairs (EEA) and the Department, pursuant to M.G.L. c. 21A, §§ 2 and 8 and M.G.L. c. 21N, §§ 3(c), 4 and 7, hereby jointly promulgate 310 CMR 7.75 following consultation with the Department of Energy Resources (DOER) and based on the considerations specified in M.G.L. c. 21N, § 3(c). In exercising their broad authority and discretion under M.G.L. c. 21N, § 3(c), EEA and the Department have determined that establishing the CES, along with the Commonwealth's other climate programs and policies, will ensure achievement of the greenhouse gas emissions limits as established under M.G.L. c. 21N, and that the 310 CMR 7.75 levels are consistent with, and take account of, regional programs such as the Regional Greenhouse Gas Initiative (RGGI) and the Renewable Portfolio Standard (RPS). The Department is also consolidating in 310 CMR 7.75 a requirement previously codified at 310 CMR 7.71(9) for retail sellers of electricity to report statewide greenhouse gas emissions and to monitor and ensure compliance with the reporting provisions of M.G.L. c. 21N, § 2(a)(5). 310 CMR 7.75 is also promulgated pursuant to M.G.L. c. 21A, § 16 and M.G.L. c. 111, §§ 2C and 142A through 142E.

(2) Definitions. The terms used in 310 CMR 7.75 are defined in 310 CMR 7.75(2) and 310 CMR 7.00: *Definitions*. Where a term is defined in both 310 CMR 7.00: *Definitions* and 310 CMR 7.75, the definition in 310 CMR 7.75 shall apply.

Biogenic Greenhouse Gas Emissions means emissions of carbon dioxide that result from the combustion of biogenic (plant or animal) material, excluding fossil fuels.

Business Day means Monday through Friday, exclusive of state and federal legal holidays.

Carbon Dioxide Equivalent means the amount of carbon dioxide by weight that would produce the same amount of global warming impact as a given weight of another greenhouse gas.

Certificates Obligation means a term defined in the NEPOOL GIS operating rules at Rule 4.1(b).

CES Alternative Compliance Credit means a credit obtained by a retail seller of electricity upon making a CES alternative compliance payment. Such credit is used to document compliance with 310 CMR 7.75(4)(a). One unit of credit shall be equivalent to one clean generation attribute.

CES-E Alternative Compliance Credit means a credit obtained by a retail seller of electricity upon making a CES-E alternative compliance payment. Such credit is used to document compliance with 310 CMR 7.75(4)(b). One unit of credit shall be equivalent to one clean existing generation attribute.

CES Alternative Compliance Payment (CES ACP) means a payment of a certain dollar amount per MWh, resulting in the issuance of CES alternative compliance credits, which a retail seller of electricity may submit to the Department in *lieu* of providing clean generation attributes required under 310 CMR 7.75(4)(a).

CES-E Alternative Compliance Payment (CES-E ACP) means a payment of a certain dollar amount per MWh, resulting in the issuance of CES-E alternative compliance credits, which a retail seller of electricity may submit to the Department in *lieu* of providing clean existing generation attributes required under 310 CMR 7.75(4)(b).

CES Statement of Qualification means a written document from the Department that qualifies a generation unit as a clean generation unit, or that qualifies a portion of the annual electrical energy output of a generation unit as clean generation.

7.75: continued

CES-E Statement of Qualification means a written document from the Department that qualifies a generation unit as a clean existing generation unit, or that qualifies a portion of the annual electrical energy output of a generation unit as clean existing generation.

Clean Existing Generation means the electrical energy output, or that portion of the electrical energy output, excluding any electrical energy utilized for parasitic load of a clean existing generation unit, that qualifies under:

- (a) the special provisions for a generation unit located in a control area adjacent to the ISO-NE control area, pursuant to 310 CMR 7.75(7)(b); or
- (b) the special provisions for clean existing generation units, pursuant to 310 CMR 7.75(7)(c); or
- (c) any other applicable provision of 310 CMR 7.75.

Clean Existing Generation Attribute means a generation attribute of the electrical energy output of a specific clean existing generation unit that derives from the unit's production of clean existing generation.

Clean Existing Generation Unit means a nuclear or hydroelectric generation unit that:

- (a) is located in Massachusetts, or in a jurisdiction that exported at least 4,000,000 MWh of electricity to Massachusetts in at least two years from 2001 through 2016, on a net annual basis, as reflected in the state greenhouse gas emissions inventories published annually by the Department;
- (b) has a nameplate capacity greater than 30 megawatts; and
- (c) commenced commercial operation before January 1, 2011.

Clean Generation means the electrical energy output, or that portion of the electrical energy output, excluding any electrical energy utilized for parasitic load of a clean generation unit, that qualifies under:

- (a) the special provisions for a generation unit located in a control area adjacent to the ISO-NE control area, pursuant to 310 CMR 7.75(7)(b); or
- (b) any other applicable provision of 310 CMR 7.75 or 225 CMR 14.00: *Renewable Energy Portfolio Standard - Class I*.

Clean Generation Attribute means the generation attribute that is either:

- (a) a generation attribute of the electrical energy output of a specific clean generation unit that derives from the unit's production of clean generation; or
- (b) any other generation attribute that is retained pursuant to St. 2008, c. 169, § 83D(h), as inserted by St. 2016, c. 188, § 12. All generation attributes retained pursuant to St. 2008, c. 169, § 83D(h), as inserted by St. 2016, c. 188, § 12, including such generation attributes that derive from generation units that do not satisfy all limitations in 310 CMR 7.75(7), are clean generation attributes.

Clean Generation Unit means a generation unit or aggregation that has received a CES statement of qualification from the Department, or that has received an RPS statement of qualification from DOER.

Commercial Operation Date means the date that a generation unit first produces electrical energy for sale within the ISO-NE control area or within an adjacent control area. In the case of transmission capacity that is used to transmit clean energy, the date on which the transmission capacity first transmitted energy into the ISO-NE control area or an adjacent control area.

Compliance Filing means a document filed annually by a retail seller of electricity in a format determined by the Department documenting compliance with 310 CMR 7.75(4), submitted no later than July 1st, or the first business day thereafter, of the subsequent compliance year.

Compliance Year means a calendar year beginning January 1st and ending December 31st, for which a retail seller of electricity that is not an Municipal Electric Department or Municipal Light Board must demonstrate that it has met the requirements of 310 CMR 7.75(4) and (5).

7.75: continued

Control Area means a geographic region in which a common generation control system is used to maintain scheduled interchange of electrical energy within and without the region.

Dedicated Transmission Line means a transmission line with a commercial operation date after December 31, 2017 that is not electrically connected to any generation unit that is not a clean generation unit.

Emitting Electricity Generators means electricity generators that are powered by any fossil or biogenic fuels.

Emitting Megawatt Hours means megawatt hours that are generated by emitting electricity generators.

End-use Customer means a person or entity in Massachusetts that purchases electrical energy at retail from a retail seller of electricity, except that a generation unit taking station service at wholesale from ISO-NE or self-supplying from its owner's other generating stations, shall not be considered an end-use customer.

Generation Attribute means a non-price characteristic of the electrical energy output of a generation unit including, but not limited to, the generation unit's fuel type, emissions, vintage and eligibility for renewable or clean energy programs.

Generation Unit. A facility that converts a fuel or an energy resource into electrical energy.

GIS Certificate means an electronic record produced by the NEPOOL GIS that identifies generation attributes of each MWh accounted for in the NEPOOL GIS.

Greenhouse Gas means any chemical or physical substance that is emitted into the air and that the Department may reasonably anticipate will cause or contribute to climate change including, but not limited to, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride.

Intermittent Generation Unit means as determined by the Department, a generation unit that utilizes resources regarding which the timing or magnitude is not predictable or controllable.

ISO-NE means ISO New England Inc., the independent system operator for New England, the regional transmission organization for most of New England, which is authorized by the Federal Energy Regulatory Commission (FERC) to exercise for the New England Control Area the functions required pursuant to the FERC's Order No. 2000 and the FERC's corresponding regulations.

ISO-NE Settlement Market System means the ISO-NE's electronic database system into which all real-time load and generation data are entered and from which such data are provided to the NEPOOL GIS.

Lifecycle Greenhouse Gas Emissions means the aggregate quantity of greenhouse gas emissions including, but not limited to, direct emissions and significant indirect emissions such as significant emissions from land use changes, and temporal changes in forest carbon sequestration and emissions resulting from biomass harvests, regrowth, and avoided decomposition as determined by the department, related to the full fuel lifecycle, including all stages of fuel and feedstock production and distribution, from feedstock generation or extraction through the distribution and delivery of the finished fuel to the ultimate consumer, where the mass values for all greenhouse gases are adjusted to account for their relative global warming potential.

Massachusetts Department of Energy Resources or DOER means the Massachusetts agency established pursuant to M.G.L. c. 25A, §§ 1 through 13.

Megawatt-hour (Mwh) means a unit of electrical energy or work equivalent to one million watts of power operating for one hour.

7.75: continued

Municipal Electric Department (MED) means a municipal electric department as defined in M.G.L. c. 164A, § 1.

Municipal Light Board (MLB) means a municipal light board as defined in M.G.L. c. 164A, § 1.

NEPOOL GIS means the NEPOOL Generation Information System, which includes a generation information database and certificate system, operated by the New England Power Pool (NEPOOL), its designee or successor entity, that accounts for generation attributes of electrical energy consumed and generated within, imported into, or exported from the ISO-NE control area.

NERC Tag means a document that identifies an electrical energy interchange transaction and its associated participants, assigned in accordance with rules set forth by the North American Electric Reliability Corporation (NERC), a nonprofit corporation granted by the FERC the legal authority to enforce mandatory reliability standards for the U.S. bulk power system, subject to FERC oversight.

Non-emitting Electricity Generators means electricity generators powered by hydro, nuclear, ocean, solar or wind power.

Non-emitting Megawatt Hours means megawatt hours that are generated by non-emitting electricity generators.

Operator means any person or entity that has charge or control of a generation unit subject to 310 CMR 7.75(7) through (9) including, without limitation, a duly authorized agent or lessee of the owner, or a duly authorized independent contractor.

Owner means any person or entity that, alone or in conjunction with others, has legal ownership, a leasehold interest, or effective control over the real property or property interest upon which a generation unit is located, or the airspace above said real property including, without limitation, a duly authorized agent of the owner. For the purposes of 310 CMR 7.75, owner does not mean a person or entity holding legal title or security interest solely for the purpose of providing financing.

Retail Electricity Product means electrical energy offering that is distinguished by its generation attributes and that is offered for sale by a retail seller of electricity to end-use customers.

Retail Seller of Electricity or Retail Seller means a competitive supplier licensed by the Department of Public Utilities or, as each is defined in M.G.L. c. 164A, § 1, an electric utility, municipal electric department or municipal light board that is connected to the regional electric grid.

RPS Alternative Compliance Credit means a credit obtained by a retail seller of electricity upon making a payment pursuant to 225 CMR 14.08(3): *Alternative Compliance*, and used to comply with 225 CMR 14.07: *Renewable Energy Portfolio Standard - Class I*.

RPS Class I Renewable Generation Unit means a generation unit or aggregation that has received a statement of qualification as an RPS Class I renewable generation unit from DOER pursuant to 225 CMR 14.00: *Renewable Energy Portfolio Standard - Class I*.

RPS Statement of Qualification means a written document issued by DOER pursuant to 225 CMR 14.06: *Qualification Process for RPS Class I, Solar Carve-out Renewable Generation Units, and Solar Carve-out II Renewable Generation Units* that qualifies a generation unit or aggregation as an RPS Class I qualified generation unit, or that qualifies a portion of the annual electrical energy output of a generation unit.

Short Ton means 2000 pounds or 0.9072 metric tons.

7.75: continued

(3) Applicability. Retail sellers are required to comply with 310 CMR 7.75.

(4) Clean Energy Standard and CES-E Standard. The total annual sales of each retail electricity product sold to Massachusetts end-use customers by a retail seller that is not an MED or MLB shall include a minimum percentage of electrical energy sales with clean generation attributes and clean existing generation attributes.

(a) For calendar years 2018 through 2050, percentage requirements for clean generation attributes are listed in 310 CMR 7.75(4): *Table A.*

Table A

Year	Retail Sellers, except Municipal Electric Departments and Municipal Light Boards
2018	16%
2019	18%
2020	20%
2021	22%
2022	24%
2023	26%
2024	28%
2025	30%
2026	32%
2027	34%
2028	36%
2029	38%
2030	40%
2031	42%
2032	44%
2033	46%
2034	48%
2035	50%
2036	52%
2037	54%
2038	56%
2039	58%
2040	60%
2041	62%
2042	64%
2043	66%
2045	70%
2044	68%

7.75: continued

Table A (continued)

Year	Retail Sellers, except Municipal Electric Departments and Municipal Light Boards
2046	72%
2047	74%
2048	76%
2049	78%
2050, and each year thereafter	80%

(b) Clean Energy Standard for Clean Existing Generation Units (CES-E). For calendar year 2021 and 2022, the percentage requirement for clean existing generation attributes shall be 20%. For calendar years 2023 through 2050, percentage requirements for clean existing generation attributes shall be determined by dividing 20% by the percentage provided by the Department pursuant to 310 CMR 7.75(9)(b)4. for the year four years before the calendar year for which the percentage requirement applies, rounded to the nearest percent (*i.e.*, if the percentage provided pursuant to 310 CMR 7.75(9)(b)4. for 2026 is 105%, then the percentage requirement for clean existing generation attributes in 2030 would be $20\% \div 105\% = 19\%$).

(5) Compliance Procedures for Retail Sellers That Are Not MEDs or MLBs.

(a) Standard Compliance. Each retail seller subject to 310 CMR 7.75(4) shall be deemed to be in compliance with 310 CMR 7.75 if the information provided in the compliance filing submitted pursuant to 310 CMR 7.75(5) is true and accurate and demonstrates compliance with 310 CMR 7.75(4). Such retail seller shall demonstrate, using a form provided by the Department or DOER, that clean generation attributes and clean existing generation attributes used for compliance have not otherwise been, nor will be, sold, retired, claimed, used or represented, as part of electrical energy output or sales, or used to satisfy obligations in jurisdictions other than Massachusetts.

(b) Banked Compliance.

1. Beginning in 2021, a retail seller subject to 310 CMR 7.75(4)(a) may use clean generation attributes produced in either or both of the two prior compliance years, subject to the limitations in 310 CMR 7.75(5)(b) and provided that the retail seller is in compliance with 310 CMR 7.75 for all previous compliance years. In addition, the retail seller shall demonstrate, using a form provided by the Department or DOER, that such attributes:

- Were in excess of the clean generation attributes needed for compliance in the compliance year in which they were generated, and that such excess attributes have not previously been used for compliance with 310 CMR 7.75;
- Do not exceed 30% of the clean energy generation attributes needed by the retail seller for compliance with 310 CMR 7.75(4)(a) in the year they were generated, subject to 310 CMR 7.75(5)(b)1.d.;
- Were produced during the compliance year in which they are claimed as excess by the generation of electrical energy sold to end-use customers in the ISO-NE control area; and
- Have not otherwise been, nor will be, sold, retired, claimed or represented as part of electrical energy output or sales, or used to satisfy obligations in jurisdictions other than Massachusetts.

2. Any RPS-eligible renewable generation attributes claimed for compliance with RPS pursuant to 225 CMR 14.08(2): *Banked Compliance* and used to comply with 225 CMR 14.07: *Renewable Energy Portfolio Standard - Class I* in a particular year shall be counted toward compliance with 310 CMR 7.75 in that year.

3. A retail seller subject to 310 CMR 7.75(4)(b) may not use clean existing generation attributes produced in prior compliance years to comply with said provision.

7.75: continued

(c) Alternative Compliance. Any RPS alternative compliance credits claimed pursuant to 225 CMR 14.08(3)(a) and used to comply with 225 CMR 14.07: *Renewable Energy Portfolio Standard - Class I* shall be counted toward compliance with 310 CMR 7.75(4)(a). A retail seller subject to 310 CMR 7.75(4) may discharge its obligations under 310 CMR 7.75(4)(a), in whole or in part, by making a CES ACP to the Department. A retail seller subject to 310 CMR 7.75(4) may discharge its obligations under 310 CMR 7.75(4)(b), in whole or in part, by making a CES-E ACP to the Department. Such funds shall be deposited in a segregated account, which may be the same account established to receive auction proceeds under 310 CMR 7.74(6)(h)1.a.i., administered by a Trustee appointed by EEA and the Department, and used for the purposes set forth in 310 CMR 7.75(5)(c)2.

1. Alternative Compliance Procedures.

a. Procedures for CES ACP. A retail seller subject to 310 CMR 7.75(4) shall receive CES alternative compliance credits from the Department, subject to the following:

i. The quantity of credits, specified in MWh, that can be applied to its obligations under 310 CMR 7.75(4)(a) shall be determined by calculating the ratio of the total of CES ACPs paid for the compliance year to the CES ACP rate for that compliance year.

ii. The CES ACP rate in dollars shall be 0.75 times the rate calculated annually by DOER pursuant to 225 CMR 14.08(3)(a)2 for years 2018 through 2020, and 0.50 times the rate calculated annually by DOER pursuant to 225 CMR 14.08(3)(a)2. for years 2021 through 2050.

b. Procedures for CES-E ACP. A retail seller subject to 310 CMR 7.75(4) shall receive CES-E alternative compliance credits from the Department subject to the following:

i. The quantity of credits, specified in MWh, that can be applied to its obligations under 310 CMR 7.75(4)(b) shall be determined by calculating the ratio of the total of CES-E ACPs paid for the compliance year to the CES-E ACP rate for that compliance year.

ii. The CES-E ACP rate in dollars shall be 0.10 times the rate specified by DOER pursuant to 225 CMR 14.08(3)(a)2. for years 2021 through 2050.

2. Use of Funds. Funds deposited pursuant to 310 CMR 7.75(5)(c) shall be expended to further the goals of M.G.L. c. 21N by supporting programs and projects to reduce greenhouse gas emissions to mitigate the impacts of climate change including, but not limited to, clean energy and vehicle electrification projects; programs or projects to support adaptation to the impacts of climate change; mitigation or adaptation programs or projects involving communities that are already adversely impacted by air pollution including, but not limited to, environmental justice communities; and for the administration of any such programs or projects. Such funds may also be used for the administration of 310 CMR 7.75. Such funds shall be expended at the direction of the Trustee, in consultation with EEA and the Department. The Trustee, EEA and the Department may consult with and enter into agreements with other agencies within the Energy and Environmental Affairs Secretariat to assist in the administration and expenditure of such funds.

(d) Treatment of Existing Contracts Executed as of August 11, 2017. Notwithstanding 310 CMR 7.75(4), in determining the total CES-qualified MWh applied to each retail seller subject to 310 CMR 7.75(4) in 2018 and 2019, the Department shall not include that portion of electrical energy sales that were subject to a contract executed or extended prior to August 11, 2017, provided that the electricity was sold at a price specified in the contract and the retail seller provides the Department with satisfactory documentation of the terms of such contracts. Contracted electrical energy delivered after December 31, 2019 shall be included in the CES, regardless of the contract's date of execution or extension.

1. In order to demonstrate eligibility of contracts for exemption under 310 CMR 7.75(5)(d), retail sellers shall provide the relevant documentation by December 31, 2017 in accordance with a form prescribed by the Department including, but not limited to, the execution and expiration dates of the contracts and the projected annual volume of electric energy supplied at a contract-specified price.

7.75: continued

2. In order to demonstrate eligibility of electrical energy sales for exemption under 310 CMR 7.75(5)(d), retail sellers shall provide the relevant documentation by July 1st of the year after the sales occurred, along with information required in accordance with a form prescribed by the Department including, but not limited to, the execution and expiration dates of the contracts and the actual annual volume of electric energy supplied at a contract-specified price.
- (e) Treatment of Existing Contracts Executed as of October 4, 2019. Notwithstanding 310 CMR 7.75(4), in determining the amount of CES E-qualified MWh applied to each retail seller subject to 310 CMR 7.75(4)(b) in 2021 and 2022, the Department shall not include that portion of electrical energy sales that were subject to a contract executed or extended prior to October 4, 2019, provided that the electricity was sold at a price specified in the contract and the retail seller provides the Department with satisfactory documentation of the terms of such contracts.
1. The adjustment to the retail electricity seller's compliance obligation pursuant to 310 CMR 7.75(4)(b) shall be equal to 20% of the amount of contracted electricity energy sales and shall apply to sales that occur in 2021 and 2022 only.
 2. In order to demonstrate eligibility of electrical energy sales for exemption under 310 CMR 7.75(5)(e), retail sellers shall provide the relevant documentation by July 1st of the year after the year for which the retail seller has exempt electrical energy sales, along with information required in accordance with a form prescribed by the Department including, but not limited to, the execution and expiration dates of the contracts and the actual annual volume of electric energy supplied at a contract-specified price.
- (6) Annual Compliance Filings for Retail Sellers That Are Not MEDs or MLBs.
- (a) Date of Annual Compliance Filing. For each compliance year, each retail seller subject to 310 CMR 7.75(4) shall file an annual compliance filing with the Department no later than the first day of July, or the first business day thereafter, of the subsequent compliance year. Such retail sellers shall complete an annual compliance report for compliance years 2018 through 2050.
- (b) Contents of Annual Compliance Filing. For each retail electricity product, the filing shall document compliance with the provisions of 310 CMR 7.75(4) and (5) using a form provided by the Department and shall include, but not be limited to, the following:
1. Total Electrical Energy Sales to End-use Customers. Documentation of the total MWh of electrical energy allocated by the retail seller to end-use customers in the compliance year. Such allocation is defined as the total quantity of such seller's certificates obligation that the seller correctly allocated or should have allocated to all of the seller's Massachusetts retail subaccounts in the NEPOOL GIS, in compliance with all relevant provisions of Part 4 of the NEPOOL GIS Operating Rules, as specified in the Guideline on the Determination of Sales to End-use Customers.
 2. Electrical Energy Sales to End-use Customers by Product. Documentation of the total MWh of each retail electricity product allocated by the retail seller to end-use Massachusetts customers in the compliance year, verified by an independent third-party satisfactory to the Department. Such allocation is defined as the quantity of the seller's certificates obligation that the seller correctly allocated or should have allocated to each of the seller's Massachusetts retail subaccounts at the NEPOOL GIS, in compliance with all relevant provisions of Part 4 of the NEPOOL GIS Operating Rules, as specified in the Guideline on the Determination of Sales to End-use Customers.
 3. Attributes Allocated from the Compliance Year. Documentation of the total MWh of each retail electricity product allocated by the retail seller to end-use Massachusetts customers that had clean generation attributes and clean existing generation attributes during the compliance year, as follows:
 - a. For electrical energy transactions included in the ISO-NE Settlement Market System, the compliance filings shall include documentation from the NEPOOL GIS administrator of the retail seller's ownership of GIS certificates representing clean generation attributes and clean existing generation attributes during the compliance year.

7.75: continued

- b. For electrical energy transactions not included in the ISO-NE Settlement Market System, but for which the retail seller has secured GIS certificates from the NEPOOL GIS, the compliance filings shall include documentation from the NEPOOL GIS of the retail seller's ownership of GIS Certificates representing clean generation attributes and clean existing generation attributes during the compliance year.
4. Attributes Allocated from Banked Compliance. Allocation by each retail seller, itemized by retail electricity product, of any quantity of clean generation attributes banked from one or both of the two previous years pursuant to 310 CMR 7.75(5)(b) that are used to demonstrate compliance with the clean energy standard in the current compliance year.
5. Alternative Compliance Credits. Allocation by each retail seller, itemized by retail electricity product, of any CES alternative compliance credits claimed pursuant to 310 CMR 7.75(5)(c)1.a., CES-E alternative compliance credits claimed pursuant to 310 CMR 7.75(5)(c)1.b., or RPS alternative compliance credits claimed pursuant to 225 CMR 14.08(3)(a): *RPS Class I Procedures*, along with a copy of any alternative compliance payment receipt(s).
6. Attributes Banked for Future Compliance. Identification of any quantity of clean generation attributes, that the retail seller anticipates claiming for purposes of banked compliance in subsequent years under the banked compliance provisions of 310 CMR 7.75(5)(b).
7. Attributes Retained Pursuant to St. 2008, c. 169, § 83D(h), as Inserted by St. 2016, c. 188, § 12. For the purpose of determining compliance with 310 CMR 7.75(4)(a), clean generation attributes that are retained by an electric utility pursuant to St. 2008, c. 169, § 83D(h), as inserted by St. 2016, c. 188, § 12, and that are not attributed to RPS Class I eligible resources, shall be assigned to all end use customers served by all retail sellers subject to 310 CMR 7.75(4)(a). The number of attributes assigned to each such retail seller's customers shall be based on the retail seller's proportion of the total retail electricity product sold statewide by all such retail sellers.
- (7) Eligibility Criteria for Clean Generation Units and Clean Existing Generation Units.
- (a) Eligibility Criteria for Clean Generation Units. A generation unit may qualify as a clean generation unit subject to the limitations in 310 CMR 7.75(7). The Department shall consider all limitations in 310 CMR 7.75(7), including the emissions criteria in 310 CMR 7.75(7)(a)1.a.ii., when considering whether to provide the owner or operator of such generation unit with a CES statement of qualification pursuant to 310 CMR 7.75(8)(c).
1. Fuels, Energy Resources and Technologies. In order to be considered by the Department for qualification, a generation unit must satisfy at least one of the two eligibility criteria in 310 CMR 7.75(7)(a)1.a. and not be excluded by 310 CMR 7.75(7)(a)1.b.
- a. A generation unit must satisfy at least one of the following two eligibility criteria:
- The generation unit has been issued an RPS statement of qualification as an RPS Class I renewable generation unit pursuant to 225 CMR 14.06(3): *Issuance or Non-issuance of a Statement of Qualification*;
 - The generation unit has net lifecycle GHG emissions, over a 20-year life cycle, that yield at least a 50% reduction of greenhouse gas emissions per unit of useful energy relative to the lifecycle greenhouse gas emissions from the aggregate use of the operation of a new combined cycle natural gas electric generating facility using the most efficient commercially available technology as of the date of the statement of qualification application for the portion of electricity delivered by the generation unit;
- b. A generation unit that does not satisfy applicable fuel, energy resource, or technology-specific provisions or limitations in 225 CMR 14.05(1)(a)5. through 7. shall not qualify under 310 CMR 7.75(7); provided, however, that any generation unit that is a hydroelectric generator that has a nameplate capacity greater than 30 megawatts may qualify under 310 CMR 7.75(7) if it satisfies the emissions criteria in 310 CMR 7.75(7)(a)1.a.ii.
2. Commercial Operation Date. For a generation unit that qualifies as a clean generation unit pursuant to 310 CMR 7.75(7)(a)1.a.ii., the commercial operation date shall be after December 31, 2010.

7.75: continued

3. Metering. For a generation unit that qualifies as a clean generation unit pursuant to 310 CMR 7.75(7)(a)1., the electrical energy output from the generation unit shall be verified by the ISO-NE or by an independent verification system or person participating in the NEPOOL GIS accounting system as an independent Third Party Meter Reader, as defined in Rule 2.5(j) of the NEPOOL GIS Operating Rules, and approved by the Department.

4. Capacity Obligation. For a generation unit that qualifies as a clean generation unit pursuant to 310 CMR 7.75(7)(a)1., the generation unit's generating capacity is subject to the obligations in 310 CMR 7.75(7)(a)4.

a. The amount of the generation capacity of the generation unit whose electrical energy output is claimed as clean generation shall not be committed to any control area other than the ISO-NE control area, unless such generation unit has entered into a capacity obligation in another control area before the start of the first available compliance year for the ISO-NE forward capacity market, in which case 310 CMR 7.75(7)(a)4.a. shall apply upon the expiration of that capacity obligation.

b. The generation unit owner or operator of a generation unit that is not an intermittent generation unit shall commit to the ISO-NE Control Area the amount of the capacity of that generation unit claimed as clean generation by submitting, by the applicable deadline, a show of intent for the ISO-NE forward capacity auction that is the earliest available for the generation unit after the owner or operator has submitted a CES statement of qualification application, unless the owner or operator can provide to the Department documentation of its prior commitment to the ISO-NE control area of such capacity. The owner or operator of any generation unit that cannot demonstrate such prior commitment must also clear the forward capacity auction for which it has qualified, even if it must participate as a price taker.

c. A clean generation unit that was deemed unqualified by the ISO-NE for participation in the ISO-NE forward capacity market for technical reasons may commit capacity to another control area and may receive GIS certificates for the energy sold into the ISO-NE control area, subject to a determination by the Department.

(b) Special Provisions for a Generation Unit Located in a Control Area Adjacent to the ISO-NE Control Area. The portion of the total electrical energy output of a clean generation unit or clean existing generation unit located in a control area adjacent to the ISO-NE control area that qualifies as clean generation or clean existing generation shall meet the relevant requirements in Rule 2.7(c) and all other relevant sections of the NEPOOL GIS Operating Rules, and the requirements in 310 CMR 7.75(7)(b).

1. The generation unit owner or operator shall provide documentation, using a form provided by the Department or DOER, of a contract or other legally enforceable obligation, that is executed between the generation unit owner or operator and an electrical energy purchaser located in the ISO-NE control area for delivery of the generation unit's electrical energy to the ISO-NE control area. For a clean generation unit, such documentation shall include provisions for obtaining associated transmission rights for delivery of the generation unit's electrical energy from the generation unit to the ISO-NE control area using transmission capacity with a commercial operation date after December 31, 2016. For a clean existing generation unit, such documentation shall include provisions for obtaining associated transmission rights for delivery of the generation unit's electrical energy from the generation unit to the ISO-NE control area using transmission capacity that had a commercial operation date before January 1, 2017, and that directly connects the ISO-NE control area with a jurisdiction that exported at least 4,000,000 MWh of electricity to Massachusetts in at least two years from 2001 through 2016, on a net annual basis, as reflected in the state greenhouse gas emissions inventories published annually by the Department. If requested by the Department, the generation unit owner or operator shall pay for evaluation and verification of the provisions of such documentation by an independent party that is engaged or approved by the Department. The Department may rely on information in the NEPOOL GIS to address the requirements of 310 CMR 7.75(7)(b)1. instead of requiring separate documentation.

2. The generation unit owner or operator for a clean generation unit or clean existing generation unit shall provide documentation using a form provided by the Department or DOER, that:

a. The electrical energy delivered pursuant to the legal obligation was settled in the ISO-NE Settlement Market System;

7.75: continued

b. The generation unit produced, during each hour of the applicable month, the amount of MWh claimed, as verified by the NEPOOL GIS administrator; if the originating control area employs a generation information system that is comparable to the NEPOOL GIS, information from that system may be used to support such documentation;

c. The electrical energy delivered under the legal obligation received a NERC tag confirming transmission from the adjacent control area to the ISO-NE control area using transmission capacity that meets the commercial obligation date and transmission path requirements specified in 310 CMR 7.75(7)(b)1.; and

d. The clean generation attributes or clean existing generation attributes have not otherwise been, nor will be, sold, retired, claimed, used or represented as part of electrical energy output or sales, or used to satisfy obligations in jurisdictions other than Massachusetts.

3. The generation unit owner or operator must provide an attestation in a form approved by the Department that it will not itself or through any affiliate or other contracted party, knowingly engage in the process of importing clean generation or clean existing generation into the ISO-NE control area for the creation of clean GIS certificates, and then exporting that energy or a similar quantity of other energy out of the ISO-NE control area during the same hour.

4. The quantity of electrical energy output from a clean generation unit or clean existing generation unit outside the ISO-NE control area that can qualify as clean generation or clean existing generation at the NEPOOL GIS during each hour is limited to the lesser of the clean generation or clean existing generation actually produced by the generation unit or the clean generation or clean existing generation actually scheduled and delivered into the ISO-NE control area.

5. For the purpose of determining compliance with 310 CMR 7.75(7)(b) and all other provisions of 310 CMR 7.75, a clean generation unit that delivers clean energy into the ISO-NE control area or an adjacent control area through a dedicated transmission line shall be considered to be located in the control area to which the clean energy is delivered.

(c) Special Provisions for Clean Existing Generation Units.

1. For any clean existing generation unit, the amount of electrical energy output that is clean existing generation in a given calendar year shall not exceed 2,500,000 MWh.

2. The amount of electrical output of a clean existing generation unit that qualifies as clean existing generation shall be the second lowest annual total amount of MWh that did not have attributes retired, claimed, used or represented, as part of electrical energy output or sales, or used to satisfy obligations in any jurisdiction other than Massachusetts in the years 2016 through 2018, as reflected in the NEPOOL-GIS.

3. Clean existing generation units must satisfy the requirements of 310 CMR 7.75(7)(a)3. and 4.

4. A generation unit that is not located in a jurisdiction that exported at least 4,000,000 MWh of electricity to Massachusetts in at least two years from 2001 through 2016 may qualify as a clean existing generation unit if it is located in a control area that is only electrically interconnected to control areas that are adjacent to the ISO-NE control area and satisfies all other requirements of 310 CMR 7.75.

5. For the purpose of determining compliance with 310 CMR 7.75 a clean existing generation unit located in a control area that is only electrically interconnected to control areas that are adjacent to the ISO-NE control area shall be considered to be located in an adjacent control area.

(8) Qualification Process for Clean Generation Units and Clean Existing Generation Units.

(a) Statement of Qualification Application. For clean generation units that have not received an RPS statement of qualification, a CES statement of qualification application shall be submitted to the Department by the owner or operator of the generation unit. For clean existing generation units, a CES-E statement of qualification application shall be submitted to the Department by the owner or operator of the generation unit. The applicant must use the most current forms and associated instructions provided by the Department, and must include all information, documentation, and assurances required by such forms and instructions.

7.75: continued

(b) Review Procedures.

1. The Department shall notify the applicant when the CES statement of qualification application or CES-E statement of qualification application is administratively complete or if additional information is required pursuant to 310 CMR 7.75(8)(a).

2. The Department may, in its sole discretion, provide an opportunity for public comment on any CES statement of qualification application or CES-E statement of qualification application.

(c) Issuance or Non-issuance of a Statement of Qualification.

1. If the Department finds that all or a portion of the electrical energy output of a generation unit meets the requirements for eligibility as clean generation pursuant to 310 CMR 7.75(7)(a), and the generation unit is not eligible to receive an RPS statement of qualification from DOER, the Department shall provide the owner or operator of such generation unit with a CES statement of qualification.

2. If the Department finds that all or a portion of the electrical energy output of a generation unit is clean existing generation, the Department shall provide the owner or operator of such generation unit with a CES-E statement of qualification.

3. The CES statement of qualification or CES-E statement of qualifications shall include any applicable restrictions and conditions that the Department deems necessary to ensure compliance by a generation unit with the provisions of 310 CMR 7.75.

4. If the generation unit does not meet the requirements for eligibility as a clean generation unit or clean existing generation unit, the Department shall provide written notice to the Owner or Operator, including the Department's reasons for such finding.

(d) Notification Requirements for Change in Eligibility Status. The owner or operator of a clean generation unit or clean existing generation unit shall notify the Department of any changes in the technology, operation, emissions, fuel sources, energy resources, capacity commitment, or other characteristics of the generation unit that may affect the eligibility of the unit as a clean generation unit or clean existing generation unit. The owner or operator shall submit the notification to the Department no later than five days following the end of the month during which such changes were implemented. The notice shall state the date the changes were made to the generation unit and describe the changes in sufficient detail to enable the Department to determine if a change in eligibility is warranted.

(e) Notification Requirements for Change in Ownership, Generation Capacity, or Contact Information. The owner or operator of a clean generation unit or clean existing generation unit shall notify the Department of any changes in the ownership, operating entity, generation capacity, NEPOOL GIS account, independent verification system for the generation unit's electrical energy output, or contact information for the generation unit. The owner or operator shall submit the notification to the Department no later than five days following the end of the month during which such changes were implemented.

(f) Time Limit for Project Implementation. Any CES statement of qualification shall expire 48 months after the issuance date of the CES statement of qualification (the expiration date) unless the commercial operation date of the generation unit is on or before the expiration date. The Department may, at its discretion, grant an extension of the expiration date of the CES statement of qualification upon petition by the owner or operator of the generation unit. If the owner or operator of such generation unit desires an extension, such owner or operator must submit a new CES statement of qualification application, and the decision of the Department on such new application may be made in accordance with the regulations and criteria that are applicable on the date that the Department receives that application.

(g) Suspension or Revocation of Statement of Qualification. The Department may suspend or revoke a CES statement of qualification or CES-E statement of qualification if the owner or operator of a clean generation unit fails to comply with 310 CMR 7.75.

(h) Identification of Clean Generation Units and Clean Existing Generation Units. The Department shall inform the NEPOOL GIS administrator which generation units should be designated clean generation units and clean existing generation units pursuant to 310 CMR 7.75.

(9) Reporting Requirements.

(a) Certification. Any person required by 310 CMR 7.75 to submit documentation to the Department shall provide:

1. The person's name, title and business address;
 2. The person's authority to certify and submit the documentation to the Department;
- and

7.75: continued

3. The following certification: "I hereby certify, under the pains and penalties of perjury, that I have personally examined and am familiar with the information submitted herein and, based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties, both civil and criminal, for submitting false information, including possible fines and imprisonment."
- (b) Annual Clean Energy Resource Report. The Department shall produce and make available to the public an annual report that summarizes information submitted to the Department by retail sellers subject to 310 CMR 7.75(4) in the annual compliance filings submitted to the Department pursuant to 310 CMR 7.75(6)(b). Such report shall include non-confidential data that provides the following:
1. The extent to which the retail sellers complied with the minimum clean energy standard, both separately and combined;
 2. The extent to which the retail sellers used standard compliance, banked compliance, and alternative compliance, in meeting the minimum standards; and
 3. The names, locations, and types of clean generation and clean existing generation from which the retail sellers, as an aggregate, obtained the clean energy attributes used in meeting the minimum standards.
 4. The total amount of electrical energy sales to end-use customers reported or should have reported pursuant to 310 CMR 7.75(6)(b)1., expressed in MWh and, beginning with the report for 2019, as a percentage of the total electrical energy sales to end use customers provided in the report for 2018.
- (c) Greenhouse Gas Emissions Reporting.
1. Each retail seller shall report annually to the Department its MWh sold and associated greenhouse gas emissions. The first required reporting year for retail sellers which are new competitive suppliers is the first year after 2017 in which they sell electricity in Massachusetts. Biogenic and non-biogenic greenhouse gas emissions shall be reported separately. This report shall be on a form provided by the Department.
 2. Deadlines.
 - a. Beginning with 2018 calendar year generation, retail sellers subject to 310 CMR 7.75(4) shall report the MWh required in 310 CMR 7.75(9)(c)4.a. through c. on a form provided by the Department no later than the first day of July after the calendar year in which the MWh were generated.
 - b. Beginning with 2018 calendar year emissions, the annual GHG emissions report shall be submitted no later than the 15th day of the second September following each calendar year. The report shall be submitted using the final annual emission factors provided by the Department for the purpose of calculating greenhouse gas emissions pursuant to 310 CMR 7.75(9)(c)3.
 - c. In order to finalize the annual biogenic and non-biogenic emission factors, the Department shall:
 - i. post draft annual emission factors, including methodologies and data sources, on its website for public comment for 30 days and notify retail sellers of the posting and the deadline for submittal of public comment; and
 - ii. post final annual emission factors, including methodologies and data sources, on its website.
 - d. Beginning with 2018 calendar year generation, MEDs and MLBs choosing to report under 310 CMR 7.75(9)(c)5.b. and c. shall submit those reports on a form provided by the Department no later than the 15th day of November after the calendar year in which the MWh were generated.
 3. For the report required in 310 CMR 7.75(9)(c)2.b., all retail sellers shall use the following formula to calculate greenhouse gas emissions:

$$\text{GHG} = (\text{EF} * \text{MWh} / 2000 \text{ pounds per short ton}) + \text{emissions reported in 310 CMR 7.75(9)(c)6.}$$

Where:

GHG = Short tons of greenhouse gases (in carbon dioxide equivalents) associated with electricity sold in MA in a particular calendar year.

EF = Emission factors supplied by the Department each year for biogenic and non-biogenic greenhouse gas emissions (pounds carbon dioxide equivalents per MWh).

Mwh = Annual electricity consumed by customers in a particular calendar year, increased to account for the portion of electricity lost during transmission and distribution (line losses), as reported pursuant to 310 CMR 7.75(6)(b)1. or

7.75: continued

310 CMR 7.75(9)(c)5.a., less the sum of certificates reported pursuant to 310 CMR 7.75(9)(c)4.b. and c. or MWh reported pursuant to 310 CMR 7.75(9)(c)5.b. and c.

4. Source of Megawatt Hour and Emissions Data for Retail Sellers Subject to 310 CMR 7.75(4).

- a. In calculating biogenic and non-biogenic greenhouse gas emissions, retail sellers shall report the same number of MWh used to calculate any CES certificates obligation under 310 CMR 7.75(6)(b)1., inclusive of line losses.
- b. Retail sellers shall report, by fuel and by state or province, the number of emitting and non-emitting MWh of electricity generated by emitting and non-emitting electricity generators represented by GIS renewable energy certificates or clean energy certificates retired in such seller's NEPOOL GIS Massachusetts Retail Subaccount, as defined in the NEPOOL GIS Operating Rules.
- c. If the number of GIS certificates retired in a retail seller's NEPOOL GIS Massachusetts Retail Subaccount and reported pursuant to 310 CMR 7.75(9)(c)4.b. are greater than the MWh reported pursuant to 310 CMR 7.75(9)(c)4.a., the retail seller shall indicate, on the 310 CMR 7.75(9)(c)4.b. report, which certificates will be excluded from GHG reporting so that the number of certificates does not exceed the MWh reported.

5. Source of Megawatt Hour and Emissions Data for Retail Sellers That Are MEDs or MLBs.

- a. In calculating biogenic and non-biogenic greenhouse gas emissions, MEDs and MLBs shall use the same number of MWh reported in the annual return to the Department of Public Utilities, inclusive of line losses.
- b. Optional MED and MLB Reporting of Non-emitting Electricity. MEDs and MLBs may choose to subtract any MWh of electricity generated by non-emitting electricity generators from the amount of MWh reported in 310 CMR 7.75(9)(c)5.a., if such non-emitting MWh are reported in the annual report due under 310 CMR 7.75(9)(c)1., and provided the following criteria are met:
 - i. for MWh neither owned nor contracted for, a report is provided from NEPOOL GIS showing that such non-emitting 225 CMR 14.00- or 225 CMR 15.00-eligible certificates are retired in the MED's or MLB's NEPOOL GIS Massachusetts Retail Subaccount or are transferred to the Reserved Certificate account, as defined in the NEPOOL GIS Operating Rules, or
 - ii. for MWh owned or contracted for, the MED or MLB:
 - A. reports MWh by fuel and by state or province;
 - B. provides information from the NEPOOL GIS showing that the certificates associated with the non-emitting MWh of electricity were unsettled certificates whose attributes were aggregated in residual mix certificates, or are retired in the MED's or MLB's NEPOOL GIS Massachusetts Retail Subaccount or are transferred to the Reserved Certificate account, as defined in the NEPOOL GIS Operating Rules; and
 - C. for contracted generators, the MED or MLB provides a copy of the contract or contracts establishing that it has purchased electricity from such generators and reports such MWh.
- c. Optional MED and MLB Reporting of Emitting Electricity. MEDs and MLBs may choose to report calculations of biogenic and non-biogenic greenhouse gas emissions, based on the methodology provided in 310 CMR 7.75(9)(c)6., if such emitting MWh are reported in the annual report due under 310 CMR 7.75(9)(c)1., and provided the following criteria are met:
 - i. for MWh neither owned nor contracted for, a report is provided from NEPOOL GIS showing that such emitting 225 CMR 14.00- or 225 CMR 15.00-eligible certificates are retired in the MED's or MLB's NEPOOL GIS Massachusetts Retail Subaccount, as defined in the NEPOOL GIS Operating Rules, or
 - ii. for MWh owned or contracted for, the MED or MLB:
 - A. reports MWh by fuel and by state or province;
 - B. provides information from the NEPOOL GIS showing that the certificates associated with the emitting MWh of electricity were unsettled certificates whose attributes were aggregated in residual mix certificates, or are retired or reserved in the MED's or MLB's NEPOOL GIS Massachusetts Retail Subaccount or are transferred to the Reserved Certificate account, as defined in the NEPOOL GIS Operating Rules; and

7.75: continued

C. for contracted generators, the MED or MLB provides a copy of the contract or contracts establishing that the MED or MLB has purchased electricity from such generators.

d. The total of all optional non-emitting and emitting MWh reported under 310 CMR 7.75(9)(c)5.b. and c. shall not be greater than the MWh reported in 310 CMR 7.75(9)(c)5.a.

6. Carbon dioxide, methane and nitrous oxide emissions from any emitting electricity generator shall be reported as follows:

$$\text{GHGi} = (\text{EFi} * \text{MWhi} / 2000 \text{ pounds per short ton})$$

Where:

GHGi = Short tons of greenhouse gases for each emitting fuel type i (in carbon dioxide equivalents) associated with electricity sold in MA in a particular calendar year.

EFi = Emission factors supplied by the Department each year for biogenic and non-biogenic greenhouse gas emissions for each emitting fuel type i (pounds carbon dioxide equivalents per MWh).

MWhi = as reported for fuel type i pursuant to 310 CMR 7.75(9)(c)4.b.

(d) The Department may specify the format and process by which any submission required pursuant to 310 CMR 7.75 shall occur, including electronic submission requirements. The Department may specify that certain submissions required pursuant to 310 CMR 7.75 be transmitted electronically to DOER, as the Department's agent instead of, or in addition to, the Department.

(10) Not later than December 31, 2017, the Department shall complete a review, including an opportunity for public comment, of options for including generators that meet all requirements of 310 CMR 7.75, except for the commercial operation date requirements in 310 CMR 7.75(7)(a)2. and (b)1., in the clean energy standard. This review shall also examine options for including annual standards for MEDs and MLBs in the clean energy standard.

(11) Not later than December 31, 2021, the Department shall complete a review, including an opportunity for public comment on the program review, of the requirements of 310 CMR 7.75 to determine whether the program should be amended. This review shall evaluate projected clean energy credit supply and costs, and any other information relevant to review of the program.

(12) Inspection and Record Retention.

(a) Document Inspection. The Department may audit the accuracy of all information submitted pursuant to 310 CMR 7.75. The Department may request and obtain from any owner, operator or authorized agent of a clean generation unit or clean existing generation unit, and from any retail seller, information that the Department determines necessary to monitor compliance with and enforcement of 310 CMR 7.75.

(b) Audit and Site Inspection. Upon reasonable notice to a retail seller or to a clean generation unit owner, operator or authorized agent, the Department may conduct audits, which may include inspection and copying of records and/or site visits to a clean energy generation unit or clean existing generation unit, or a retail seller's facilities including, but not limited to, all files and documents that the Department determines are related to compliance with 310 CMR 7.75.

(c) Record Retention. All documentation used to comply with any provision of 310 CMR 7.75 shall be retained for five years and provided to the Department electronically or in hard copy as requested by the Department.

(13) Enforcement.

(a) If a retail seller that is not an MED or MLB does not comply with the requirements of 310 CMR 7.75(4) and (5), then such retail seller shall be deemed to have caused air pollutant emissions releases to the environment without the approval or authorization of the department.

(b) The requirements of 310 CMR 7.75 shall be enforced in accordance with applicable federal and Massachusetts law including, but not limited to, the issuance of an administrative order or civil administrative penalties pursuant to M.G.L. c. 21A, § 16, 310 CMR 5.00: *Administrative Penalty*, M.G.L. c. 111, §§ 2C, 142A through 142E, and M.G.L. c. 21N, § 7(d).

7.76: Prohibitions on Use of Certain Hydrofluorocarbons in Refrigeration, Chillers, Aerosol Propellants, and Foam End-uses

(1) Purpose. The purposes of 310 CMR 7.76 are to prevent and control pollution to the atmosphere, as required by M.G.L. c. 111, §§ 142A and 142B, to support Massachusetts in achieving greenhouse gas emissions reductions goals established pursuant to M.G.L. c. 21N and to reduce hydrofluorocarbon emissions by adopting specific prohibitions for certain substances in refrigeration equipment, chillers, aerosol propellants, and foam end-uses.

(2) Definitions. The definitions in 310 CMR 7.76(2) apply to 310 CMR 7.76. Where a term defined in 310 CMR 7.70 also appears in 310 CMR 7.76, the definition in 310 CMR 7.76 is applicable for the purpose of 310 CMR 7.76.

Aerosol Propellant. A compressed gas or vapor in a container which, upon release of pressure and expansion through a valve, carries another substance from the container as a mist or spray.

Air Conditioning Equipment. Chillers, both centrifugal chillers and positive displacement chillers, intended for comfort cooling of occupied spaces.

Capital Cost. An expense incurred in the production of goods or in rendering services including, but not limited to, the cost of engineering, purchase, and installation of components or systems, and instrumentation, and contractor and construction fees.

Centrifugal Chiller. Air conditioning equipment that utilizes a centrifugal compressor in a vapor-compression refrigeration cycle. Under Centrifugal Chiller, a centrifugal chiller is a chiller intended for comfort cooling and does not include chillers used for industrial process cooling and refrigeration.

Cold Storage Warehouse. A cooled facility designed to store meat, produce, dairy products, and other products that are delivered to other locations for sale to consumers.

Component. A part of a refrigeration system, including but not limited to, a condensing unit, compressor, condenser, evaporator, and receiver; and all of its connections and subassemblies, without which the refrigeration system will not properly function or will be subject to failures.

Cumulative Replacement. All additions or changes in multiple components within a three-year period.

Effective Date of Prohibition. The date on which the prohibitions in 310 CMR 7.76(6) take effect.

End-use. Processes or classes of specific applications within industry sectors including, but not limited to, those listed in 310 CMR 7.76(6).

Flexible Polyurethane. A non-rigid polyurethane foam including, but not limited to, that used in furniture, bedding, and chair cushions.

Foam. A product with a cellular structure formed *via* a foaming process in a variety of materials that undergo hardening *via* a chemical reaction or phase transition.

Foam Blowing Agent. A substance that functions as a source of gas to generate bubbles or cells in the mixture during the formation of foam.

Household Refrigerators and Freezers. Refrigerators, refrigerator-freezers, freezers, and miscellaneous household refrigeration appliances intended for residential use. For the purposes of 310 CMR 7.76, Household Refrigerators and Freezers does not include Household Refrigerators and Freezers – Compact, or Household Refrigerators and Freezers – Built-in.

Household Refrigerators and Freezers – Compact. Any refrigerator, refrigerator-freezer or freezer intended for residential use with a total refrigerated volume of less than 7.75 cubic feet (220 liters).

7.76: continued

Household Refrigerators and Freezers – Built-in. Any refrigerator, refrigerator-freezer or freezer intended for residential use with 7.75 cubic feet or greater total volume and 24 inches or less depth not including doors, handles, and custom front panels; with sides which are not finished and not designed to be visible after installation; and that is designed, intended, and marketed exclusively to be: installed totally encased by cabinetry or panels that are attached during installation; securely fastened to adjacent cabinetry, walls or floor; and equipped with an integral factory-finished face or to accept a custom front panel.

Hydrofluorocarbon or HFC. A class of greenhouse gases that are saturated organic compounds containing hydrogen, fluorine, and carbon.

Integral Skin Polyurethane. A self-skinning polyurethane foam including, but not limited to, that used in car steering wheels and dashboards.

Metered Dose Inhaler, or Medical Dose Inhaler, or MDI. A device that delivers a measured amount of medication as a mist that a patient can inhale, typically used for bronchodilation to treat symptoms of asthma, chronic obstructive pulmonary disease (COPD), chronic bronchitis, emphysema, and other respiratory illnesses. An MDI consists of a pressurized canister of medication in a case with a mouthpiece.

New means:

- (a) products or equipment that are manufactured on or after the effective date of prohibition in 310 CMR 7.76(6): *Table 1*;
- (b) products or equipment first assembled and installed for an intended purpose with new or used components on or after the effective date of prohibition in 310 CMR 7.76(6): *Table 1*;
- (c) products or equipment to which components have been added to increase system capacity on or after the effective date of prohibition in 310 CMR 7.76(6): *Table 1*; or
- (d) products or equipment replaced or cumulatively replaced such that the cumulative capital cost on or after the effective date of prohibition in 310 CMR 7.76(6): *Table 1* of replacement exceeds 50% of the capital cost of replacing the whole system.

Person. Any individual, firm, association, organization, manufacturer, distributor, partnership, trust, corporation, limited liability company, company, state, or local governmental agency or public district.

Phenolic Insulation Board and Bunstock. Phenolic insulation including but not limited to that used for roofing and walls. Bunstock is a large solid box-like structure formed during the production of polystyrene insulation.

Polyolefin. Foam sheets and tubes made of polyolefin, a macromolecule formed by the polymerization of olefin monomer units.

Polystyrene Extruded Boardstock and Billet (XPS). A foam formed from polymers of styrene and produced on extruding machines in the form of continuous foam slabs which can be cut and shaped into panels used for roofing, walls, flooring, and pipes.

Polystyrene Extruded Sheet. Polystyrene foam including, but not limited to, that used for packaging and buoyancy or floatation. It is also made into food-service items including, but not limited to, hinged polystyrene containers (for "take-out" from restaurants); food trays (meat and poultry), plates, bowls, and retail egg containers.

Polyurethane. A polymer formed principally by the reaction of an isocyanate and a polyol.

Positive Displacement Chiller. Vapor compression cycle chillers that use positive displacement compressors, typically used for commercial comfort air conditioning. For the purpose of 310 CMR 7.76, Positive Displacement Chiller is a chiller intended for comfort cooling and does not include cooling for industrial process cooling and refrigeration.

7.76: continued

Refrigerant. Any substance, including blends and mixtures, which is used for heat transfer purposes.

Refrigerated Food Processing and Dispensing Equipment. Retail food refrigeration equipment that is designed to process food and beverages that are intended for immediate or near-immediate consumption including, but not limited to, chilled and frozen beverages, ice cream, and whipped cream. For the purpose of 310 CMR 7.76, Refrigerated Food Processing and Dispensing Equipment does not include water coolers, or units designed solely to cool and dispense water.

Refrigeration Equipment. Any stationary device that is designed to contain and use refrigerant to establish or maintain colder than ambient temperatures in a confined space including, but not limited to, retail or commercial refrigeration equipment, household refrigerators and freezers, and cold storage warehouses.

Remote Condensing Units. Retail refrigeration equipment or units that have a central condensing portion and may consist of compressors, condensers, and receivers assembled into a single unit, which may be located external to the sales area. The condensing portion (and often other parts of the system) is located outside the space or area cooled by the evaporator. For example, Remote Condensing Units are commonly installed in convenience stores, specialty shops (*e.g.*, bakeries, butcher shops), supermarkets, restaurants, and other locations where food or other products are stored, served, or sold.

Residential Use. Use by a private individual of a substance, or a product containing the substance, in or around a permanent or temporary household, including use in both single and multi-unit dwellings, during recreation, or for any personal use or enjoyment. Use within a household for commercial or medical applications is not included in this definition, nor is use in automobiles, watercraft, or aircraft.

Retail Food Refrigeration or Commercial Refrigeration. Equipment designed to store and display chilled or frozen goods for commercial sale including, but not limited to, stand-alone units, refrigerated goods processing and dispensing equipment, remote condensing units, supermarket systems, and vending machines.

Retrofit. To convert an appliance from one refrigerant to another refrigerant. Retrofitting includes the conversion of the appliance to achieve system compatibility with the new refrigerant and may include, but is not limited to, changes in lubricants, gaskets, filters, driers, valves, o-rings or appliance components.

Rigid Polyurethane and Polyisocyanurate Laminated Boardstock. Laminated board insulation made with polyurethane or polyisocyanurate foam including, but not limited to, that used for roofing and walls.

Rigid Polyurethane Appliance Foam. Polyurethane insulation foam in domestic (*e.g.* residential) appliances.

Rigid Polyurethane Commercial Refrigeration and Sandwich Panels. Polyurethane foam, used to provide insulation in walls and doors including, but not limited to, that used for commercial refrigeration equipment and garage doors.

Rigid Polyurethane High-pressure Two-component Spray Foam. A liquid polyurethane foam system sold as two parts (*i.e.*, A-side and B-side) in non-pressurized containers; and is field or factory applied *in situ* using high-pressure proportioning pumps at 800-1600 pounds per square inch (psi) and an application gun to mix and dispense the chemical components.

Rigid Polyurethane Low-pressure Two-component Spray Foam. A liquid polyurethane foam system sold as two parts (*i.e.*, A-side and B-side) in containers that are pressurized to less than 250 psi during manufacture of the system for application without pumps; and are typically applied *in situ* relying upon a liquid blowing agent and/or gaseous foam blowing agent that also serves as a propellant.

7.76: continued

Rigid Polyurethane Marine Flotation Foam. Buoyancy or flotation polyurethane foam used in boat and ship manufacturing for both structural and flotation purposes.

Rigid Polyurethane One-component Foam Sealants. A polyurethane foam generally packaged in aerosol cans that is applied *in situ* using a gaseous foam blowing agent that is also the propellant for the aerosol formulation.

Rigid Polyurethane Slabstock and Other. A rigid closed-cell polyurethane foam formed into slabstock insulation for panels and fabricated shapes for pipes and vessels.

Stand-Alone Unit. Retail refrigerators, freezers, and reach-in coolers (either open or with doors) where all refrigeration components are integrated and the refrigeration circuit is entirely brazed or welded. These systems are fully charged with refrigerant at the factory and typically require only an electricity supply to begin operation.

Stand-alone Low-temperature Unit. A stand-alone unit that maintains goods at temperatures at or below 32°F (0°C).

Stand-alone Medium-temperature Unit. A stand-alone unit that maintains goods at temperatures above 32°F (0 °C).

State (when capitalized). The Commonwealth of Massachusetts for disclosure requirements in 310 CMR 7.76(5).

Substance. Any chemical intended for use in the end-uses listed in 310 CMR 7.76(6).

Supermarket Systems. Multiplex or centralized retail food refrigeration equipment systems designed to cool or refrigerate, which operate with racks of compressors installed in a machinery room and which includes both direct and indirect systems.

Use. Any utilization of any substance including, but not limited to, utilization in a manufacturing process or product in Massachusetts, consumption by the end-user in Massachusetts, or in intermediate applications in Massachusetts, such as formulation or packaging for other subsequent applications. For the purposes of 310 CMR 7.76, Use excludes residential use, but it does not exclude manufacturing for the purpose of residential use.

Vending Machines. A self-contained unit that dispenses goods that must be kept cold or frozen.

(3) Applicability. 310 CMR 7.76 applies to any person who sells, leases, rents, offers for sale, installs, uses, or manufactures, in Massachusetts, any product or equipment that uses or will use a prohibited substance in the end-uses listed in 310 CMR 7.76(6). 310 CMR 7.76 does not apply to any person in Massachusetts who uses for residential use any combination of a Household Refrigerator or Freezer, a Household Refrigerator or Freezer – Compact, or a Household Refrigerator or Freezer – Built-in.

(4) Prohibitions.

(a) No person may sell, lease, rent, offer for sale, install, use or manufacture, in Massachusetts, any product or equipment that uses or will use a prohibited substance in the end-uses listed in 310 CMR 7.76(6), unless an exemption is provided for the end-use in 310 CMR 7.76(7).

(b) Except where existing equipment is retrofitted, nothing in 310 CMR 7.76 requires a person that acquired a product or equipment containing a prohibited substance prior to an effective date of prohibition in 310 CMR 7.76(6): *Table 1* to cease use of that product or equipment.

(c) Products or equipment manufactured prior to the applicable effective date of the prohibitions in 310 CMR 7.76(6): *Table 1*, including foam systems not yet applied on site or new refrigeration equipment for which a facility has received a building permit prior to the effective date of prohibition, may be sold, leased, rented, imported, exported, distributed, installed, and used on or after the effective date of prohibition.

7.76: continued

(5) Disclosure Statement. Except for the exemptions listed in 310 CMR 7.76(7): *Table 1*, as of the effective date of prohibition in 310 CMR 7.76(6): *Table 1*, any person who manufactures for sale in Massachusetts products or equipment in the air conditioning, refrigeration, foam, or aerosol propellant end-uses listed in 310 CMR 7.76(6), must provide a written disclosure or label to the buyer as follows.

(a) For motor-bearing refrigeration and air conditioning equipment that is neither factory-charged nor pre-charged with refrigerant, the required disclosure or label must state "This equipment is prohibited from using any substance on the "List of Prohibited Substances" for that specific end-use, in accordance with State regulations for hydrofluorocarbons."

(b) Except for products and equipment with existing labeling required by State building codes and safety standards which contain the information required in 310 CMR 7.76(5)(b)1. and 2., the disclosure or label for motor-bearing refrigeration and air conditioning equipment that are factory-charged or pre-charged with a hydrofluorocarbon or hydrofluorocarbon blend shall include:

1. The date of manufacture or a date code representing the date. If the manufacturer uses a date code for any product, the manufacturer shall file an explanation of each code with the Department; and

2. The refrigerant and foam blowing agent the product or equipment contains.

(c) Except for foam products with existing labeling required by State building codes and safety standards which contain the information required in 310 CMR 7.76(5)(c)1. and 2., the disclosure or label for foam products shall include one of the two alternatives in 310 CMR 7.76(5)(c)1. and 2.:

1. Alternative 1.

a. The date of manufacture or a date code representing the date. If the manufacturer uses a date code for any product, the manufacturer shall file an explanation of each code with the Department; and

b. The foam blowing agent the product contains, or a reference to a Safety Data Sheet (complying with 29 CFR 1910.1200 requirements), if the latter identifies the foam blowing agent the product contains.

2. Alternative 2. "Where sold, compliant with State HFC regulations."

(d) For aerosol propellants, the disclosure or label shall include one of the two alternatives in 310 CMR 7.76(5)(d)1. and 2.:

1. Alternative 1.

a. The date of manufacture or a date code representing the date, which is indicated on the label, lid, or bottom of the container. If the manufacturer uses a date code for any product, the manufacturer shall file an explanation of each code with the Department; and

b. The aerosol propellant the product contains, or availability of a Safety Data Sheet (complying with 29 CFR 1910.1200 requirements), if the latter identifies the propellant the product contains.

2. Alternative 2. "Where sold, compliant with State HFC regulations."

(6) List of Prohibited Substances by End-use. 310 CMR 7.76(6): *Table 1* lists prohibited substances in specific end-uses and the effective date of prohibition, unless an exemption is provided for the end-use in 310 CMR 7.76(7). The prohibitions do not apply to products and equipment in specific end-uses manufactured prior to an applicable effective date of prohibition.

7.76: continued

Table 1: End-use and Prohibited Substances

End-use	Prohibited Substances	Effective Date of Prohibition
End-use Category: Aerosol Propellants		
Aerosol Propellants	HFC-125, HFC-134a, HFC-227ea and blends of HFC-227ea and HFC 134a	January 1, 2021
End-Use Category: Air Conditioning		
Centrifugal chillers (new)	FOR12A, FOR12B, HFC-134a, HFC-227ea, HFC-236fa, HFC245fa, R-125/ 134a/ 600a (28.1/70/1.9), R-125/ 290/ 134a/ 600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-410A, R-410B, R-417A, R-421A, R-422B, R-422C, R-422D, R-423A, R-424A, R-434A, R438A, R-507A, RS-44 (2003 composition), THR-03	January 1, 2024
Positive displacement chillers (new)	FOR12A, FOR12B, HFC-134a, HFC-227ea, KDD6, R125/ 134a/ 600a (28.1/70/1.9), R-125/ 290/ 134a/ 600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-410A, R-410B, R-417A, R-421A, R-422B, R-422C, R-422D, R-424A, R-434A, R-437A, R438A, R-507A, RS-44 (2003 composition), SP34E, THR-03	January 1, 2024
End-use Category: Refrigeration		
Cold storage warehouses (new)	HFC-227ea, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R404A, R-407A, R-407B, R-410A, R-410B, R-417A, R-421A, R421B, R-422A, R-422B, R-422C, R-422D, R-423A, R-424A, R428A, R-434A, R-438A, R-507A, RS-44 (2003 composition)	January 1, 2023
Household refrigerators and freezers (new)	FOR12A, FOR12B, HFC-134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-507A, RS24 (2002 formulation), RS 44 (2003 formulation), SP34E, THR-03	January 1, 2022

7.76: continued

Table 1: End-use and Prohibited Substances (continued)

End-use	Prohibited Substances	Effective Date of Prohibition
Household refrigerators and freezers-compact (new)	FOR12A, FOR12B, HFC 134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-507A, RS24 (2002 formulation), RS 44 (2003 formulation), SP34E, THR-03	January 1, 2021
Household refrigerators and freezers-built in appliances (new)	FOR12A, FOR12B, HFC 134a, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-507A, RS24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03	January 1, 2023
Supermarket Systems (Retrofit)	R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R428A, R-434A, R-507A	January 1, 2021
Supermarket Systems (New)	HFC-227ea, R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A	January 1, 2021
Remote Condensing Units (Retrofit)	R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A	January 1, 2021
Remote Condensing Units (New)	HFC-227ea, R-404A, R-407B, R-421B, R-422A, R-422C, R-422D, R-428A, R-434A, R-507A	January 1, 2021
Stand-alone Units (Retrofit)	R-404A, R-507A	January 1, 2021
Stand-alone Medium-temperature Units (New)	FOR12A, FOR12B, HFC-134a, HFC-227ea, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R407A, R-407B, R-407C, R407F, R-410A, R-410B, R417A, R-421A, R-421B, R-422A, R-422B, R-422C, R422D, R-424A, R-426A, R-428A, R-434A, R-437A, R438A, R-507A, RS-24 (2002 formulation), RS-44 (2003 formulation), SP34E, THR-03	January 1, 2021

7.76: continued

Table 1: End-use and Prohibited Substances (continued)

End-use	Prohibited Substances	Effective Date of Prohibition
Stand-alone Low-temperature Units (New)	HFC-227ea, KDD6, R-125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-407C, R-407F, R-410A, R-410B, R-417A, R-421A, R-421B, R422A, R-422B, R-422C, R-422D, R-424A, R-428A, R434A, R-437A, R-438A, R-507A, RS-44 (2003 formulation)	January 1, 2021
Refrigerated food processing and dispensing equipment (New)	HFC-227ea, KDD6, R-125/ 290/ 134a/ 600a (55.0/1.0/42.5/1.5), R-404A, R-407A, R-407B, R-407C, R-407F, R-410A, R-410B, R417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R424A, R-428A, R-434A, R-437A, R-438A, R-507A, RS-44 (2003 formulation)	January 1, 2021
Vending Machines (Retrofit)	R-404A, R-507A	January 1, 2021
Vending Machines (New)	FOR12A, FOR12B, HFC-134a, KDD6, R125/290/134a/600a (55.0/1.0/42.5/1.5), R-404A, R407C, R-410A, R-410B, R-417A, R-421A, R-422B, R422C, R-422D, R-426A, R-437A, R-438A, R-507A, RS-24 (2002 formulation), SP34E	January 1, 2022
End-use Category: Foams		
Rigid Polyurethane and Polyisocyanurate Laminated Boardstock	HFC-134a, HFC 245fa, HFC-365mfc, and blends thereof	January 1, 2021
Flexible Polyurethane	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof	January 1, 2021
Integral Skin Polyurethane	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6	January 1, 2021
Polystyrene Extruded Sheet	HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof; Formacel TI, Formacel Z-6	January 1, 2021
Phenolic Insulation Board and Bunstock	HFC-143a, HFC-134a, HFC-245fa, HFC-365mfc, and blends thereof	January 1, 2021

7.76: continued

Table 1: End-use and Prohibited Substances (continued)

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

End-use	Prohibited Substances	Effective Date of Prohibition
Rigid Polyurethane Slabstock and Other	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, Formacel Z-6	January 1, 2021
Rigid Polyurethane Appliance Foam	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, Formacel Z-6	January 1, 2021
Rigid Polyurethane Commercial Refrigeration and Sandwich Panels	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, Formacel Z-6	January 1, 2021
Polyolefin	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, Formacel Z-6	January 1, 2021
Rigid Polyurethane Marine Flotation Foam	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, Formacel Z-6	January 1, 2021
Polystyrene Extruded Boardstock and Billet (XPS)	HFC-134a, HFC-245fa, HFC-365mfc and blends thereof; Formacel TI, Formacel B, Formacel Z-6	July 1, 2021
Rigid polyurethane (PU) high-pressure two-component spray foam	HFC-134a, HFC-245fa, and blends thereof; blends of HFC365mfc with at least 4% HFC-245fa, and commercial blends of HFC-365mfc with 7% to 13% HFC-227ea and the remainder HFC-365mfc; Formacel TI	January 1, 2021
Rigid PU low-pressure two-component spray foam	HFC-134a, HFC-245fa, and blends thereof; blends of HFC365mfc with at least 4% HFC-245fa, and commercial blends of HFC-365mfc with 7% to 13% HFC-227ea and the remainder HFC-365mfc; Formacel TI	January 1, 2021
Rigid PU one-component foam sealants	HFC-134a, HFC-245fa, and blends thereof; blends of HFC365mfc with at least 4% percent HFC-245fa, and commercial blends of HFC-365mfc with 7% to 13% HFC-227ea and the remainder HFC-365mfc; Formacel TI	January 1, 2021

7.76: continued

(7) Exemptions. 310 CMR 7.76(7): *Table 1* lists exemptions to the prohibited substances and end-uses in 310 CMR 7.76(6).

Table 1: Exemptions

End-use Category	Prohibited Substances	Acceptable Uses
Aerosol Propellants	HFC-134a	Cleaning products for removal of grease, flux and other soils from electrical equipment; refrigerant flushes; products for sensitivity testing of smoke detectors; lubricants and freeze sprays for electrical equipment or electronics; sprays for aircraft maintenance; sprays containing corrosion preventive compounds used in the maintenance of aircraft, electrical equipment or electronics, or military equipment; sprays for aerospace manufacturing and rework operations; pesticides for use near electrical wires, in aircraft, in total release insecticide foggers, or in certified organic use pesticides for which EPA has specifically disallowed all other lower-GWP propellants; mold release agents and mold cleaners; lubricants and cleaners for spinnerettes for synthetic fabrics; duster sprays specifically for removal of dust from photographic negatives, semiconductor chips, specimens under electron microscopes, and energized electrical equipment; adhesives and sealants in large canisters; document preservation sprays; FDA-approved MDIs for medical purposes; wound care sprays; topical coolant sprays for pain relief; and products for removing bandage adhesives from skin.
Aerosol Propellants	HFC-227ea and blends of HFC-227ea and HFC 134a	FDA-approved MDIs for medical purposes.
Air Conditioning	HFC-134a	Military marine vessels where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements.
Air Conditioning	HFC-134a and R-404A	Human-rated spacecraft and related support equipment where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements.
Foams - Except Rigid polyurethane (PU) spray foam	All substances	Military applications where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements until January 1, 2022.
Foams - Except Rigid polyurethane (PU) spray foam	All substances	Space- and aeronautics-related applications where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements until January 1, 2025.

7.76: continued

Table 1: Exemptions

End-use Category	Prohibited Substances	Acceptable Uses
Rigid polyurethane (PU) two-component spray foam	All substances	Military or space- and aeronautics-related applications where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements until January 1, 2025.

(8) Recordkeeping. As of the effective date of prohibition for each end-use listed in 310 CMR 7.76(6): *Table 1*, any person who manufactures any product or equipment in the end-uses listed in 310 CMR 7.76(6), for sale or entry into commerce in Massachusetts must maintain for five years, and make available upon request by the Department, records sufficient to demonstrate that the product or equipment does not contain any substances listed in 310 CMR 7.76(6): *Table 1* as prohibited for that end-use or that the product is exempt in accordance with 310 CMR 7.76(7).

REGULATORY AUTHORITY

310 CMR 7.00: M.G.L. c. 111, § 142A through J.

310 CMR 7.00: APPENDIX A: EMISSION OFFSETS AND NONATTAINMENT REVIEW

(1) Introduction. 310 CMR 7.00: *Appendix A* sets forth the Massachusetts preconstruction review program for stationary sources of air pollution (not including indirect sources) pursuant to sections 172(c)(5) and 173 of the Clean Air Act. A new major source or major modification either that is located in an area designated as nonattainment pursuant to section 107(d) of the Act, published at 40 CFR 81, for any National Ambient Air Quality Standards (NAAQS) for which the source or modification would be major or that is major for volatile organic compounds or oxides of nitrogen must meet the stringent conditions set forth in this appendix prior to receiving approval to construct. These conditions are designed to insure that the increased emissions will be controlled to the greatest degree possible; that more than equivalent offsetting emission reductions (emission offsets) will be obtained from existing sources; and that there will be reasonable further progress toward achievement of the National Ambient Air Quality Standards (NAAQS).

(2) Definitions. The definitions found in 310 CMR 7.00 apply to 310 CMR 7.00: *Appendix A*. The following words and phrases shall have the following meanings as they appear in 310 CMR 7.00: *Appendix A*. Where a term is defined in 310 CMR 7.00 and the definition also appears in 310 CMR 7.00: *Appendix A(2)* the definition in 310 CMR 7.00: *Appendix A* controls.

Actual Emissions means:

- (a) As of a particular date, actual emissions shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a two-year period which precedes the particular date and which is representative of normal source operation. The Department shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period. For the purposes of calculating a net emissions increase where actual emissions exceed allowable emissions, the actual emissions for the unit will be presumed to be equivalent to the source-specific allowable emissions of the unit.
- (b) For either an electric utility steam generating unit (other than a new unit or the replacement of an existing unit) or an emissions unit(s) complying with 310 CMR 7.08(2), 7.18, 7.19, 7.24, or 7.34, actual emissions of the unit following the physical or operational change shall equal the representative actual annual emissions of the unit, provided the source owner or operator maintains and submits to the Department, on an annual basis for a period of five years from the date the unit resumes regular operation, information demonstrating that the physical or operational change did not result in an emissions increase. A longer period, not to exceed ten years, may be required by the Department if it determines such period to be more representative of normal source post-change operations.
- (c) For any emissions unit (except as provided for in 310 CMR 7.00: *Appendix A* Actual Emissions(b)) which has not begun normal operations on the particular date, actual emissions shall equal the federal potential emissions of the unit on that date.

Allowable Emissions means the emissions rate, in tons per year, of a stationary source calculated by multiplying the maximum rated capacity of the source (unless the source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) times the most stringent of:

- (a) Any applicable standards set forth in 40 CFR part 60 (NSPS) or 61 (NESHAPS);
- (b) Any applicable Massachusetts SIP emissions limitation including a limitation with a future compliance date; or
- (c) Any emissions rate specified as a federally enforceable permit condition, including a limitation with a future compliance date.

Begin Actual Construction means physical on-site construction activities on an emissions unit which is of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying of underground pipework, and construction of permanent storage structures. With respect to a change in method of operation, this term refers to those on-site activities other than preparatory activities which mark the initiation of the change.

Appendix A: continued

Building, Structure, Facility, or Installation means all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Any marine vessel is a part of a facility while docked at the facility. Any marine vessel is a part of an Outer Continental Shelf (OCS) source while docked at and within 25 miles en route to and from the OCS source. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same Major Group (*i.e.*, which have the same two-digit code) as described in the *Standard Industrial Classification Manual*, 1987.

Clean Coal Technology (CCT) means any technology at a new or existing emissions unit(s), including technologies applied at the precombustion, combustion, or post combustion stage, which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.

Clean Coal Technology Demonstration Project means a project using funds appropriated under the heading 'Department of Energy-Clean Coal Technology,' up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the United States Environmental Protection Agency (EPA). The Federal contribution for a qualifying project shall be at least 20% of the total cost of the demonstration project.

Coastal Waters means tidal waters over permanently or periodically submerged lands lying between the mean high tide line and a line seaward from the coastline to the boundary line of each State. The boundary shall extend no more than three geographical miles into the Atlantic Ocean.

Commence means as applied to construction of a major stationary source or major modification that the owner or operator has all necessary preconstruction approvals or permits and either has:

- (a) Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or,
- (b) Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.

Complete means, in reference to an application for a plan approval, that the application contains all of the information necessary for processing the application, as determined by the Department. Designating an application administratively complete for purposes of permit processing does not preclude the Department from requesting or accepting any additional information.

Construction means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) which would result in an increase in actual emissions.

Corresponding Onshore Area means, for stationary sources located in, or on, navigable rivers and lakes, coastal waters, or the Outer Continental Shelf (OCS), the onshore attainment or nonattainment area which is closest to the source. However, the Department or EPA may determine that another area with more stringent requirements with respect to the control and abatement of air pollution may reasonably be expected to be affected by such emissions. Such determination shall be based on the potential for air pollutants from the offshore source to reach the other onshore area and the potential of such air pollutants to affect the efforts of the other onshore area to attain or maintain any Federal or State ambient air quality standard or to comply with the provisions of 310 CMR 7.00: *Appendix A*.

Appendix A: continued

Electric Utility Steam Generating Unit means any steam electric generating unit that is constructed for the purpose of supplying more than $\frac{1}{3}$ of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

Emissions Unit means any part of a stationary source, which emits or would have federal potential emissions of any pollutant (including fugitive emissions), subject to regulation under the Act.

Energy Input means the total gross calorific value (where gross calorific value is measured by ASTM Method D2015-66, D240-64, or D1826-64) of all fuels burned. Energy input is calculated in British thermal units (Btu) per hour using the higher heating value of the fuel.

Fossil Fuel-Fired Boiler means a unit (or combination of such units) which combusts fossil fuel (or receives energy from other fossil fuel-fired units) to produce steam by indirect heat transfer and includes such units that produce steam for electric generation. The energy input for such units includes any energy provided to such units from the combustion of fossil fuels in other units. The total energy input from fossil fuel-firing for a combination of such units is the sum of the energy inputs from fossil fuel-firing for each unit.

Fossil Fuel-Fired Electric Plant means one or more units (a plant) that combust fossil fuel to produce electricity. The total energy input for such a plant from fossil fuel-firing is the sum of the energy inputs from fossil fuel-firing for each combustion unit that is part of such plant.

Fugitive Emissions means those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening.

Indian Governing Body means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.

Indian Tribe means any Indian tribe, band, nation, or other organized group or community which is Federally recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

Lowest Achievable Emission Rate (LAER) means, for any source, the more stringent rate of emissions based on the following:

- (a) The most stringent emissions limitation which is contained in any state SIP for such class or category of stationary source, unless the owner or operator of the proposed stationary source demonstrates that such limitations are not achievable; or
- (b) The most stringent emissions limitation which is achieved in practice by such class or category of stationary source. This limitation, when applied to a modification, means the lowest achievable emissions rate for the new or modified emissions units within a stationary source.

In no event shall LAER allow a proposed new or modified stationary source to emit any pollutant in excess of the amount allowable pursuant to applicable new source standards of performance.

Major Modification means any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant, for which the existing source is major, subject to regulation under the Act.

- (a) Any net emissions increase that is considered significant for VOCs shall be considered significant for ozone; and
- (b) For the purpose of applying the requirements of 310 CMR 7.00: *Appendix A* to major stationary sources of NO_x any significant net emissions increase of NO_x is considered significant for ozone, in addition to any separate requirements for NO_x under part C or D of Title I of the Act; and

Appendix A: continued

- (c) A physical change or change in the method of operation shall not include:
1. Routine maintenance, repair and replacement; or
 2. Use of an alternative fuel or raw material by reason of an order under sections 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to the Federal Power Act; or
 3. Use of an alternative fuel by reason of an order or rule under sec. 125 [Measures to Prevent Economic Disruption or Unemployment] of the Act; or
 4. Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste; or
 5. Use of an alternative fuel or raw material by a stationary source where:
 - a. The source is approved to use such fuel or raw material under any plan approval issued under 310 CMR 7.00: *Appendix A*; or
 - b. The source was capable of accommodating such fuel or raw material before December 21, 1976, unless such change would be prohibited under any federally-enforceable permit condition which was established after December 21, 1976 pursuant to 40 CFR part 52.21 (Prevention of significant deterioration of air quality), plan approval requirements under 310 CMR 7.02(1), 7.00: *Appendix A*, *Appendix B*(3), operating permits issued either under 310 CMR 7.00: *Appendix C* or pursuant to 40 CFR part 71 or prohibited under any other federally-enforceable regulatory requirements; or
 6. An increase in the hours of operation or in the production rate, unless such change is prohibited under any federally-enforceable permit condition which was established after December 21, 1976 pursuant to 40 CFR 52.21 (Prevention of significant deterioration of air quality), plan approval requirements under 310 CMR 7.02(2), 310 CMR 7.00: *Appendix A*, 310 CMR 7.00: *Appendix B*(3), operating permits issued either under 310 CMR 7.00: *Appendix C* or pursuant to 40 CFR part 71 or prohibited under any other federally-enforceable regulatory requirements; or
 7. Any change in ownership at a stationary source; or
 8. The addition, replacement or use of a pollution control project at either an existing electric utility steam generating unit or an emissions unit(s) in order to comply with 310 CMR 7.08(2), 7.18, 7.19, 7.24, or 7.34, unless the Department determines that such addition, replacement, or use renders the unit less environmentally beneficial; or unless
 - a. The Department has reason to believe that the pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of Title I of the Act, if any; and
 - b. The Department determines that the increase will cause or contribute to a violation of any national ambient air quality standard or PSD increment, or visibility limitation; or
 9. The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:
 - a. the Massachusetts SIP, and
 - b. other requirements necessary to attain and maintain the national ambient air quality standard during the project and after it is terminated.

Major Stationary Source means any stationary source of air pollutants which emits, or has the federal potential emissions greater than or equal to, 100 tpy or more of any pollutant subject to regulation under the Act, except that lower emissions thresholds shall apply as follows:

- 50 TPY of volatile organic compounds (VOC), or
- 50 TPY of oxides of nitrogen (NO_x).

In addition, any physical change that would occur at a stationary source not previously qualifying as a major stationary source will be considered a major stationary source, if the physical change would result in the following increases either in actual emissions or in the federal potential to emit, greater than or equal to:

Appendix A: continued

50 TPY of volatile organic compounds (VOC), or

50 TPY of oxides of nitrogen (NO_x), or

100 TPY or more of any other pollutant subject to regulation under the Act.

(a) A stationary source that is major for VOC shall be considered major for ozone. VOC emissions, as precursors to the pollutant ozone, are subject to the requirements of 310 CMR 7.00: *Appendix A*; and

(b) For the purpose of applying the requirements of 310 CMR 7.00: *Appendix A* to major stationary sources of NO_x a stationary source that is major for NO_x is considered major for ozone, in addition to any separate requirements for NO_x under part C or D of Title I of the Act; and

(c) The fugitive emissions of a stationary source shall not be included in determining, for any of the purposes of 310 CMR 7.00: *Appendix A*, whether the stationary source is a major stationary source, unless the stationary source belongs to one of the following categories of stationary sources:

Carbon black plants (furnace process); or

Coal cleaning plants (with thermal dryers); or

Coke oven batteries; or

Charcoal production plants; or

Chemical process plants; or

Fuel conversion plants; or

Fossil fuel-fired boilers (or combination thereof)

totaling more than 250 million British thermal units per hour heat input; or

Fossil fuel-fired electric plants of more than 250 million British thermal units per hour heat input; or

Glass fiber manufacturing plants; or

Hydrofluoric acid plants; or

Iron and steel mills; or

Kraft pulp mills; or

Lime plants; or

Municipal incinerators (or combinations thereof) capable of charging more than 50 tons of refuse per day; or

Nitric acid plants; or

Outer continental shelf sources; or

Petroleum refineries; or

Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels; or

Phosphate rock processing plants; or

Portland cement plants; or

Primary aluminum ore reduction plants; or

Primary copper smelters; or

Primary lead smelters; or

Primary zinc smelters; or

Secondary metal production plants; or

Sintering plants; or

Sulfuric acid plants; or

Sulfur recovery plants; or

Taconite ore processing plants; or

Any other stationary source category regulated under sec. 111 (NSPS) or 112 (NESHAPS) of the Act before November 15, 1990.

Navigable Rivers and Lakes means non-tidal bodies of water which were navigable at the time the States in which they are located became members of the United States. This term does not include waters over lands now or heretofore constituting a part of the public lands of the United States, if such lands were not meandered in connection with the public survey of such lands under the laws of the United States and title to such lands was lawfully conveyed from the United States or any State to any person.

Necessary Preconstruction Approvals or Permits means those permits or plan approvals required under Federal air quality control laws and regulations, and those air quality control laws and regulations which are part of the Massachusetts State Implementation Plan.

Appendix A: continued

Net Emissions Increase means

- (a) The amount by which the sum of the following exceeds zero:
 1. Any increase in actual emissions from a particular physical change or change in the method of operation at a stationary source; and
 2. Any other increases and decreases in actual emissions at the source shall be included for netting purposes, that are contemporaneous with the particular change and are otherwise creditable as described in 310 CMR 7.00: *Appendix A Net Emissions Increase*(b), (c), (d), (e) and (f).
- (b) An increase or decrease is contemporaneous with the particular change only if it occurs over any period of five consecutive calendar years which includes the calendar year the increase will occur, but not earlier than January 1, 1990.
- (c) An increase or decrease in actual emissions must have occurred prior to the increase from the particular change in order for the increase or decrease to be considered contemporaneous for purposes of calculating a net emissions increase.
- (d) An increase or decrease in actual emissions is creditable only if the increase or decrease in actual emissions has not been credited in a previous plan approval issued under 310 CMR 7.00: *Appendix A*, unless that approval has been rescinded.
- (e) An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.
- (f) A decrease in actual emissions is creditable only to the extent that:
 1. The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions; and
 2. It is federally-enforceable at and after the time that actual construction on the particular change begins; and
 3. The reduction was not required as a condition of the Massachusetts SIP, in demonstrating attainment or reasonable further progress, in issuing any permit or plan approval under 310 CMR 7.00: *Appendix A*, 310 CMR 7.02(3)(j)6. (BACT requirement), 40 CFR 52.21 (PSD), operating permits issued either under 310 CMR 7.00: *Appendix C* or 40 CFR part 71 or otherwise required under the Act ; and
 4. For VOC emissions, the decreased emissions have approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change; and
 5. The unit was actually operated one or more years and emitted the nonattainment pollutant for which the decrease is being sought. Reductions of permitted emissions for units that were never operated cannot be considered creditable emissions decreases.
- (g) An emissions increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days.
- (h) Emission reduction credits (ERCs) withdrawn from the Department's Emission Reduction Banking System are creditable if the ERCs meet the criteria in 310 CMR 7.00: *Appendix A Net Emissions Increase*(a) through (g).

Nonattainment Pollutant means an air pollutant (or precursor of the pollutant, as applicable) for which an area is designated nonattainment (as of the date on which a complete application is filed) pursuant to § 107(d) [Nonattainment Designations] of the Act or oxides of nitrogen (NOx) or volatile organic compounds (VOC).

Outer Continental Shelf (OCS) shall have the meaning provided, as of the date of promulgation of 310 CMR 7.00, by section 2 of the Outer Continental Shelf Lands Act (43 U.S.C. 1331 *et seq*).

Outer Continental Shelf Source means any equipment, activity, or facility which:

- (a) Emits or has federal potential emissions of any air pollutant; and
- (b) Is regulated or authorized under the Outer Continental Shelf Lands Act (43 U.S.C. 1331 *et seq*); and
- (c) Is located on the OCS or in or on the waters above the OCS.

Appendix A: continued

Pollution Control Project means any activity or project at either an existing electric utility steam generating unit or at an emissions unit(s) to comply with 310 CMR 7.08(2), 7.18, 7.19, 7.24, or 7.34 for purposes of reducing emissions from such unit. Such activities or projects are limited to:

- (a) The installation of conventional or innovative pollution control technology, including but not limited to advanced flue gas desulfurization, sorbent injection for sulfur dioxide and nitrogen oxides controls and electrostatic precipitators; or
- (b) an activity or project to accommodate switching to a fuel which is less polluting than the fuel used prior to the activity or project, including, but not limited to natural gas or coal re-burning, or the co-firing of natural gas and other fuels for the purpose of controlling emissions; or
- (c) a permanent clean coal technology demonstration project conducted under title II, sec. 101(d) of the Further Continuing Appropriations Act of 1985 (sec. 5903(d) of title 42 of the United States Code), or subsequent appropriations, up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the EPA; or
- (d) a permanent clean coal technology demonstration project that constitutes a repowering project ; or
- (e) an activity or project to reduce emissions of VOC or NO_x to comply with 310 CMR 7.08(2), 7.18, 7.19, 7.24, or 7.34.

Reasonable Further Progress means such annual incremental reductions in emissions of the relevant air pollutant as are required by part D (Plan Requirements for Nonattainment Areas) of the Act or may reasonably be required by the Department or EPA for the purpose of ensuring attainment of the applicable national ambient air quality standards in an area by the applicable statutory deadline or resulting from shutdowns that are credited towards attainment.

Repowering means:

- (a) replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the EPA, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990 ; or
- (b) any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

Representative Actual Annual Emissions means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within ten years after that change, where the Department determines that such period is more representative of normal source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the Department:

- (a) shall consider all relevant information, including but not limited to historical operational data, the company's own representations, filings with Massachusetts Department of Public Utilities or Federal regulatory authorities, filings with the Department pursuant to 310 CMR 7.12, Department regulations and approvals issued pursuant to those regulations and compliance plans under title IV of the Clean Air Act; and
- (b) shall exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole.

Appendix A: continued

Secondary Emissions means emissions which would occur as a result of the construction or operation of a major stationary source or major modification, which do not come from the major stationary source or major modification itself. For the purpose of 310 CMR 7.00: *Appendix A*, secondary emissions must be specific, well defined, quantifiable, and impact the same general area as the stationary source or modification which causes the secondary emissions. Secondary emissions include emissions from any offsite support facility which would not otherwise be constructed or undergo an increase in emissions except as a result of the construction or operation of the major stationary source or major modification. Secondary emissions do not include tailpipe emissions from any source regulated under title II of the Act or any emissions from in-transit, non-OCS marine vessels.

Significant means

(a) In reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates:

POLLUTANT EMISSION RATE

Carbon monoxide:	100 tpy
Ozone:	25 tpy of nitrogen oxides (NO _x) where an administratively complete application was received on or after November 15, 1992 for the physical change or change in the method of operation.
Ozone:	40 tpy of VOC 25 tpy of VOC where an administratively complete application was received on or after November 15, 1992 for the physical change or change in the method of operation.
Sulfur dioxide:	40 tpy
Particulate matter:	15 tpy as PM10
Lead:	0.6 tpy

(b) A net increase in emissions of VOCs or NO_x that would result from either any physical change in or change in the method of operation, of a stationary source is significant if such increase exceeds applicable thresholds when aggregated with all, creditable and contemporaneous, increases and decreases, in emissions of the same pollutant.

Stationary Source means any building, structure, facility, or installation which emits or which may emit any air pollutant subject to regulation under the Act.

(a) A stationary source may consist of one or more emissions units and:

1. may be a land-based point or area source; or
2. may be located in, or on, the OCS or other submerged lands beneath navigable waters (lakes, rivers, and coastal waters adjacent to Outer Continental Shelf lands) ; or
3. may be any internal combustion engine, or engine combination, greater than 175 horsepower (hp) used for any stationary application; or
4. may be any internal combustion engine regulated under Sec. 111 (NSPS) of the Act, regardless of size; or
5. may be any internal combustion engine of less than 175 horsepower (hp) not actually controlled to meet a regulation under Sec. 213 (Nonroad Engines and Vehicles) of the Act.

(b) A stationary source does not include:

1. emissions resulting directly from an internal combustion engine for transportation purposes; or
2. tailpipe emissions from any source regulated under title II of the Act or any emissions from in-transit, non-OCS marine vessels.

Appendix A: continued

Temporary Clean Coal Technology Demonstration project means a CCT demonstration project that is operated for a period of five years or less, and which complies with the Massachusetts SIP and other requirements necessary to attain and maintain the national ambient air quality standard during the project and after it is terminated.

(3) Applicability and exemptions. (see also 310 CMR 7.00: *Appendix A*(10) Source Obligation.)

(a) Any major stationary source or major modification to which the requirements of 310 CMR 7.00: *Appendix A* apply shall not receive a plan approval to begin actual construction unless the Department is satisfied that the stationary source or modification will meet the requirements of 310 CMR 7.00: *Appendix A*.

(b) The requirements of 310 CMR 7.00: *Appendix A* shall apply only to any new major stationary source or major modification that is major for either:

1. the pollutant (or precursor of the pollutant, as applicable) for which an area is designated nonattainment (as of the date on which a complete application is filed) pursuant to § 107(d) [Nonattainment Designations] of the Act if the stationary source or modification would be constructed in the designated nonattainment area; or
2. oxides of nitrogen (NO_x) or volatile organic compounds (VOC).

(c) The requirements of 310 CMR 7.00: *Appendix A* shall apply in any Outer Continental Shelf area for which the corresponding onshore area is designated as nonattainment as of the date on which a complete application is filed in accordance with 310 CMR 7.00: *Appendix A*.

(d) If a stationary source is in one of the categories listed in the definition of 310 CMR 7.00: *Appendix A* Major Stationary Source(c), fugitive emissions, to the extent quantifiable, are included when calculating federal potential emissions to determine if the stationary source or modification is subject to the provisions of 310 CMR 7.00: *Appendix A*.

(e) In the case of any major stationary source of volatile organic compounds located in the area (other than a source which emits or has federal potential emissions of 100 tons or more of volatile organic compounds per year), whenever any physical change or change in the method of operation at that source results in any increase (other than a *de minimis* increase) in emissions of volatile organic compounds from any discrete operation, unit or other pollutant emitting activity at the source, such increase shall be considered a modification for purposes of 310 CMR 7.00: *Appendix A*, except that such increase shall not be considered a modification for such purposes if the owner or operator of the source elects to offset the increase by greater reduction in emissions of volatile organic compounds concerned from other operations, units, or activities within the source at an internal offset ratio of at least 1.3 to 1. If the owner or operator does not make such election, such change shall be considered a modification for such purposes, but in applying 310 CMR 7.00: *Appendix A*(4)(c) in the case of any such modification, the best available control technology (BACT), as defined in 310 CMR 7.00: DEFINITIONS, shall be substituted for the lowest achievable emission rate (LAER).

(f) In the case of any major stationary source of volatile organic compounds located in the area which emits or has federal potential emissions 100 tons or more of volatile organic compounds per year, whenever any physical change or change in the method of operation at that source results in any increase (other than a *de minimis* increase) in emissions of volatile organic compounds from any discrete operation, unit or other pollutant emitting activity at the source, such increase shall be considered a modification for purposes of 310 CMR 7.00: *Appendix A*, except that if the owner or operator of the source elects to offset the increase by a greater reduction in emissions of volatile organic compounds from other operations, units or activities within the source at an internal offset ratio of at least 1.3 to 1, the requirements of 310 CMR 7.00: *Appendix A*(4)(c) (concerning the lowest achievable emission rate (LAER) shall not apply.

(g) 310 CMR 7.00: *Appendix A*(3)(e) and (f) apply to modifications at major stationary sources of NO_x in the same way that they apply to sources of volatile organic compounds.

(4) Control technology review.

(a) A new major stationary source or major modification at an existing major stationary source shall meet each applicable emissions limitation under the Massachusetts SIP and each applicable emissions standard of performance under 40 CFR parts 60 (NSPS) and 61 (NESHAPS).

Appendix A: continued

(b) A new major stationary source shall meet the lowest achievable emission rate (LAER) for each pollutant subject to the provisions of 310 CMR 7.00: *Appendix A* that would have federal potential emissions in major amounts. This provision applies to each new emissions unit at which emissions would occur. Major amounts are as follows:

1. VOC - 50 tons or more per year.
2. NO_x - 50 tons or more per year.
3. 100 tons per year or more of any other pollutant subject to regulation under the Act.

(c) A major modification shall meet the lowest achievable emission rate (LAER) for each pollutant subject to the requirements of 310 CMR 7.00: *Appendix A* which would result in a significant net emissions increase at the source. This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of the physical change or change in the method of operation in the unit being proposed. LAER will not be required for previous modifications included in the determination of net emissions increase considered in determining major modification status, but which are not to be modified as part of the proposed project.

(d) For phased construction projects, the determination of the lowest achievable emission rate (LAER) shall be reviewed and modified as appropriate at the latest reasonable time, but no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the stationary source may be required to demonstrate the adequacy of any previous determination of the lowest achievable emission rate to the next phase of construction.

(5) Reasonable Further Progress.

(a) Sufficient offsetting emissions shall be in effect such that the total emissions from existing sources in the area, from new or modified sources which are not major stationary sources, and from the proposed source will be sufficiently less than the total emissions from existing sources prior to the application for such plan approval to construct or modify so as to represent (when considered together with the SIP provisions required under sec. 172 of the Act) reasonable further progress by the time the proposed source or modification is to commence operation; and

(b) for the purposes of satisfying the requirements of 310 CMR 7.00: *Appendix A(5)(a)*, the determination of total emissions at both the time prior to the application for a plan approval subject to the requirements of 310 CMR 7.00: *Appendix A* and the time such permitted source or modification would commence operation, shall be made in a manner consistent with the Massachusetts SIP approved by the EPA concerning baseline emissions for the demonstration of reasonable further progress and attainment of the national ambient air quality standards for the particular pollutant subject to review pursuant to 310 CMR 7.00: *Appendix A*.

(6) Emissions Offsets.

(a) Prior to the issuance of a plan approval for any emissions unit(s), for which offsets are required pursuant to 310 CMR 7.00: *Appendix A*, emission offsets must be made federally enforceable; and

(b) For a new major stationary source of NO_x or major modification of a major stationary source of NO_x located in an area that is not a nonattainment area, prior to commencing operation of any emission unit(s), for which offsets are required under 310 CMR 7.00: *Appendix A*, NO_x emission offsets must actually occur and be obtained from the same source or other sources within the Ozone Transport Region. For a new major stationary source of VOC or major modification of a VOC source located in an area that is not a nonattainment area, prior to commencing operation of any emission unit(s), for which offsets are required under 310 CMR 7.00: *Appendix A*, VOC emission offsets must actually occur and be obtained from the same source or other sources within the Ozone Transport Region that contributes to a violation of the NAAQS in a nonattainment area that the new source or modification will impact. For a new major stationary source or major modification located in a nonattainment area, prior to commencing operation of any emission unit(s) for which offsets are required under 310 CMR 7.00: *Appendix A*, emission offsets must actually occur and be obtained from the same source or other sources in the same nonattainment area, except that such emissions reductions may be obtained from a source in another nonattainment area if:

1. The other area has an equal or higher nonattainment classification than the area in which the source is located; and

Appendix A: continued

2. Where the proposed new source or modified source is located in a nonattainment area, emissions from such other area contribute to a violation of a national ambient air quality standard in the nonattainment area in which the proposed new or modified source would construct.
- (c) Emission offsets for a land-based stationary source may not be obtained from Outer Continental Shelf (OCS) sources. However, emission offsets for an OCS source may be obtained from land-based stationary sources.
- (d) The increase in emissions of any applicable nonattainment air pollutant allowed from either the proposed new major stationary source or from the proposed changes at the major stationary source that are part of the major modification, shall be offset by an equal or greater reduction, as applicable, in the actual emissions of such air pollutant from the same or other sources.
- (e) In meeting the requirements of 310 CMR 7.00: *Appendix A(6)(d)*, the ratio of total actual emission reductions to the increase in actual emissions shall be as follows:
 1. 1.2:1 of VOC or NO_x; or
 2. 1:1 of any other pollutant subject to regulation under 310 CMR 7.00: *Appendix A*.
- (f) Shutdowns.
 1. Emissions reductions achieved by shutting down an existing source or curtailing production or operating hours below baseline levels may be generally credited if such reductions are real, surplus, permanent, quantifiable and federally enforceable. In addition, the shutdown or curtailment is creditable only if it occurred after December 31, 1990, and the following conditions have been met:
 - a. the Department has submitted a completed emissions inventory as required by The Clean Air Act, § 182(a)(1)(c); and
 - b. the Department has submitted complete revisions to 310 CMR 7.00: *Appendix A* as required by The Clean Air Act, § 182(a)(2)(C); and
 - c. the Department submits the 15% VOC reduction plan required by the Clean Air Act, § 182(b)(1)(A); and
 - d. the Department submits the attainment demonstration required by The Clean Air Act 182(c)(2); or
 2. If any of the submissions in 310 CMR 7.00: *Appendix A(6)(f)1.a.* through d. are delinquent, incomplete or disapproved, emissions reductions from shutdowns or curtailments can not be used, unless the shutdown or curtailment occurred either on or after the date the new source plan approval application is filed or unless the applicant can establish that the proposed new source is a replacement for the shutdown or curtailed source, and the cutoff date provisions of *Appendix A(6)(f)1.* are observed.
- (g) With respect to a proposed increase in VOC emissions, no emissions credit shall be allowed for reductions in any organic compound specifically excluded from the definition of "VOCs" in 310 CMR 7.00.
- (h) Credit for an emissions reduction may not be claimed to the extent that the Department has relied on the reduction as a condition of the Massachusetts SIP, in demonstrating attainment or reasonable further progress, in issuing any permit or plan approval under 310 CMR 7.02(3)(j)6. (BACT requirement), 310 CMR 7.00: *Appendix A*, 40 CFR 52.21 (PSD), operating permits issued either under 310 CMR 7.00: *Appendix C* or pursuant to 40 CFR part 71 or otherwise required under the Act. Incidental emissions reductions which are not otherwise required under the Act may be creditable as emissions reductions for such purposes if such emissions reductions meet the applicable requirements of 310 CMR 7.00: *Appendix A(6)*.
- (i) Emission reduction credits (ERCs) withdrawn from the Massachusetts Emission Reduction Credit Bank (310 CMR 7.00: *Appendix B(3)*) may be used as offsets, providing the ERCs are federally enforceable and meet all of the requirements under 310 CMR 7.00: *Appendix A(6)*.
- (j) Emission reductions generated by the seasonal control of ozone precursors (VOC or NO_x), during the period May 1 through September 30, may be used at any time during the calendar year. Emission reductions generated by the seasonal control of VOC or NO_x, during the period October 1 through April 30, may only be used during the period October 1 through April 30th. Emission reductions generated by the seasonal control of carbon monoxide, during the period November 1st through February 28th, may be used at any time during the calendar year. Emission reductions generated by the seasonal control of carbon monoxide, during the period March 1 through October 31, may only be used during the period March 1st through October 31st.

Appendix A: continued

- (7) Source Impact Analysis. The applicant shall demonstrate to the satisfaction of the Department that;
- (a) the emissions offsets required under 310 CMR 7.00: *Appendix A(6)*, when considered in conjunction with the proposed emissions increase will have a net air quality benefit in the affected area;
 - (b) the emissions from the proposed new major stationary source or major modification will not contribute to nonattainment in, or interfere with maintenance by any other state of any national primary or secondary ambient air quality standard; and
 - (c) the emissions from the proposed new major stationary source or major modification will not interfere with measures required to be included in the applicable implementation plan for any other State under a program for the prevention of significant deterioration or for the protection of visibility.
- (8) Additional Conditions for Approval. In order for the Department to issue an approval under 310 CMR 7.00: *Appendix A*, the following conditions shall be met:
- (a) All major stationary sources in Massachusetts owned or operated by the owner or operator of the proposed source (or by any entity controlling, controlled by, or under common control with such owner or operator) which are subject to federally enforceable emission limitations must be in compliance, or on a federally enforceable schedule for compliance, with all applicable emissions limitations and standards under the Act.
 - (b) By means of an analysis of alternative sites, sizes, production processes, and environmental control techniques for such proposed new or modified stationary source, the owner or operator of the proposed stationary source or modification shall demonstrate to the satisfaction of the Department that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification.
 - (c) The Administrator has not determined that the Massachusetts SIP is not being adequately implemented for the nonattainment area (as applicable) in which the proposed stationary source or modification is to be constructed in accordance with the requirements of part D of the Act.
- (9) Public Participation.
- (a) The Department shall notify all applicants as to any administrative or technical deficiencies in the plan approval application or information submitted.
 - (b) After receipt of a technically complete application the Department shall:
 1. Make a proposed decision as to whether the plan approval application shall be approved, approved with conditions, or disapproved.
 2. Provide a 30-day public comment period for submittal of public comment;
 3. Post on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period, the following:
 - a. A notice of availability of the Department's proposed decision to approve or deny the plan approval and information on how to submit public comment;
 - b. The Department's proposed decision to approve or deny the plan approval; and
 - c. Information on how to access the administrative record for the Department's proposed decision on whether to approve or deny the plan approval application.
 4. Send a copy of the notice required under 310 CMR 7.00: *Appendix A(9)(b)3.a.* to the applicant, the EPA, and officials and agencies having jurisdiction over the location where the proposed construction would occur as follows: any other State or local air pollution control agencies, the chief executives of the city where the source would be located; any comprehensive regional land use planning agency, and any Federal Land Manager, or Indian Governing body whose lands may be affected by emissions from the source or modification.
 5. Consider all public comments (written and oral) submitted at any public hearing(s) in making a final decision on the approvability of the application. The Department shall make all comments available for public inspection in the same locations where the Department made available preconstruction information relating to the proposed source or modification.
 6. Make a final decision as to whether the plan approval application should be approved, approved with conditions, or disapproved.

Appendix A: continued

7. Notify the applicant in writing of the final decision and make such notification available for public inspection at the same location where the Department made available preconstruction information and public comments relating to the source.

(10) Source Obligation.

- (a) Except as provided for in 310 CMR 7.00: *Appendix A*(10)(b),
1. any owner or operator who constructs or operates either a stationary source or modification not in accordance with the terms of the approval to construct issued under 310 CMR 7.00: *Appendix A*; or
 2. any owner or operator of a stationary source or modification subject to 310 CMR 7.00: *Appendix A*, who commences construction after November 15, 1992 without applying for and receiving approval under 310 CMR 7.00: *Appendix A*,
- shall be considered in noncompliance with 310 CMR 7.00: *Appendix A*, unless a complete application to construct or substantially reconstruct or alter under 310 CMR 7.02(1) was filed by November 15, 1992 and the change was approved by the Department.
- (b) If an owner or operator of a stationary source began construction of a new source or a modification before the applicable date specified in 310 CMR 7.00: *Appendix A* (10)(b)(1. through 4.), then the owner or operator need not comply with 310 CMR 310 CMR 7.00: *Appendix A*.
1. If the source or modification resulted in an increase in actual emissions of VOCs, then the applicable date is January 10, 1980.
 2. If the source or modification resulted in an increase in actual emissions of CO, then the applicable date is January 10, 1980, or the date on which the location in which the construction or modification occurred was declared in the Federal Register to be in nonattainment.
 3. If the source or modification resulted in an increase in actual emissions of NO_x, then the applicable date is November 15, 1990.
 4. If the source or modification resulted in an increase in any other nonattainment pollutant, then the applicable date is the date on which the location in which the construction or modification occurred was declared in the Federal Register to be in nonattainment for that pollutant.
- (c) Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date.
- (d) Approval to construct shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the Massachusetts SIP and any other requirements under local, State or Federal law.
- (e) At such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation on the capacity of the source or modification to emit a pollutant, where such enforceable limitation was established after August 7, 1980, then the requirements of 310 CMR 7.00: *Appendix A* shall apply to the source or modification as though no previous approval had been issued on the source or modification.

NON-TEXT PAGE

APPENDIX B: U EMISSION BANKING, TRADING, AND AVERAGING

(1) Introduction. 310 CMR 7.00: *Appendix B*(1) through (6) establishes principles and procedures which can be utilized by facilities to comply with the requirements of 310 CMR 7.18, 310 CMR 7.19 and 310 CMR 7.00: *Appendix A*. 310 CMR 7.00: *Appendix B* contains provisions to allow emission averaging or "bubbles" and provisions to allow for the creation and use of emission reduction credits to be "banked", used or traded among facilities.

(2) Definitions. The definitions found in 310 CMR 7.00 apply to 310 CMR 7.00: *Appendix B*. The following words and phrases shall have the following meanings as they appear in 310 CMR 7.00: *Appendix B*. Where a term is defined in the 310 CMR 7.00 definitions section and the definition also appears in 310 CMR 7.00: *Appendix B*, the definition in 310 CMR 7.00: *Appendix B* controls.

Actual Emissions means, the average rate, in tons per year, at which a unit actually emitted the pollutant during the two-year period which precedes the date of application and which is representative of normal production rates or activity levels. The Department shall allow the use of a different two year consecutive time period, within five years immediately prior to the date of application, upon a determination that the alternative two year period is more representative of normal source operation. Actual emissions shall be calculated using the eligible source's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.

Allowable Emissions means the emissions rate of a source calculated using either the production or activity rates associated with the maximum rated capacity of the source, and the hours of operation or the permitted hours of operation or capacity provided that such permit is federally enforceable and so as not to exceed the following:

- (a) Any applicable standards set forth in 40 CFR part 60 (NSPS) or 61 (NESHAPS);
- (b) Any applicable Massachusetts SIP emissions limitation including a limitation with a future compliance date; or
- (c) Any emissions rate specified as a federally enforceable permit condition, including a limitation with a future compliance date.

Area Source means stationary and non-road sources of emissions who are too small and/or too numerous to be individually included in a stationary source emission inventory examples being home heating furnaces, aircraft, commercial vessels, gas stations and lawn mowers.

Baseline means the emission level set for an eligible source and calculated in accordance with methods described in 310 CMR 7.00: *Appendix B*(3)(c), which reflects the lower of actual emissions, or allowable emissions and which serves as the level below which emission reductions are considered surplus and can be eligible for approval by the Department as Emission Reduction Credits (ERC). As future allowable emission rates or emission standards become effective, the lowest of future allowable emissions, allowable emissions or actual emissions will be the baseline below which reductions must be made to be considered surplus.

Bubble means an alternative emission control strategy where two or more existing emission points are regarded as being placed under a hypothetical bubble, which is then regarded as a single emission source.

Curtailement means a permanent reduction in hours of operation or process rate, said reduction approved in a permit issued by the Department.

Direct Determination means a calculation or measurement based on source specific information rather than from estimates of emission and control efficiencies.

Eligible Source means any stationary, area or mobile source of VOC, NO_x or CO emissions which is eligible to participate in emissions banking and trading at any point in time.

Appendix B: continued

Emission Estimation means calculation of emissions using estimated emission factors and assumptions of control efficiency not based in whole or in part on actual measurement or detailed records for an emission unit.

Emission Limiting means a program or strategies that directly specify limits on total mass emission, emission related parameters (*e.g.*, emission rates per unit of product) or levels of emission reductions that are required to be met by eligible sources.

Emission Reduction Credit (ERC) means the actual air pollutant reductions from an emitting source that have been certified by the Department as enforceable, permanent, quantifiable, real, and surplus in accordance with the requirements of 310 CMR 7.00: *Appendix B*.

Enforceable means those limitations and conditions which are enforceable by the Department of Environmental Protection and the EPA. Examples of such enforceable mechanisms include, but are not limited to the following:

- (a) Conditions in pre-construction permits issued pursuant to 40 CFR 52.21 (federal delegated PSD programs); or
- (b) Limitations developed pursuant to 40 CFR Parts 60 (NSPS) and 61 (NESHAPS); or
- (c) Requirements contained in the EPA-approved Massachusetts State Implementation Plan (SIP), or source-specific SIP revisions that are approved by EPA; or
- (d) Conditions in pre-construction "plan approvals" issued by the Commonwealth of Massachusetts, provided that those pre-construction "plan approval" regulations have been approved by the EPA in the *Federal Register* as meeting the requirements of 40 CFR 51.160.
- (e) Permits issued pursuant to generic bubble regulations that have been approved by EPA as adhering to the December 4, 1986, Emissions Trading Policy Statement.
- (f) Information contained in a Department-issued Emission Reduction Credit approval for retrospectively approved ERCs, as to by what means the ERCs were created.

Future Allowable means the maximum emission rate, process rate or activity level assumed in the most recent Department adopted State Implementation Plan for Ozone or State Implementation Plan for Carbon Monoxide. An example might be the future allowable (1994) emission rate for Leather Coating operations at 27.4 pounds of VOC per gallon of solid applied [310 CMR 7.18(22)] which when applied to the two year average capacity utilization factor and two year average hours of operation for an eligible source, would result in the estimate of baseline starting on the rule effective date in 1994. Prior to this effective date, credit is calculated using a baseline that includes the lower of actual or allowable emissions at the time of application.

Irreversible Process Change means a process modification or equipment substitution that completely and irreversibly eliminates key emitting properties of the emission unit. For example, elimination of solvent use in a process line.

Mass ERC Bank means the Massachusetts registry for ERCs quantified by mass (*e.g.* tons). ERCs from this bank may be used either for compliance pursuant to 310 CMR 7.00: *Appendix B(3)* or for "discrete" offsets pursuant to 310 CMR 7.00: *Appendix B(3)* and 310 CMR 7.00: *Appendix A*.

NEPOOL Marginal Emission Rate or Successor Organization Rate means the corresponding calendar year NO_x emission rate determined by NEPOOL or a successor organization through accepted modeling or data gathering techniques reviewed and approved by the Department.

Netting means the mechanism used to secure an exemption of modifications at existing stationary sources from preconstruction permit requirements under 310 CMR 7.00 Appendix A (Emission Offsets and Nonattainment Review) and/or 40 CFR 52.21 (Prevention of Significant Deterioration) regulations which apply when there is a significant net emissions increase.

Appendix B: continued

Non-inventoried Emission Source Category means air pollutants emitted into the ambient air from any source category which has not been included in the Department's 1990 emission inventories.

Offset means the use of an Emission Reduction Credit to compensate for emission increases of a nonattainment pollutant from a new major stationary or modified major stationary source subject to the requirements of 310 CMR 7.00: *Appendix A*.

Permanent means that emission reductions implemented for the purpose of generating Emission Reduction Credit must be assured for the life of the corresponding Emission Reduction Credit through a federally enforceable mechanism.

Program Baseline means the level of emissions, or emission related parameters for each eligible source or group of sources from which the program results (*e.g.* quantifiable emission reductions) shall be determined. For purposes of 310 CMR 7.00: *Appendix B*, the program baseline shall be the 1990 Base Year Emission Inventory of Volatile Organic Compound, Oxides of Nitrogen and Carbon Monoxide.

Quantifiable means that the amount, rate, and characteristics of an emission reduction can be measured through a replicable method acceptable to the Department of Environmental Protection and the EPA.

Rate ERC Bank means the Massachusetts registry of ERC that have been certified at a continuous rate (*i.e.* tons per year). ERCs from the Rate ERC Bank may be used for the purposes of offsets pursuant to 310 CMR 7.00: *Appendix B(3)* and 310 CMR 7.00: *Appendix A*.

Real means the reduction in actual emissions released into the air.

Remaining Useful Life means the length of time for which the equipment that is being shut down would have continued to operate had the owner/operator chosen not to shut down the equipment and apply for certification of credits at that time. Remaining useful life shall be ten years except in those cases where the Department determines a shorter period is appropriate, or the applicant demonstrates to the Department's satisfaction that a period of longer than ten years is warranted. The Department will use the following criteria for making the determination including, but not limited to: the age of the equipment; the type of equipment; maintenance history; operating history; and industry norms. In any case, remaining useful life shall not exceed 20 years.

Replicable means methods which are sufficiently clear and unambiguous such that the same or equivalent results would be obtained by the application of the methods by different users.

Shutdown means the earlier of (1) the date that the Department verifies that the source is shutdown or 2) the date that operations and emissions from an emitting unit ceased and the associated emission units have been removed or rendered inoperable.

State Implementation Plan (SIP) means the most recently prepared plan or revision thereof required by the Clean Air Act, 42 USC Section 7410, which has been either adopted by the Department and submitted to the United States Environmental Protection Agency (EPA) for approval or approved by the United States Environmental Protection Agency (EPA), whichever is more stringent.

Surplus means, emission reductions beyond an established source baseline which, as such, are not required by the Department adopted SIP, relied upon in any applicable attainment demonstration, or credited in any RFP or milestone demonstration.

Transfer means the conveyance of ownership of an Emission Reduction Credit from one entity to another.

Appendix B: continued

Use for the purposes of 310 CMR 7.00: *Appendix B*, the term "use" shall mean to employ for emission averaging or emission trading an ERC such that the person who owns or controls the ERC has received a plan approval from the Department which factors the ERC into the emissions from the facility for purposes of compliance with emission limitations or emission offset requirements.

(3) Emission Reduction Credit Banking and Trading.

(a) Introduction and statement of purpose. The goal of the program, defined by 310 CMR 7.00: *Appendix B(3)*, is to encourage the creation and trading of surplus emission reductions as Emission Reduction Credits (ERC) to be used for purposes of offsets, netting and cost effective compliance without interfering with any applicable requirements concerning attainment, reasonable further progress or any other applicable air pollution control requirement.

(b) Applicability.

1. Entry into this program is voluntary.
2. 310 CMR 7.00: *Appendix B(3)* applies to the owner/operator of eligible sources including stationary sources, area sources and mobile sources applying for certification of surplus emission reductions as emission reduction credits (ERC).
3. Nothing in 310 CMR 7.00: *Appendix B* shall require that ERCs be listed in either the Rate ERC Bank or the Mass ERC Bank if the ERCs are being transferred to other facilities operated or owned, in whole or part, by the creator of the ERCs, provided that the requirements of 310 CMR 7.00: *Appendix B(3)(e)* are met prior to use of the ERCs.
4. Nothing in 310 CMR 7.00: *Appendix B* shall require that emission reductions, created for the purpose of offsets, be submitted for approval through the emission banking program if the emission reductions are used by the facility or within facilities owned by the same economic entity which created the emission reductions and provided that the requirements of 310 CMR 7.00: *Appendix A* are met.

(c) Generation of Emission Reduction Credit.

1. General Principles which apply to generation of Emission Reduction Credits (ERC).
 - a. Emission reductions within Massachusetts shall be recognized as ERCs only after the approval of the Department has been obtained in accordance with 310 CMR 7.00: *Appendix B(3)*.
 - b. Emission reductions generated for the purpose of creating ERCs must meet, at minimum, all of the following principles, to receive approval as emission reduction credits.
 - i. The reductions must have occurred after December 31, 1990.
 - ii. The reductions must be real reductions of emissions of: Volatile Organic Compounds (VOC), Oxides of Nitrogen (NOx), or Carbon Monoxide (CO);
 - iii. The reductions must be surplus in that they are reductions in emissions below the baseline established for the eligible source.
 - iv. The reductions must be permanent and the amount and duration of the reduction must be documented; and,
 - v. The reductions must be quantifiable, with a replicable basis for calculating the amount of reduction as well as reliable methods for assessing compliance with the emission rates after the reduction has been made, and the reductions must be enforceable.
 - c. Emission reductions cannot be recognized as ERCs if said reductions are required by Federal or Department permits, plan approvals, agreements, administrative or judicial orders, or other enforcement actions or regulations.
 - d. Emission reductions can only be eligible for certification pursuant to 310 CMR 7.00: *Appendix B(3)* if said reductions occur from emissions sources within the geographical boundaries of Massachusetts. ERCs generated by sources outside of the Commonwealth may be used by facilities within the Commonwealth pursuant to 310 CMR 7.00: *Appendix B(3)(f)*.
 - e. Emission reductions eligible for credit are those emissions reductions below baseline for the eligible source.
 - f. Emission reductions considered eligible for consideration as ERCs include:

Appendix B: continued

- i. Shutdown or curtailment provided that the applicant can demonstrate to the satisfaction of the Department that demand for the services or product will not or cannot shift to other similar sources in the State resulting in no net decrease in emissions from the source category. Where emission reductions from shutdowns of electric generating facilities will be used exclusively as offsets for new facilities pursuant to 310 CMR 7.00: *Appendix A*, the ERC will not be adjusted for shifting demand. If such reductions are to be deposited in the Mass ERC Bank, credit will be available only to the extent that the emission rate from the unit being shut down or curtailed is greater than the applicable NEPOOL marginal emission rate or successor organization rate.
 - ii. Control of an emission unit beyond that required by Massachusetts Air Pollution Regulations or federal law and regulations.
 - iii. Seasonal Controls with the recognition that VOC and NOx emission reductions created by the application of seasonal controls will be subject to use restrictions as defined in 310 CMR 7.00: *Appendix B(3)(e)8*.
 - iv. Early implementation of future emission controls provided that the reductions commence before promulgation of the regulations establishing the new emission controls. These reductions are surplus only up to the effective date for compliance with the program or emission controls. Credit will cease to accrue upon the effective date of the new emission controls.
 - v. Emission reductions which result from application of mobile and area source controls provided that the reductions meet all other requirements of 310 CMR 7.00: *Appendix B* including provisions for establishment of baseline and replicable quantification as well as compliance monitoring methods.
 - g. Emission reductions are not eligible for consideration as an ERCs if said reductions are generated by an un-inventoried area source category (*e.g.*, small bakeries) or if said reductions are generated by biogenic sources (*e.g.*, trees).
2. Calculation of Credit.
- a. Credit shall be calculated by first calculating baseline emissions, second calculating the post reduction emissions, and third multiplying the difference between the baseline emissions and post reduction emissions by the applicable compliance assurance factor. The ERC amount is the result of complete application of these three steps.
 - b. Baseline emissions will be expressed in tons of pollutant emitted per day or per year, whichever is more appropriate and shall be further defined as ozone or non-ozone (October 1 - April 30) season.
- Step 1:
- c. Baseline emissions will be established for each stationary source according to the following formula:

$$\text{baseline} = \text{ER} \times (\text{CU} \times \text{H})$$

Where:

ER equals the lower of the actual or allowable emission rate

ER shall be expressed as mass of emission per unit of production or thruput (*e.g.*, pounds of VOC per gallon of solids applied or pounds of NOx per million Btu)

CU equals the actual average hourly capacity utilization (*e.g.*, expressed in terms of millions of Btu per hour or numbers of gallons of solids applied in an hour).

H equals the actual number of hours of operation per day.

ERC, CU and H are based on average historical values for the factors for two representative years within the five years immediately prior to the date of application.

Appendix B: continued

- d. Baseline emissions will be established for each area source measure according to the following formula:

$$\text{baseline} = \text{ER} \times \text{ACT}$$

Where:

ER equals the emission rate as determined by the Department and EPA in the most recent emission inventory using EPA approved methods and emission factors including AP-42 and Volume IV for Area Source, or the EPA Off-road Study for off-road sources. Assumptions shall be consistent with the most recent adopted periodic emission inventory prepared by the Department.

ER must be the lower of actual, or allowable emission rate and shall be expressed as mass of emission per unit of production or thruput (*e.g.*, pounds per 1000 gallons burned or pounds per capita, as is appropriate)

ACT equals the actual average activity factor expressed in a manner so as to be consistent with the units required by the emission rate such as number of gallons burned, or number of persons affected.

- e. Baseline emissions will be established for each Mobile Source by methods approved or published by EPA or the Department, including but not limited to:
- i. Interim guidelines on the Generation of Mobile Source ERC, 58 FR 11134.
 - ii. Guidance for Implementation of Accelerated Retirement of Vehicle programs, U.S. EPA, February 1993.
 - iii. Program for Generation of Emission Credits by Urban Buses, U.S. EPA, January 1993.
3. Calculation of post-reduction emissions.

Step 2:

- a. Creditable, workable and replicable methods must be used to quantify post-reduction emissions reflecting the real emission reduction below baseline emissions. The post-reduction emissions shall be calculated using methods as or more accurate than those used to calculate baseline emissions.
- b. Post-reduction emissions for DSM shall be determined after implementation of these DSM measure(s) and based on review of historical records covering a period of no less than one year collected since implementation, and shall be calculated in conformance with guidance provided and approved by the Massachusetts DPU.

4. Calculation of the Emission Reduction Credit.

- a. Step 3: The emission reduction is calculated by first subtracting post-reduction emissions from baseline emissions.
- b. The emission reduction will be certified by the Department as an emission reduction credit after application of a compliance assurance multiplier to the resulting difference between baseline emissions and post-reduction emissions. The applicable compliance assurance multiplier will be determined by the Department within the ranges provided in the table below. Actual ERC adjustment will be set for individual circumstances and conditions within these ranges.

<u>Method of Compliance Assurance</u>	<u>Compliance Assurance Multiplier</u>
Irreversible process change	1.0
Compliance Assessment by Direct Determination: Continuous Emission Monitoring System (CEMS) installed pursuant to 40 CFR part 75	1.0
Mass Balance Reconciliation	0.85 - 0.99
CEMS other than 40 CFR part 75	0.80 - 0.95

Appendix B: continued

Compliance Assessment by Testing:	
Periodic Stack Test / Emission Test	0.80 - 0.90
Testing of Capture Efficiency and control	

Emission Determinations using estimates of capture and control and/or emission factors	0.50 - 0.80
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- i. The resulting amount of credit will be rounded to the nearest ton.
 - ii. Once the three step calculation has been completed, and the result rounded to the nearest ton, the resulting ERCs shall not be subject to adjustment of value.
 - c. ERCs certified from discrete, retrospective reductions shall be expressed in total tons and will be placed in the Mass ERC Bank. ERCs from the Mass ERC Bank may be used as offsets pursuant to 310 CMR 7.00: *Appendix A* with approval of the Department.
 - d. ERCs certified from either shutdowns or enforceable prospective over-control of emissions shall be expressed in tons per year, and will be placed in the Rate ERC Bank. In the event the owner of ERCs from a shutdown wishes to transfer the ERCs to the Mass ERC Bank, the Department will assign the ERCs from the shutdown a "remaining useful life" in years, which will be used to transfer the ERCs from the Rate ERC Bank to the Mass ERC Bank. If the ERC transferred are from shutdown of an electric generating facility, the Department will also subtract the NEPOOL marginal emission rate or successor organization rate replacement power in effect at the time of original certification of the ERCs.
- (d) Procedure For Certification of Emission Reductions as ERC.
1. An application for certification of ERCs may be submitted in advance of the time when the reduction is actually made (prospective certification) or after the reduction has been made (retrospective certification).
 2. Unapprovable sources of generation and quantities.
 - a. ERCs may not be generated from non-inventoried sources. In other words, only sources accounted for in SIP and RFP planning (inventoried sources) may be used to generate credits.
 - b. ERCs can be approved only where the emission reduction, as calculated under 310 CMR 7.00 *Appendix B(3)(c)4.a.*, is greater than 5 tons per year for deposit in the Rate ERC Bank, or greater than 5 tons for the Mass ERC Bank.
 3. For emission reductions implemented prior to January 1, 1994, an Emission Reduction Credit Application must be submitted to the Department by September 30, 1994.
 4. For emission reductions implemented after January 1, 1994, an Emission Reduction Credit Application must be submitted to the Department within six months of:
 - a. the end date of the period being evaluated for a retrospective discrete emission reductions.
 - b. the approval date of a federally enforceable mechanism for prospective emission reductions other than 310 CMR 7.00 *Appendix B(3)*.
 5. Application Procedures.
 - a. Any person who owns or operates an emission unit at which an eligible emission reduction has occurred or will occur may submit an Emission Reduction Credit (ERC) application in accordance with the requirements of 310 CMR 7.00: *Appendix B*.
 - b. The ERC application shall be submitted on a standard form supplied by the Department with documentation provided by the applicant as to the calculation method for baseline and the post-reduction emissions as required by 310 CMR 7.00: *Appendix B(3)* as well as a proposed method for determining and assuring compliance.
 - c. ERC applications shall express emission reductions in tons, or in tons per year if for offsets, and indicate what portions of the reductions were made during the period May 1 - September 30 (ozone season).
 - d. ERC applications shall contain sufficient information to allow the Department to evaluate each emission reduction consistent with the requirements of 310 CMR 7.00: *Appendix B(3)*.

Appendix B: continued

- e. The ERC application shall be signed by a responsible official.
 - f. The ERC application shall comply with provisions of 310 CMR 4.00 *et seq.* for fees and permit procedures.
6. ERC approvals will be emission-limiting, either prospectively or retrospectively, as applicable. An ERC approval will be issued pursuant to 310 CMR 7.00: *Appendix B(3)*. To be made federally enforceable, it must contain the specific quantifiable emission limits reflecting the change in emission rate, operating conditions and other measures taken to generate the ERCs. All emissions limitations, controls, and other requirements imposed by such approvals must be at least as stringent as all other applicable limitations and requirements contained in the SIP, enforceable under the SIP, or otherwise federally enforceable. All limitations, controls, and other requirements imposed by such approvals must be permanent, quantifiable, and enforceable as a practical matter.
- a. In order to confirm emission reductions claimed in conjunction with an application for a prospective Emission Reduction Credit, the Department will require sources to implement compliance assurance methods such as monitoring, recordkeeping and reporting as part of the ERC certification approval.
 - b. The Department may also require the applicant to conduct source testing utilizing Department or EPA approved test methods, including but not limited to those methods referenced in 40 CFR Part 60 Appendix A, or 310 CMR 7.18(2), or 310 CMR 7.19(13), as appropriate for the source.
 - c. In addition, the Department may require regular submittal of information which the Department determines is necessary to maintain the integrity of the ERC.
7. A person having ownership of ERCs has the exclusive right to possess and dispose of the ERCs subject to the applicable restrictions contained in the certification approval and 310 CMR 7.00: *Appendix B(3)*.
8. ERCs in the Rate ERC Bank shall revert to the state to be retired for the benefit of the environment if they have not been used by midnight of the date ten years from the date of Department approval. ERCs in the Mass ERC Bank shall not expire or cease to exist after a set period of time, even if not traded or used.
- (e) Withdrawal, Transfer, and Use of Emission Reduction Credits.
- 1. The Department must issue a federally enforceable approval to a person seeking to use ERCs prior to the use of any ERCs. This includes approvals to construct or operate issued to stationary sources and a practical equivalent to be issued to persons who have applied to use ERCs in area and mobile source situations.
 - 2. Persons seeking to use ERCs must obtain an amount of credit equal to five percent more than the amount needed for the offset or compliance calculation. This five percent increment shall be held by the applicant and not used or sold until such time that the Department determines whether or not the excess credit can be released for use. Such a determination shall be made by the Department on or about January 1, 1999. If the Department determines it cannot release said ERCs for use, the ERCs will by operation of law be retired for the benefit of the environment.
 - 3. ERCs may not be used to meet the requirements of, or result in violation of federal New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPS), the requirements for Lowest Achievable Emission Rate (LAER), the requirements for Best Available Control Technology (BACT), Maximum Achievable Control Technology (MACT), Title IV, section 183(e) and 183(f) of the Clean Air Act, cause a violation of a National Ambient Air Quality Standard for criteria pollutants, cause a violation of a PSD increment or create a nuisance condition. ERCs may not be used to stay below an applicability threshold of the Clean Air Act or 310 CMR 7.00 *et seq.*
 - 4. ERCs may not be used to comply with performance standards established by regulation, such as, operating procedure requirements (*e.g.* covers on degreasers, operating within a specific temperature range) or to comply with requirements for record keeping, reporting or facility testing as may be required by the Department.
 - 5. Where ERCs are used for netting under 310 CMR 7.00: Appendix A, the ERCs must meet the criteria in 310 CMR 7.00: *Appendix A Net Emissions Increase(a)* through (g), as applicable.

Appendix B: continued

6. Certified ERCs can be traded between emission sectors (*e.g.*, from mobile sources to stationary sources) provided that credit generated by stationary source reductions may under no circumstances be used to comply with any mobile source requirement.
 7. ERCs generated through emission reductions of one pollutant can not be used for trading or averaging with another pollutant.
 8. ERCs generated by the control of ozone precursors (VOC and NO_x) during the period May 1st through September 30th, can be used at any time during the calendar year. ERCs generated by control of ozone precursors during the period October 1st through April 30th, can only be used in the same season as generated (October 1st through April 30th).
 9. ERCs generated by the use of seasonal control of carbon monoxide during the period November 1st through February 28th, can be used at any time during the calendar year. ERCs generated through use of seasonal control of carbon monoxide during the period March 1st through October 31st can only be used in the in the same season as generated (March 1st through October 31st).
 10. ERCs approved from shutdown or curtailment of an emission unit where the emitting operations are based on manufacturing activity and the operations, and jobs associated with the emitting activity are shifted outside of Massachusetts, are eligible for use only in Massachusetts. 310 CMR 7.00: *Appendix B(3)(e)*11. does not apply to electric generating facilities.
 11. ERCs generated by shutdowns are presumptively available only for offsets pursuant to 310 CMR 7.00: *Appendix A*. If at any time prior to use of ERCs as offsets an owner of said ERCs wishes to use them for compliance purposes, the Department will assign a "remaining useful life" to said ERCs which will be used to transfer the ERCs from the Rate ERC Bank to the Mass ERC Bank. If the ERCs were generated by an electric generating facility shutdown, the Department will also subtract the NEPOOL marginal emission rate or successor organization rate in effect at the time of original ERC certification. Offset credits generated outside of the Commonwealth of Massachusetts are not eligible for conversion to mass-based credits.
 12. ERCs from the Rate ERC Bank used as offsets pursuant to a 310 CMR 7.00: *Appendix A* approval, must be retired at the approved annual offset rate regardless of the facility's annual actual emissions. In addition, ERCs from the Mass ERC Bank used as offsets pursuant to a 310 CMR 7.00: *Appendix A* approval, must be obtained for the current year of operation plus four subsequent years of operation; and five years of ERCs, available for use in each of those five years, must be held at all times for the approval to remain valid. These ERCs will be retired on December 31st of each year, beginning with the first calendar year or any portion thereof, in which the facility operates.
 13. ERCs utilized as offsets are considered "used" commencing with startup of a facility; ERCs with an expiration date prior to actual startup of a source needing offsets will not be acceptable as offsets for the facility.
 14. Conversions to Allowances. (Reserved)
- (f) Interstate Trading of ERCs.
1. Federally enforceable emission reductions generated by facilities outside the Commonwealth may be used in the Commonwealth, and ERC generated in the Commonwealth may be used in other states or jurisdictions, provided that the State within which the other facility is located has executed a Memorandum of Understanding concerning emission trading with the Commonwealth.
 2. Said Memoranda of Understanding will include at a minimum:
 - a. the requirement that creditable emission reductions be real, surplus, permanent, quantifiable and federally enforceable;
 - b. discounts as appropriate to make ERCs generated outside of the Commonwealth equivalent with ERCs generated in the Commonwealth;
 - c. restrictions on allowable directionality of trades if necessary;
 - d. state-specific notification or other requirements, as necessary;
 - e. ERC lifetimes and expiration dates, if applicable;
 - f. ozone season definition and restrictions;

Appendix B: continued

- g. the requirement that any ERC generated outside of the Commonwealth can be used in the Commonwealth only in compliance with 310 CMR 7.00: *Appendix B(3)(e)*, except where specifically stated otherwise; and
 - h. averments of cooperation on enforcement and reporting.
3. Interstate emission reduction credit trades must comply with the specific requirements of the applicable Memorandum of Understanding.
- (g) Emission Reduction Credit Registry.
- 1. Upon satisfaction of all applicable requirements of 310 CMR 7.00: *Appendix B*, approved emission reduction credits shall be registered in an Emission Reduction Credit Registry operated or overseen by the Department. Such registry shall include:
 - a. Name of generator and contact person;
 - b. Pollutant associated with the ERCs;
 - c. Amount of ERC expressed in tons, or in tons per year if banked in Rate ERC Bank;
 - d. Any seasonal use restrictions on the ERCs;
 - e. Whether the ERCs may be used or are reserved as part of a 5% set aside pursuant to 310 CMR 7.00: *Appendix B(3)(e)2*.
 - 2. ERCs shall be tracked within the Emission Reduction Credit Registry by assigning a serial number to each ton of ERC, or ton per year if banked for use as offsets. The serial number will provide information about the type of pollutant, type of ERC (rate/mass), seasonality and first year available for use.
 - 3. Information related to emission reduction credits maintained in the Emission Reduction Credit Registry shall be available for public review.
- (h) Program review.
- 1. The Department shall maintain records of ERCs and shall account for unused ERCs as "emitted" within the context of RFP and periodic emission inventory reports.
 - 2. The Department shall conduct a review of the emission trading program beginning in 1995 and every three years thereafter. This review shall evaluate the handling of applications for ERC approval and use, and the legitimacy of approved ERCs, and may include review of ERCs creation and use protocols, and compliance assessment of sources using ERCs.
 - 3. The program review shall also include assessment of the impact of the program on Reasonable Further Progress, attainment or maintenance of the National Ambient Air Quality Standards, and ascertain if there is any significant effect from interstate trades pursuant to 310 CMR 7.00: *Appendix B(3)(f)*.
 - 4. Should a review reveal the need to make program revisions, the Department shall, within six months of the review findings, propose the appropriate program revisions.
 - 5. The results of Department reviews and the findings shall be reported in the context of required RFP and periodic inventory reports (every three years).
 - 6. Program Baseline for this program is the most recent revision of the 1990 Base Year Emission Inventory of Volatile Organic Compound, Oxides of Nitrogen and Carbon Monoxide and the State Implementation Strategy Plan submittal of November 15, 1993 which describes programs and strategies to be used by the Commonwealth to attain and maintain NAAQS for ozone and carbon monoxide. Source baseline as described in previous sections is defined within the context of the program baseline (the lower of actual, allowable or future allowable emissions) so as to avoid interference with attainment and maintenance of NAAQS.
- (4) Emission Averaging (Bubble).
- (a) Introduction.
- 1. The purpose of 310 CMR 7.00 *Appendix B(4)* is to specify requirements by which one or more facilities operated or controlled by the same economic entity can comply with either 310 CMR 7.18 or 7.19, respectively, using emissions averaging, herein referred to as a bubble, under either 310 CMR 7.18(2)(b) or 7.19(14).
 - 2. In an emissions bubble, a person who operates or controls one or more facilities with more than one emission unit subject to regulation by 310 CMR 7.00, may apply to the Department to meet the requirements of either 310 CMR 7.18 or 7.19 through a mix of control techniques. The emissions of the various emission units are averaged over a 24 hour period, except as provided for in 310 CMR 7.00 *Appendix B(4)(e)5*.

Appendix B: continued

(b) Applicability.

1. 310 CMR *Appendix B(4)* applies to any person who operates or controls a facility(ies) subject to either 310 CMR 7.18(3) through (6), (10) through (12), (14) through (16), (21) through (26), (30)(c)7., (31) or 310 CMR 7.19(4), (5), (7), (8), (12), that set an emission limitation in either pounds of VOC per gallon of solids applied or pounds of NO_x per million Btu of heat input, respectively, and who chooses to comply by emission averaging.
2. For bubbles to comply with 310 CMR 7.18, emission units subject to emissions standards other than pounds of VOC per gallon of solids applied (*e.g.* such as pounds of VOC per pound of solids applied, pounds of VOC per 1000 square feet covered, metric units, *etc.*) may be averaged with other emission units subject to an emission limitation in the same units of measure.
3. For bubbles under 310 CMR 7.19, 310 CMR 7.19(14)(a), through (c) describe which emissions units can be averaged together to comply with 310 CMR 7.19 and under what replicable and equivalent methods.
4. A bubble can not be used to comply with work practice requirements of either 310 CMR 7.18 or 7.19.
5. For purposes of 310 CMR 7.00 *Appendix B(4)*, emission bubbles are only allowed for the purpose of compliance at a single facility or multiple facilities which are operated by or under the control of the same economic entity.
6. Nothing in 310 CMR 7.00 *Appendix B(4)* relieves a facility from having to comply with other requirements of 310 CMR 7.00 as may be applicable.

NON-TEXT PAGE

Appendix B: continued

7. For facilities that have bubbles that were approved by the Department under 310 CMR 7.18(2)(b) and for which the application was received prior to May 25, 1988, the approved bubble conditions, recordkeeping and reporting requirements shall remain in force and no revision of said bubble approvals is required by 310 CMR 7.00: *Appendix B(4)*, unless and until the facility seeks to have the existing bubble approval modified. At that time, the request to modify the bubble shall be subject to 310 CMR 7.00: *Appendix B(4)*. However, with respect to those bubbles that were approved by the Department under 310 CMR 7.18(2)(b) and for which the application was received prior to May 25, 1988, modification of said bubbles solely to incorporate a more stringent Reasonably Available Control Technology adopted pursuant to 310 CMR 7.18 shall not make the facility subject to 310 CMR 7.00: *Appendix B(4)*.
- (c) General Bubble Requirements.
1. Compliance with emission requirements, through use of a bubble, will be approved by the Department providing that:
 - a. The bubble has been approved by the Department in accordance with 310 CMR 7.00 *Appendix B(4)*.
 - b. At no time may the use of a bubble result in a violation of a National Ambient Air Quality Standard for nitrogen dioxide (NO₂), particulate matter or carbon monoxide (CO) as determined by modelling.
 - c. At no time may the use of a bubble result in total VOC or NO_x emissions at a facility exceeding the applicable emission limitations in 310 CMR 7.18 or 7.19 averaged over a 24 hour period (except as provided for in 310 CMR 7.00 *Appendix B(4)(e)5.*) for emission units in the bubble.
 - d. At no time may use of a bubble result in total VOC emissions exceeding a monthly facility emission baseline as calculated under 310 CMR 7.00: *Appendix B(4)(e)2.* At no time may use of a bubble with an averaging time longer than 24 hours result in NO_x emissions exceeding the daily cap as calculated in 310 CMR 7.00 *Appendix B(4)(e)5.*
 - e. Organic compounds, that are specifically excluded from the definition of VOC in 310 CMR 7.00, shall not be used to emission average.
 - f. At no time may use of a bubble under 310 CMR 7.00 *Appendix B(4)* be used to meet the requirements of, or result in an increase in emissions for any emission unit above a New Source Performance Standard (NSPS), National Emission Standard for Hazardous Air Pollutants (NESHAP), the requirement for Best Available Control Technology (BACT), the requirement for Lowest Achievable Emission Rate (LAER) or Maximum Achievable Control Technology (MACT).
 - g. Emission reductions used in a bubble must be real in that the emission reductions must be from an emission unit which actually operated within the two year time period immediately preceding the application for the bubble.
 - h. Emission reductions used in a bubble must be permanent and the amount and duration of the reduction must be documented.
 - i. Emission reductions used in the bubble must be quantifiable with a replicable method for calculating the amount of reduction, as well as, a replicable method for assessing compliance with the emission rates after the reduction has been made.
 - j. Emission limitations must be federally enforceable and will be documented in the facility's emission control plan approval issued by the Department.
- (d) Application for a Bubble.
1. Application for approval of an emission bubble shall be made as part of the submittal to the Department of an emission control plan pursuant to either 310 CMR 7.18(20) or 310 CMR 7.19(3) and shall include:
 - a. Identification of all emission units to be included in the bubble, and
 - b. Demonstration of how compliance will be met and maintained, and
 - c. Demonstration that all emission units included in the bubble are operated by or under the control of the same economic entity, and
 - d. Demonstration that the bubble will not increase emissions of an emission unit included in the bubble above the following standards as applicable:
 - i. A Best Available Control Technology (BACT) determination pursuant to 310 CMR 7.02(3), or 40 CFR 52.21, or
 - ii. A Lowest Achievable Emission Rate (LAER) determination pursuant to 310 CMR 7.00 *Appendix A*, or
 - iii. A Federal New Source Performance Standard (NSPS [40 CFR Part 60]), or

Appendix B: continued

- iv. A National Emission Standard for Hazardous Air Pollutants (NESHAP [40 CFR Part 61]), or
 - v. A Maximum Achievable Control Technology (MACT) determination pursuant to 40 CFR Part 63.
 - e. For bubbles to comply with 310 CMR 7.19, evidence that the bubble will not cause an exceedance of the National Ambient Air Quality Standard for nitrogen dioxide (NO₂) or carbon monoxide (CO).
 - f. For facilities wishing to bubble either VOC or NO_x emissions, documentation that the bubble will result in total VOC or NO_x emissions, respectively, in compliance with the applicable emission limitation on a 24-hour basis as calculated under 310 CMR 7.00: *Appendix B(4)(e)1*. Exceptions to this averaging period may be granted by the Department as provided for in 310 CMR 7.00 *Appendix B(4)(e)5*. For VOC bubbles, the person must document that the bubble will result in total VOC emissions below the emissions baseline on a monthly basis.
 - g. Documentation that emission reductions used in the bubble are real, quantifiable, permanent and federally enforceable.
2. After approval of 310 CMR 7.00 *Appendix B(4)* by EPA into the Massachusetts SIP, certain applications to bubble will still require EPA approval. Persons wishing to include mobile and area sources in a bubble are required to have the approval of the EPA prior to inclusion of those sources in the bubble.
 3. Sources subject to enforcement action require the approval of EPA prior to use of a bubble to comply with 310 CMR 7.18 or 7.19. If EPA does not object to the use of a bubble by any facility subject to enforcement action during the public comment period, then this will be taken as EPA approval to bubble.

(e) Bubble Calculation.

1. In order to comply with a bubble for VOC or NO_x, the combined actual emissions (AcE) over a daily (or other period as allowed by 310 CMR 7.00 *Appendix B(4)(e)5*.) from all emission units in the bubble must be less than or equal to the allowable emission total (AIE) as determined by the following equations:

$$AcE = (Ac_1 \times B_1) + (Ac_2 \times B_2) + (...) + (Ac_n \times B_n)$$

$$AIE = (A_1 \times B_1) + (A_2 \times B_2) + (...) + (A_n \times B_n) + ERC$$

Where:

AcE = the combined actual emissions from the facility in pounds per day.

AIE = the allowable emissions from the facility in pounds per day.

Ac₁, Ac₂,...Ac_n = the actual emission rate of each emission unit (e.g. for VOC; pounds of VOC per gallon of solids applied; for NO_x, pounds of NO_x per million Btu heat input) included in the bubble. Where a single CEMS is used to determine the emission rate of more than one emission unit, this will be a combined emission rate.

A₁, A₂,...A_n = the most stringent applicable emission limitation for each unit of production (e.g. for VOC; pounds of VOC per gallon of solids applied; and for NO_x, pounds of NO_x per million Btu heat input).

B₁, B₂,...B_n = the actual number of production units processed each day (e.g. for VOC: gallons of solids applied; for NO_x; million Btu heat input per day).

ERC = the daily quantity of federally enforceable emission reduction credits (ERCs) from sources of either VOC or NO_x emissions, certified by the Department under 310 CMR 7.00 *Appendix B(3)*.

2. In addition to 310 CMR 7.00 *Appendix B(4)(e)1*., in order to comply with a bubble for VOC the total combined actual emissions, over a calendar month, from all emission units in the bubble must be less than the baseline emissions determined by the following equation:

Appendix B: continued

$$BE = (ER \times CU \times H) + (ERC \times D)$$

Where:

BE = the baseline emissions from the facility in pounds per month. Baseline emissions for a bubble is the sum of the baseline emissions for all emission units in the bubble.

ER = Emission rate specified in terms of mass emission per unit of production or throughput (e.g. pounds of VOC per gallon of solids applied) representative of the 1990 emission rate, the future allowable emission rate as determined by the SIP, 310 CMR 7.18 or other federally enforceable emission rate, whichever is lowest.

CU = Average hourly capacity utilization (e.g. gallons of solids applied per hour).

H = average number of hours of operation per month.

D = Number of days per month that the ERC generating facility operates.

ERC = the daily quantity of federally enforceable ERCs from emission units emitting VOC certified by the Department under 310 CMR 7.00 Appendix B(3).

3. In order to determine the average hourly Capacity Utilization (CU) and average number of hours of operation per month (H) in 310 CMR 7.00 *Appendix B(4)(e)2.*, the facility shall average the CU rate and monthly H over the two calendar year period immediately preceding the date of the application for a bubble. Documentation in sufficient detail to enable Department staff to replicate the determination of CU and H must be submitted with the application.

4. Should it be determined that the two year historical production information required to determine CU and H is not representative of normal historical production for the facility, the applicant may submit suitable and sufficient documentation to demonstrate to the Department that two alternative consecutive years within the five year period preceding the application should be used to determine CU and H for the facility. The Department shall have final approval of the use of alternative historical production information.

5. Should it be determined for a NO_x bubble that a 24 hour averaging period is insufficient to respond to the production demands at a specific facility, a facility operator or controller may submit suitable and sufficient documentation to demonstrate to the Department that an averaging period of up to and including 30 days for the bubble is more feasible given the production process and product requirements of the specific facility. Applications for a bubble with an averaging period of greater than 24 hours shall include a commitment from the facility to maintain a daily "cap" on maximum total emissions. The cap shall be determined according to the following equation:

$$\text{Cap} = (A_1 \times EI_1 \times H) + (A_2 \times EI_2 \times H) + (\dots) \\ + (A_n \times EI_n \times H) + \text{ERC}$$

Where:

Cap = The emission cap for the facility in pounds per day. The emission cap for a bubble is the sum of the emission caps for all emission units in the bubble.

A₁, A₂,...A_n = The emission rate for each emission unit specified in terms of mass emission per unit of production (e.g. pounds of NO_x per million Btu) representative of the 1990 emission rate, the future allowable emission rate as determined by the SIP, 310 CMR 7.19 or other federally enforceable emission rate, whichever is lowest.

Appendix B: continued

EI_1, EI_2, \dots, EI_n = The maximum energy input capacity for each emission unit in million Btu per hour.

H = 24 hours per day.

ERC = the daily quantity of federally enforceable ERCs from emission units emitting NO_x certified by the Department under 310 CMR 7.00 Appendix B(3).

(f) Department Review of a Request to Bubble. The following conditions apply to bubble applications;

1. The Department shall review each application for a bubble in a complete submittal of an emission control plan pursuant to 310 CMR 7.18(20) and 7.19(3).
2. An approved emissions bubble shall be in effect for a period of no more than five years from the date of Department final approval. However, for facilities subject to 310 CMR 7.00 Appendix C, with five year terms or less, the expiration date of the bubble shall be identical with the expiration date of the operating permit. At least nine months prior to the expiration of the bubble, the facility must reapply for permission to bubble. The Department shall review the bubble for compliance and may either renew the bubble or allow the bubble to expire. Should the bubble expire, the facility that held the bubble shall return to complying with applicable regulations based on continuous compliance for each regulated emission unit which was formerly in the bubble. Bubbles that do not already contain an emissions cap will not be required to take one as part of the renewal. For facilities with existing caps, new caps will not be recalculated.
3. The emission limitations in a bubble approval may be specific for each emission unit or may be expressed as a multi-emission unit average.

(g) Compliance Determination.

1. The Department shall determine compliance with the terms and conditions of the bubble through any means the Department judges to be adequate based upon the criteria listed below:
 - a. The provisions and emission limitations of any approved bubble shall be incorporated in the approval of the emission control plan submitted under 310 CMR 7.18(20) or 7.19(3).
 - b. Said emission control plan approval shall include, but not be limited to source specific emission limitation (*e.g.* pounds of VOC per gallon of solids applied; pounds of NO_x per million Btu heat input) and emission cap (*e.g.* pounds of VOC per month; pounds of NO_x per day) limits where applicable, record keeping requirements and test methods used to determine compliance.
 - c. Compliance with this approval shall be determined utilizing Department and EPA approved test methods and/or continuous emissions monitoring system, including but not limited to those methods referenced in 310 CMR 7.13, 7.14, 7.18(2), 7.19(13) as appropriate for the facility and emissions units.
 - d. In order for a facility to demonstrate compliance with the emission limitations of a bubble it is required that records shall be maintained. Records shall be kept on a daily basis for each emissions unit in the bubble and shall be specific enough to demonstrate compliance with the emission limits of the bubble for the facility as a whole. Record keeping shall include, but not be limited to:
 - i. Process information and identification of equipment;
 - ii. For surface coating operations, coating formulation information including the name of the coating, the color of the coating, the identification number for the coating as it relates to coating consumption information, the density of the coating, the total VOC contained in the coating by weight percent, the solids content of the coating as a volume percent, the percent by weight of exempt solvents as identified in the definition of VOC at 310 CMR 7.00 and the formulation of the diluents used or mixed in the coating (pounds VOC per gallon of diluent);
 - iii. For surface coating, daily coating/diluent consumption rate for each emissions unit in the bubble. Daily total of solvents used in clean-up.

Appendix B: continued

- iv. For bubbles to comply with 310 CMR 7.19, comply with the recordkeeping requirements contained in 310 CMR 7.19(13)(d).
 - v. Daily emissions or emission rates calculated in a manner to be consistent with the compliance averaging period approved for the facility.
 - vi. Any other information determined to be necessary by the Department to demonstrate compliance.
2. Records shall be kept at the facility and maintained for a five-year period. The records must be accessible for review by the Department or EPA.
 3. Persons holding an approved bubble plan must submit to the appropriate regional office of the Department quarterly (January - March, April - June, July - September, October - December) summary calculations based on daily emission calculations of 1) actual emissions, 2) allowable emissions, 3) whether actual emission exceeded allowable emissions over the reporting period, and 4) whether the facility was in compliance with the emission baseline cap for each day/month. Said submittal must be made 30 days after the end of the quarter for which the report is being prepared.
 4. Any exceedance of the bubble emissions limitations must be recorded and reported to include the date of exceedance and quantity of excess emissions and reported to the Department by the 30th of the month following the close of the calendar quarter in which the exceedance occurred.
- (5) Enforcement.
- (a) The Department shall enforce the provisions of 310 CMR 7.00: *Appendix B* under applicable law and regulations.
 - (b) For purposes of 310 CMR 7.00: *Appendix B(3)*, a violation of the emission limitation provisions of any permit issued or modified to reflect the creation of an emission reduction credit shall be enforced at the point of ERC creation.
- (6) Public Participation. The following conditions apply to applications under 310 CMR 7.00: *Appendix B*:
- (a) For persons applying under 310 CMR 7.00: *Appendix B(4)* to comply with either 310 CMR 7.18 or 7.19, the ECP approved by the Department must be approved by EPA as a SIP revision if EPA has not approved 310 CMR 7.00 *Appendix B(4)* as a part of the Massachusetts SIP.
 - (b) For persons applying for Emission Reduction Credit under 310 CMR 7.00: *Appendix B(3)*, the approval issued by the Department must be approved by EPA as a SIP revision if EPA has not approved 310 CMR 7.00: *Appendix B(3)* as a part of the Massachusetts SIP.
 - (c) The Department shall notify all applicants as to any administrative or technical deficiencies in the application or information submitted.
 - (d) For each Emission Reduction Credit (ERC) application submitted pursuant to 310 CMR 7.00: *Appendix B(3)* or (4), the Department shall:
 1. Make a proposed decision as to whether the application should be approved, approved with conditions, or a decision that the application should be disapproved.
 2. Provide a 30-day comment period for submittal of public comment.
 3. Post on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period, the following:
 - a. A notice of availability of the Department's proposed decision to approve or deny the ERC application and information on how to submit public comment;
 - b. The Department's proposed decision to approve or deny the ERC application; and
 - c. Information on how to access the administrative record for the Department's proposed decision on whether to approve or deny the ERC application.
 4. Send a copy of the notice required under 310 CMR 7.00: *Appendix B(6)(d)3.a.* to EPA.

Appendix B: continued

5. Consider all public comments in making a final decision whether or not to approve the application. The Department shall make all comments available for public inspection in the same location(s) where the Department made available information relating to the proposed approval under 310 CMR 7.00: *Appendix B(3)* or (4).

6. Make a final decision as to whether the plan approval application should be approved, approved with conditions, or disapproved.

7. Notify the applicant and the EPA in writing of the final decision and make such notification available for public inspection at the same location where the Department made available information and public comments relating to the source.

(7) Greenhouse Gas Credit Banking and Trading.

(a) Introduction and Statement of Purpose. The goal of the program set forth in 310 CMR 7.00: *Appendix B(7)* is to reduce, avoid or sequester emissions of greenhouse gas (GHG) in order for affected facilities as defined in 310 CMR 7.29 (“affected facilities”) to use GHG Credits for compliance with the applicable provisions of 310 CMR 7.29(5)(a)5.

(b) Definitions. The definitions in 310 CMR 7.00 apply to 310 CMR 7.00: *Appendix B(7)*. However, the following terms have the following meanings when they appear in 310 CMR 7.00: *Appendix B(7)*. Where a term defined in 310 CMR 7.00 definitions also appears in 310 CMR 7.00: *Appendix B(7)(b)*, the definition in 310 CMR 7.00: *Appendix B(7)(b)* controls.

Additional means GHG emission reductions, avoided emissions, or sequestered emissions that are not required by local, state or federal law or regulation, or as part of a local, state or federal permit, plan, or plan approval, agreement, administrative or judicial order, or as part of an enforcement action (including such laws, regulations, permits, plans, plan approvals, agreements, orders or actions taken to reduce other pollutants) at the time of submittal of a certification application. A requirement to obtain a permit or plan approval under local, state, or federal law solely for the purpose of constructing, installing, or operating a voluntary emission reduction, avoided emission, or sequestered emission project shall not be considered when determining whether or not such project is additional.

Afforestation means the conversion of land that has been in a non-forested state for at least the ten years prior to the filing of an initial application for GHG Credit certification to a forested state.

Avoided Emissions means emissions of a GHG that do not occur and which would have otherwise occurred if not for specific projects undertaken.

Cancel, Cancelled, or Cancellation means transferring an allowance or credit to a cancellation account, or otherwise terminating such allowance or credit in a manner consistent with its program of origin, to prevent subsequent use in a regulatory or voluntary program, or use for any purpose other than compliance with the CO₂ emissions standards of 310 CMR 7.29.

Cancellation Account means the account established in a Kyoto Protocol signatory country for purposes of canceling allowances. Such account will not be established by the Department.

Carbon Dioxide Equivalent or CO₂e means the weight of a quantity of a GHG multiplied by its Global Warming Potential.

Certification means the process of reviewing and conditionally approving a quantity of emission reductions, avoided emissions or sequestered emissions as GHG Credits.

Clean Development Mechanism, or CDM, means a mechanism, created under the Kyoto Protocol, that allows for the creation and use of CDM CERs to demonstrate compliance with emissions targets established by the Kyoto Protocol.

Clean Development Mechanism Certified Emissions Reduction, or CDM CER, means a greenhouse gas emissions offset currency created for projects that reduce, avoid, or sequester emissions of greenhouse gases in developing countries. CDM CERs are issued by the Executive Board of the Clean Development Mechanism, and are usable for meeting country-specific greenhouse gas emissions targets established by the Kyoto Protocol.

Appendix B: continued

Coastal Waters means the waters within the 12-mile limit pursuant to the Tariff Act of 1930 19 USC § 1401.

Energy Conservation Measure means an action that reduces demand for electricity. An Energy Conservation Measure means the installation or implementation of one or more of the following measures:

- (a) the design, acquisition, and installation of projects which result in energy savings, or
- (b) the modification of maintenance and operating procedures in a building or facility which result in energy savings, or
- (c) the installation, replacement, or modification of equipment, fixtures, or materials in a building or facility which reduce energy consumption, and include, but are not limited to, modifications to windows and doors; caulking and weather-stripping, insulation; automatic energy control systems; hot water systems; equipment required to operate steam, hydraulic, and ventilation systems; plant and distribution system modifications including replacement of burners, furnaces or boilers; devices for modifying fuel openings; electrical or mechanical furnace ignition stems; utility plant system conversions; replacement or modification of lighting fixtures; and energy recovery systems.

Energy Conservation Measures do not include reductions in labor, load shifting, or measures that do not reduce energy use directly.

Enforceable means enforceable by the Department.

European Union Emissions Trading Scheme or EU ETS means a multi-country, multi-sector greenhouse gas emission trading scheme implemented in 2005 by the European Commission to control emissions of greenhouse gases.

European Union Emissions Trading Scheme Phase II Allowance or EU ETS Phase II Allowance means an allowance that can be used during the second trading period of the EU ETS, which lasts from 2008-2012, and can be used to demonstrate compliance with emission reduction targets established by the European Commission.

GHG Credit means a credit based on an amount of emission reductions, avoided emissions or sequestered emissions of a GHG. One GHG Credit has an assigned value of one ton of carbon dioxide equivalent. GHG Credits shall be expressed in whole tons. When certifying or verifying GHG Credits, the number of GHG Credits is rounded down for decimals less than 0.5 and rounded up for decimals of 0.5 or greater.

GHG Expendable Trust means the trust established pursuant to 801 CMR 50.00 for the purpose of providing a separate segregated interest-bearing account for the receipt of payments made pursuant to 310 CMR 7.00: *Appendix B(7)(d)5*.

GHG Registry means the database of Massachusetts GHG Credits that have been certified, verified, voided or used.

Global Warming Potential or GWP means the ratio of the global heat trapping effect, direct and indirect, of one mass unit of a gas to that of the same mass unit of carbon dioxide over 100 years. In implementing 310 CMR 7.00: *Appendix B(7)*, the Department shall utilize the GHG GWPs, as published by the Intergovernmental Panel on Climate Change (IPCC), at the time of submittal of a certification application.

Greenhouse Gas or GHG means any of the gases for which a GWP is listed by the Intergovernmental Panel on Climate Change.

Kyoto Protocol means an international commitment, adopted in Kyoto on December 11 1997, to stabilize greenhouse gas emissions.

Appendix B: continued

Leakage means displacement of reduced, avoided, or sequestered GHG emissions to an area or location outside of the boundary of a project which reduced, avoided or sequestered the GHG emissions.

Permanent means that GHG emission reductions, avoided emissions, or sequestered emissions implemented for the purpose of generating GHG Credits must be assured for the life of the corresponding GHG Credits.

Phase II of the EU ETS means the second trading period of the EU ETS, which lasts from 2008-2012.

Real means actual.

Renewable Energy Generation Measure means an energy supply-side measure using sources that are essentially inexhaustible or regenerative. Renewable sources of energy include, but are not limited to, wood, geothermal, wind, photovoltaic and solar thermal energy.

Sequestered Emissions means carbon that has successfully been captured and securely stored that would have otherwise been emitted to or remained in the atmosphere.

Verifiable means that emission reductions, avoided emissions or sequestered emissions can be determined through replicable (as defined in 310 CMR 7.00: *Appendix B(2)*) methods which are acceptable to the Department.

Verification means the process of determining the extent to which certified GHG emission reductions, avoided emissions or sequestered emissions actually occurred.

(c) Applicability.

1. Entry into this GHG Banking and Trading Program is voluntary.
2. 310 CMR 7.00: *Appendix B(7)* applies to affected facilities and any other person applying for certification or verification of GHG Credits.
3. GHG Credits certified or verified under 310 CMR 7.00: *Appendix B(7)* may only be used to satisfy the requirements of 310 CMR 7.29(5)(a)5., except as provided in 310 CMR 7.00: *Appendix B(7)(h)*.
4. Applications for certification or verification of GHG Credits pursuant to 310 CMR 7.00: *Appendix B(7)(e)* may be submitted by any person.
5. Applications to verify and use EU ETS Phase II Allowances and CDM CERs pursuant to 310 CMR 7.00: *Appendix B(7)(i)* may be submitted only by affected facilities.

(d) Creation of GHG Credits.

1. GHG Credits may be created by projects which reduce emissions, avoid emissions, or sequester emissions. Examples include, but are not limited to: landfill gas combustion; sulfur hexafluoride (SF₆) capture; afforestation; natural gas, oil and propane end-use efficiency; methane capture from farming operations; stationary, area and mobile source projects; renewable energy projects; and energy conservation measures.
2. The following are not eligible for certification as GHG Credits: nuclear power generation, under-water and under-ground sequestration, and over-compliance with the cap and rate limitations in 310 CMR 7.29 by affected facilities.
3. Except as allowed pursuant to 310 CMR 7.00: *Appendix B(7)(d)4*, emission reduction, avoided emission or sequestered emission projects shall be located within the geographic limits of:
 - a. Connecticut, Delaware, Maine, Massachusetts, Maryland, New Hampshire, New Jersey, New York, Rhode Island, Vermont, or the coastal waters thereof; or,
 - b. The United States, or the coastal waters thereof, not including those regions specified in 310 CMR 7.00: *Appendix B(7)(d)3.a*.

Appendix B: continued

4. Offset Trigger Price.
 - a. The Department shall establish an offset trigger price for 2006, 2007, and 2008. The offset trigger price for calendar year 2006 shall be \$6.50 per ton of CO_{2e}. For each calendar year after 2006, until such time as the offset trigger price is exceeded, the Department shall publish the new offset trigger price by January 31st, which shall be equal to the previous year's offset trigger price adjusted up or down according to the previous year's Consumer Price Index.
 - b. By February 15, 2007, the Department shall determine whether the offset trigger price for the previous calendar year was exceeded, or whether there are insufficient GHG Credits available for purchase at or below the offset trigger price for the previous calendar year in the geographic region specified in 310 CMR 7.00: *Appendix B(7)(d)3*. In determining whether the offset trigger price for the previous calendar year was exceeded, the Department may consider the average calendar year price of GHG Credits or of applied-for GHG Credits for the previous year, or any other relevant information.
 - c. Notwithstanding 310 CMR 7.00: *Appendix B(7)(d)3*., if the Department determines by February 15, 2007 that the offset trigger price for the previous calendar year was exceeded, or that there are insufficient GHG Credits available for purchase at or below the offset trigger price for the previous calendar year in the geographic region specified in 310 CMR 7.00: *Appendix B(7)(d)3*., then, for all subsequent years, applicants may apply for certification and verification of projects that occur anywhere on Earth, and certification and verification of greenhouse gas allowances and credits from any allowance or credit system.
 - d. By June 1, 2008, the Department shall determine whether there are insufficient GHG Credits available for purchase at or below the offset trigger price in the geographic regions specified in 310 CMR 7.00: *Appendix B(7)(d)3*. In determining whether there are insufficient GHG Credits available for purchase at or below the offset trigger price, the Department may consider the average price of GHG Credits or applied-for GHG Credits, or any other relevant information. Notwithstanding 310 CMR 7.00: *Appendix B(7)(d)3*., if the Department determines by June 1, 2008 that there are insufficient GHG Credits available for purchase at or below the offset trigger price in the geographic regions specified in 310 CMR 7.00: *Appendix B(7)(d)3*., then, pursuant to 310 CMR 7.00: *Appendix B(7)(i)*, affected facilities may apply to verify and use EU ETS Phase II Allowances and CDM CERs that are eligible for use under Phase II of the EU ETS.
5. Trust Trigger Price.
 - a. The Department shall establish a trust trigger price for 2006, 2007, and 2008. The trust trigger price for calendar year 2006 shall be \$10.00 per ton of CO_{2e}. For each calendar year after 2006, the Department shall publish the new trust trigger price by January 31st, which shall be equal to the previous year's trust trigger price adjusted up or down according to the previous year's Consumer Price Index plus 2%.
 - b. By February 15, 2007, the Department shall determine whether the trust trigger price for the previous calendar year was exceeded. In making this determination, the Department may consider the average calendar year price of GHG Credits, of applied-for GHG Credits, or of projects funded or credits or allowances purchased by the GHG Expendable Trust for the previous year, or any other relevant information.
 - c. Notwithstanding 310 CMR 7.00: *Appendix B(7)(d)3*. and 4., if the Department determines by February 15, 2007 that the trust trigger price for the previous calendar year was exceeded, then, to demonstrate compliance with 310 CMR 7.29(5)(a)5., affected facilities may pay into the GHG Expendable Trust at the price established pursuant to 310 CMR 7.00: *Appendix B(7)(d)5.a.* to offset all or a portion of emissions above the historical actual emissions or excess emissions pursuant to 310 CMR 7.29(5)(a)5.c. and d., so that a combination of GHG Credits and payments into the GHG Expendable Trust equals emissions above historical actual emissions plus excess emissions.

Appendix B: continued

6. Notwithstanding 310 CMR 7.00: *Appendix B(7)(d)3.*, 4., and 5., if, at any time prior to September 1, 2009, the Commissioner determines that the price of GHG Credits or of applied-for GHG Credits substantially exceeds either of the price thresholds established in 310 CMR 7.00: *Appendix B(7)(d)4.* or 5., or if insufficient GHG Credits are available, then the Commissioner may, after public notice in the Environmental Monitor, and an opportunity for public comment: expand the geographic scope; allow payments into the GHG Expendable Trust at the rate set forth in 310 CMR 7.00: *Appendix B(7)(d)5.*; or reduce the annual average CO_{2e} tonnage requirements for certification of projects under 310 CMR 7.00: *Appendix B(7)(e)3.* If the geographic scope is expanded pursuant to 310 CMR 7.00: *Appendix B(7)(d)6.*, then applicants for projects that occur outside of the geographic limits of the United States or the coastal waters thereof shall follow the procedures in 310 CMR 7.00: *Appendix B(7)(i).* This provision shall have no effect on and after September 1, 2009.
7. In order to be certified or verified as GHG Credits pursuant to 310 CMR 7.00: *Appendix B(7)*, emission reductions, avoided emissions, or sequestered emissions shall be real, additional, verifiable, permanent, and enforceable and occur on or after January 1, 2006.
8. In the case of sequestered emissions, in order for a GHG Credit to be permanent, the owner shall, at a minimum, place the land within the sequestration project boundary under a legally binding instrument, acceptable to the Department, such that the sequestered emissions remain captured and securely stored in perpetuity.
9. In order to be certified or verified as GHG Credits pursuant to 310 CMR 7.00: *Appendix B(7)*, emission reductions, avoided emissions, or sequestered emissions shall be generated only by projects built and generating energy (in the case of certain avoided emissions), or built and in use, or installed and operational (in the case of emission reductions or sequestered emissions) on or after January 1, 2006.
10. Except as provided in 310 CMR 7.00: *Appendix B(7)(h)*, GHG Credits may be created for emissions reduced, avoided, or sequestered up to and including December 31, 2008, provided administratively complete applications for certification and verification are submitted to the Department no later than March 31, 2009. The Department shall have sole discretion to determine whether applications for certification and verification of GHG Credits are administratively complete.
- (e) Procedure For Certification and Verification of Emission Reductions, Avoided Emissions, or Sequestered Emissions that Occur Within the Geographic Limits of the United States and the Coastal Waters Thereof as GHG Credits.
1. An application for certification of GHG Credits may be submitted to the Department in advance of the time when the emission reduction, avoided emission, or sequestered emission actually occurs (prospective certification) or after the emission reduction, avoided emission, or sequestered emission has actually occurred (retrospective certification).
 2. In order for GHG Credits to be eligible for verification, an application for verification of GHG Credits shall be submitted to the Department within two calendar years after the end of the calendar year in which the emission reduction, avoided emission, or sequestered emission actually occurred. Applicants may apply for verification a maximum of two times per calendar year per approved certification.
 3. For project-based emission reductions, avoided emissions, or sequestered emissions located within the geographic scope set forth in 310 CMR 7.00: *Appendix B(7)(d)3.a.*, only those projects which generate an annual average over the period applied for of 5,000 or more tons CO_{2e}, as calculated under 310 CMR 7.00: *Appendix B(7)(d)*, are eligible to be certified as GHG Credits. For project-based emission reductions, avoided emissions, or sequestered emissions located within the geographic scope set forth in 310 CMR 7.00: *Appendix B(7)(d)3.b.*, only those projects which generate an annual average over the period applied for of 20,000 or more tons CO_{2e}, as calculated under 310 CMR 7.00: *Appendix B(7)(d)*, are eligible to be certified as GHG Credits.
 4. Application Procedures for projects.
 - a. Applications are required for certification and verification of GHG Credits from emissions reduction, avoided emission and sequestration projects.

Appendix B: continued

- b. The GHG Credit application shall be submitted on a form supplied by the Department and shall include but not be limited to: a complete description of the project; a quantification protocol that details the calculation method for the quantification of pre- and post-project emissions for emission reductions, quantity of avoided emissions, or quantity of sequestered emissions; and a proposed method for determining, monitoring and assuring compliance.
 - c. GHG Credit applications shall express emission reductions, avoided emissions, and or sequestered emissions in whole tons of CO_{2e}. When certifying or verifying GHG Credits, the number of GHG Credits is rounded down for decimals less than 0.5 and rounded up for decimals of 0.5 or greater.
 - d. GHG Credit applications shall contain sufficient information to allow the Department to evaluate each emission reduction, avoided emission or sequestered emission consistent with the requirements of 310 CMR 7.00: *Appendix B(7)*. Where applicable, the applicant shall specify the best management practice used to determine an emissions baseline.
 - e. GHG Credit applications shall be submitted by and bear the signature of a responsible official having the legal authority to bind the applicant.
 - f. GHG Credit applications shall comply with provisions of 310 CMR 4.00 *et seq.* for fees and permit procedures as applicable.
 - g. Concurrent participation in other registries and certification programs.
 - i. If an applicant has submitted information relative to the emission reductions, avoided emissions, or sequestered emissions for which the applicant is seeking certification under 310 CMR 7.00: *Appendix B(7)* to any other certification system, registry or inventory, then the applicant shall submit a copy of such information with its application for certification of GHG Credit in Massachusetts. The applicant shall state the status of its submittal to such other certification system, registry or inventory.
 - ii. If an applicant for GHG Credit fails to comply with 310 CMR 7.00: *Appendix B(7)(e)4.g.i.*, then the Department may deny any GHG Credit applied for and void any GHG Credits that may have been approved. GHG Credits shall be voided in cases where the GHG Credit is found to have been used for a purpose other than those specified in 310 CMR 7.00: *Appendix B(7)*.
 - h. GHG Credit certification and verification applications shall contain a description of potential project leakage, and describe how such leakage was or will be monitored and avoided. The Department shall void GHG Credits to the extent of any leakage that has been identified.
 - i. GHG Credit applications shall document the negotiated or anticipated price per ton of GHG Credit applied for.
6. Conditions of GHG Credit Certification and Verification Approvals.
- a. The Department may approve, approve with conditions, or deny GHG Credit applications.
 - b. The Department may require applicants to implement compliance assurance methods such as testing, monitoring, recordkeeping and reporting as part of the GHG Credit certification and verification approval.
 - c. The Department may consider scientific uncertainty and the extent to which a project may be harmful to the environment or public health when certifying or verifying GHG Credits.
- (f) Public participation procedures for certification and verification applications pursuant to 310 CMR 7.00: *Appendix B(7)*.
- 1. The Department shall publish, at the applicant's expense, a notice of public comment on a proposed approval, conditional approval, or disapproval. The Department will allow a 30-day public comment period following publication of the notice, and may hold a public hearing. After the close of the public comment period, the Department will issue a final decision.
 - 2. 310 CMR 7.00: *Appendix B(7)(f)* shall apply to applications for certification and verification pursuant to 310 CMR 7.00: *Appendix B(7)*, instead of the procedures under 310 CMR 7.00: *Appendix B(6)*.
 - 3. The public participation procedures of 310 CMR 7.00: *Appendix B(7)(f)* and 310 CMR 7.00: *Appendix B(6)* shall not apply to applications for use pursuant to 310 CMR 7.00: *Appendix B(7)(I)5*.

Appendix B: continued

(g) Use and Purchase of GHG Credits.

1. To the extent that affected facilities use GHG Credits to comply with 310 CMR 7.29(5)(a)5., only GHG Credits verified under 310 CMR 7.00: *Appendix B(7)* may be used.
2. GHG Credits that have been used to satisfy any GHG liability or requirement other than 310 CMR 7.29, with the exception of requirements to disclose environmental and other attributes of electricity generation, shall not be eligible for use to comply with the requirements of 310 CMR 7.29.
3. Any person who purchases a GHG Credit from any source shall report the price paid per GHG Credit to the Department within 30 days of purchase.
5. Nothing in 310 CMR 7.00: *Appendix B(7)* or 310 CMR 7.29(5)(a)5. shall be construed to limit the authority of the Department to terminate, void, or limit GHG Credits that have been certified or verified.
6. If the Department determines that any emission reductions, avoided emissions, or sequestered emissions used to generate GHG Credits are not real, additional, verifiable, permanent, or enforceable as defined in 310 CMR 7.00: *Appendix B(7)(b)*, such GHG Credits shall become void.
7. Any affected facility using voided GHG Credits shall replace the voided GHG Credits with an equivalent amount of valid GHG Credits and shall demonstrate compliance with this provision within one year of the date that the Department determines that such GHG Credits are void.
8. Violations of the requirements, for purposes of 310 CMR 7.00: *Appendix B(7)*, may be enforced against the affected facility, any person who applied for certification or verification of GHG Credits, or any combination thereof. Nothing in 310 CMR 7.00: *Appendix B(7)* shall limit the ability of the Department to take enforcement action for violations of 310 CMR 7.29 or 310 CMR 7.00: *Appendix B(7)*.

(h) Exchange of GHG Credits for CO₂ Budget Trading Program CO₂ Allowances.

1. Eligibility. GHG Credits shall be eligible for exchange with CO₂ Budget Trading Program CO₂ Allowances provided:
 - a. The project from which the GHG Credits were derived is not an offset project type listed under 310 CMR 7.70(10)(c)1.a.
 - b. The GHG Credits were not created from allowances or credits from another carbon constraining program.
 - c. An administratively complete application for certification of GHG Credits was submitted to the Department no later than January 25, 2008. The Department shall have sole discretion to determine whether an application for certification of GHG Credits is administratively complete.
2. Verification Deadline. GHG Credits may be created for emissions reduced, avoided, or sequestered up to and including December 31, 2012, provided:
 - a. The GHG Credits meet the requirements of 310 CMR 7.00: *Appendix B(7)(h)1.*; and
 - b. An administratively complete application for verification is submitted to the Department no later than March 31, 2013. The Department shall have sole discretion to determine whether an application for verification of GHG Credits is administratively complete.
3. Exchange.
 - a. At any time after January 1, 2009 and prior to December 1, 2013, any person may apply to the Department for CO₂ Budget Trading Program CO₂ Allowances in exchange for GHG Credits that meet the requirements of 310 CMR 7.00: *Appendix B(7)(h)1.* and 2. and which have been verified by the Department pursuant to 310 CMR 7.00: *Appendix B(7)(e)* and (f).
 - b. The Department shall exchange one CO₂ Budget Trading Program CO₂ allowance set aside pursuant to 310 CMR 7.70(5)(c)1.a. for every two GHG Credits provided to the Department pursuant to 310 CMR 7.00: *Appendix B(7)(h)3.a.*
 - c. The Department shall retire all GHG Credits exchanged for CO₂ Budget Trading Program CO₂ Allowances.

(i) Procedures for Verification and Use of EU ETS Phase II Allowances and CDM CERs that are Eligible for Use Under Phase II of the EU ETS.

1. Eligibility. Provided the geographic scope is expanded beyond the United States and its coastal waters pursuant to 310 CMR 7.00: *Appendix B(7)(d)4.* or 6., the following are eligible to be used to demonstrate compliance with the CO₂ emissions standards of 310 CMR 7.29(5)(a)5. provided they have been verified.

Appendix B: continued

- a. EU ETS Phase II allowances; and,
- b. CDM CERs provided that:
 - i. The CDM CERs are acceptable and valid for use in Phase II of the European Union Emissions Trading Scheme at the time of application for verification;
 - ii. The CDM CERs were not created for a project type listed under 310 CMR 7.00: *Appendix B(7)(d)2.*; and
 - iii. The CDM CERs are permanent.
2. For purposes of 310 CMR 7.00: *Appendix B(7)*, EU ETS Phase II Allowances and CDM CERs that are eligible for use under Phase II of the EU ETS are presumed to be certified GHG emission reductions, avoided emissions, or sequestered emissions.
3. Applications for verification shall be submitted in a form determined by the Department and shall include but not be limited to:
 - a. Name of the allowances and credits;
 - b. Name of the regulatory scheme and issuing body of the allowances or credits;
 - c. Where applicable, the type of project for which the CDM CERs were created;
 - d. Serial numbers of the allowances and credits;
 - e. Total tons of CO_{2e} represented by the allowances and credits;
 - f. Demonstration that the CDM CERs are acceptable and valid for use with Phase II of the EU ETS at the time of application for verification;
 - g. Identification of the owner of the allowances and credits;
 - h. Certification by the relevant regulatory body that the allowances and credits have been issued;
 - i. The price paid, or to be paid, for such allowances or credits.
4. Applications for verification shall be for not less than 20,000 tons CO_{2e}, or 18,144 metric tons CO_{2e}.
5. Applications to use verified EU ETS Phase II Allowances and verified eligible CDM CERs for compliance with the CO₂ emission standards in 310 CMR 7.29(5)(a)5., shall be submitted in a form determined by the Department and shall include but not be limited to a demonstration and certification that the allowances or credits were cancelled to prevent their use for any other regulatory or voluntary purposes other than for compliance with 310 CMR 7.29(5)(a)5.
 - a. This demonstration shall include but not be limited to:
 - i. Evidence that the allowance or credit was actually purchased;
 - ii. A legal document or other written statement issued by the relevant regulatory body that the allowances and credits have been cancelled; and,
 - iii. Evidence that the allowance or credit has not and cannot be used for any other regulatory or voluntary program.
 - b. The certification statement shall be signed under the pains and penalties of perjury by a Responsible Official of the affected facility and the entity that cancelled the allowance or credit (if not the affected facility).
6. Application Deadlines.
 - a. Administratively complete applications submitted pursuant to 310 CMR 7.00: *Appendix B(7)(i)3.* shall be submitted to the Department no later than March 31, 2009.
 - b. Administratively complete applications submitted pursuant to 310 CMR 7.00: *Appendix B(7)(i)5.* shall be submitted to the Department no later than June 30, 2009.
 - c. The Department shall have sole discretion to determine whether applications submitted pursuant to 310 CMR 7.00: *Appendix B(7)(i)3.* or 5. are administratively complete.
7. The Department will make a finding regarding the administrative completeness for applications submitted pursuant to 310 CMR 7.00: *Appendix B(7)(i)* within 15 business days of submittal, and will make a consistency determination within 30 days of its finding that an application is administratively complete.
8. The Department may approve, approve with conditions, or deny applications submitted pursuant to 310 CMR 7.00: *Appendix B(7)(i)3.* or 5.
9. Verified cancelled allowances or credits are not GHG Credits under 310 CMR 7.00: *Appendix B(7)* and cannot be transferred, exchanged pursuant to 310 CMR 7.00: *Appendix B(7)(h)*, or used for any purpose other than compliance with the CO₂ emissions standards of 310 CMR 7.29, or by any entity other than the affected facility that submitted an application pursuant to 310 CMR 7.00: *Appendix B(7)(i)3.* and 5.

NON-TEXT PAGE

APPENDIX C: OPERATING PERMIT AND COMPLIANCE PROGRAM

(1) Definitions: Terms used in 310 CMR 7.00: *Appendix C* are defined at 310 CMR 7.00: *Definitions* or in 310 CMR 7.00: *Appendix C*. Where a term is defined in both 310 CMR 7.00: *Definitions* and in 310 CMR 7.00: *Appendix C*, the definition in 310 CMR 7.00: *Appendix C* is applicable.

Affected Source means a source that includes one or more affected units.

Affected State means any state:

- (a) Whose air quality may be affected and is contiguous to Massachusetts; or
- (b) Which is located within 50 miles of a facility subject to the operating permit and compliance program in Massachusetts.

Affected Unit means a fossil fuel fired combustion device subject to the emission reduction requirements or limitations under Title IV (Acid Rain) of 42 U.S.C. 7401.

Allowance means an authorization by the Administrator of the United States Environmental Protection Agency (EPA) under the Acid Rain Program, to emit up to one ton of sulfur dioxide during or after a specified calendar year.

Applicable Requirement means all of the following as they apply to emissions units or control equipment in a facility subject to the requirements of 310 CMR 7.00: *Appendix C*. This includes requirements that have been promulgated or approved by EPA through rule making at the time of issuance but have future-effective compliance dates:

- (a) Any standard or other requirement provided for in the applicable implementation plan, contained at 310 CMR 7.00 approved or promulgated by EPA through rulemaking under 42 U.S.C. 7401, Title I that implements the relevant requirements of 42 U.S.C. 7401, including any revisions to that plan promulgated in 40 CFR Part 52;
- (b) Any term or condition of any approval issued by the Department pursuant to any regulation under 310 CMR 7.00 which has been approved or promulgated through rulemaking under 42 U.S.C. 7401, Title I, including parts C or D (310 CMR 7.00: *Appendix A* or 40 CFR 52.21 PSD approvals), of 42 U.S.C. 7401;
- (c) Any standard or other requirement under 42 U.S.C. 7401, The Clean Air Act, § 111, including § 111(d) (New Source Performance Standards (NSPS));
- (d) Any standard or other requirement under 42 U.S.C. 7401, The Clean Air Act, § 112, including any requirement concerning accident prevention under 42 U.S.C. 7401, The Clean Air Act, § 112(r)(7) (National Emission Standard for Hazardous Air Pollutants (NESHAPS));
- (e) Any standard or other requirement of the acid rain program under Title IV of 42 U.S.C. 7401 or the regulations promulgated thereunder;
- (f) Any requirement(s) established pursuant to 42 U.S.C. 7401, § 504(b) (monitoring and analysis) or § 114(a)(3) (enhanced monitoring 40 CFR Part 64 regulations);
- (g) Any standard or other requirement governing solid waste incineration, under 42 U.S.C. 7401, The Clean Air Act, § 129;
- (h) Any standard or other requirement for consumer and commercial products, under 42 U.S.C. 7401, The Clean Air Act § 183(e);
- (i) Any standard or other requirement for tank vessels under 42 U.S.C. 7401, The Clean Air Act, § 183(f);
- (j) Any standard or other requirement of the program to control air pollution from outer continental shelf sources, under 42 U.S.C. 7401, § 328;
- (k) Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under 42 U.S.C. 7401, Title VI, unless the EPA has determined that such requirements need not be contained in an operating permit;
- (l) Any national ambient air quality standard or increment or visibility requirement under 42 U.S.C. 7401, Title I, part C but only as it would apply to temporary sources permitted pursuant to 42 U.S.C. 7401, § 504(e); and
- (m) Any other standard or requirement contained in 310 CMR 7.00 that has not been approved or promulgated by EPA through rulemaking under 42 U.S.C. 7401, Title I. These applicable requirements would be listed as a "state only" enforceable provision of an operating permit.

Appendix C: continued

Carbon Dioxide Equivalent, or CO_2e , means the amount of GHG emitted by a facility, computed by multiplying the mass amount of emissions in tons per year for each of the six greenhouse gases in the pollutant GHG, by each gas's associated global warming potential set forth in 40 CFR part 98 subpart A Table A-1 - Global Warming Potentials, and summing the resultant value for each to compute tons per year CO_2e .

Complete Application means an application, filed on form(s) specified by the Department, that is completed consistent with the criteria set forth in the instructions for the application form(s). To be deemed complete, an application must provide all information required pursuant to 310 CMR 7.00: *Appendix C(5)b.*, except that applications for permit modifications or amendments need supply such information only if it is related to the proposed change. Information submitted must be sufficient to evaluate the subject source(s) and its application; and to determine all applicable requirements, and shall be submitted over the signature of a responsible official who certifies the submitted information is in accordance with 310 CMR 7.00: *Appendix C(5)(b)9.* and (5)(c). The source(s)' ability to operate without a permit, as set forth in 310 CMR 7.00: *Appendix C(11)* (application shield), shall be in effect from the date the application is determined or deemed to be complete until the final permit is issued, provided that the applicant submits any requested additional information by the deadline specified by the Department.

Designated Representative shall have the meaning given to it in 42 U.S.C. 7401, § 402(26) and the regulations promulgated thereunder.

Draft Permit means the version of an operating permit which is released for an opportunity for comment by the public, EPA or an affected state in compliance with 310 CMR 7.00: *Appendix C(6)(a)* prior to the Department's final decision on an operating permit application.

Emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation would require immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, operator error or decision to keep operating despite knowledge of any of these things.

Emissions Unit(s) means any part or activity of a facility that emits or has the potential to emit any regulated air pollutant or any pollutant listed under 42 U.S.C. 7401, the Clean Air Act, § 112(b). This term is not meant to alter or affect the definition of the term "unit" for purposes of 42 U.S.C. 7401, Title IV (the acid rain provisions). Further clarification of the scope of "emission unit(s)" is provided by the Department by policy.

Emissions Allowable Under the Permit means a federally enforceable permit term or condition determined at issuance to be required by an applicable requirement that establishes an emissions limit (including a work practice standard), or a federally enforceable emissions cap.

Facility means any installation or establishment and associated equipment, located on the same, adjacent or contiguous property, capable of emissions and are under control of the same person.

Final Operating Permit means the version of an operating permit issued by the Department that has completed all review procedures required by 310 CMR 7.00: *Appendix C* including EPA review.

Fugitive Emissions are those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening.

General Operating Permit means a standardized operating permit that the Department may make applicable to numerous similar operation(s) or facilities under 310 CMR 7.00: *Appendix C(15)*.

Appendix C: continued

GHG Mass Basis means the sum of the mass amount of emissions in tons per year of the six greenhouse gases in the pollutant GHG prior to multiplying by each gas's associated global warming potential set forth in 40 CFR part 98 subpart A Table A-1 - *Global Warming Potentials*.

Greenhouse Gas (GHG) means the air pollutant that is the aggregate of the group of six gases: Carbon dioxide (CO₂), Methane (CH₄), Nitrous oxide (N₂O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur hexafluoride (SF₆).

Hazardous Air Pollutant (HAP) means an air contaminant listed by EPA as a HAP, pursuant to 42 U.S.C. 7401, § 112. That list is incorporated by reference in 310 CMR 7.00: *Appendix C*, together with all amendments and supplements thereto. A copy of the list is available from the Department.

NON-TEXT PAGE

Appendix C: continued

Laboratory Hoods means a boxlike non-production structure intended for placement on a table or bench; the bench and the hood may be one integral structure. The opening(s) is provided with a sash or sashes that move vertically or horizontally to close the opening(s). Provisions are made for exhausting air from the top or back of the hood, and adjustable internal baffles are provided to obtain air flow distribution across the open face(s). Laboratory hoods may include those used for special purposes such as, but not limited to, capturing gases from equipment such as atomic absorption, gas chromatograph, liquid pouring or mixing stations and heat sources. It may additionally include floor mounted hoods with sash and/or doors for closing the open face.

Major Source means any stationary source (or any group of stationary sources that are located on one or more contiguous or adjacent properties, and are under common control of the same person (or persons under common control)) belonging to a single major industrial grouping and that are described in 310 CMR 7.00: Appendix C Major Source. For the purpose of defining "major source," a stationary source or group of stationary sources shall be considered part of a single industrial grouping if all of the pollutant emitting activities at such source or group of sources on contiguous or adjacent properties belong to the same Major Group (*i.e.*, all have the same two-digit code) as described in the Standard Industrial Classification Manual, 1987. Notwithstanding the previous statement, for the purpose of determining major source under 42 U.S.C. 7412, The Clean Air Act, § 112, all hazardous air pollutants as defined under 42 U.S.C. 7412, The Clean Air Act, § 112 shall be summed regardless of the SIC code classification of the process emitting said pollutant(s).

- (a) A major source under 42 U.S.C. 7401, The Clean Air Act § 112 which is defined as:
1. For pollutants other than radionuclides, any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, in the aggregate, ten tons per year (tpy) or more of any hazardous air pollutant which has been listed pursuant to 42 U.S.C. 7401, The Clean Air Act, § 112(b), 25 tpy or more of any combination of such hazardous air pollutants, or such lesser quantity as the Administrator may establish by rule. Notwithstanding the preceding sentence, emissions from any oil or gas exploration or production well (with its associated equipment) and emissions from any pipeline compressor or pump station shall not be aggregated with emissions from other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are major sources; or
 2. For radionuclides, "major source" shall have the meaning specified by the Administrator by rule.

(b) A major stationary source of air pollutants, as defined in 42 U.S.C. 7602, The Clean Air Act, § 302, that directly emits or has the potential to emit, 100 tpy or more of any air pollutant (including any major source of fugitive emissions of any such pollutant, as determined by rule by the Administrator). The fugitive emissions of a stationary source shall not be considered in determining whether it is a major stationary source for the purposes of 42 U.S.C. 7602, The Clean Air Act, § 302(j), unless the source belongs to one of the following categories of stationary source:

1. Coal cleaning plants (with thermal dryers);
2. Kraft pulp mills;
3. Portland cement plants;
4. Primary zinc smelters;
5. Iron and steel mills;
6. Primary aluminum ore reduction plants;
7. Primary copper smelters;
8. Municipal incinerators capable of charging more than 250 tons of refuse per day;
9. Hydrofluoric, sulfuric, or nitric acid plants;
10. Petroleum refineries;
11. Lime plants;
12. Phosphate rock processing plants;
13. Coke oven batteries;
14. Sulfur recovery plants;
15. Carbon black plants (furnace process);
16. Primary lead smelters;
17. Fuel conversion plant;
18. Sintering plants;
19. Secondary metal production plants;

Appendix C: continued

20. Chemical process plants;
 21. Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
 22. Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
 23. Taconite ore processing plants;
 24. Glass fiber processing plants;
 25. Charcoal production plants;
 26. Fossil-fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input; or
 27. All other stationary source categories regulated by a standard promulgated under 42 U.S.C. 7411 and 7412, The Clean Air Act, §§ 111 and 112.
- (c) A major stationary source as defined in 42 U.S.C. 7401, Title I, part D, including:
1. For ozone non attainment areas, sources with the potential to emit 100 tpy or more of volatile organic compounds or oxides of nitrogen in areas classified as "marginal" or "moderate," 50 tpy or more in areas classified as "serious," 25 tpy or more in areas classified as "severe," and ten tpy or more in areas classified as "extreme"; except that the references in this paragraph to 100, 50, 25, and ten tpy of nitrogen oxides shall not apply with respect to any source for which the Administrator has made a finding, under 42 U.S.C. 7401, The Clean Air Act, § 182(f)(1) or (2), that requirements under 42 U.S.C. 7401, The Clean Air Act, § 182(f) do not apply;
 2. For ozone transport regions established pursuant to 42 U.S.C. 7401, The Clean Air Act, § 184 sources with the potential to emit 50 tpy or more of volatile organic compounds;
 3. For carbon monoxide non attainment areas:
 - a. that are classified as "serious," and
 - b. in which stationary sources contribute significantly to carbon monoxide levels as determined under rules issued by the Administrator, sources with the potential to emit 50 tpy or more of carbon monoxide; and
 4. For particulate matter (PM-10) non attainment areas classified as "serious," sources with the potential to emit 70 tpy or more of PM-10.

Operating Permit means any permit or group of permits covering emission unit(s) at a facility subject to the permitting requirement of 310 CMR 7.00: *Appendix C* that is issued, renewed, amended or revised pursuant to 310 CMR 7.00: *Appendix C*.

Permit Modification means a revision to any operating permit issued under 310 CMR 7.00: *Appendix C* that does not meet the requirements for an administrative amendment.

Proposed Permit means the version of a permit that the Department proposes to issue and forwards to the EPA for review in compliance with 310 CMR 7.00: *Appendix C(6)* and 40 CFR 70.8.

Regulated Air Pollutant means the following:

- (a) Nitrogen oxides or any volatile organic compound;
- (b) Any pollutant for which a national ambient air quality standard has been promulgated;
- (c) Any pollutant that is subject to any standard promulgated under 42 U.S.C. 7401, The Clean Air Act, § 111, New Source Performance Standard 40 CFR Part 60;
- (d) Any Class I or II substance subject to a standard promulgated under or established by 42 U.S.C. 7401, Title VI; or
- (e) Any pollutant subject to a standard promulgated under 42 U.S.C. 7401, The Clean Air Act, § 112, National Emissions Standards for Hazardous Air Pollutants, 40 CFR Part 61, or other requirements established under 42 U.S.C. 7401, The Clean Air Act, § 112, including §§ 112(g), (j), and (r), including the following:
 1. Any pollutant subject to requirements under 42 U.S.C. 7401, § 112(j). If the EPA fails to promulgate a standard by the date established pursuant to 42 U.S.C. 7401, The Clean Air Act, § 112(e), any pollutant for which a subject source would be major shall be considered to be regulated on the date 18 months after the applicable date established pursuant to 42 U.S.C. 7401, The Clean Air Act, § 112(e); and

Appendix C: continued

2. Any pollutant for which the requirements of 42 U.S.C. 7401, § 112(g)(2) have been met, but only with respect to the individual source subject to 42 U.S.C. 7401, § 112(g)(2) requirement.

Renewal means the process by which a permit can be reissued at the end of its term or earlier should the Department determine a modification meets the requirements of renewal.

Responsible Official means one of the following:

- (a) For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
 1. the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or
 2. the delegation of authority to such representative is approved in advance in writing by the Department;
- (b) For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- (c) For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (*e.g.*, a Regional Administrator of EPA); or
- (d) For affected sources:
 1. The designated representative insofar as actions, standards, requirements, or prohibitions under 42 U.S.C. 7401, Title IV or the regulations promulgated thereunder are concerned; and
 2. The designated representative for any other purposes under 310 CMR 7.00: *Appendix C(4)*.

Section 502(b)(10) Changes are changes that contravene an expressed operating permit term but would not violate any applicable requirement(s) or contravene federally enforceable permit term(s) and condition(s) that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements.

Stationary Source means any building, structure, facility, or installation that emits or may emit any regulated air pollutant or any pollutant listed under 42 U.S.C. 7401, § 112(b). "Building, structure, facility, or installation" means all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person.

Timely means, with respect to an application for an operating permit or permit revision, in accordance with a time frame as set forth in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions* and 7.00: *Appendix C*.

(2) Applicability.

- (a) 310 CMR 7.00: *Appendix C* applies to any facility which:
 1. emits or has federal potential emissions, in the aggregate, including from exempt and insignificant activities, of any regulated air pollutant in an amount which equals or exceeds any one of the following: 50 tons per year of VOC; 50 tons per year of NO_x; ten tons per year of any hazardous air pollutant (HAP) subject to 42 U.S.C. 7401 § 112, 25 tons per year of any combination of HAPs; or 100 tons per year of any other regulated air pollutant, excluding GHGs; or
 2. is subject to a standard or other requirements under 42 U.S.C. 7401, § 112 (NESHAPS), except that a facility is not required to obtain a permit solely because it is subject to the regulation or requirements under 42 U.S.C. 7401, § 112(r) (accidental release); or
 3. is subject to a New Source Performance Standard (NSPS), including an area source requirement, or other requirements under 42 U.S.C. 7401, § 111; or

Appendix C: continued

4. is an affected source as defined in 42 U.S.C. 7401, Title IV (acid rain provisions); or
 5. is in any other source category designated by the EPA pursuant to 40 CFR, § 70.3(a)(5) or pursuant to a rulemaking under 42 U.S.C. 7401, §§ 111 or 112 where EPA promulgates a standard for a source category and EPA determines not to exempt any or all non-major sources subject to that standard from the requirement to obtain an operating permit.
- (b) Any non-major source for which an operating permit is required under 310 CMR 7.00: *Appendix C(2)(a)2.* through 3., which is not an affected source under 42 U.S.C. 7401, Title IV or a solid waste incineration unit required to obtain a permit pursuant to 42 U.S.C. 7401, § 129(e), is deferred from the obligation to obtain an operating permit until such time as the Department and EPA complete a rulemaking, including a rule making by EPA under 42 U.S.C. 7401, §§ 111 or 112, to determine how the operating permit program should be structured for non-major sources, and the appropriateness of any permanent exemptions. Notwithstanding the previous sentence, any non-major source which becomes subject to a rulemaking promulgated by EPA pursuant to 42 U.S.C. 7401 §§ 111 or 112 ("NSPS, NESHAPs or MACT") on or after July 21, 1992, where the rulemaking explicitly requires the source to obtain an operating permit, shall submit an operating permit application in accordance with the schedule established in that rulemaking. Where the rulemaking defers to the regulating authority, the application is due on the date that is one year after the date on which the source becomes subject to the rulemaking.
- (c) Any source listed in 310 CMR 7.00: *Appendix C(2)(b)* deferred from the requirement to obtain a permit may elect to apply for an operating permit pursuant to 310 CMR 7.00: *Appendix C.*
- (d) Notwithstanding 310 CMR 7.00: *Appendix C(2)(a)*, a facility is not subject to this Appendix if the only applicable requirement which applies to the facility is:
1. A requirement pursuant to 40 CFR Part 60, Subpart AAA - Standards of Performance for New Residential Wood Heaters; or
 2. A requirement pursuant to 40 CFR Part 61, Subpart M - National Emission Standard for Hazardous Air Pollutants for Asbestos, section 61.145, Standard for Demolition and Renovation.
- (e) For the purpose of determining applicability under 310 CMR 7.00: *Appendix C(2)(a)*, an owner or operator may elect to treat any part(s) of a facility used solely for research and development (R&D) operations, co-located with a major source, as a separate facility providing; 1) the SIC code for the R&D part of the facility differs from the rest of the facility; and 2) the relationship between the functions of the R&D part of the facility and the remainder of the facility does not involve support of the latter by the former.
- (f) An owner or operator of a facility subject to 310 CMR 7.00: *Appendix C* may elect to be relieved from the requirement to obtain an operating permit under 310 CMR 7.00: *Appendix C.* To be eligible, one of the following must be complied with:
1. A source specific SIP revision which has been approved by EPA;
 2. Restricted emission status issued pursuant to 310 CMR 7.02(9); or
 3. A construction, substantial reconstruction or modification plan approval issued pursuant to 310 CMR 7.02(1) which limits the potential emissions of the total facility below the applicability thresholds stated at 310 CMR 7.00: *Appendix C(2)(a)*; or
 4. Operating in accordance with the requirements of 310 CMR 7.02(11).
- (3) General Provisions.
- (a) 1. On or before June 30, 1996, person(s) owning or operating a facility subject to the requirements of 310 CMR 7.00: *Appendix C* based upon their operations in calendar years 1990, 1991, 1992 or 1993, and not electing to comply with a federally approved option listed at 310 CMR 7.00: *Appendix C(2)(f)* shall enroll with the Department.

Appendix C: continued

2. On or after July 1, 1996, any owner or operator of a facility shall automatically be enrolled when subject to 310 CMR 7.00: *Appendix C*.
- (b) Any owner or operator of a facility subject to the requirements of 310 CMR 7.00: *Appendix C* shall submit a complete application for a permit according to time frames specified in 310 CMR 7.00: *Appendix C*(4)(a) and 310 CMR 4.00, and shall operate in compliance with the terms and conditions of a permit issued pursuant to 310 CMR 7.00: *Appendix C*.
- (c) Permits shall be for a fixed term of five years in the case of affected sources, and for a term not to exceed five years in the case of all other facilities. Notwithstanding this requirement, permits for solid waste incineration units combusting municipal waste subject to standards under 42 U.S.C. 7401, § 129(e) shall be issued for a period not to exceed 12 years and reviewed by the Department at least every five years.
- (d) No person shall cause, suffer, allow or permit the operation of any facility subject to 310 CMR 7.00: *Appendix C*:
 1. Unless a timely and complete application for an operating permit or renewal has been submitted to the Department;
 2. If the facility's operating permit has expired unless a timely and complete application pursuant to 310 CMR 7.00: *Appendix C*(4) has been submitted to the Department;
 3. If the facility's operating permit has been revoked;
 4. Unless all fees required pursuant to 310 CMR 4.00 have been remitted to the Department or waived by the Department in accordance with 310 CMR 4.00; and
 5. If modified, unless the procedures in 310 CMR 7.00: *Appendix C*(7) and/or (8) as applicable, have been complied with.
- (e) An initial operating permit, permit modification, or renewal may be issued only if all of the following conditions have been met:
 1. A complete application for a permit, general permit, permit modification, or permit renewal has been received and reviewed by the Department;
 2. Except for modifications qualifying for minor permit modification procedures under 310 CMR 7.00: *Appendix C*(8), the requirements for public participation contained in 310 CMR 7.00: *Appendix C*(6) have been complied with;
 3. The requirements for notifying and responding to affected States under 310 CMR 7.00: *Appendix C*(6) has been complied with;
 4. The conditions of the permit provide for compliance with all applicable requirements and the requirements of 310 CMR 7.00: *Appendix C*; and
 5. The EPA has received a copy of the proposed permit and any notices required under 310 CMR 7.00: *Appendix C*(6), and has not objected to issuance of the permit within the time period specified therein.
- (f) Any facility subject to 310 CMR 7.00: *Appendix C* and operating without an operating permit, or failing to comply with any of the terms of its operating permit; or any provision of 310 CMR 7.00: *Appendix C*; or any order issued by the Department pursuant to 310 CMR 7.00: *Appendix C*, shall be subject to enforcement pursuant to the Massachusetts General Laws and regulations promulgated thereunder.
- (g) Each operating permit issued by the Department shall include provisions in accordance with the following:
 1. Each operating permit shall include all applicable requirements, including any emissions limitations and standards and any operational requirements, and shall cite to the legal authority for each requirement. Each operating permit shall also identify any difference in form between the permit condition and the applicable requirement upon which the permit condition is based.

Appendix C: continued

2. The operating permit shall specify the expiration date of the permit in accordance with 310 CMR 7.00: *Appendix C(3)(c)*.
3. The operating permit shall require emissions monitoring and analysis procedures or test methods in accordance with 310 CMR 7.00: *Appendix C(9)*.
4. The operating permit shall require recordkeeping and reporting in accordance with 310 CMR 7.00: *Appendix C(10)*. The operating permit shall specify the format and time frequency for reporting to the Department all monitoring data and related supporting information in accordance with 310 CMR 7.00: *Appendix C(10)*.
5. For a permittee subject to EPA's acid rain deposition control program pursuant to Title IV, 42 U.S.C. § 7651 et seq., the operating permit shall include and be consistent with the regulations in Title IV.
6. The operating permit shall include a severability clause to ensure the continued validity of the various operating permit requirements in the event of a challenge to any portions of the operating permit.
7. The operating permit shall include the following statements:
 - a. The permittee shall comply with all conditions of the operating permit including the approved compliance plan. Any noncompliance with a permit condition constitutes a violation of 310 CMR 7.00: *Appendix C* or 42 U.S.C. 7661 et seq., and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of an operating permit renewal application.
 - b. A permittee in an enforcement action cannot use as a defense that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the operating permit.
 - c. The operating permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for an operating permit revision, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any operating permit condition.
 - d. The operating permit does not convey any property rights of any sort, or any exclusive privilege.
 - e. All terms and conditions in an operating permit, including any provisions designed to limit a facility's potential to emit, are enforceable by the EPA and citizens under 42 U.S.C. 7661 et seq. Notwithstanding the preceding sentence, the Department shall specifically designate in the operating permit any terms and conditions that are not federally enforceable because the terms and conditions are not required under 42 U.S.C. 7661 et seq. or under any of its applicable requirements.
8. The operating permit shall require the permittee to pay fees to the Department consistent with the fee schedule pursuant to 310 CMR 4.00.
9. The operating permit shall contain terms and conditions for reasonably anticipated alternative operating scenarios as approved by the Department.
10. The operating permit shall include a provision stating that no operating permit revision shall be required, under any approved economic incentives program, marketable permits program, emissions trading program and other similar programs or processes, for changes that are provided for in the operating permit.
11. If the permittee has authorization for intra-facility emissions trading, the operating permit shall state the terms and conditions for the trading of emissions increases and decreases within the permitted facility in accordance with the requirements of 310 CMR 7.00: *Appendix C(7)(b)* or 310 CMR 7.00: *Appendix B*.
12. The operating permit shall include a statement that upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Department or an authorized representative to perform the following:
 - a. Enter upon the permittee's premises where an operating permit facility is located or emissions-related activity is conducted, or where records must be kept under the conditions of the operating permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the operating permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the operating permit; and

Appendix C: continued

- d. As authorized by 42 U.S.C.7661 *et seq.*, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the operating permit or applicable requirements.
13. The operating permit shall include requirements for Compliance Certification consistent with 310 CMR 7.00: *Appendix C(5)(b)(9)*.
14. The operating permit shall include a schedule of compliance and a schedule for the submittal of progress reports, both approved by the Department, consistent with 310 CMR 7.00: *Appendix C(5)(b)(8)*.
15. The operating permit shall state whether a permit shield is applicable pursuant to 310 CMR 7.00: *Appendix C(12)*.
16. The operating permit shall contain provisions for emergency conditions in accordance with in 310 CMR 7.00: *Appendix C(16)*.
17. The operating permit may include other provisions as required by the Department.
- (h) An operating permit does not convey any property right of any sort, or any exclusive privilege.
- (i) An operating permit does not relieve any person from the obligation to comply with any other provision of 310 CMR 7.00 or to obtain any other necessary authorizations from other governmental agencies, or to comply with all other applicable Federal, State, or local rules and regulations, not addressed in their operating permit.
- (j) All information submitted to the Department pursuant to the requirements of 310 CMR 7.00: *Appendix C* shall be public information except for that which the Department has designated confidential pursuant to the provisions of M.G.L. c. 111, § 142B and 40 CFR 70.4(b)(3) published in the Federal Register July 21, 1992, incorporated herein by reference. No permit shall in any case be designated confidential.
- (k) The Department may issue a single permit authorizing emissions from similar operations by the same owner or operator at multiple temporary locations provided:
1. The operation is temporary;
 2. The operation involves at least one change of location during the term of the permit;
 3. The temporary source is not an affected source; and
 4. The conditions of approval for operation of the temporary source assure compliance with:
 - a. All applicable requirements at all authorized locations;
 - b. All other provisions of 310 CMR 7.00: *Appendix C*; and
 - c. The requirement that the Department be notified at least ten days in advance of each change in location in writing.
- (l) If an additional applicable requirement becomes applicable to the facility, or an applicable requirement which was previously applicable to the facility changes, the facility shall act to have the new applicable requirement or the change incorporated into the operating permit, in accordance with the procedures set forth in 310 CMR 7.00: *Appendix C(14)(a)*.
- (m) The Department may terminate an operating permit upon request of the responsible official of said facility.
- (n) The Department hereby adopts and incorporates by reference the provisions of the acid rain program 40 CFR part 72, as in effect on January 11, 1993 and as amended March 23, 1993, October 24, 1997, and 40 CFR Part 76 as in effect on September 1, 1998, for purposes of implementing an acid rain program that meets the requirements of 42 U.S.C. 7401, Title IV. The term permitting authority shall mean the Department and the term Administrator shall mean the Administrator of the United States Environmental Protection Agency.
- (o) If the provisions or requirements of 40 CFR part 72 conflict with or are not included in 310 CMR 7.00: *Appendix C*, the part 72 provisions and requirements shall apply and take precedence.
- (4) Application Submittal Time Lines for Operating Permits.
- (a) Schedule to submit an application for an operating permit.
1. On and after April 1, 1994 a complete operating permit application shall be submitted to the Department in accordance with the following schedule:

Appendix C: continued

- a. For Restricted Emission Status (RES) pursuant to 310 CMR 7.02(12) and 310 CMR 7.00: *Appendix C(2)(f)*: a Restricted Emission Status application must be submitted, reviewed, and approved no later than the published timeline for submittal of the original operating permit application, or a renewal application unless otherwise agreed to by the Department in writing.
 - b. For a Group A Source, any facility subject to 310 CMR 7.00: *Appendix C* and not submitting an application under 310 CMR 7.00: *Appendix C(4)(a)1.a.*, with operations classified under the Standard Industrial Classification Codes (major group) 49 or 51: no later than November 15, 1994 nor before October 1, 1994;
 - c. For a Group B Source, any facility subject to 310 CMR 7.00: *Appendix C* and not submitting an application under 310 CMR 7.00: *Appendix C(4)(a)1.a.*, with operations classified under the Standard Industrial Classification Codes (major group) 22, 23, 25, 26, 27, 28, 30, 31, 36, 38, 97 or 99: no later than September 1, 1995 nor before July 1, 1995;
 - d. For a Group C Source, any facility subject to 310 CMR 7.00: *Appendix C* and not submitting an application under 310 CMR 7.00: *Appendix C(4)(a)1.a.*, with operations classified under the Standard Industrial Classification Codes (major group) 01, 14, 20, 24, 29, 32, 33, 34, 35, 37, 39, 45, 50, 56, 63, 65, 70, 72, 80, 82, 86, 95 or other stationary sources not classified in Groups A or B: no later than November 15, 1995 nor before September 15, 1995.
2. For a facility subject to the requirements of 310 CMR 7.00: *Appendix C* and in operation prior to the effective date of 310 CMR 7.00: *Appendix C*, an application for an operating permit pursuant to 310 CMR 7.00: *Appendix C* shall be submitted in accordance with the schedule detailed in 310 CMR 7.00: *Appendix C(4)(a)1.*, or other schedule established in writing by the Department and the facility, but in no case later than one year after approval by EPA of 310 CMR 7.00: *Appendix C*, the operating permit program.
 3. For operating permit applications submitted in accordance with 310 CMR 7.00: *Appendix C(4)(a)1.* or 2., the Department shall take final action on all applications no later than three years after approval by EPA of 310 CMR 7.00: *Appendix C*, the operating permit program.
 4. Applications for initial phase II acid rain permits shall be submitted by January 1, 1996 for sulfur dioxide, and by January 1, 1998 for nitrogen oxides. Operating permit applications for these sources must be submitted in accordance with the schedule detailed in 310 CMR 7.00: *Appendix C(4)(a)1.*
 5. For new construction subject to the requirements of 310 CMR 7.00: *Appendix C*, an application for an operating permit shall be submitted no later than one year after commencement of operation. Where an operating permit issued pursuant to 310 CMR 7.00: *Appendix C* would be modified or amended as a result of this construction, the owner or operator must follow the procedures of 310 CMR 7.00: *Appendix C(8)* and the time lines contained in 310 CMR 7.00: *Appendix C(4)(b)*. (NB: New facilities are encouraged to submit applications pursuant to 310 CMR 7.00: *Appendix C* concurrent with 310 CMR 7.02 applications.)
 6. For construction, substantial reconstruction or alteration of any facility, which results in the facility being subject to the requirements of 310 CMR 7.00: *Appendix C*, the application for an operating permit shall be submitted to the Department no later than one year after the commencement of operation of the portion of the facility which made the facility subject to the program. (NB: Owners and operators are encouraged to submit applications concurrent with 310 CMR 7.02 application)
 7. For a facility operating under 310 CMR 7.02(9) or 310 CMR 7.02(11) status, an operating permit application shall be submitted within six months of becoming subject to 310 CMR 7.00: *Appendix C*.
- (b) Schedule for submittal of applications to amend, modify or renew an operating permit:
1. For a significant modification to an operating permit, a timely application is one that is submitted at least nine months prior to the planned modification. For significant modifications which have been reviewed and approved under 310 CMR 7.00, the construction or modification that has been reviewed and approved may commence, but may not operate, prior to final approval of the modification to the operating permit if the existing operating permit would prohibit such construction or change in operation. If the existing operating permit would not prohibit such construction or change in operation, then operations may commence prior to final approval of the modification to the operating permit.

Appendix C: continued

2. For a minor modification to an operating permit, a timely application is one that is submitted concurrent with the planned modification.
 3. For an administrative amendment to an operating permit, a timely application is one that is submitted concurrent with initiation of the proposed change.
 4. For a renewal of an operating permit, a timely application shall be submitted at least six months prior to the expiration of the operating permit.
- (c) Except for as provided in 310 CMR 7.00: *Appendix C(4)(a)3.*, final action by the Department shall be taken on each operating permit application within:
1. 18 months of receipt of a complete application for an operating permit for new construction submitted after November 15, 1995
 2. nine months of receipt of a complete application for a significant modification to an operating permit.
 3. 90 days of receipt of a minor modification application to an operating permit or 15 days after the end of the EPA's 45 day review period under 310 CMR 7.00: *Appendix C(6)*, whichever is later.
 4. 15 days of receipt of an administrative amendment to an operating permit.
 5. nine months of receipt of a complete application for renewal of an operating permit.
 6. 120 days for group processing of minor modifications or 15 days after the end of EPA's 45-day review period under 310 CMR 7.00: *Appendix C(6)*, whichever is later.
 7. nine months of receipt of a complete application for an early reduction demonstration (40 CFR Part 63) under 42 U.S.C. 7401, § 112(i)(5).
- (d) Completeness Determination.
1. The Department shall notify the applicant within 60 days of its receipt of the application for an initial operating permit, a significant modification or renewal as to whether the application is complete.
 2. To be deemed complete, an application shall include all the information required by 310 CMR 7.00: *Appendix C(5)* and payment of the applicable fee pursuant to 310 CMR 4.10: *Appendix: Schedules for Timely Action and Application Fees*. A completeness determination shall not be required for a minor permit modification or an administrative amendment.
 3. If the Department fails to notify the applicant within 60 days of the Department's receipt of an application that more information is needed, then the application shall be deemed complete and the applicant shall be afforded the application shield described at 310 CMR 7.00: *Appendix C(11)*.
 4. If, after a completeness determination, the Department requires additional information, it shall request such information in writing and set a deadline for its submittal. Departmental requests for additional information made after the application is deemed complete shall not, by themselves, indicate that the application is not complete. If however, the applicant fails to submit the requested information by a reasonable deadline specified or as otherwise agreed in writing by the Department, the application shall be considered incomplete and the applicant shall not have the application shield provided for under 310 CMR 7.00: *Appendix C(11)*.
- (5) General Application Requirements.
- (a) Applications for an operating permit or renewal of an operating permit pursuant to 310 CMR 7.00: *Appendix C*, and any additional information required by the Department shall be submitted to the Department and EPA in a format prescribed by the Department. An applicant may not omit information needed to determine whether the facility is subject to any applicable requirement.
 1. For any subject facility whose emissions exceed the thresholds of 310 CMR 7.00: *Appendix C(2)(a)1.*, the application shall include all applicable requirements for all emissions units.
 2. For any facility that contains an emission unit that causes the facility to be subject to 310 CMR 7.00: *Appendix C(2)(b)*, the application shall include all applicable requirements for the emissions units that cause the facility to be subject to 310 CMR 7.00: *Appendix C*.
 - (b) Except as provided for in 310 CMR 7.00: *Appendix C(5)(a)2.* and (i), the following information must be submitted for each emission unit associated with the facility. Fugitive emissions shall be included in the permit application in the same manner as stack emissions, regardless of whether the source category in question is included in the list of sources contained in the definition of major source. Applications shall contain at a minimum:

Appendix C: continued

1. Identifying information, including company name and address (or plant name and address if different from the company name); owner's name and telephone number; and name(s) and telephone number(s) of facility site manager/contact.
2. A description of the facility's processes and products (by Standard Industrial Classification Code) associated with each alternate scenario proposed in the application.
3. Except for insignificant activities listed in 310 CMR 7.00: *Appendix C(5)* the following emissions-related information:
 - a. All emissions of regulated air pollutants for which the emissions unit has an applicable requirement.
 - b. Identification and description of all points of emissions described in 310 CMR 7.00: *Appendix C(5)(b)3.a.* in sufficient detail to establish said applicable requirements.
 - c. Emissions rates in tons per year and in such terms as are necessary to establish compliance consistent with the applicable EPA standard reference emissions test method.
 - d. The following information to the extent it is needed to determine or regulate emissions: fuels, fuel use, raw materials, production rates, and operating schedules.
 - e. Identification and description of air pollution control equipment and compliance monitoring devices or activities
 - f. Limitations on source operation affecting emissions or any work practice standards, where applicable, for all regulated pollutants at the source.
 - g. Other information required by any applicable requirement (including information related to stack height limitations developed pursuant to 42 U.S.C. 7401, The Clean Air Act, § 123).
 - h. Calculations on which the information in 310 CMR 7.00: *Appendix C(5)(b)3.a.* through g. is based.
4. For activities proposed to be exempt pursuant to 310 CMR 7.00: *Appendix C(5)(h)*, a list describing each activity and its emissions.
5. The following air pollution control requirements:
 - a. Citation and description of all applicable requirements, and
 - b. Description of or reference to any applicable test method for determining compliance with each applicable requirement.
6. Other specific information that may be necessary to implement and enforce 310 CMR 7.00: *Appendix C(5)(b)2, (7)* or other applicable requirements of 42 U.S.C. 7401 or to determine the applicability of such requirements including but not limited to terms and conditions for reasonably anticipated operating scenarios including:
 - a. Establishing and maintaining, contemporaneously with making a change from one operating scenario to another, a record in a log at the facility as to which scenario it is operating under; and
 - b. Documenting that the terms and conditions of each such alternative scenario meet all applicable requirements and the requirements of 310 CMR 7.00: *Appendix C.*
The permit shield described in 310 CMR 7.00: *Appendix C(12)* shall apply to all terms and conditions under each such operating scenario.
7. An explanation of any proposed exemptions from otherwise applicable requirements.
8. A Compliance Plan that contains all the following:
 - a. A description of the compliance status of the facility with respect to all applicable requirements.
 - b. A description as follows:
 - (i) For applicable requirements with which the facility is in compliance, a statement that the source will continue to comply with such requirements.
 - (ii) For applicable requirements that will become effective during the permit term, a statement that the facility will meet such requirements on a timely basis.
 - (iii) For requirements for which the source is not in compliance at the time of permit issuance, a narrative description of how the source will achieve compliance with such requirements.
 - c. A compliance schedule as follows:
 - (i) For applicable requirements with which the source is in compliance, a statement that the source will continue to comply with such requirements.

Appendix C: continued

- (ii) For applicable requirements that will become effective during the permit term, a statement that the source will meet such requirements on a timely basis. A statement that the source will meet in a timely manner applicable requirements that become effective during the permit term shall satisfy this provision, unless a more detailed schedule is expressly required by the applicable requirement.
 - (iii) A schedule of compliance for emissions units that are not in compliance with all applicable requirements at the time of permit issuance. Such a schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the facility will be in noncompliance at the time of permit issuance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the facility is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based.
- d. A schedule for submission of certified progress reports no less frequently than every six months for sources required to have a schedule of compliance to remedy a violation.
 - e. The compliance plan content requirements specified in 310 CMR 7.00: *Appendix C(5)(b)8.e.* shall apply and be included in the acid rain portion of a compliance plan for an affected source, except as specifically superseded by regulations promulgated under 42 U.S.C. 7401, Title IV with regard to the schedule and method(s) the source will use to achieve compliance with the acid rain emissions limitations.
9. Requirements for Compliance Certification, including the following:
- a. A certification of compliance with all applicable requirements by a responsible official consistent with 310 CMR 7.00: *Appendix C(5)(b)9.c.* and 42 U.S.C. 7401, § 114(a)(3);
 - b. A statement of methods used for determining compliance, including a description of monitoring, record keeping, and reporting requirements and test methods;
 - c. A schedule for submission of compliance certifications during the permit term, to be submitted no less frequently than annually, or more frequently if specified by the underlying applicable requirement or by the Department;
 - d. A statement indicating the facility's compliance status with any applicable enhanced monitoring and compliance certification requirements of 42 U.S.C. 7401; and
 - e. A statement accepting the Department's authority to enter the premises of the permitted facility and perform reasonable inspections and sampling, as described in 310 CMR 7.00: *Appendix C(3)(g).*
10. The use of nationally-standardized forms for acid rain portions of permit application(s) and compliance plan(s), as required by regulations promulgated under 42 U.S.C. 7401, Title IV.
- (c) Any application form, report, or compliance certification submitted pursuant to 310 CMR 7.00: *Appendix C* shall contain certification by a responsible official of truth, accuracy, and completeness in accordance with 310 CMR 7.01(2).
 - (d) Any application for an initial, or renewal of an operating permit submitted to the Department pursuant to 310 CMR 7.00: *Appendix C* shall include the following:
 - 1. For initial operating permits, copies of any preconstruction, substantial reconstruction or alteration approvals issued by the Department under 310 CMR 7.02;
 - 2. For renewals of operating permits, the last complete operating permit application supplemented with all new information pertinent to the provisions of 310 CMR 7.00: *Appendix C(5), (6) and (7)*, including any operational changes made pursuant to operational flexibility section, and any other proposed operational scenarios.
 - (e) Any person who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit.

Appendix C: continued

(f) If any person fails to submit information requested by the Department within the deadlines provided, the Department may deny the application, and an application shield pursuant to 310 CMR 7.00: *Appendix C(11)* shall automatically terminate pursuant to 310 CMR 7.00: *Appendix C(11)(f)*. Prior to denying the application, the Department shall provide 30 days written notice to the applicant, including a list of the required information. A person may reapply at any time after the application is denied. The re-application shall meet all requirements of a complete initial permit application, including any application fee.

(g) In the event that a discrepancy exists between the information in an application for an operating permit and the requirements of the permit, the conditions of the permit shall prevail.

(h) Exempt Activities. Except as provided in 310 CMR 7.00: *Appendix C(5)(i)*, any facility subject to the requirements of 310 CMR 7.00: *Appendix C* may propose to exempt certain activities from the requirements of 310 CMR 7.00: *Appendix C(5)(b)*. A list of proposed exemptions must be submitted as part of the application. The Department will exempt the emission unit(s) if it is of a size eligible to comply with 310 CMR 7.02(8)(i) or to be exempt from preconstruction review and approval pursuant to 310 CMR 7.02(2)(b)7., 15., or 29. and not otherwise subject to an applicable requirement.

(i) Insignificant Activities. Notwithstanding 310 CMR 7.00: *Appendix C(5)(h)* any emission unit that is part of the following activities is exempt from the requirements of 310 CMR 7.00: *Appendix C*, except that emissions from these activities shall be included in determining federal potential to emit under 310 CMR 7.00: *Appendix C(2)*:

1. Open burning conducted in accordance with the requirements of 310 CMR 7.07(2), (3)(a) and (3)(e);
2. Office activities and the equipment and implements used therein, such as typewriters, printers, and pens;
3. Interior maintenance activities and the equipment and supplies used therein, such as janitorial cleaning products and air fresheners; this does not include any cleaning of production equipment or activities regulated by 310 CMR 7.18;
4. Bathroom and locker room ventilation and maintenance;
5. Copying and duplication activities for internal use and for support of office activities at the facility;
6. The activities not regulated by 310 CMR 7.18 in maintenance shops, such as welding, gluing, soldering;
7. First aid or emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation;
8. Laundry operations that service uniforms or other clothing used at the facility that are not regulated by 310 CMR 7.18;
9. Architectural maintenance activities conducted to take care of the buildings and structures at the facility, including repainting, reroofing, and sandblasting;
10. Exterior maintenance activities conducted to take care of the grounds of the facility, including parking lots and lawn maintenance;
11. Food preparation to service facility cafeterias and dining rooms;
12. The use of portable space heaters which reasonably can be carried and relocated by an employee;
13. Liquid petroleum gas (LPG) or petroleum fuels used to power the facility's mobile equipment and not otherwise regulated by the Department;
14. Emergency vents not subject to the accidental release regulations.
15. Non-process related surface coating and painting which exclusively use non-refillable aerosol cans;
16. Vacuum cleaning systems used exclusively for commercial or residential house-keeping;
17. Ventilating systems used exclusively for heating and cooling buildings, for the comfort of people living or working within the building serviced by said system, which EPA has determined need not be contained in an operating permit;
18. Ventilating and exhaust systems for laboratories, including hoods, used:
 - a. by academic institutions for academic purposes.
 - b. by hospitals and medical care facilities used for medical care purposes and medical research only.

Appendix C: continued

- c. by laboratories which perform laboratory scale activities as defined by OSHA, excluding commercial laboratories that provide laboratory services for third parties.
- d. by facilities for quality assurance and quality control testing and sampling activities.

19. surface coating and printing processes used exclusively for educational purposes in educational institution excluding those emission units regulated by 310 CMR 7.18; and

20. kilns or ventilating hoods for art or ceramic curricula at colleges, primary or secondary schools.

(6) Permit Review by the Public, EPA and Affected States.

(a) A draft of an operating permit (draft permit) and a statement that sets forth the legal and factual basis for the draft permit conditions (including references to the applicable regulatory provisions), shall be released to the public, EPA, the applicant and affected states by the Department for applications for an operating permit, a significant modification or renewal of an operating permit; and to EPA and affected states for minor permit modifications.

(b) For each draft initial operating permit, significant modification or renewal of an operating permit pursuant to 310 CMR 7.00: *Appendix C(2)*, the Department shall:

1. Post on a public website identified by the Department (which may be the Department's own website), for the duration of the public comment period, the following:
 - a. A notice of availability of the Department's draft initial operating permit, significant modification or renewal of an operating permit and information on how to submit public comment;
 - b. The Department's draft initial operating permit, significant modification or renewal of an operating permit; and
 - c. Information on how to access the administrative record for the Department's draft initial operating permit, significant modification or renewal of an operating permit.
2. Give notice to persons on a mailing list developed by the Department using generally accepted methods (*e.g.*, hyperlink sign-up function or radio button on a Department website, sign-up sheet at a public hearing, *etc.*) that enable interested parties to subscribe to a mailing list. The Department may update the mailing list from time-to-time by requesting written indication of continued interest from those listed. The Department may delete from the list the name of any person who fails to respond to such a request within a reasonable timeframe.

(c) The notice shall identify:

1. The name and address of the facility;
2. The name and address of the permittee;
3. The name and address of the Department's regional office processing the permit;
4. The activity or activities included in the permit action;
5. The emissions change associated with any permit modification;
6. The name, address, and telephone number of a person (or an email or website address) from whom interested persons may obtain additional information, including copies of the draft permit, the application, all relevant supporting materials, and all other materials available that are relevant to the permit decision; and
7. A brief description of the comment procedures required by 310 CMR 7.00: *Appendix C(6)*; and the time and place of any hearing that may be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled).

(d) The Department, on or before the publication of the public notice of a draft permit, shall also give notice of its intent to issue a draft permit to the head of the environmental program of any affected state.

(e) The Department shall provide a comment period of no less than 30 calendar days and no more than 60 calendar days on draft permits for an initial permit, significant modifications and renewals of operating permits.

(f) The Department based upon material issues or at its own initiative may hold a public hearing on a draft permit. For an initial operating permit issuance, renewal or significant modification to an operating permit, any person may request before the expiration of the public comment period specified pursuant to 310 CMR 7.00: *Appendix C(6)(a)*, that the Department hold a public hearing (if the Department has not already scheduled a public hearing) on a draft permit, by submitting a written request stating the nature of the issues to be raised at a public hearing. Notice of any public hearing shall be given at least 30 days in

Appendix C: continued

advance of the hearing and may be included in the notice issued pursuant to 310 CMR 7.00: *Appendix C(6)(a)* and by the procedures of 310 CMR 7.00: *Appendix C(6)(b)* and (c). (g) Whenever the Department determines to hold a public hearing, the duration of the public comment period shall automatically extend to the close of the public hearing. The hearing officer may further extend the comment period by announcing the extension and its duration at the public hearing.

(h) At a public hearing, the Department may:

1. Establish reasonable limits upon the time allowed for oral statements; and
2. Require the submission of statements in writing.

(i) The Department shall keep records of the comments and also of the issues raised during the public participation process so that EPA may fulfill its obligation under 42 U.S.C. 7401, § 505(b)(2) to determine whether a citizen petition should be granted, and such records shall be available to the public.

(j) After the close of the public comment period, the Department will forward to the EPA a proposed operating permit (proposed permit), together with other required supporting information pertaining to the proposed permit. NOTE: The Department as part of the submittal of the proposed permit to the EPA shall notify the EPA and any affected state in writing of any refusal by the Department to accept any recommendations on the draft permit that the affected state submitted during the draft permit review period. The notice shall include the Department's reason for not accepting any such recommendation; the Department is not required to accept recommendations that are not based on an applicable requirement or the requirements of 310 CMR 7.00: *Appendix C*.

(k) If EPA submits an objection to the proposed permit in writing, during the 45 day period following EPA's receipt of the proposed permit, the Department shall revise, and resubmit a proposed operating permit to the EPA. EPA shall send a copy of its objection to the applicant. The Department will not issue a final permit prior to the expiration of the 45-day period for EPA objection unless EPA notifies DEP of its intention not to object.

(l) If the Department fails, within 90 days after the receipt of an objection under 310 CMR 7.00: *Appendix C(6)(k)*, to revise and submit a proposed permit in response to the objection, the EPA may issue or deny the permit in accordance with the requirements of the Federal Program promulgated under 42 U.S.C. 7401, Title V.

(m) If EPA does not object to the proposed permit, any person may petition the EPA during the 60 days after the expiration of the EPA's 45 day review period, and may request that EPA object.

1. The petition shall be based only on objections that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period.
2. If the EPA is convinced that such objection meets the criteria established in 310 CMR 7.00: *Appendix C(6)(m)1.*, and objects, the Department shall not issue the operating permit until the EPA's objection is resolved.
3. If the Department has issued an operating permit prior to receipt of an EPA objection, the EPA may modify, terminate, or revoke the permit. The Department may thereafter issue only a revised permit that satisfies EPA's objection. In any case, the stationary source will not be in violation of the requirement to have submitted a timely and complete application.

(n) The Department shall transmit final operating permits to EPA.

(7) Operational Flexibility.

(a) Section 502(b)(10) changes

1. Any facility issued an operating permit may make Section 502(b)(10) changes through the procedures set forth in 310 CMR 7.00: *Appendix C(7)*.
2. The Department shall attach the notice of the change to the operating permit, but shall not revise the operating permit until the next application for renewal.
3. If the requirements of 310 CMR 7.00: *Appendix C(7)* are met, the change may be made 15 days after receipt of the notice of the change by the Department or EPA whichever is later.
4. No change may be made pursuant to 310 CMR 7.00: *Appendix C(7)* if the change would:
 - a. violate an applicable requirement(s);

Appendix C: continued

- b. contravene a federally enforceable permit term(s) and condition(s) that is monitoring (including test methods), recordkeeping, reporting, or compliance certification;
 - c. is a modification under 42 U.S.C. 7401, Title I; or
 - d. is in excess of the emissions allowed under the operating permit (whether expressed therein as a rate of emissions or in terms of total emissions).
5. A responsible official must provide the Department and EPA with written notification at least 15 days in advance of the proposed changes. For each such change, the written notification required above shall include:
- a. A brief description of the change within the permitted facility;
 - b. The date on which the change will occur;
 - c. Any change in emissions; and
 - d. Any permit term or condition that is no longer applicable as a result of the change.
6. The permit shield provided for under 310 CMR 7.00: *Appendix C(12)* shall not apply to changes made under 310 CMR 7.00: *Appendix C(7)*.
- (b) Intra-facility Emissions Trading.
- 1. Pursuant to a request from a responsible official in an operating permit application, the Department shall issue an operating permit that contains terms and conditions that allow for the trading of emissions increases and decreases within the permitted facility. The Department shall not include in these trading provisions any emissions units for which emissions are not quantifiable or for which there are no replicable procedures to enforce the emissions trades.
 - 2. Any requests made under 310 CMR 7.00: *Appendix C(7)* are solely for the purposes of complying with the federally-enforceable emissions cap that is established in the permit independent of otherwise applicable requirement(s).
 - 3. Emission trades may be implemented provided the Department and EPA are notified at least 15 business days in advance of the proposed changes. For each change, the following must be provided:
 - a. A description of the change within the permitted facility;
 - b. The date on which the change will occur;
 - c. Any change in emissions; and
 - d. How these increases and decreases in emissions will comply with the terms and conditions of the permit.
 - 4. The 15 day notice shall commence upon the receipt by the Department or EPA whichever is later.
 - 5. The permit shield provided for under 310 CMR 7.00: *Appendix C(12)* shall apply to the permit terms and conditions that allow such increases and decreases in emissions.
 - 6. Any intra-facility change that does not qualify pursuant to 310 CMR 7.00: *Appendix C(7)(b)2.* is required to be submitted to the Department pursuant to 310 CMR 7.00: *Appendix B.*
- (8) Administrative Amendments, Minor Modifications and Significant Modifications.
- (a) The following changes shall require a revision to an operating permit:
- 1. An Administrative Amendment, if the proposed change is:
 - a. A change in business name, division name, or facility name; mailing address; company stack designation; telephone number; or name of facility contact; or
 - b. A transfer of ownership of the facility for which an operating permit is in effect, where the Department determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Department; or
 - c. A change to monitoring, reporting, recordkeeping, or testing requirements that is more frequent than previously specified in the operating permit; or
 - d. The Department, EPA or permittee determines that the operating permit contains typographical errors.
 - 2. A Minor Modification, if the proposed change:
 - a. Does not violate any applicable requirements;
 - b. Does not involve a significant change to existing monitoring, reporting, or recordkeeping requirements in the permit;

Appendix C: continued

- c. Does not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
 - d. Does not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the facility has assumed to avoid an applicable requirement to which the facility would otherwise be subject; and
 - e. Is not a modification under any provision of 42 U.S.C. 7401, Title I.
3. A Significant Modification is a permit modification that does not qualify as a minor permit modification or as an administrative amendment, or is a significant change to any monitoring, reporting or recordkeeping requirements as required by any operating permit.
- (b) Processing an Administrative Amendment. For an administrative amendment to an operating permit a timely and complete application is one filed on forms specified by the Department and in accordance with the timelines established at 310 CMR 7.00: *Appendix C(4)*.
- 1. The Department shall take final action within 15 days of receipt of said application and may incorporate such changes without providing notice to the public or affected states. The Department shall submit a copy of the revised permit to EPA.
 - 2. The source may make the change upon receipt by the Department of the proposed administrative amendment.
 - 3. An administrative amendment for purposes of the acid rain portion of the operating permit shall be governed by 40 CFR part 72.
 - 4. The permit shield provisions of 310 CMR 7.00: *Appendix C(12)* shall not apply to changes made under 310 CMR 7.00: *Appendix C(8)*.
- (c) Processing a Significant Modification. For a significant modification to an operating permit an application must be filed on forms specified by the Department and in accordance with the timelines established at 310 CMR 7.00: *Appendix C(4)*, and shall:
- 1. Be subject to all of the same requirements as a new operating permit application including review by EPA, affected states and the public under 310 CMR 7.00: *Appendix C*;
 - 2. Focus on the proposed significant modifications to the issued operating permit only;
 - 3. A significant modification for purposes of the acid rain portion of the operating permit shall be governed by 40 CFR part 72; and
 - 4. For significant modifications which have been reviewed and approved under 310 CMR 7.02(4) or (5), the construction, substantial reconstruction, or alteration may commence, but may not be operated if the existing operating permit would prohibit such construction or change in operation, during the period after receipt of the required significant modification application by the Department, but before the Department revises the operating permit. If the existing operating permit would not prohibit such construction or change in operation, then operations may commence prior to final approval of the modification to the operating permit. The permit shield provided under 310 CMR 7.00: *Appendix C(12)* applies to any changes resulting from such significant modification.
- (d) Processing a Minor Modification. For a minor modification to an operating permit an application must be filed on forms specified by the Department and in accordance with the timelines established at 310 CMR 7.00: *Appendix C(4)*.
- 1. An application requesting the use of minor permit modifications procedures shall include the following:
 - a. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
 - b. The facility's suggested draft permit;
 - c. Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used; and
 - d. Completed forms for the Department to use to notify the EPA and affected states. Said notification shall be made within five business days of receipt by the Department of a complete permit modification application.
 - 2. A minor modification for purposes of the acid rain portion of the operating permit shall be governed by 40 CFR part 72.
 - 3. The source may make the change upon receipt by the Department of the proposed modification.

Appendix C: continued

4. The permit shield provisions of 310 CMR 7.00: *Appendix C(12)* shall not apply to changes made under 310 CMR 7.00: *Appendix C(8)*.
- (e) Revisions to Operating Permit Not Required. A revision to an operating permit is not required for increases in emissions that are authorized by allowances acquired pursuant to the Acid Rain program under Title IV, provided that such increases do not require an operating permit revision under any other applicable requirement.
- (9) Testing and Monitoring Requirements.
- (a) Any facility, for which an operating permit specifies testing and monitoring requirements shall do so in a manner and time as specified in the operating permit.
- (b) Each operating permit shall contain the following monitoring requirements:
1. The permittee shall comply with all emissions monitoring and analysis procedures or test methods required under the applicable requirements, including those promulgated pursuant to 42 U.S.C. 7401, The Clean Air Act, §§ 504(a) and 504(b) or 114(a)(3);
 2. If the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), then the permittee shall perform periodic monitoring sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit. Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement. Recordkeeping provisions may be sufficient to meet the requirements; and
 3. The permittee shall comply with requirements concerning the use, maintenance and installation of monitoring equipment or methods as the Department deems appropriate.
- (c) Any facility required to install a continuous emissions monitor (CEM) shall install, calibrate, operate, certify and maintain the CEM to continuously measure and continuously record the required emissions and other data as specified in the operating permit.
- (d) Any person required to perform monitoring shall maintain records of and report to the Department in accordance with the requirements established in the facility operating permit and 310 CMR 7.00: *Appendix C(10)*.
- (10) Recordkeeping and Reporting Requirements.
- (a) Upon the Department's request, any record relevant to the operating permit or to the emissions of any air contaminant from the facility shall be submitted to the Department within 30 days of the request by the Department or within a longer time period, if approved in writing by the Department, and shall be transmitted on paper, on computer disk, or electronically at the discretion of the Department.
- (b) The permittee shall maintain records of all monitoring data and supporting information on-site for a period of at least five years from the date of the monitoring sample, measurement, report or initial operating permit application. Supporting information includes, at a minimum, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the operating permit, and any other information required to interpret the monitoring data. Records required to be maintained shall include, where applicable:
1. The date, place as defined in the permit, and time of sampling or measurements;
 2. The date(s) analyses were performed;
 3. The company or entity that performed the analyses;
 4. The analytical techniques or methods used;
 5. The results of such analyses; and
 6. The operating conditions as existing at the time of sampling or measurement.
- (c) The permittee shall report a summary of all monitoring data and related supporting information to the Department at least every six months in a format and time frequency specified by the Department.

Appendix C: continued

- (d) Upon request, an owner or operator shall also furnish to the Department copies of records required to be kept by the operating permit or, for information claimed to be confidential, said person may furnish such records directly to the Department and EPA, along with a claim of confidentiality.
- (e) The following shall be made readily available for inspection by the Department:
1. The operating permit together with any amendments thereto;
 2. A diagram of the facility indicating the location of all equipment and control apparatus, any stack designation assigned by the Department, and any stack designation assigned by the facility;
 3. Records documenting any and all use of any equipment, control apparatus, or other source operation including, but not limited to, the kind and amount of air contaminant emitted, rate of production and hours of operation, raw material throughput; and
 4. Records documenting any construction, substantial reconstruction or alteration, including the dates thereof, of any equipment or control apparatus.
- (f) The permittee shall promptly report to the Department all instances of deviations from permit requirements. This report shall include the deviation itself, including those attributable to upset conditions as defined in the permit, the probable cause of the deviation, and any corrective actions or preventive measures taken.
- (g) For facilities permitted to operate under alternative operating scenarios, the permittee shall establish and maintain a log at the facility which indicates the scenario under which the facility is operating. The permittee shall record changes from one scenario to another contemporaneously with the change.
- (h) All required reports must be certified by a responsible official consistent with 310 CMR 7.00: *Appendix C(5)(c)*.

(11) Application Shield.

- (a) An application shield provides that an owner or operator of a facility subject to 310 CMR 7.00: *Appendix C* shall not be subject to penalties for operating without an operating permit during the time the application shield is in effect.
- (b) An application shield is in effect for an owner or operator of a facility subject to 310 CMR 7.00: *Appendix C* if:
1. A timely and complete application for an initial application or renewal of an operating permit has been submitted pursuant to 310 CMR 7.00: *Appendix C(3)(a)* (facility may continue to operate until the Department takes final action on the application); and
 2. The applicant submits any information requested in writing by the Department within the timelines established.
- (c) This application shield does not relieve an owner or operator of a facility subject to 310 CMR 7.00: *Appendix C* from complying with the terms and conditions of any operating permit or applicable requirement. For initial permit issuance, the application shield does not relieve an owner or operator of said facility from complying with any applicable state and federal laws and regulations.
- (d) The submittal of a complete application shall not affect the requirement that any source have a preconstruction approval under 310 CMR 7.02 if applicable.
- (e) In the event that the Department has not taken final action on an operating permit renewal application prior to an existing operating permit's expiration date, the permit shall remain in effect until the Department takes final action on the renewal application, provided that a timely and complete renewal application has been submitted in accordance with 310 CMR 7.00: *Appendix C(13)*.
- (f) An application shield terminates automatically upon either of the following:
1. The Department's final action on the application for the initial operating permit or for the renewal; or
 2. Failure of the applicant to submit additional information requested by the Department in writing within the deadline established by the Department pursuant to 310 CMR 7.00: *Appendix C(5)(f)*.
- (g) An application shield terminated pursuant to 310 CMR 7.00: *Appendix C(5)(f)* will be reinstated upon receipt of a submittal meeting all the requirements of a complete initial permit application, including any application fee.

Appendix C: continued

(12) Permit Shield.

(a) An owner or operator of a facility subject to 310 CMR 7.00: *Appendix C* will not be subject to enforcement action for operating not in compliance with all applicable requirements provided said facility is in compliance with its permit terms and the Department expressly included in the facility's operating permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:

1. Such applicable requirements are included and are specifically identified in the permit; or
2. The Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable and the permit includes the determination or a concise summary thereof.

(b) Nothing in 310 CMR 7.00: *Appendix C*(12)(a) or in any operating permit shall alter or affect the following:

1. The provisions of 42 U.S.C. 7401, § 303 (Emergency Orders), including the authority of the EPA under 42 U.S.C. 7401, § 303;
2. The liability of an owner or operator of a facility subject to 310 CMR 7.00: *Appendix C* for any violation of applicable requirements prior to or at the time of permit issuance;
3. The applicable requirements of the acid rain program, consistent with 42 U.S.C. 7401, § 408(a); or
4. The ability of EPA to obtain information from a source pursuant to 42 U.S.C. 7401, § 114.

(c) In the event that the Department has not taken final action on an operating permit renewal application prior to an existing operating permit's expiration date, the permit shall remain in effect until the Department takes final action on the renewal application, provided that a timely and complete renewal application has been submitted in accordance with 310 CMR 7.00: *Appendix C*(13).

(13) Renewals.

(a) The expiration of an operating permit terminates the right of the owners or operators of a facility subject to 310 CMR 7.00: *Appendix C* to operate any emission unit, control equipment or associated equipment covered by the permit unless a timely and complete renewal application is submitted pursuant to 310 CMR 7.00: *Appendix C*(4)(b)4.

(b) Applications for renewal of operating permits are subject to the same requirements for public participation and EPA and affected state(s) oversight that apply to initial permit applications (310 CMR 7.00: *Appendix C*(6)).

(c) An application for renewal of an operating permit shall include the results of such testing as is necessary, at the discretion of the Department, to verify that emissions from the equipment or control apparatus meet the compliance emission limitations established in an approval issued pursuant to 310 CMR 7.00 or an operating permit issued under 310 CMR 7.00: *Appendix C*. If such testing is required, the applicant shall comply with the procedures outlined in 310 CMR 7.00: *Appendix C*(9) testing and monitoring.

(d) Any owner or operator of a facility subject to 310 CMR 7.00: *Appendix C* filing a timely and complete application for renewal of an operating permit shall be provided with an Application shield as prescribed in 310 CMR 7.00: *Appendix C*(11).

(14) Reopenings for Cause.

(a) The Department shall reopen and amend a permit when:

1. Additional federal requirements (including, but not limited to, standards or requirements pursuant to 42 U.S.C. 7401, §§ 112(d), 112(g), 112(h) and 112(j)) become applicable to a facility with a remaining permit term of three or more years. Such a reopening and amendment shall be completed not later than 18 months after promulgation of the applicable federal requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire unless the original permit or any of its terms and conditions has been extended pursuant to 310 CMR 7.00: *Appendix C*(11)(e).
2. Additional requirements (including excess emission requirements) become applicable to an affected source under the acid rain program. Upon approval by the EPA, excess emissions offset plans shall be deemed to be incorporated into the permit.

Appendix C: continued

3. The Department or EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards, limitations, or other terms or conditions of the permit.
 4. The Department or EPA determines that the permit must be revised to assure compliance with the applicable requirements.
- (b) Proceedings to reopen and issue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the operating permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable.
 - (c) Reopening under 310 CMR 7.00: *Appendix C(14)(a)* shall not be initiated before a notice of such intent is provided to the facility by the Department at least 30 days in advance of the date that the permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency.
- (15) General Operating Permits.
- (a) The Department may, after notice and opportunity for public comment provided at 310 CMR 7.00: *Appendix C(6)*, issue a general operating permit applicable to numerous similar operations or facilities. Each general operating permit shall specify criteria by which facilities may qualify for the general operating permits. General operating permits shall contain as applicable, the requirements of 310 CMR 7.00: *Appendix C(3)(g)*.
 - (b) Facilities subject to the requirements of 310 CMR 7.00: *Appendix C(2)* (Applicability) may seek a general operating permit previously issued by the Department, where appropriate, by applying to the Department under the requirements of 310 CMR 7.00: *Appendix C(5)*. An application shield shall apply (310 CMR 7.00: *Appendix C(11)*).
 - (c) Affected units subject to the acid rain requirements of 42 U.S.C. 7401, Title IV are not eligible for general operating permits unless otherwise provided for under regulations promulgated by EPA under 42 U.S.C. 7401, Title IV.
 - (d) The approval of a facility's request for authorization to operate under a general operating permit shall not be a final permit action for the purpose of judicial review.
 - (e) Any permittee in possession of a general operating permit who proposes a modification to the equipment or control device which deviates from any term or condition of the general operating permit, shall apply for an individual operating permit consistent with the rules and procedures under 310 CMR 7.00: *Appendix C*.
 - (f) Notwithstanding the shield provisions of 310 CMR 7.00: *Appendix C(12)* the owner or operator of the facility shall be subject to enforcement action for operation without an operating permit if the facility is later determined not to qualify for the conditions and terms of the general permit.
 - (g) If a facility can no longer be covered under the general permit terms and conditions, the owner or operator of said facility must apply for an individual operating permit.

Appendix C: continued

(16) Emergency Conditions.

(a) The owner or operator of a facility subject to 310 CMR 7.00: *Appendix C* shall be shielded from enforcement action brought for non-compliance with technology-based emission limits specified in the operating permit as a result of an emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of 310 CMR 7.00: *Appendix C*(16) are met. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An emergency occurred and that the cause(s) of the emergency can be identified;
2. The facility was at the time being properly operated;
3. During the period of the emergency all reasonable steps were taken as expeditiously as possible to minimize levels of emissions that exceeded the emission standards, or other requirements in the operating permit; and
4. Notice of the emergency was submitted to the Department within two business days of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirement of 310 CMR 7.00: *Appendix C*(10). This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

(c) This provision is in addition to any emergency or upset provision contained in any applicable requirement.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 8.00: THE PREVENTION AND/OR ABATEMENT OF AIR POLLUTION EPISODE AND AIR POLLUTION INCIDENT EMERGENCIES

Section

- 8.01: Introduction
- 8.02: Definitions
- 8.03: Air Pollution Episode Criteria
- 8.04: Air Pollution Episode Potential Advisories
- 8.05: Declaration of Air Pollution Episodes and Incidents
- 8.06: Termination of Air Pollution Episodes and Incident Emergencies
- 8.07: Emission Reductions Strategies
- 8.08: Emission Reduction Plans
- 8.15: Air Pollution Incident Emergency
- 8.21: Hearings
- 8.22: Enforcement Provisions
- 8.30: Severability
- 8.31: Relief

8.01: Introduction

The purpose of 310 CMR 8.00 is to prevent ambient air contaminant concentrations at any location in the Commonwealth from reaching levels which would constitute significant harm, or imminent and substantial endangerment to the health of persons. The levels which would constitute significant harm, or imminent and substantial endangerment, to the health of persons as have been defined by the Administrator of the Environmental Protection Agency are set forth in Table 1.

TABLE 1.
CONTAMINANT CONCENTRATION LEVELS

Prescribed by the EPA Administrator as would cause significant harm, or Imminent and Substantial Endangerment, to Health.

Ambient Air Contaminant Concentration Levels					
Contaminant	Ave. ug/m ³	ppm	COHs	Duration (average)	Product
Sulfur Dioxide (SO ₂)	2,620	1.0		24-hr.	
Particulate Matter					
PM10	600			24-hr.	
Tape Stain (COHs)			8	24-hr.	
Product of: (SO ₂) X (COHs) (SO ₂)			(COHs)	24-hr.	1.5
Carbon Monoxide	144,000	125		1-hr.	
Carbon Monoxide	86,300	75		4-hr.	
Carbon Monoxide	57,500	50		8-hr.	
Photochemical Oxidant	1,200	0.6*		1-hr.	
Nitrogen Dioxide	3,750	2.0		1-hr.	

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Nitrogen Dioxide	938	0.5	24-hr.
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*expressed as Ozone (O₃)

8.02: Definitions

When used in 310 CMR 8.00 and in communications, notices, or orders relative thereto, the following words and phrases shall have the meanings ascribed below:

Air Contaminant means any substance or man-made physical phenomenon in the ambient air space and includes, but is not limited to dust, flyash, gas, fume, mist, odor, smoke, vapor, pollen, microorganism, radioactive material, ionizing radiation, heat, sound, any combination thereof, or any decay or reaction product thereof.

Air Contaminant Source means any place at or from which any air contaminant is emitted to the ambient air space.

Air Pollution means the presence in the ambient air space of one or more air contaminants or combinations thereof in such concentrations and of such duration as to:

- (a) cause a nuisance;
- (b) be injurious to human or animal life, to vegetation, or to property; or
- (c) unreasonably interfere with the comfortable enjoyment of life and property or the conduct of business.

Air Pollution Episode means a state of the ambient air environment in which the concentrations of air contaminants are elevated to or are in excess of certain defined levels and that certain meteorological conditions are expected to continue.

Air Pollution Episode Alert (APEA) means that degree of Air Pollution Episode which meets the criteria for determination of an Air Pollution Episode Alert as set forth in 310 CMR 8.03.

Air Pollution Episode Emergency (APEE) means that degree of Air Pollution Episode which meets the criteria for determination of an Air Pollution Episode Emergency as set forth in 310 CMR 8.03.

Air Pollution Episode Warning (APEW) means that degree of Air Pollution Episode which meets the criteria for determination of an Air Pollution Episode Warning as set forth in 310 CMR 8.03.

Air Pollution Incident Emergency (APIE) means a condition in the atmosphere in the Commonwealth or any part thereof, which constitutes a present or reasonably imminent danger to health.

Ambient Air Space means unconfined space occupied by the atmosphere above the geographical area of the District.

Atmospheric Stagnation Advisory means an advisory, issued by the National Weather Service, relative to meteorological conditions that are predicted to be manifest for 36 hours or more and to be characterized by poor ventilation and potential increase of ambient air contaminant concentration levels. (The advisories may be prepared for regions of substantial area, or as the need may dictate, for local, relatively small areas.)

COH - Coefficient of Haze means the unit which quantifies the increase in photometric density of a filter tape due to deposition of particles per 1000 linear feet of air through a one inch diameter filter when sampled at the rate of approximately 0.25 cfm.

Commissioner means the Commissioner of the Department of Environmental Protection or his official designees.

Department means the Department of Environmental Protection.

Emission means any discharge or release of an air contaminant to the ambient air space.

8.02: continued

Emission Reduction Plan(s) means the plans for reducing emissions during Air Pollution Episode Alerts, Warning, and/or Emergencies.

ug/m³ means micrograms per cubic meter.

News Media means certain channels of communication by which information is conveyed between persons; it includes, but is not limited to, radio, television, and newspapers.

p.p.m. means parts per million.

Person means any individual, partnership, association, firm, syndicate, company, trust, corporation, department, authority, bureau, agency, political subdivision of the Commonwealth, law enforcement agency, fire fighting agency, or any other entity recognized by law as the subject of rights and duties.

PM10 or Particulate Matter 10 means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by a reference method based on Appendix J of Part 50 of CFR and designated in accordance with Part 53 or by an equivalent method designated in part 53.

8.03: Air Pollution Episode Criteria

(1) Episode Criteria. Conditions justifying the proclamation of air pollution alert, air pollution warning, or air pollution emergency shall be deemed to exist whenever the Department determines that the accumulation of air pollutants in any place is attaining or has attained levels which could, if such levels are sustained or exceeded, lead to a substantial threat to the health of persons. In making this determination, the Department will be guided by the following criteria:

(a) Air Pollution Forecast. An internal watch by the Department shall be actuated by a National Weather Service advisory that Atmospheric Stagnation Advisory is in effect.

(b) Alert. The Alert level is that concentration of pollutants at which first stage control actions is to begin. An Alert will be declared when any one of the levels listed in 310 CMR 8.03(2)(a) is reached at any monitoring site and meteorological conditions are such that the Department is of the opinion that, unless appropriate control actions to reduce emissions are taken, ambient air contaminant concentration levels will remain at or in excess of the above levels for 12 or more hours.

(c) Warning. The warning level indicates that air quality is continuing to deteriorate and that additional control actions are necessary. A warning will be declared when any one of the levels listed in 310 CMR 8.03(2)(b) is reached at any monitoring site and meteorological conditions are such that the Department is of the opinion that, unless appropriate control actions to reduce emissions are taken, ambient air contaminant concentration levels will remain at or in excess of the above levels for 12 or more hours.

(d) Emergency. The emergency level indicates that air quality is continuing to deteriorate toward a level of significant harm to the health of persons and that the most stringent control actions are necessary. An emergency will be declared when any one of the levels listed in 310 CMR 8.03(2)(c) is reached at any monitoring site and meteorological conditions are such that the Department is of the opinion that, unless appropriate control actions to reduce emissions are taken, ambient air contaminant concentration levels will remain at or in excess of the above levels for 12 or more hours.

(e) Termination. Once declared, any status reached by application of these criteria will remain in effect until the criteria for that level are no longer met. At such time, the next lower status will be assumed, or the episode will be declared over.

8.03: continued

(2) Criteria to be used to determine an Air Pollution Episode.

8.03(2)(a) Criteria for Determination of Air Pollution Episode Alert (APEA)

CONTAMINANT	Ambient Air Contaminant Concentration Levels				
	Ave. ug/m ³	ppm	COHs	Duration	Product
Sulfur Dioxide (SO ₂)	800	0.3		24-hr.	
Particulate Matter PM10	350			24-hr.	
Tape Stain (COHs)			3	24-hr.	
Product of: (SO ₂) X (COHs)		(SO ₂)	(COHs)	24-hr.	0.2
Carbon Monoxide	17,000	15		8-hr.	
Ozone (O ₃)	400	0.2		1-hr.	
Nitrogen Dioxide	1,130	0.6		1-hr.	
Nitrogen Dioxide	282	0.15		24-hr.	

Meteorological Conditions are such that the Department is of the opinion that, unless appropriate control actions to reduce emissions are taken, ambient air contaminant levels will remain at or in excess of the above levels for 12 or more hours.

8.03(2)(b) Criteria for Determination of Air Pollution Episode Warning (APEW)

CONTAMINANT	Ambient Air Contaminant Concentration Levels				
	Ave. ug/m ³	ppm	COHs	Duration	Product
Sulfur Dioxide (SO ₂)	1,600	0.6		24-hr.	
Particulate Matter PM10	420			24-hr.	
Tape Stain (COHs)			5	24-hr.	
Product of: (SO ₂) X (COHs)		(SO ₂)	(COHs)	24-hr.	0.8
Carbon Monoxide	34,000	30		8-hr.	
Ozone (O ₃)	800	0.4		1-hr.	
Nitrogen Dioxide	2,260	1.2		1-hr.	
Nitrogen Dioxide	565	0.3		24-hr.	

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Meteorological Conditions are such that the Department is of the opinion that, unless appropriate control actions to reduce emissions are taken, ambient air contaminant levels will remain at or in excess of the above levels for 12 or more hours.

8.03: continued

8.03(2)(c) Criteria for Determination of Air Pollution Episode
Emergency (APEE)

CONTAMINANT	Ambient Air Contaminant Concentration Levels				Product
	Ave. ug/m ³	ppm	COHs	Duration	
Sulfur Dioxide (SO ₂)	2,100	0.8		24-hr.	
Particulate Matter					
PM10	500			24-hr.	
Tape Stain (COHs)			8	24-hr.	
Product of:					
(SO ₂) X (COHs)		(SO ₂)	(COHs)	24-hr.	1.2
Carbon Monoxide	46,000	40		8-hr.	
Ozone (O ₃)	1,000	0.5		1-hr.	
Nitrogen Dioxide	3,000	1.6		1-hr.	
Nitrogen Dioxide	750	0.4		24-hr.	

Meteorological Conditions are such that the Department is of the opinion that ambient air contaminant levels will remain at or in excess of the above levels for 12 or more hours.

8.04: Air Pollution Episode Potential Advisories

- (1) Atmospheric Stagnation Advisories received by the Department shall be evaluated by the Department in light of manifest local meteorological conditions, weather forecast, ambient air contaminant concentration levels observed, and anticipated weather-influenced emissions.
- (2) During periods of suspected poor atmospheric ventilation, Atmospheric Stagnation Advisories, and Air Pollution Episodes, the Department will maintain close liaison with the National Weather Service to exchange information of mutual benefit.

8.05: Declaration of Air Pollution Episodes and Incidents

- (1) The Commissioner, based upon the Department's evaluation of such information relative to ambient air contaminant concentration levels as may be available to the Department, meteorological conditions extant, the Criteria set forth in 310 CMR 8.03 and/or other substantive and germane information, shall declare an
 - (a) Air Pollution Episode Alert,
 - (b) Air Pollution Episode Warning, or
 - (c) Air Pollution Incident Emergency.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

8.05: continued

	<u>Alert</u>	<u>Warning</u>	<u>Emergency</u>	<u>PM</u> <u>SO₂</u>	<u>O₃</u>	<u>CO</u>
Process Steam Generating Facility	-	-	X	X		
Boiler lancing or soot blowing between 12 AM - 4AM unless notified otherwise by the Department	X	X	X	-	-	-
Use of lowest sulfur content fuel available	X	X	X	X	-	-
Use of lowest ash content fuel available	X	X	X	X	-	-
Purchase instead of generate electric power from steam	X	X	X	X	-	-
Make ready for use of ERP	-	X	-	X	-	-
Put ERP into operation	-	-	X	X	-	-
Other Industries						
Boiler lancing or soot blowing between 12AM - 4PM unless notified otherwise by the Department	X	X	X	-	-	-
Purchase instead of generate electric power	X	X	X	X*	-	-
Make ready for ERP	-	X	-	X*	-	-
Put ERP into operation	-	-	X	X*	-	-
Notification of sensitive persons	X	X	X	X	X	X
Stop all sandblasting and demolition activities	X	X	X	X	-	-
Stop construction activities that generate pollutants	X	X	X	X	-	-
The following shall cease operations						
Mining and quarrying of non-metallic minerals	-	-	X	-	-	-
Manufacturing establishments with no ERP	-	-	X	-	-	-
Wholesale trade establishments	-	-	X	-	-	-
Non-essential local, county, state, and federal offices	-	-	X	-	-	-
Retail trade establishments	-	-	X	-	-	-
Banks, credit agencies, etc.	-	-	X	-	-	-
Domestic services	-	-	X	-	-	-
Recreational and sporting Facilities and events	-	-	X	-	-	-
Educational institutions	-	-	X	-	-	-

* applies only to Industries discharging organics

(2) The Commissioner, with the approval of the Governor, based upon the Department's evaluation of such information relative to the ambient air contaminant concentration levels as may be available to the Department, meteorological conditions extant, the Criteria set forth in 310 CMR 8.03 and/or other substantive and germane information may declare an Air Pollution Episode Emergency.

8.05: continued

(3) When an Air Pollution episode or Incident Emergency is declared, the Commissioner shall specify the contaminant(s) and portion(s) of the Commonwealth in which said Episodes or Incident Emergencies pertain.

(4) Notice of a declaration of an Air Pollution Episode or Incident Emergency shall be made through the News Media to the extent feasible and such other means of communication as the Commissioner deems appropriate.

8.06: Termination of Air Pollution Episodes and Incident Emergencies

(1) Whenever an Air Pollution Episode is declared, said level (or status) of episode will remain in effect until the criteria for that said level are no longer being met and, at such time, the next lower level (or status) will be assumed.

(2) When the conditions which occasioned the need for declaration of an Air Pollution Episode or Incident Emergency no longer exist, the Commissioner shall declare a termination.

8.07: Emission Reductions Strategies

Upon the declaration of an Air Pollution Episode, any person responsible for or having control over an ambient air contaminant emission source shall implement, to the extent possible, any indicated action strategies as listed below for the episode level and contaminant of concern as declared by the Commissioner.

<u>Action Strategies</u>	<u>Alert</u>	<u>Warning</u>	<u>Emergency</u>	<u>PM SO₂</u>	<u>O₃</u>	<u>CO</u>
Notification to sensitive persons	x	x	x	x	x	x
APC Regulations in force	x	x	x	x	x	x
Open burning variances cancelled	x	x	x	x	x	x
Incinerator use not allowed	-	x	x	x	-	-
Request public to voluntarily curtail motor vehicle use	x	-	-	-	x	x
Stop unnecessary motor vehicle use	-	x	x	-	x	x
Electric Power Generating Facilities Boiler lancing or soot blowing between 12 AM - 4PM only unless notified otherwise by the Department	x	x	x	-	-	-
Electric Power Generating Facilities input capacity = 250 MBTU/hr. Use of lowest sulfur content fuel available	x	x	x	x	-	-
Use of lowest ash content fuel available	x	x	x	x	-	-
Power source switching	x	x	x	x	-	-
Make ready for use of (ERP) Emission Reduction Plan Enact ERP	-	x	-	x	-	-

8.08: Emission Reduction Plans (ERP)

- (1) Any person responsible for the operation of an emission source as set forth in 310 CMR 8.07 or any other emission source when specified by the Department in writing shall prepare standby Emission Reduction Plans (ERP) to reduce or eliminate emissions of air contaminants.
- (2) Standby Emission Reduction Plans required by 310 CMR 8.08(1) shall be in writing and shall identify the sources of air contaminants, the approximate amount of reduction of contaminants, and a brief description of the manner in which the reduction will be achieved.
- (3) ERPs Submittal and Approval.
 - (a) Standby plans (ERPs) required by 301 CMR 8.08(2) shall be submitted to the Department upon request within 30 days of the receipt of such request.
 - (b) Standby plans (ERPs) shall be subject to review and approval by the Department. If, in the opinion of the Department, any ERP is inadequate, the Department shall disapprove the plan and request the preparation of an amended plan. The Department shall give the reasons for disapproval and shall require resubmittal of the plan with a reasonable period of time as determined by the Department.
- (4) During a declared Air Pollution Episode, standby ERPs as required by 310 CMR 8.08(2) shall be made available on the premises to any person authorized to enforce the provisions of 310 CMR 8.00 and the person responsible for the operation of the emissions source shall be responsible for its implementation.
- (5) Any person responsible for the operation of a stationary emission source having a capability of emitting 100 tons or more per year of sulfur dioxide, nitrogen dioxide, particulate matter (PM), carbon monoxide, or hydrocarbons shall be subject to the provisions of 310 CMR 8.08(1), 8.08(2), 8.08(3) and 8.08(4).
- (6) Any person subject to the provisions of 310 CMR 8.08(5) shall submit an ERP to the Department for the Department's review for approval.

8.15: Air Pollution Incident Emergency (APIE)

- (1) The Commissioner shall declare an Air Pollution Incident Emergency if in his opinion, such is deemed advisable to prevent or abate a condition or impending condition which constitutes a present or reasonably imminent danger to the public health.
- (2) By nature of Air Pollution Incident Emergencies, as defined, APIE's do not lend themselves to specific pre-planned strategies for the specific emission sources as in the case of Air Pollution Episodes.
- (3) Upon declaration of an Air Pollution Incident Emergency the Commissioner or his designee shall assume and exercise such authority and powers as are provided in M.G.L. c. 111, § 2B as amended, and as the Commissioner or his designees may deem necessary to effect a prevention or an abatement of the conditions which occasioned his declaration of the APIE.
- (4) Appropriate agencies of the Commonwealth and political subdivisions thereof shall cooperate with the Commissioner and his designees in efforts to effect the prevention or abatement of the Air Pollution Incident Emergency.
- (5) Steps taken by any person to effect or assist in the prevention or abatement of an Air Pollution Incident Emergency shall not be proof conclusive in any action to establish responsibility for the event or happening that occasioned the APIE and shall not prejudice his rights under the law.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

8.21: Hearings

The Department will grant a hearing, upon application in writing for the purpose of reconsideration to any person to whom an Order has been issued, provided that such application is made within ten days of the receipt of the Order. The Order will remain in full force and must be obeyed during the reconsideration process unless modified by the Department.

8.22: Enforcement Provisions

Any official of any police department or agency, fire department or agency, or health agency of the Commonwealth or political subdivision thereof is hereby authorized to enforce, as provided for in M.G.L. c. 111, § 2B or 142B, 310 CMR 8.07, 8.08(4) and 8.09.

8.30: Severability

Each of section of 310 CMR 8.00 shall be construed as separate to the end that if any regulation or sentence, clause, or phrase thereof shall be held invalid for any reason, the remainder of 310 CMR 8.00 and all other regulations shall continue in full force.

8.31: Relief

M.G.L. c. 111, § 2B provides that any aggrieved person may appeal to the Commissioner or his designee for relief from the continuance of an Order. If the Commissioner or his designee finds that the continuance of any Order in whole or in part is unreasonable or unnecessary in light of the then prevailing conditions of air pollution, he may terminate or modify any such Order.

REGULATORY AUTHORITY

310 CMR 8.00: M.G.L. c. 111, § 2B.

310 CMR 9.00: WATERWAYS

Section

- 9.01: Purpose
- 9.02: Definitions
- 9.03: Scope of Jurisdiction
- 9.04: Geographic Areas Subject to Jurisdiction
- 9.05: Activities Subject to Jurisdiction
- 9.06: Requests for Determination of Applicability
- 9.07: Activities Subject to Annual Permit
- 9.08: Enforcement
- 9.09: Effective Date and Severability
- 9.10: Simplified Procedures for Small Structures Accessory to Residences
- 9.11: Application Requirements
- 9.12: Determination of Water-dependency
- 9.13: Public Notice and Participation Requirements
- 9.14: Decision on License and Permit Applications
- 9.15: Terms
- 9.16: Fees
- 9.17: Appeals
- 9.18: Recording
- 9.19: Certificate of Compliance
- 9.20: Authorization of Emergency Actions
- 9.21: Variances
- 9.22: Maintenance, Repair, and Minor Project Modifications
- 9.23: Transfer of License Upon Change of Ownership
- 9.24: Amendments
- 9.25: Expiration and Renewal
- 9.26: Revocation and Nullification
- 9.27: Removal of Previously Licensed Structures
- 9.28: Amnesty
- 9.29: General License Certification
- 9.30: Permitting of Test Projects
- 9.31: Summary of License and Permit Requirements
- 9.32: Categorical Restrictions on Fill and Structures
- 9.33: Environmental Protection Standards
- 9.34: Conformance with Municipal Zoning Law and Approved Municipal Harbor Plans
- 9.35: Standards to Preserve Water-related Public Rights
- 9.36: Standards to Protect Water-dependent Uses
- 9.37: Engineering and Construction Standards
- 9.38: Use Standards for Recreational Boating Facilities
- 9.39: Standards for Marinas/Boatyards/Boat Ramps
- 9.40: Standards for Dredging and Dredged Material Disposal
- 9.51: Conservation of Capacity for Water-dependent Use
- 9.52: Utilization of Shoreline for Water-dependent Purposes
- 9.53: Activation of Commonwealth Tidelands for Public Use
- 9.54: Consistency with Coastal Zone Management Policies
- 9.55: Standards for Nonwater-dependent Infrastructure Facilities
- 9.56: Standards for Facilities of Limited Accommodation
- 9.57: Approved Municipal Harbor Plans

9.01: Purpose

(1) Authority. 310 CMR 9.00 is adopted by the Commissioner of the Department of Environmental Protection (DEP) under the authority of M.G.L. c. 91, § 18 to establish procedures, criteria, and standards for uniform and coordinated administration of the provisions of M.G.L. c. 91, §§ 1 through 63 and M.G.L. c. 21A, §§ 2, 4, 8 and 14. 310 CMR 9.00 also form part of the Massachusetts Coastal Zone Management (CZM) Program, established by M.G.L. c. 21A, § 4A, and codified at 301 CMR 20.00: Coastal Zone Management Program. The interpretation and application of 310 CMR 9.00 shall be consistent with the policies of the CZM Program, 301 CMR 20.00, to the maximum extent permissible by law.

9.01: continued

(2) Purpose. 310 CMR 9.00 is promulgated by the Department to carry out its statutory obligations and the responsibility of the Commonwealth for effective stewardship of trust lands, as defined in 310 CMR 9.02. The general purposes served by 310 CMR 9.00 are to:

- (a) protect and promote the public's interest in tidelands, Great Ponds, and non-tidal rivers and streams in accordance with the public trust doctrine, as established by common law and codified in the Colonial Ordinances of 1641-47 and subsequent statutes and case law of Massachusetts;
- (b) preserve and protect the rights in tidelands of the inhabitants of the Commonwealth by ensuring that the tidelands are utilized only for water-dependent uses or otherwise serve a proper public purpose;
- (c) protect the public health, safety, and general welfare as it may be affected by any project in tidelands, great ponds, and non-tidal rivers and streams;
- (d) support public and private efforts to revitalize unproductive property along urban waterfronts, in a manner that promotes public use and enjoyment of the water; and
- (e) foster the right of the people to clean air and water, freedom from excessive and unnecessary noise, and the natural, scenic, historic, and esthetic qualities of their environment under Article XCVII of the Massachusetts Constitution.

9.02: Definitions

Abutter means the owner of land which shares, along the water's edge, a common boundary or corner with a project site, as well as the owner of land which lies within 50 feet across a water body from such site. Ownership shall be determined according to the records of the local tax assessors office.

Accessory Use means a use determined to be accessory to a water-dependent use, in accordance with the provisions of 310 CMR 9.12(3).

Aggrieved Person means any person who, because of a decision by the Department to grant a license or permit, may suffer an injury in fact, which is different either in kind or magnitude, from that suffered by the general public and which is within the scope of the public interests protected by M.G.L. c. 91 and c. 21A.

Applicant means any person submitting a license or permit application or other request for action by the Department pursuant to 310 CMR 9.00, and shall include the heirs, assignees, and successors in interest to such person.

Approved Municipal Harbor Plan means any Municipal Harbor Plan listed in 310 CMR 9.57(1).

Area of Critical Environmental Concern (ACEC) means an area which has been so designated by the Secretary pursuant to 301 CMR 12.00: *Areas of Critical Environmental Concern*.

Base Flood Elevation means the maximum elevation of flood water, including wave heights if any, which will theoretically result from the statistical 100-year frequency storm. Said elevation shall be determined by reference to the most recently available flood profile data prepared for the municipality within which the work is proposed under the National Flood Insurance Program, currently administered by FEMA; and in accordance with Wetlands Protection Act regulations at 310 CMR 10.57: *Land Subject to Flooding (Bordering and Isolated Areas)*.

Beach Nourishment means the placement of clean sediment, of a grain size compatible with existing beach sediment, on a beach to increase its width and volume for purposes of storm damage prevention, flood control, or public recreation. The seaward edge of the nourished beach shall not be confined by any structure.

Berth means any space wherein a vessel is confined by wet slip, dry stack, float, mooring, or other type of docking facility.

Boatyard means a facility whose function is the construction, repair, or maintenance of boats, which may include boat storage and docking for boatyard services.

9.02: continued

Boston Waterfront Decision means the decision of the Massachusetts Supreme Judicial Court in *Boston Waterfront Development Corporation vs. Commonwealth*, 378 Mass. 629, 393 N.E.2d 356 (1979).

Channel means a navigable route for the passage of vessels, established by customary use or under the authority of federal, state, or municipal law.

Coastal Atlas means the volume of maps of the coastal zone at a scale of 1:40,000 prepared as part of the CZM Program and available for public review at CZM offices.

Coastal Beach means unconsolidated sediment subject to wave, tidal, and coastal storm action which forms the gently sloping shore of a body of salt water and including tidal flats. Coastal beaches extend from the low water line landward to the dune line, coastal bank line or the seaward edge of existing man-made structures, when these structures replace one of the above lines, whichever is closest to the ocean.

Coastal Dune means any natural hill, mound or ridge of sediment landward of a coastal beach deposited by wind action or storm overwash. Coastal dune also means sediment deposited by artificial means and serving the purpose of storm damage prevention or flood control.

Coastal High Hazard Area means an area subject to high velocity waters, as defined in accordance with FEMA regulations and as designated on a Flood Insurance Rate Map, as issued and as may be revised or amended hereafter by FEMA.

Coastal or Shoreline Engineering Structure means any breakwater, bulkhead, groin, jetty, revetment, seawall, weir, riprap or any other structure which by its design alters wave, tidal, current, ice, or sediment transport processes in order to protect inland or upland structures from the effects of such processes.

Coastal Processes means natural forces which can modify coastal lands and waters through the action of wind, waves, tides, currents, or ice.

Coastal Zone means that area subject to the CZM Program and defined in 301 CMR 20.02: *Definitions*.

Combined Application means an application that may serve as a Notice of Intent pursuant to 310 CMR 10.00: *Wetlands Protection*, an application for a 401 Water Quality Certification pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*, and/or an application for a Chapter 91 license, permit or other written approval for a water-dependent use pursuant to 310 CMR 9.00. Notwithstanding the foregoing, a Combined Application may not serve as an application for an annual permit for a mooring, float, raft or small structure accessory to a residence in accordance with 310 CMR 9.07, an application for a Chapter 91 license for a small structure accessory to a residence in accordance with the simplified process set forth in 310 CMR 9.10, or the certification submitted as an application for a General License in accordance with 310 CMR 9.29.

Combined Permit means a decision issued in response to a Combined Application that serves as two or more of the following: a Superseding Order of Conditions issued pursuant to 310 CMR 10.00: *Wetlands Protection*; a 401 Water Quality Certification issued pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*; and/or a Chapter 91 permit, license or other written approval issued pursuant to 310 CMR 9.00.

Commonwealth Tidelands means tidelands held by the Commonwealth, or by its political subdivisions or a quasi-public agency or authority, in trust for the benefit of the public; or tidelands held by a private person by license or grant of the Commonwealth subject to an express or implied condition subsequent that it be used for a public purpose. In applying 310 CMR 9.02: *Definitions*: Commonwealth Tidelands, the Department shall act in accordance with the following provisions:

9.02: continued

(a) the Department shall presume that tidelands are Commonwealth tidelands if they lie seaward of the historic low water mark or of a line running 100 rods (1650 feet) seaward of the historic high water mark, whichever is farther landward; such presumption may be overcome only if the Department issues a written determination based upon a final judicial decree concerning the tidelands in question or other conclusive legal documentation establishing that, notwithstanding the *Boston Waterfront* decision of the Supreme Judicial Court, such tidelands are unconditionally free of any proprietary interest in the Commonwealth;

(b) the Department shall presume that tidelands are not Commonwealth tidelands if they lie landward of the historic low water mark or of a line running 100 rods (1650 feet) seaward of the historic high water mark, whichever if farther landward; such presumption may be overcome only upon a showing that such tidelands including, but not limited to, those in certain portions of the Town of Provincetown, are not held by a private person.

Commissioner means the Commissioner of the Department of Environmental Protection (DEP).

CZM means the Massachusetts Coastal Zone Management Office.

CZM Program means the Massachusetts Coastal Zone Management Program established pursuant to M.G.L. c. 21A and codified in 301 CMR 20.00: *Coastal Zone Management Program*.

Date of Receipt means the date of delivery to an office, home or usual place of business by mail or hand delivery. The Department will presume that a document is received three business days after it is mailed, certified mail return receipt requested, to the correct address, unless good cause is shown otherwise.

DCR means the Department of Conservation and Recreation.

Department means the Department of Environmental Protection (DEP).

Designated Port Area (DPA) means an area that has been so designated by CZM in accordance with 301 CMR 25.00: *Designation of Port Areas*.

Development Site means the area owned, controlled, or proposed for development by the applicant in which a project will occur.

DPA Master Plan means the component of an Approved Municipal Harbor Plan pertaining to lands and waters of a DPA within the municipality. Such master plan or portion thereof shall take effect under 310 CMR 9.00 only upon written approval by the Secretary in accordance with 301 CMR 23.00: *Review and Approval of Municipal Harbor Plans* and any associated written guidelines of CZM and approval by the Department through the adoption of the substitute provisions of Approved Municipal Harbor Plans listed in 310 CMR 9.57.

Dredged Material means rocks, bottom sediment, debris, refuse, plant or animal matter, or other materials which are removed by dredging.

Dredged Material Disposal means the discharge of dredged material, the transportation of such material prior to discharge, and the dispersion, deposition, assimilation or biological uptake or accumulation of such material after transportation or discharge.

Dredging means the removal of materials including, but not limited to, rocks, bottom sediments, debris, sand, refuse, plant or animal matter, in any excavating, cleaning, deepening, widening or lengthening, either permanently or temporarily, of any flowed tidelands, rivers, streams, ponds or other waters of the Commonwealth. Dredging shall include: improvement dredging, maintenance dredging, excavating and backfilling or other dredging and subsequent refilling.

Ecological Restoration Project means a project whose primary purpose is to restore or otherwise improve the natural capacity of a Resource Area(s) to protect and sustain the interests identified in M.G.L. c. 131, § 40, when such interests have been degraded or destroyed by anthropogenic influences. Ecological Restoration Project shall not include projects specifically intended to

9.02: continued

provide mitigation for the alteration of a Resource Area authorized by a Final Order or Variance issued pursuant to 310 CMR 10.00: *Wetlands Protection* or a 401 Water Quality Certification issued pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*.

EIR means Environmental Impact Report as defined in 301 CMR 11.00: *MEPA Regulations*.

Environmental Monitor means the semi-monthly publication of proposed actions and projects which require MEPA filings with the Secretary pursuant to M.G.L. c. 30, §§ 61 through 62H.

EOEEA means the Executive Office of Energy and Environmental Affairs.

Facility of Limited Accommodation means a facility at which goods or services are made available directly (*e.g.*, in person by customer access to the facility, not exclusively by means of mail order, telecommunications or other electronic transmission) to the public on a regular basis primarily by appointment or enrollment on essentially equal terms to the public at large rather than restricted to a relatively limited group of specified individuals. Facilities of Limited Accommodation may be either water-dependent, accessory to water-dependent, or nonwater-dependent, and shall include but not be limited to:

- (a) Rehabilitation clinics and medical facilities;
- (b) Business or professional offices that serve customers by appointment or enrollment and by customer access to the facility;
- (c) Child care centers and elderly or other social service centers, provided that the facility does not interfere with access to public spaces outside of a building; and
- (d) Artist and photography studios open to the public by appointment.

Facility of Private Tenancy means a facility at which the advantages of use accrue, on either a transient or a permanent basis, to a relatively limited group of specified individuals (*e.g.*, members of a private club, owners of a condominium building) rather than to the public at large (*e.g.*, patrons of a public restaurant, visitors to an aquarium or museum). Such facilities may be water-dependent, accessory to water-dependent, or nonwater-dependent, and may include but are not limited to:

- (a) houses, apartments, condominiums, and other residential units;
- (b) business or professional offices that do not rely upon customer access as a significant element of the business or profession;
- (c) industrial facilities, including but not limited to manufacturing plants and electric power generating stations;
- (d) vehicular ways or parking facilities not open to the public;
- (e) open spaces, pedestrian walkways, or outdoor recreation facilities not open to the public; and
- (f) marina berths for long-term exclusive use.

Facility of Public Accommodation means a facility at which goods or services are made available directly to the transient public on a regular basis, or at which advantages of use are otherwise open on essentially equal terms to the public at large (*e.g.*, patrons of a public restaurant, visitors to an aquarium or museum), rather than restricted to a relatively limited group of specified individuals (*e.g.*, members of a private club, owners of a condominium building). Facilities of public accommodation may be either water-dependent, accessory to water-dependent, or nonwater-dependent, and shall include but are not limited to:

- (a) public restaurants or entertainment facilities;
- (b) theaters, performance halls, art galleries, or other establishments dedicated to public presentation of the fine arts;
- (c) hotels, motels, or other lodging facilities of transient occupancy;
- (d) educational, historical, or other cultural institutions open to the public;
- (e) interior spaces dedicated to the programming of community meetings, informational displays, special recreational events, or other public activities;
- (f) sports or physical fitness facilities open to the public;
- (g) open spaces, pedestrian walkways, or outdoor recreation facilities open to the public;

9.02: continued

- (h) retail sales or service facilities;
- (i) ferry terminals, transit stations, and other public transportation facilities;
- (j) marina berths for transient use; and
- (k) vehicular ways open to the public or parking facilities open to the public, including users of facilities of public accommodation.

FEMA means the Federal Emergency Management Agency.

Fill means any unconsolidated material that is confined or expected to remain in place in a waterway, except for: material placed by natural processes not caused by the owner or any predecessor in interest; material placed on a beach for beach nourishment purposes; and dredged material placed below the low water mark for purposes of subaqueous disposal.

Filled Tidelands means former submerged lands and tidal flats which are no longer subject to tidal action due to the presence of fill.

Final Order means the order of conditions issued pursuant to the Wetlands Protection Act, M.G.L. c. 131, § 40, as the term is defined in 310 CMR 10.04: *Definitions*.

Fish means any animal life inhabiting waterways or the land beneath them that is utilized for recreational or commercial purposes, or that is part of the food chain for such animal life.

Flowed Tidelands means present submerged lands and tidal flats which are subject to tidal action.

Great Pond means any pond which contained more than ten acres in its natural state, as calculated based on the surface area of lands lying below the natural high water mark. The title to land below the natural low water mark is held by the Commonwealth in trust for the public, subject to any rights which the applicant demonstrates have been granted by the Commonwealth. The Department shall presume that any pond presently larger than ten acres is a Great Pond, unless the applicant presents topographic, historic, or other information demonstrating that the original size of the pond was less than ten acres, prior to any alteration by damming or other human activity.

Harbor Line means any line established by the legislature pursuant to M.G.L. c. 91, § 34.

Harbormaster means the individual appointed pursuant to M.G.L. c. 102, § 19, or as otherwise provided by law.

High Water Mark means:

- (a) for tidelands, the present mean high tide line, as established by the present arithmetic mean of the water heights observed at high tide over a specific 19-year Metonic Cycle (the National Tidal Datum Epoch), and shall be determined using hydrographic survey data of the National Ocean Survey of the U.S. Department of Commerce; and
- (b) for Great Ponds, rivers, and streams, the present arithmetic mean of high water heights observed over a one year period using the best available data as determined by the Department.

Historic High Water Mark means the high water mark which existed prior to human alteration of the shoreline by filling, dredging, excavating, impounding, or other means. In areas where there is evidence of such alteration by fill, the Department shall presume the historic high water mark is the farthest landward former shoreline which can be ascertained with reference to topographic or hydrographic surveys, previous license plans, and other historic maps or charts, which may be supplemented as appropriate by soil logs, photographs, and other documents, written records, or information sources of the type on which reasonable persons are accustomed to rely in the conduct of serious business affairs. Such presumption may be overcome by a clear showing that a seaward migration of such shoreline occurred solely as a result of natural accretion not caused by the owner or any predecessor in interest. For Great Ponds, the historic high water mark is synonymous with the natural high water mark.

9.02: continued

Historic Low Water Mark means the low water mark which existed prior to human alteration of the shoreline by filling, dredging, excavating, impounding or other means. In areas where there is evidence of such alteration by fill, the Department shall make its determination of the position of the historic low water mark in the same manner as described in 310 CMR 9.02: *Definitions: Historic High Water Mark*.

Improvement Dredging means any dredging under a license or a permit in an area which has not been previously dredged or which extends the original dredged width, depth, length, or otherwise alters the original boundaries of a previously dredged area.

Infrastructure Crossing Facility means any infrastructure facility which is a bridge, tunnel, pipeline, aqueduct, conduit, cable, or wire, including associated piers, bulkheads, culverts, or other vertical support structures, which is located over or under the water and which connects existing or new infrastructure facilities located on the opposite banks of the waterway. Any structure which is operationally related to such crossing facility and requires an adjacent location shall be considered an ancillary facility thereto. Such ancillary facilities generally include, but are not limited to, power transmission substations, gas meter stations, sewage headworks and pumping facilities, toll booths, tunnel ventilation buildings, drainage structures, and approaches, ramps, and interchanges which connect bridges or tunnels to adjacent highways or railroads.

Infrastructure Facility means a facility which produces, delivers, or otherwise provides electric, gas, water, sewage, transportation, or telecommunication services to the public.

Innovative Technology means technology that has not been commercially deployed or is in limited deployment in Massachusetts, and includes, but is not limited to, energy technology that obtains energy from the ocean, waterway, or conditions associated with the ocean or waterway, other forms of renewable energy technology.

Landlocked Tidelands means any filled tidelands which on January 1, 1984 were entirely separated by a public way or interconnected public ways from any flowed tidelands, except for that portion of such filled tidelands which are presently located:

- (a) within 250 feet of the high water mark, or
- (b) within any Designated Port Area. Said public way or ways shall also be defined as landlocked tidelands, except for any portion thereof which is presently within 250 feet of the high water mark.

Licensee means the person to whom a license is issued and shall include the heirs, assignees, and successors in interest to such person.

Local Economic Development Authority means a municipal planning board, zoning board, or other board or commission so designated by a municipality; community development corporations designated in accordance with M.G.L. c. 40H; municipal economic development and industrial corporations designated in accordance with M.G.L. c. 121C; municipal housing authorities designated in accordance with M.G.L. c. 121B, § 3; municipal redevelopment authorities designated in accordance with M.G.L. c. 121B, § 4; urban development corporations designated in accordance with M.G.L. c. 121A; and 40B district planning commissions established under M.G.L. c. 40B, including, but not limited to, the Cape Cod Commission, the Martha's Vineyard Commission and the Boston Redevelopment Authority.

Low Water Mark means the present mean low tide line, as established by the present arithmetic mean of water heights observed at low tide over a specific 19-year Metonic Cycle (the National Tidal Datum Epoch), and shall be determined using hydrographic survey data of the National Ocean Survey of the U.S. Department of Commerce.

Maintenance Dredging means dredging in accordance with a license or permit in any previously authorized dredged area which does not extend the originally dredged depth, width, or length.

Marina means a berthing area with docking facilities under common ownership or control and with berths for ten or more vessels, including commercial marinas, boat basins, and yacht clubs. A marina may be an independent facility or may be associated with a boatyard.

9.02: continued

Marine Industrial Park means a multi-use complex on tidelands within a DPA, at which:

- (a) the predominant use is for water-dependent industrial purposes; in general, at least $\frac{2}{3}$ of the park site landward of any project shoreline must be used exclusively for such purposes;
- (b) spaces and facilities not dedicated to water-dependent industrial use are available primarily for general industrial purposes; uses that are neither water-dependent nor industrial may occur only in a manner that is incidental to and supportive of the water-dependent industrial uses in the park, and may not include general residential or hotel facilities; and
- (c) any commitment of spaces and facilities to uses other than water-dependent industry is governed by a comprehensive park plan, prepared in accordance with M.G.L. c. 30, §§ 61 through 62H, if applicable, and accepted by the Department in a written determination issued pursuant to 310 CMR 9.14.

MEPA means the Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61 through 62H, and 301 CMR 11.00: *MEPA Regulations*.

MOU means a Memorandum of Understanding between the Department and another public agency. The draft text of any such document or other written interagency agreement shall be published in the *Environmental Monitor* for public review and comment, and the final text shall be published therein upon adoption and made available by the Department upon request.

Municipal Harbor Plan (MHP) means a document (in words, maps, illustrations, and other media of communication) setting forth, among other things: a community's objectives, standards, and policies for guiding public and private utilization of land and water bodies within a defined harbor or other waterway planning area; and an implementation program which specifies the legal and institutional arrangements, financial strategies, and other measures that will be taken to achieve the desired sequence, patterns, and characteristics of development and other human activities within the harbor area. Such plan shall take effect under 310 CMR 9.00 only upon approval by the Department through the adoption of the substitute provisions of Approved Municipal Harbor Plans listed in 310 CMR 9.57.

Municipal Official means the mayor of a city, the board of selectmen of a town, or the council of a municipality having a manager-council form of government.

Natural High Water Mark means the historic high water mark of a Great Pond.

Natural Low Water Mark means the historic low water mark of a Great Pond.

Net Operating Income means the rental income from a Facility of Limited Accommodation within the licensed structure minus its operating expenses and property taxes calculated as an amount per square foot for the licensed structure or a comparable value if owner occupied. Operating expenses may include expenses for management, legal and accounting services, insurance, janitorial and security services, maintenance, supplies, and utilities.

Noncommercial Community Docking Facility means a facility for berthing of recreational vessels accessory to residential or nonprofit seasonal camp use (*e.g.*, summer camps).

Nonprofit Organization means an organization exempt from federal income taxation under § 501(c)(3) of the U.S. Internal Revenue Code.

Nonwater-dependent Use means a use as specified in 310 CMR 9.12.

Nonwater-dependent Use Project means a project consisting of one or more nonwater-dependent uses, or a mix of water-dependent and nonwater-dependent uses, as specified in 310 CMR 9.12(1).

Notification Date means a specified date by which a public notice must be published in the newspaper and/or the *Environmental Monitor*, and mailed to municipal officials, and on which the public comment period commences.

9.02: continued

Ocean Sanctuary means an ocean area wherein certain restrictions on activities apply, as defined in M.G.L. c. 132A, § 13 and 302 CMR 5.00: *Ocean Sanctuaries*.

Party means the applicant, any person allowed by the Department to intervene pursuant to M.G.L. c. 30A, § 1, or any ten citizens allowed by the Department to intervene pursuant to M.G.L. c. 30A, § 10A.

Person means any individual, partnership, trust, firm, corporation, association, commission, district, department, board, municipality, public or quasi-public agency or authority.

Present means contemporaneous with the review of an application, request for determination of applicability, or other action by the Department.

Private Recreational Boating Facility means a facility for berthing of recreational vessels at which all berths and accessory uses thereto are not available for patronage by the general public, or where exclusive use of any such berth is available on a long-term basis. Such berths shall not include a berth reserved for the operator of said facility.

Private Tidelands means tidelands held by a private person subject to an easement of the public for the purposes of navigation and free fishing and fowling and of passing freely over and through the water. In accordance with the Colonial Ordinances of 1641-47, the Department shall presume that tidelands are private tidelands if they lie landward of the historic low water mark or of a line running 100 rods (1650 feet) seaward of the historic high water mark, whichever is farther landward; such presumption may be overcome upon a showing that such tidelands, including but not limited to those in certain portions of the Town of Provincetown, are not held by a private person or upon a final judicial decree that such tidelands are not subject to said easement of the public.

Project means any work, action, conduct, alteration, change of use, or other activity subject to the jurisdiction of the Department under M.G.L. c. 91, in accordance with the provisions of 310 CMR 9.03 through 9.05, which is the subject of a license or permit application.

Project Shoreline means the high water mark, or the perimeter of any pier, wharf, or other structure supported by existing piles or to be replaced pursuant to 310 CMR 9.32(1)(a)4., whichever is farther seaward.

Project Site means the area owned, controlled, or proposed for development by the applicant in which a project will occur and which is subject to the geographic jurisdiction of the Department, as specified in 310 CMR 9.04.

Public Agency means any agency, department, board, district, commission, or authority of the Commonwealth or the United States, or any municipality or other political subdivision of the Commonwealth.

Public Recreational Boating Facility means a facility for berthing of recreational vessels at which all berths and accessory uses thereto are available for patronage by the general public on a seasonal or transient basis. Such facility may be either publicly or privately owned, and may include town piers, commercial rental marinas, or community sailing centers or yacht clubs offering open membership to the public. Nothing in 310 CMR 9.00 shall be construed as prohibiting the adoption of minimum eligibility criteria of broad, objective applicability, such as basic knowledge of boating safety or a willingness to make regular work commitments; nor as prohibiting the reservation of a berth for the operator of said facility.

Public Service Project means a project:

- (a) whose entire control, development, and operation is undertaken by a public agency for the provision of facilities or services directly to the public (or to another public agency for such provision to the public) by the public agency or its contractor or agent; or
- (b) which consists entirely of Infrastructure Facilities, as defined at 310 CMR 9.02.

Public Way means a road, street, or highway for vehicular use open to the public at large and for which a public agency is responsible for maintenance and repair.

9.02: continued

Resource Area means any of the areas specified in 310 CMR 10.25 through 10.35 and 310 CMR 10.54 through 10.58. It is used synonymously with Area Subject to Protection under M.G.L. c. 131, § 40, each one of which is enumerated in 310 CMR 10.02(1): *Areas Subject to Protection Under M.G.L. c. 131, § 40*.

Restoration Order of Conditions means the General Order of Conditions issued pursuant to 310 CMR 10.14: *General Ecological Restoration Project Order of Conditions* for a project that meets the eligibility criteria set forth in 310 CMR 10.13: *Eligibility Criteria for General Restoration Order of Conditions*.

Secretary means the Secretary of the Executive Office of Energy and Environmental Affairs.

Shellfish means the following species: Bay Scallop (*Argopecten irradians*); Blue Mussel (*Mytilus edulis*); Ocean Quahog (*Arctica islandica*); Oyster (*Crassostrea virginica*); Quahog (*Mercenaria mercenaria*); Razor Clam (*Ensis directus*); Sea Clam (*Spicula solidissima*); Sea Scallop (*Placopecten megallanicus*); and Soft Clam (*Mya arenaria*).

State Agency means any agency, department, board, district, commission, or authority of the Commonwealth.

Structure means any man-made object which is intended to remain in place in, on, over, or under tidelands, Great Ponds, or other waterways. Structure shall include, but is not limited to, any pier, wharf, dam, seawall, weir, boom, breakwater, bulkhead, riprap, revetment, jetty, piles (including mooring piles), line, groin, road, causeway, culvert, bridge, building, parking lot, cable, pipe, pipeline, conduit, tunnel, wire, or pile-held or other permanently fixed float, barge, vessel or aquaculture gear. Structure does not include any mooring, float, or raft which has been authorized by annual permit of a harbormaster, in accordance with M.G.L. c. 91, § 10A and with 310 CMR 9.07; nor any weir, pound net, or fish trap which has been authorized in tidewater by permit of the municipal official and approved by the Department and the Division of Marine Fisheries, in accordance with M.G.L. c. 130, § 29. Any such mooring, float, raft, weir, pound net, or fish trap, which has not been so authorized shall be considered a structure under 310 CMR 9.00.

Substantial Change in Use means a use for a continuous period of at least one year of 10% or more of the surface area of the authorized or licensed premises or structures for a purpose unrelated to the authorized or licensed use or activity, whether express or implied.

Substantial Structural Alteration means a change in the dimensions of a principal building or structure which increases by more than 10% the height or ground coverage of the building or structure specified in the authorization or license, or an increase by more than 10% of the surface area of the fill specified in the authorization or license.

Superseding Order means an order of conditions issued by the Department pursuant to the Wetlands Protection Act M.G.L. c. 131, § 40, as defined in 310 CMR 10.04: *Definitions*.

Supporting DPA Use means an industrial or commercial use in a Designated Port Area that provides water-dependent industrial use in the DPA with direct economic or operational support, to an extent that adequately compensates for the reduced amount of tidelands on the project site that will be available for water-dependent industrial use during the term of the license. The type, location, scale, duration, operation, and other relevant aspects of the industrial or commercial use must be compatible with activities characteristic of a working waterfront and its backlands, in order to preserve in the long run the predominantly industrial character of the DPA and its viability for maritime development. In determining whether an industrial or commercial use qualifies as a Supporting DPA Use, the Department shall act in accordance with the following provisions as well as all applicable provisions of a DPA Master Plan.

9.02: continued

In the case of commercial uses, any use may be determined to be compatible with the DPA except where the inherent nature of the use gives rise to conflict with port operations or excessive consumption of port space, either directly or indirectly (*e.g.* as a result of collateral development activity). Accordingly, new or expanded uses that shall not be determined to be a Supporting DPA Use include, but are not limited to, transient group quarters such as hotels/motels, nursing homes, and hospitals; recreational boating facilities; amusement parks and other major entertainment or sports complexes; and new buildings devoted predominantly to office use.

Unless otherwise provided in a DPA Master Plan, the amount of tidelands occupied by Supporting DPA Uses and any accessory uses thereto shall not exceed 25% of the area of the project site (excluding tidelands seaward of the project shoreline), so that the remainder of the project site will continue to be available exclusively for water-dependent industrial or temporary use.

Temporary Use means warehousing, trucking, parking, and other industrial and transportation uses which occupy vacant space or facilities in a Designated Port Area, for a maximum term of ten years as specified in 310 CMR 9.15(1)(d), and without significant structural alteration of such space or facilities. Temporary uses may be licensed only if marketing efforts have failed to identify any prospective water-dependent industrial tenant, and if the license is conditioned to require further solicitation of such tenancy upon expiration of the license term.

Test Project means the installation or deployment of water dependent Innovative Technology *in situ* for purposes of evaluating its performance and environmental effects.

Tidelands means present and former submerged lands and tidal flats lying between the present or historic high water mark, whichever is farther landward, and the seaward limit of state jurisdiction. Tidelands include both flowed and filled tidelands, as defined in 310 CMR 9.02.

Trust Lands means present and former waterways in which the fee simple, any easement, or other proprietary interest is held by the Commonwealth in trust for the benefit of the public. All geographic areas subject to the jurisdiction of M.G.L. c. 91, as specified in 310 CMR 9.04, are generally considered to be trust lands.

9.02: continued

Upper Floor Accessory Services means utility and access facilities which must be located on the ground floor of any building to serve any facility of private tenancy located on any other floors, provided that such accessory services do not occupy more than 25% of the building footprint. Examples of such services include utility shafts, elevators, stairways, and entryways.

Water-dependent Use means a use as specified in these regulations at 310 CMR 9.12(2).

Water-dependent Use Project means a project consisting entirely of fill or structures for one or more water-dependent or accessory uses as specified in 310 CMR 9.12(1).

Water-dependent Use Zone means an area within the geographic jurisdiction of the Department and running landward of and parallel to the project shoreline, the width of which is determined in accordance with 310 CMR 9.51(3)(c). For purposes of such determination, the landward lot line of a property shall mean that in existence as of the effective date of 310 CMR 9.00, unless subsequent reconfiguration thereof results in a more landward location at the time of license application; and all baselines and distances shall be specified according to accepted land regulation and survey practices.

Waterway means any area of water and associated submerged land or tidal flat lying below the high water mark of any navigable river or stream, any Great Pond, or any portion of the Atlantic Ocean within the Commonwealth, which is subject to 310 CMR 9.04.

Wetlands Protection Act means M.G.L. c. 131, § 40 and 310 CMR 10.00: *Wetlands Protection*.

9.03: Scope of Jurisdiction

(1) Authorization of Projects by the Department. Written authorization in the form of a license, permit, or amendment thereto must be obtained from the Department before the commencement of one or more activities specified in 310 CMR 9.03(2) and (3) or 310 CMR 9.05 and located in one or more geographic areas specified in 310 CMR 9.04, unless the legislature has specifically exempted any such activity(ies) from Department jurisdiction under M.G.L. c. 91.

(2) Oversight of Certain Work Authorized by the Legislature. In accordance with M.G.L. c. 91, § 20, no person shall undertake any work authorized by the legislature and subject to M.G.L. c. 91 in accordance with 310 CMR 9.03(1), until said person has given written notice thereof to the Department, in the form of a license or permit application, and has submitted plans for such work which conform with the application requirements of 310 CMR 9.00. The Department may alter such plans and impose conditions in the license or permit, which shall be consistent with the legislative authorization and issued in accordance with 310 CMR 9.31(4). All work so authorized shall conform with the plans and conditions contained in said license or permit, and shall not commence until said license or permit has been issued.

In accordance with the *Boston Waterfront* decision of the Supreme Judicial Court, grants by the legislature of tidelands below the historic low water mark are subject to a condition subsequent that such tidelands be used for the public purpose for which they were granted, and the rights of the grantee to those tidelands are ended when that purpose is extinguished. If the present use of such tidelands has changed from the public purpose for which they were granted, authorization shall be obtained from the Department, in the form of a license pursuant to 310 CMR 9.00, in order to establish that such change of use serves a proper public purpose.

(3) Activities of the Massachusetts Port Authority. In accordance with its Enabling Act, St. 1956, c. 465, the Massachusetts Port Authority (Massport) may undertake the following activities within the following geographic areas without written authorization in the form of a license or permit from the Department:

- (a) any project consisting entirely of water-dependent-industrial uses or accessory uses thereto on previously filled or flowed tidelands within the Port of Boston; or
- (b) any project authorized by said Enabling Act on previously filled tidelands within the geographical boundary of Logan Airport, so long as it is operated as an airport.

9.03: continued

Except as provided in 310 CMR 9.03(3)(b), Massport shall obtain a license or permit pursuant to M.G.L. c. 91 for any project consisting entirely of uses other than water-dependent-industrial uses. With regard to all other future Massport projects, Massport and the Department shall develop an MOU, which shall be executed by the effective date of 310 CMR 9.00, in order to further clarify the Department's jurisdiction under M.G.L. c. 91 relative to the purposes, powers, and plans of Massport's Enabling Act, St. 1956, c. 456, as amended.

9.04: Geographic Areas Subject to Jurisdiction

The following geographic areas, generally considered "trust lands", are subject to licensing and permitting by the Department under 310 CMR 9.00:

(1) all waterways, including all flowed tidelands and all submerged lands lying below the high water mark of:

- (a) Great Ponds;
- (b) the Connecticut River;
- (c) the section of the Westfield River in the Towns of West Springfield and Agawam lying between the confluence of said river with the Connecticut River and the bridge across said river at Suffield Street in said Town of Agawam;
- (d) the non-tidal portion of the Merrimack River; and
- (e) any non-tidal river or stream on which public funds have been expended for stream clearance, channel improvement, or any form of flood control or prevention work, either upstream or downstream within the river basin, except for any portion of any such river or stream which is not normally navigable during any season, by any vessel including canoe, kayak, raft, or rowboat; the Department may publish, after opportunity for public review and comment, a list of navigable streams and rivers; and

(2) all filled tidelands, except for landlocked tidelands, and all filled lands lying below the natural high water mark of Great Ponds.

9.05: Activities Subject to Jurisdiction

(1) Activities Requiring a License Application. Except as provided in 310 CMR 9.05(3), an application for license or license amendment shall be submitted to the Department for the following activities involving work on or use of fill or structures:

- (a) any construction, placement, excavation, addition, improvement, maintenance, repair, replacement, reconstruction, demolition or removal of any fill or structures, not previously authorized, or for which a previous grant or license is not presently valid.
- (b) any existing or proposed use of any fill or structures not previously authorized, or for which a previous grant or license is not presently valid;
- (c) any structural alteration of fill or structures from the specifications contained in a valid grant or license, whether such authorization was obtained prior to or after January 1, 1984;
- (d) any change in use of fill or structures from that expressly authorized in a valid grant or license or, if no such use statement was included, from that reasonably determined by the Department to be implicit therein, whether such authorization was obtained prior to or after January 1, 1984.

(2) Activities Requiring a Permit Application. Except as provided in 310 CMR 9.05(3), an application for a permit or permit amendment shall be submitted to the Department for the following activities unless the applicant includes such activities in a license application:

- (a) any beach nourishment;
- (b) any dredging;
- (c) any disposal involving the subaqueous placement of unconsolidated material below the low water mark;
- (d) any burning of rubbish or other material upon the water, in accordance with M.G.L. c. 91, § 52;
- (e) any lowering of the water level of a Great Pond, except a body of water used for agriculture, manufacturing, mercantile, irrigation, insect control purposes, or for flowing cranberry bogs, or for public water supply, in accordance with M.G.L. c. 91, § 19A;

9.05: continued

(f) any structure and associated use with the potential to impair the public's rights in tidelands which is intended to remain in place on a temporary basis not to exceed six months, provided said structure and use otherwise meet the applicable substantive standards found at 310 CMR 9.31 through 9.60; and

(g) any structure and associated use with the potential to impair the public's rights in tidelands for the purpose of conducting a Test Project for Innovative Technology, provided said structure and use meet the applicable substantive standards found at 310 CMR 9.30.

(3) Activities Not Requiring a License or Permit. Notwithstanding the provisions of 310 CMR 9.05(1) through (2), no license or permit is required for:

(a) maintenance, repair, and minor modifications, as described in 310 CMR 9.22, of fill or structures for which a grant or license is presently valid, or which is exempt from licensing pursuant to 310 CMR 9.05(3)(b) through (h);

(b) continuation of any existing, unauthorized use or structure located on private tidelands lawfully filled in accordance with a license or grant, provided that no unauthorized structural alteration or change in use has occurred on such tidelands subsequent to January 1, 1984 or in violation of an express condition of said license or grant;

(c) continuation of any existing, unauthorized public service project, provided that no unauthorized structural alteration or change in use has occurred subsequent to January 1, 1984, unless the Department determines, upon notice and opportunity for public comment, that licensing is essential to prevent significant harm to an overriding water-related public interest;

(d) continuation in use of any unauthorized Massport project existing as of the effective date of 310 CMR 9.00, and for which no unauthorized structural alteration or change of use has occurred since that date, provided said project:

1. includes water-dependent industrial activities; or

2. is any other project for which a final EIR was certified as adequately and properly complying with M.G.L. c. 30, §§ 61 through 62H, prior to January 1, 1984; unless the Department determines, upon written notice and opportunity for public comment, that licensing is essential to prevent significant harm to an overriding water-related public interest;

(e) continuation in the use of existing, unauthorized water-dependent structures that are accessory to a single-family residence, in accordance with the provisions of 310 CMR 9.28;

(f) continuation of any existing, unauthorized use of fill or structures constructed prior to 1939 on any non-tidal river or stream subject to jurisdiction under 310 CMR 9.04(1)(e), provided that no unauthorized structural alteration or change in use has occurred subsequent to January 1, 1984;

(g) placement in a non-tidal river or stream subject to jurisdiction under 310 CMR 9.04(1)(e) of fill or structures for which a final Order of Conditions has been issued under M.G.L. c. 131, § 40 and 310 CMR 10.00: *Wetlands Protection*, and which does not reduce the space available for navigation; such fill or structures are limited to:

1. overhead wires, conduits, or cables to be attached to an existing bridge, without substantial alteration thereof, or constructed and maintained in accordance with the National Electrical Safety Code;

2. fish ladders, fishways, and other devices which allow or assist fish to pass by a dam or other obstruction in the waterway;

3. pipelines, cables, conduits, sewers, and aqueducts entirely embedded in the soil beneath such river or stream; and

4. bulkheads, revetments, headwalls, storm drainage outfalls, and similar structures which do not extend into such river or stream, except as may be necessary for bank stabilization;

(h) reconfiguration of licensed docking facilities in a marina, in accordance with the provisions of 310 CMR 9.39(1)(b);

(i) any change in use of berths for recreational vessels from seasonal or transient occupancy to long-term exclusive occupancy in accordance with a contract or other agreement, provided that the lease agreement, master lease agreement, or notice thereof for such berths was filed at the Registry of Deeds prior to July 6, 1990, in which event no application for a license or license amendment is required for any change in use of any berth subject to such agreement for long-term exclusive occupancy;

9.05: continued

- (j) emergency action, in accordance with the provisions of 310 CMR 9.20;
- (k) removal of fill or structures in accordance with the provisions of 310 CMR 9.08 or 310 CMR 9.27;
- (l) activities subject to annual permit by the harbormaster, other designated local official, or local permitting program, in accordance with the provisions of 310 CMR 9.07;
- (m) demolition or removal of any unauthorized structures or fill in order to facilitate water-dependent use provided prior written approval is obtained from the Department, which, at the discretion of the Department may include prior public notice and comment;

(4) Activities Eligible for General License Coverage. Activities eligible for Certification and subject to coverage under the General License pursuant to the provisions of 310 CMR 9.29.

9.06: Requests for Determination of Applicability

(1) Any person who desires a determination whether 310 CMR 9.00 presently apply to any area of land or water, or any activity thereon, may submit to the Department a request for a determination of applicability. Said request shall:

- (a) use the appropriate determination of applicability forms provided by the Department;
- (b) provide a detailed description of the proposed project, if any, which identifies all existing and proposed fill and structures and uses thereof; and
- (c) include a plan or plans showing:
 - 1. an appropriately-scaled site location map;
 - 2. references to any previous licenses, permits, or other authorizations for existing structures, fill, or dredging at the site, including the license number(s) and the date the license was recorded at the Registry of Deeds or Land Court;
 - 3. appropriately-scaled principal dimensions and elevations of proposed and existing fill, structures, or dredging in waterways;
 - 4. any historic dredging, filling, or impoundment at the site; and
 - 5. a delineation of the present high and low water marks, and the historic high and low water marks, as relevant.

(2) The applicant shall submit a request for a determination of applicability to the Department, and at the same time, to the persons identified in 310 CMR 9.13(1)(a).

(3) A public hearing and newspaper notice published by the applicant may be required by the Department on any request for a determination of applicability.

(4) Any person may submit written comments to the Department on any request for a determination of applicability within 21 days of the date of the request or the newspaper notification date, if applicable.

(5) Unless the Department requests further information, the Department shall issue a determination of applicability in recordable form within 60 days of the receipt of the request or the close of the public comment period, whichever is later.

(6) Any person who would otherwise have the right to an adjudicatory hearing pursuant to 310 CMR 9.17 may appeal the issuance of any determination of applicability within 21 days of the date of its issuance in accordance with the procedures set forth at 310 CMR 9.17.

9.07: Activities Subject to Annual Permit

(1) General. A written application for an annual permit must be submitted to the harbormaster of a city or town or, in a municipality where no harbormaster has been appointed, to the municipal official or other designated local official(s), for the placement on a temporary basis of moorings, floats or rafts held by bottom-anchor, and ramps associated thereto, which are located within the territorial jurisdiction of the municipality. A written application for an annual permit for small structures accessory to residences must be submitted to the harbormaster or other designated local official when a city or town has been approved by the Department to administer a local permitting program under 310 CMR 9.07(3), unless a license or other authorization under 310 CMR 9.00 is obtained from the Department. The harbormaster or other designated local official shall establish a schedule for receipt of applications. Completed applications shall be acted upon within a period of 15 days from receipt, according to the schedule. Any permit may contain such terms, conditions and restrictions as deemed necessary, consistent with the requirements of 310 CMR 9.07. No license shall be required from the Department if an annual permit is issued pursuant to 310 CMR 9.07. A city or town implementing 310 CMR 9.07 shall not discriminate against any citizen of the Commonwealth on the basis of residency, race, religion, sex, age, disability, or other illegal distinction. The provisions of 310 CMR 9.07 shall be enforced by local officials. The Department may enforce the provisions of 310 CMR 9.07 upon the request of a local permitting program or upon a finding that local enforcement is inadequate.

(2) Annual Permits for Moorings, Floats and Rafts.

(a) The harbormaster or other local official shall provide a written procedure for the fair and equitable assignment from a waiting list for use of vacant or new moorings, floats or rafts held by bottom-anchor and ramps associated thereto. Methods for mooring assignment which are appropriate include, but are not limited to, one or more of the following:

1. date of application;
2. physical characteristics of vessels, *e.g.*, size and type;
3. purpose of vessel use, *e.g.*, commercial *vs.* recreational or public *vs.* private.

The harbormaster, however, may allow the previous permit holder of a mooring to renew, on an annual basis, that mooring or another mooring within the control of the harbormaster.

(b) If the placement of floats or rafts for public recreational boating facilities, exclusive of moorings, extends beyond any established state harbor line, encompasses an area greater than 2,000 square feet, or constitutes a marina, additional procedures apply:

1. a public hearing must be held by the harbormaster or other local official in the affected municipality with notice at least seven days in advance published in the local newspaper at the expense of the applicant; and
2. the harbormaster or other local official must set forth the reasons for issuing such permit in a written statement, which must include findings to the effect that the project will serve a public purpose, will not unreasonably interfere with navigation in the harbor, and:
 - a. cannot be located reasonably within the harbor line, if the project extends beyond such line; and/or
 - b. complies with the provisions of 310 CMR 9.39(1), if the project includes a marina.

A copy of the permit and written statement shall be submitted upon issuance to the Department. The Department may review any such permit within 30 days of receipt and may either affirm the permit, set such action aside or amend such action by imposing its own conditions and restrictions as deemed necessary.

(c) A copy of the permit and written statement shall be submitted upon issuance to the Department. The Department may review any such permit within 30 days of receipt and may either affirm the permit, set such action aside or amend such action by imposing its own conditions and restrictions as deemed necessary. No permit for a mooring, float or raft may authorize unreasonable interference with the public rights to use waterways for any lawful purposes including fishing, fowling, and navigation in tidelands and Great Ponds. All permits shall meet the terms and conditions described in 310 CMR 9.07(4).

(d) No permit for a mooring, float or raft shall be transferrable to another person, except to a person within the immediate family of the permittee upon approval of the harbormaster. Nothing in 310 CMR 9.07 shall be construed to prevent moorings for which permits are issued to a recreational boating facility from being assigned to individual patrons or members of such facility.

9.07: continued

(3) Annual Permits for Small Structures Accessory to Residences.

(a) Petition for Local Permitting Program. A city or town may petition the Department for approval to administer a local permitting program for small structures accessory to residences. The Department shall state the basis for approval or denial of any petition in writing. The Department may withdraw its approval of a local permitting program if it determines that the local program exhibits a repeated failure to comply with the provisions of 310 CMR 9.07.

1. A city or town may elect to issue permits for small structures accessory to residences under the provisions of 310 CMR 9.07. The city or town shall provide public notice and an opportunity to comment on the petition for approval prior to its submittal to the Department. The petition shall include:

- a. the designation of a local official or local governmental body to administer the program;
- b. a demonstration that public access has been or will be provided to waterbodies within the town, including at least one formal means of access to the waterway, reasonable in type and scope for the waterway and its anticipated use by any citizen of the Commonwealth, established prior to the date of the petition or scheduled to be available within a reasonable period of time; and
- c. provision that any fees collected be used for support of the local permitting program, the improvement of waterways, or the enhancement of public access to or along waterways.

2. Where the Legislature has created a lake commission (*e.g.*, the Lake Quinsigamond Commission) with authority to issue permits, the commission may petition the Department for approval under 310 CMR 9.07(3), without designation by a city or town.

3. A local permitting program may also be approved by the Department if it provides substantially equivalent procedures and protection of public rights as 310 CMR 9.07. A city or town may petition for approval of a local permitting program pursuant to a local ordinance or bylaw. Where the Legislature has created a lake commission with authority to issue permits, the commission may petition the Department for approval of regulations implementing a local permitting program. Upon request, the Department shall provide advisory opinions on draft petitions for approval.

(b) Eligibility. An application for a local permit under 310 CMR 9.07(3) may be submitted only for a project consisting entirely of a dock, pier, seawall, bulkhead, or other small-scale structure that is accessory to a residential use or serves as a noncommercial community docking facility, provided that:

1. for proposed structures, or for structures built or substantially altered after January 1, 1984:

- a. any structure is water-dependent and pile-supported (*e.g.*, by wooden or metal posts) or bottom-anchored, without any fill;
- b. any structures total no more than 600 square feet below the mean high water shoreline for coastal waters or below the ordinary high water shoreline for inland waters;
- c. the structure is not a marina (*i.e.*, does not serve ten or more vessels);
- d. if within an ACEC, such structures were existing on October 4, 1990 or the effective date of the ACEC designation, whichever is later, and, if a resource management plan for the ACEC has been adopted by the municipality and approved by the Secretary, said structures are consistent with said plan;
- e. if within an ACEC, such structures, if built or substantially altered after October 4, 1990 or the effective date of the ACEC designation, whichever is later, are consistent with a resource management plan adopted by the municipality and approved by the Secretary;

2. for structures or fill constructed prior to January 1, 1984 and not substantially altered since that date:

- a. any structure or fill must be water-dependent;
- b. any structure and fill total no more than 600 square feet below the mean high water shoreline for coastal waters and below the ordinary high water shoreline for inland waters;
- c. the structure is not a marina (*i.e.*, does not serve ten or more vessels).

9.07: continued

(c) Standards. The local permitting program must find that the structure is limited to the minimum size necessary to achieve the intended water-related purposes, will not significantly interfere with any public rights to use waterways for fishing, fowling, navigation and other lawful purposes, mitigates for any interference by providing lateral access or other mitigation according to guidance issued by the Department, and complies with the provisions of 310 CMR 9.07.

(d) Application Requirements. The initial application shall be accompanied by plans or other documentation sufficient to accurately show the location and size of the structure. For proposed structures, the applicant must provide an Order of Conditions, a negative or conditional negative Determination of Applicability, or evidence of written request for action by the Conservation Commission and subsequent failure of the Conservation Commission to respond. For existing structures, no permit shall be issued if the Conservation Commission has determined that the structure or fill is in violation of the Wetlands Protection Act, M.G.L. c. 131, § 40. The applicant shall provide notice to the Selectmen or Mayor, the Conservation Commission, and to abutters for proposed structures and for previously unauthorized structures. The applicant shall also publish a public notice of the project in a newspaper of general circulation, which may serve as joint notice for M.G.L. c. 91 and M.G.L. 131, § 40. Notices must be provided or published at least ten business days prior to the deadline for receipt of applications established by the local permitting program. Notices must include the applicant's name and address, the location and a concise description of the project, the address to which comments may be sent, and the deadline for receipt of comments.

(e) Program Requirements. The local program shall send to the Department a copy of each permit issued for proposed or previously unauthorized structures, but not renewals. The local program shall maintain in the municipality a list of applicants and permittees, and provide the list to any person upon written request. The local permitting program shall annually publish a public notice of its intention to renew permits for small structures in specifically named water bodies at least ten business days prior to the renewal date, identifying the address where information on the renewal applications may be obtained and comments should be sent, and specifying the deadline for receipt of comments. A copy of the annual notice and a list of permittees shall be sent to the Department. Any written comments within the scope of M.G.L. c. 91 submitted to the local permitting program on any permit application shall be considered, and a permit may not be issued prior to the close of the public comment period. A copy of any permit on which public comment was received shall be sent immediately upon issuance or renewal to persons submitting comments and to the Department.

(f) Renewals and Transfer. Projects meeting the provisions of 310 CMR 9.07(3), which previously obtained an annual permit, license, amnesty license or interim approval, may apply for extension of authorization under 310 CMR 9.07 as a renewal. No individual notice is required for renewals, unless specifically requested by the local permitting program. A permit for an eligible small structure attached to land under 310 CMR 9.07(3) is transferrable upon change of ownership of the land to a new owner.

(4) Terms and Conditions Applicable to All Annual Permits.

(a) No permit may be valid for a period longer than to the end of any given calendar year.

(b) No permit may authorize structures other than the placement of moorings, floats, rafts or eligible small structures accessory to residences under 310 CMR 9.07.

(c) No permit shall be construed as authorizing the placement of moorings, floats, rafts, or other structures on private tidelands of anyone other than the applicant if objected to by the owner or owners thereof.

(d) No permit may authorize the placement of moorings, floats, rafts or other structures in any navigation channel or turning basin formally designated by the federal or state government or by a municipality pursuant to an Approved Municipal Harbor Plan, unless the designating authority or other agency with jurisdiction over said area has previously approved such placement.

(e) No permit shall be inconsistent with an Approved Municipal Harbor Plan, if any, or unless permitted under 310 CMR 9.07(2)(b), be issued for a project extending beyond the harbor line.

9.07: continued

(f) No mooring, float, raft, or other small structure may interfere with public rights associated with a common landing, public easement, or other historic legal form of public access that may exist on or adjacent to the project site.

(g) Any person receiving a permit for a small structure accessory to a residence shall post signage as required by the city or town in accordance with guidance issued by the Department.

(5) Review of Local Decision.

(a) Any applicant aggrieved by a refusal to permit a mooring, float, raft, or small structure accessory to a residence or by any condition or restriction imposed relative thereto, may request a review in writing to the Department within 30 days after receiving notice of such refusal or of the imposition of such condition or restriction. The failure of the harbormaster, other local official, or local program to act upon a complete application within a reasonable time shall be deemed by the Department to be a denial of a permit. A copy of the request shall be sent at the same time to the harbormaster, other local official, or local permitting program.

(b) The Department may review any permit within 30 days of receipt, with notification to the applicant, harbormaster or other local official, or local program, and may either affirm the permit, set such action aside or amend such action by imposing its own conditions and restrictions as deemed necessary. The Department may review a permit upon its own initiative or may initiate a review upon written request of any person who submitted written comments on a permit application to a harbormaster, other local official, or local permitting program and who sends the request to the Department within ten days of the postmarked date of the permit or of the decision on a renewal.

(c) The Department shall consider all written comments from the harbormaster, other local official, local permitting program, the applicant, and interested persons that are submitted within 30 days of the date of receipt of the request by the Department pursuant to 310 CMR 9.07(5)(a), or of the date the Department initiates a review pursuant to 310 CMR 9.07(5)(b).

(d) The Department may conduct a site inspection or a public hearing if deemed appropriate.

(e) After reviewing the request and other relevant documents, the Department shall render a written determination either affirming the local action, setting such action aside, or amending such action by imposing its own conditions and restrictions as deemed necessary.

(f) The Department shall affirm the local decision except upon a finding that:

1. it is arbitrary, capricious, or an abuse of discretion;
2. it conflicts with an overriding state, regional, or federal public interest;
3. it fails to meet any requirement contained in 310 CMR 9.07;
4. it was based on plans or other documentation submitted with the application which contained substantially inaccurate or incomplete depictions of the structure and its surroundings; or
5. it allows floats, rafts, or small structures which significantly interfere with public rights to use waterways for fishing, fowling, and navigation or for other lawful purposes.

The Department shall issue its decision within 30 days of the close of the period for comments described in 310 CMR 9.07(5)(c).

(g) The Department's decision shall be the final administrative review under 310 CMR 9.07; there shall be no right to an adjudicatory hearing.

9.08: Enforcement

(1) The Department may seek discontinuation of use, removal, or other remedial action in the case of any fill or structure in waterways that is determined to be a public nuisance, in accordance with M.G.L. c. 91, § 23 or as otherwise provided by law. Such fill or structures include those not previously authorized by the Department or the Legislature, those for which a grant or license is not presently valid pursuant to 310 CMR 9.00, or those not conforming to the terms and conditions of a grant or license.

(2) In accordance with M.G.L. c. 91, § 49B, the Department shall remove or cause to be removed any fill or structure in waterways which, in the opinion of the Department, is dilapidated, unsafe, a menace to navigation, or is a source of floating debris that is, or is liable to become, a menace to navigation.

9.08: continued

(3) Pursuant to M.G.L. c. 30, § 62I and 310 CMR 9.08(4), the Department may enforce any conditions required by the Secretary in a MEPA certificate for projects proposed within landlocked tidelands.

(4) In addition to any remedy specified pursuant to M.G.L. c. 91, to the Civil Administrative Penalties Statute, M.G.L. c. 21A, § 16, or to other laws of the Commonwealth, the Department may issue Enforcement Orders requiring compliance with any regulation or with any condition of any license or permit issued by the Department. The employees of the Department may enter at reasonable hours upon any property subject to a license, permit, grant, or public easement to inspect for compliance either prior to or following completion of construction of the authorized structure.

9.09: Effective Date and Severability

(1) 310 CMR 9.00 shall take effect on October 4, 1990. Revisions to 310 CMR 9.07 and 9.10 shall take effect on April 19, 1996. Revisions to 310 CMR 9.00 shall take effect on July 1, 2000. Revisions to 310 CMR 9.10 shall take effect on February 25, 2005. Certain revisions to 310 CMR 9.00 shall take effect on October 3, 2008. 310 CMR 9.29: *General License Certification*, 310 CMR 9.30: *Permitting Test Projects*, and revisions to 310 CMR 9.02, 9.05(2), 9.05(3), 9.09, 9.10, 9.11(2), 9.11(3), 9.13 and 9.14, 9.16, 9.17(4), and 9.40(1) shall take effect on May 23, 2014.

(2) Except as provided in 310 CMR 9.28, 310 CMR 9.00 shall apply to any application for a license, permit, or amendment thereto, and to all subsequent proceedings related thereto, if:

(a) said application is filed on or after the effective date of 310 CMR 9.00; or

(b) in the case of an application for a nonwater-dependent use project including one or more activities requiring an EIR, except for any such project which the Department determines, with the concurrence of the municipal planning board, provides essential economic support to an associated water-dependent use project of particular statewide or regional significance, a Certificate of the Secretary stating that a Draft EIR adequately and properly complies with M.G.L. c. 30, §§ 61 through 62H had not been issued as of May 23, 2014.

(3) In the case of any application for license, permit, or amendment thereto filed prior to the effective date of 310 CMR 9.00, except for that to which 310 CMR 9.00 apply pursuant to 310 CMR 9.09(2)(b), the prior applicable regulations shall remain in full force and effect for all subsequent proceedings related thereto; such application shall be subject to the content and other requirements of 310 CMR 9.11(2)(a), 9.11(2)(b)1. through 3., and 9.11(5) only.

(4) 310 CMR 9.08, 9.22, 9.23, 9.25, 9.26 and 9.27 shall apply to all projects for which a license or permit was in effect on the effective date of 310 CMR 9.00, or is obtained in accordance with 310 CMR 9.09(3), and for which a new license or permit application is not required pursuant to 310 CMR 9.05(3).

(5) A Certification of the General License affirmed by the Department in accordance with 310 CMR 9.29 shall take effect when the proponent records the Certification in accordance with 9.29(6).

(6) Severability. If any provision of any part of 310 CMR 9.00, or the application thereof, is held to be invalid, such invalidity shall not affect any other provision of 310 CMR 9.00.

9.10: Simplified Procedures for Small Structures Accessory to Residences

(1) Projects Eligible for Simplified Procedures. Notwithstanding other procedural provisions of 310 CMR 9.00 to the contrary, the procedural standards of 310 CMR 9.10 shall apply to the licensing of certain small-scale structures by the Department. An application for a license under 310 CMR 9.10 may be submitted only for a project consisting entirely of a dock, pier, seawall, bulkhead, or other small-scale structure that is accessory to a residential use or serves as a noncommercial community docking facility, provided that:

9.10: continued

(a) for proposed structures, or for structures built or substantially altered after January 1, 1984:

1. any structure is water-dependent and pile-supported (*e.g.*, by wooden or metal posts) or bottom-anchored, without any fill;
2. any structures total no more than 600 square feet below the mean high water shoreline for coastal waters or below the ordinary high water shoreline for inland waters;
3. any structure is not a marina (*i.e.*, does not serve ten or more vessels);
4. if within an ACEC, such structures were existing on October 4, 1990 or the effective date of the ACEC designation, whichever is later, and if a resource management plan for the ACEC has been adopted by the municipality and approved by the Secretary, said structures are consistent with said plan; and
5. if within an ACEC, any structure built or substantially altered after October 4, 1990 or the effective date of the ACEC designation, whichever is later, is consistent with a resource management plan adopted by the municipality and approved by the Secretary; and

(b) for structures or fill constructed prior to January 1, 1984 and not substantially altered since that date:

1. any structure or fill may be water-dependent or nonwater-dependent;
2. any structures and fill total no more than 600 square feet below the mean high water shoreline for coastal waters or below the ordinary high water shoreline for inland waters; and
3. the structure is not a marina (*i.e.*, does not serve ten or more vessels).

The above thresholds are established for determination of eligibility only; structures licensed under 310 CMR 9.10 shall be the minimum size necessary to achieve the intended water-related purposes. Projects meeting the provisions of 310 CMR 9.10(1), which previously obtained a license, amnesty license or interim approval, may apply for renewal under 310 CMR 9.07, 9.10, or 9.25.

(c) projects eligible for general license certification under 310 CMR 9.29 shall comply with the certification procedures of 310 CMR 9.29 to obtain an affirmed certification under 310 CMR 9.29, instead of a simplified license pursuant to 310 CMR 9.10.

(2) Standards. The project shall preserve any rights held by the Commonwealth in trust for the public to use tidelands, Great Ponds and other waterways for lawful purposes. The project shall preserve public rights of access on private tidelands that are associated with fishing, fowling, and navigation, and public rights to use Commonwealth tidelands, Great Ponds, and other waterways for any lawful use. The provisions of 310 CMR 9.33 through 9.38 apply to projects authorized under 310 CMR 9.10 except that, notwithstanding the provisions of 310 CMR 9.37(1)(a), fill and structures need not be certified by a Registered Professional Engineer except as specified in 310 CMR 9.10(3). For eligible nonwater-dependent structures or fill, the Department will generally presume that a proper public purpose is served through the provision of on-foot passage to ensure lateral public access along the shore for any lawful purpose.

(3) Applications Under Simplified Procedures. For purpose of authorizing eligible projects under simplified procedures the following provisions apply:

(a) Application and Plans. An applicant for a license shall submit a written application on forms provided by the Department, signed by the applicant and the landowner if other than the applicant. The application shall be prepared in accordance with all applicable instructions contained in the Department's application package. When plans have been submitted with a Notice of Intent or referenced in an Order of Conditions under the Wetlands Protection Act, M.G.L. c. 131, § 40, a copy of those plans shall accompany the application. Under the Wetlands Protection Act, Conservation Commissions and the Department generally require plans for new structures to be certified by a Registered Professional Engineer or Registered Land Surveyor where there are questions relating to structural integrity (*e.g.*, where a structure is located in a velocity zone or floodway) or to the location of important wetland resource areas (*e.g.*, salt marsh or eelgrass), as well as in other circumstances at the discretion of the issuing authority; see instructions for filing a Notice of Intent pursuant to 310 CMR 10.00: *Wetlands Protection*.

9.10: continued

If plans certified by an engineer or surveyor are not required under M.G.L. c. 131, § 40, the Wetlands Protection Act pursuant to 310 CMR 10.00: *Wetlands Protection*, certification for projects meeting the eligibility requirements of 310 CMR 9.10(1) will generally not be required. However, based on comments submitted during the public comment period or other relevant information, the Department may require plans to be certified by a Registered Professional Engineer or Registered Land Surveyor for a structure when it finds that the preparation of plans by a professional is necessary to ensure:

1. an adequate review of public access;
2. the preservation of public navigational rights;
3. structural integrity;
4. the accuracy of stated distances from property boundaries; or
5. that the plan is sufficiently clear and accurate to allow a licensing decision which otherwise could result in significant interference with public rights or environmental interests in tidelands, Great Ponds, and other waterways. The Department will provide a statement of reasons to support this finding.

When plans have not been prepared under M.G.L. c. 131, § 40, the Wetlands Protection Act, a plot plan or other scaled plan with structures to be licensed measured accurately from lot lines or other structures shall be prepared in accordance with application instructions.

(b) Applications for Projects within Great Ponds. The Department shall publish an inventory of Great Ponds which shall be available upon written request. Prior to the addition of any pond to the inventory, the Department will hold a public hearing in the vicinity of the pond. After a pond is added to the inventory, the Department will provide an opportunity for owners of existing structures that require licenses to come into compliance with M.G.L. c. 91 regulatory requirements by submission of an application within six months from the date of the addition of the pond to the inventory. The Department will take no enforcement action against the owners of a structure on a Great Pond not listed on the inventory, unless and until the Great Pond has been added to the inventory and the opportunity for compliance has been afforded.

(c) Coordination with the Conservation Commission. At least 45 days prior to issuance of a license, the Department and the applicant shall coordinate with the Conservation Commission as follows:

1. The Department will not require Conservation Commission approval for existing structures built before enactment of M.G.L. c. 131, § 40, the Wetlands Protection Act (1963 for coastal wetlands and 1965 for inland wetlands) and not substantially altered subsequently. Applicants should consult their local Conservation Commission regarding application of M.G.L. c. 131, § 40, the Wetlands Protection Act to maintenance or alteration of existing structures.
2. For structures built between 1963 or 1965 (as applicable) and December 31, 1983, and not substantially altered after the latter date, the applicant shall provide notice of the application to the Conservation Commission. The Department shall proceed with licensing, unless the Conservation Commission informs the Department that it has provided written notice to the applicant prior to the close of the public comment period to promote compliance with or to enforce M.G.L. c. 131, § 40, the Wetlands Protection Act.
3. For structures proposed, built, or substantially altered on or after January 1, 1984, applicants shall provide an Order of Conditions, a negative or conditional negative Determination of Applicability, or a Certificate of Compliance. The Department may waive this requirement based upon evidence of a written request for action by an applicant to a Conservation Commission, and subsequent failure of the Conservation Commission to respond.

(d) The applicant shall submit the notice of the application included in the application package to the Board of Selectmen or Mayor, the planning board, zoning authority and the Conservation Commission of the town or city where the work will be performed. The Department shall presume compliance with applicable state and local requirements, unless it receives information to the contrary during the public comment period. Unless the Department receives a contrary determination from the proper zoning authority, signed by the Clerk of the affected municipality, compliance with applicable zoning ordinances and bylaws pursuant to 310 CMR 9.34(1) shall be deemed certified 45 days after notice to that

9.10: continued

zoning authority and clerk. Proposed structures must also conform to plans for waterways developed by agencies or commissions with legal authority, such as Approved Municipal Harbor Plans developed pursuant to 301 CMR 23.00: *Review and Approval of Municipal Harbor Plans* and listed in 310 CMR 9.57, or lake, regional commission, or other formal area-wide policies or plans developed pursuant to 310 CMR 9.38(2)(b).

(e) Public Notice and Notice to Abutters. The applicant shall publish in a newspaper of general circulation in the area where the project is located a public notice including the applicant's name and address, the project location, a description of the project, a statement that written comments will be accepted within 30 days of the Notification Date stated therein, the address where comments may be sent, and a statement that a municipality, ten citizen group or any aggrieved person who has submitted written comments within the public comment period may appeal the Department's decision and that failure to submit written comments within the public comment period will result in the waiver of any right to an adjudicatory hearing. A copy of the notice shall also be sent by the applicant to the landowner if not the applicant, to any person having a record easement interest in the property where the structure is or may be located, and to all abutters to the property where the structure is or may be located, by certified mail, return receipt requested. Joint notice under 310 CMR 10.05(4): *Notices of Interest*, 310 CMR 9.10 and 314 CMR 9.05(3): *Public Notices of an Application* may be published and sent to persons entitled to notification, provided it contains the requisite information and meets the requisite standards pursuant to each statute.

(f) Fees. For structures totaling more than 300 square feet pursuant to 310 CMR 9.10(1)(a), applicants for simplified licenses shall pay an application fee, or the renewal fee, in accordance with the provisions of 310 CMR 4.10(8)(f) and (l) respectively. All other applicants for licenses under simplified procedures shall pay the application fee, or the renewal fee in accordance with the provisions of 310 CMR 4.10(8)(f) and (l) respectively. No tidewater displacement fees shall be assessed. Any person granted a license from the Department in, on or over any land the title to which is in the Commonwealth shall compensate the Commonwealth for the rights granted in such lands through payment of an occupation fee (\$1 per square yard per year for the term of the license), in accordance with the provisions of 310 CMR 9.16. No occupation fee shall be assessed by the Department for structures within the enhanced portion of Great Ponds. An occupation fee shall be assessed for the portion of any structure that the Department determines, after opportunity for public comment, extends below the natural high water mark into the historic portion of the Great Pond. Enhanced Great Ponds are those which contain a surface area greater than their historic natural state, resulting from alteration by damming or other human activity.

(4) Decision on Applications. The Department shall issue a license, draft license, or written determination to deny a license within 90 days of a complete application, commencing no earlier than the close of the public comment period.

(5) Terms and Recordation for Licenses from the Department. The license term shall be 15 years, unless the Department determines that a shorter term is necessary to protect the public interest. In accordance with M.G.L. c. 91, § 18, the license, with the plan as an exhibit, shall be recorded at the Registry of Deeds within the chain of title of the affected property within 60 days of the date of issuance. Failure to record the license and accompanying plan within 60 days will render the license void in accordance with M.G.L. c. 91, § 18.

(6) Renewal and Transfer of Licenses from the Department. A license may be renewed provided the structure remains sound and conforms to plans submitted with the original application. At the time an application for renewal is submitted, the applicant shall send a notice of application for renewal included in the application package to the mayor or board of selectmen, planning board, and conservation commission of the city or town where the project site is located. The Department may require additional public notice based on comments received about the structure or other relevant information. If such additional public notice for renewal is required, the public comment period is 30 days. Applicants for renewal shall pay a renewal fee (*see* 310 CMR 4.10(8)(1)). Any person applying for a renewal under 310 CMR 9.10, including renewals of interim approvals or licenses originally granted under the Amnesty Program, shall compensate the Commonwealth for the rights granted in such lands through

9.10: continued

payment of an occupation fee (\$1 per square yard per year for the term of the license), in accordance with the provisions of 310 CMR 9.16. Unless otherwise provided in the license, a valid license shall run with the land and shall automatically be transferred upon a change of ownership of the affected property within the chain of title of which the license has been recorded. All rights, privileges, obligations, and responsibilities specified in the license shall be transferred to the new landowner upon recording of the changed ownership.

(7) Appeals. The appeal provisions in 310 CMR 9.17 apply to projects licensed under 310 CMR 9.10.

9.11: Application Requirements(1) Pre-application Consultation

(a) Upon request of a prospective applicant for a license for any large or complex project, including those required to file an EIR, the Department shall conduct a pre-application consultation meeting in order to receive a presentation of the project proposal, provide preliminary guidance on the applicability of the substantive standards of 310 CMR 9.00 to the project, explain the necessary licensing procedures, and answer any appropriate inquiries concerning the program or 310 CMR 9.00. When appropriate, the Department may invite representatives of CZM, any other state agency, or representatives of the municipality in which the project is located, including the lead agency responsible for implementation of a Municipal Harbor Plan. The participants in the pre-application consultation meeting may make arrangements for further consultation sessions and for co-ordinated review of the project.

(b) In the case of an unusually large and complex set of activities undertaken by a public agency the Department may establish, in cooperation with the prospective applicant, a special procedure for the review of one or more applications for such activities. Such procedure may include, without limitation, as deemed appropriate by the Department, consolidation procedures, expedited review, and single or multiple licenses, permits, or written determinations. Public notice of any such procedure established under 310 CMR 9.11 shall be published in the *Environmental Monitor*.

(2) Application Review Schedules.

(a) For a water-dependent use project, the Department shall, within 45 days of receipt of the information required under 310 CMR 9.11(3)(a) and (b), assign a file number, make a determination of water-dependency under 310 CMR 9.12, and issue a public notice under 310 CMR 9.13(1). Within 20 days of the notification date, the Department may hold a public hearing under 310 CMR 9.13(2). The public comment period shall begin at the notification date and end no less than 30 days and no more than 60 days from the notification date. Within 60 days of the close of the public comment period and notification by the applicant that the public notice has been published, the Department shall conduct an administrative completeness review under 310 CMR 9.11(3)(c) and either determine the application to be complete or request additional information. Within 90 days of making a determination of administrative completeness, the Department shall complete a technical review and issue either a draft license or a final license as specified in 310 CMR 9.14.

(b) For a nonwater-dependent use project, the applicant may elect one of four application options by submitting the selected category of application under the Timely Action and Fee Schedule at 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

1. Partial Application. Within 45 days of receiving an application with all information identified in 310 CMR 9.11(3)(a) and (b), the Department shall assign a file number, make a determination of water-dependency under 310 CMR 9.12, and issue a public notice under 310 CMR 9.13(1). The public comment period shall begin at the notification date and end no less than 30 days and no more than 60 days from the notification date. Within 20 days of the notification date, the Department shall hold the public hearing under 310 CMR 9.13(3). The applicant shall submit the information identified in 310 CMR 9.11(3)(c)2. prior to the close of the public comment period, and the information identified in 310 CMR 9.11(3)(c)1. and 3. prior to the issuance of the written determination. Within 30 days of the close of the public comment period and notification by the applicant that the public notice has been published, the Department

9.11: continued

shall conduct its administrative completeness review and determine the application to be complete or request additional information. Within 60 days of determining the application to be complete, or 90 days from the close of the public comment period, whichever comes later, the Department shall issue the written determination under 310 CMR 9.14(1). The Department shall issue the final license under 310 CMR 9.14(5) within 45 days of the expiration of the appeal period or final decision, or 15 days from the date of the Governor's signature, whichever is later.

2. Full Application. Within 45 days of receiving an application with all information identified in 310 CMR 9.11(3)(a), and 310 CMR 9.11(3)(b)1., 2., 6., and 7., and 310 CMR 9.11(3)(c)1. through 3., the Department shall assign a file number, make a determination of water-dependency under 310 CMR 9.12, conduct an administrative completeness review of the information received, and determine the application to be complete or request additional information. The Department shall issue a public notice under 310 CMR 9.13(1) upon determination that the application is complete. The public comment period shall begin at the notification date and end no less than 30 days and no more than 60 days from the notification date. The Department shall provide upon request the draft license conditions seven days prior to the public hearing. Within 20 days of the notification date, the Department shall hold the public hearing under 310 CMR 9.13(3). Within 60 days from the close of the public comment period and notification by the applicant that the public notice has been published, or the submission of the information identified in 310 CMR 9.11(3)(c)4., and 5., whichever is later, the Department shall issue the written determination under 310 CMR 9.14(1). The Department shall issue the final license under 310 CMR 9.14(5) within 45 days of the expiration of the appeal period or final decision, or 15 days from the date of the Governor's signature, whichever is later.

3. Municipal Harbor Plan Application. For a project within an area governed by and in compliance with an Approved Municipal Harbor Plan approved under 301 CMR 23.00: *Review and Approval of Municipal Harbor Plans* and listed in 310 CMR 9.57, within 45 days of receiving an application containing the information identified in 310 CMR 9.11(3)(a) and (b), the Department shall assign a file number, make a determination of water-dependency under 310 CMR 9.12, and issue a public notice under 310 CMR 9.13(1). The public comment period shall begin at the notification date and end no less than 30 days and no more than 60 days from the notification date. Within 20 days of the notification date, the Department shall hold the public hearing under 310 CMR 9.13(3). Within 30 days of the close of the public comment period and notification by the applicant that the public notice has been published, the Department shall conduct its administrative completeness review and determine an application to be complete or request additional information. Within 45 days of determining an application to be complete, the Department shall issue a written determination under 310 CMR 9.14(1). The Department shall issue the final license under 310 CMR 9.14(5) within 45 days of the expiration of the appeal period or final decision, or 15 days from the date of the Governor's signature, whichever is later.

4. Joint MEPA EIR Application. An applicant may initiate coordinated review under MEPA and 310 CMR 9.00 by specifying in the Environmental Notification Form (ENF) filing under 301 CMR 11.05: *ENF Preparation and Filing* the intent to pursue a joint filing. The Draft EIR submitted under 301 CMR 11.07(3) shall also include information to meet the application requirements of 310 CMR 9.11(3)(a) through (c)2. for pre-application review by the Department. Within 25 days of receipt of a Final EIR meeting the requirements of 310 CMR 9.11(3)(a) through (c)2., the Department shall assign a file number, make a determination of water-dependency under 310 CMR 9.12, conduct an administrative completeness review, and issue the text for the public notice under 310 CMR 9.13(1). The Department shall hold a public hearing within 20 days of the notification date or ten days after the date of the Secretary's Final Certificate, whichever is later. The public comment period shall begin at the notification date and end no less than 30 days and no more than 60 days from the notification date. The Department shall send to the applicant, within ten days of the close of the public comment period and receipt by the Department of notification from the applicant that the public notice has been published, whichever is later, any public comment submitted within the comment period for response and may request additional information or determine the application to be complete in accordance with 310 CMR 9.11(3)(c). Any response to comments provided by the applicant shall also be distributed by the applicant to all persons that

9.11: continued

submitted comments during the public comment period. The Department shall issue the written determination under 310 CMR 9.14(1) within 30 days of receipt of the response to comments, or a determination that the application is complete, whichever is later. The Department shall issue the final license under 310 CMR 9.14(5) within 45 days of the expiration of the appeal period or final decision, or 15 days from the date of the Governor's signature, whichever is later.

(c) For a project requiring a permit under 310 CMR 9.05(2), the Department shall, within 45 days of receiving an application with all information identified in 310 CMR 9.11(3)(a) and (b), assign a file number, make a determination of water dependency, issue a public notice under 310 CMR 9.13(1), conduct an administrative completeness review, and determine the application to be complete or request additional information. The public comment period shall be 15 days from the notification date. Within 45 days from the date the application is complete the Department shall issue a permit decision.

(3) Filing and Completion of Application.

(a) An applicant for a license or permit shall submit a written application on forms provided by the Department, signed by the applicant and the landowner if other than the applicant. In *lieu* of the landowner's signature, the applicant may provide other evidence of legal authority to submit an application for the project site. The application shall be prepared in accordance with all applicable instructions contained in the Department's application package. A partial application under 310 CMR 9.11(2)(b)1. requires only the information identified in 310 CMR 9.11(3)(a) and (b). If the project is a water-dependent use project, the application may be a Combined Application.

(b) The Department shall assign a file number to the project only after receipt of an application which includes the following information:

1. the names and addresses of the applicant, all landowners, any representative thereof and the abutters to the project site;
2. detailed description of the proposed project which identifies:
 - a. the location of the project site, and whether it lies within a DPA, ACEC, or Ocean Sanctuary; and
 - b. the specific use(s) of existing and proposed fill and structures and, if dredging is involved, estimates of the volume of dredged material and a description of the dredged material disposal area;
3. a set of plans containing at least the applicable information specified in 310 CMR 9.11(3)(a) through (c); the Department may accept appropriately-scaled preliminary plans in *lieu* of final plans certified in accordance with 310 CMR 9.11(3)(c)1., provided such preliminary plans are prepared by:
 - a. a Registered Professional Engineer, Land Surveyor, or Architect, as deemed appropriate by the Department; and
 - b. in the case of a nonwater-dependent use project requiring an EIR, a Registered Landscape Architect, unless otherwise deemed appropriate by the Department;
4. a list of state environmental regulatory programs with which the project must comply, in accordance with the applicable provisions of 310 CMR 9.33; a copy of the Notice of Intent if the project is subject to M.G.L. c. 131, § 40, and 310 CMR 10.00: *Wetlands Protection* which may be provided in a Combined Application; and a copy of any state and local approvals which must be obtained and have been obtained by the project as specified in 310 CMR 9.11(3)(c)3.;
5. any other preliminary information specified in the application instruction package;
6. payment of the application fee in accordance with the provisions of 310 CMR 9.16(1); and
7. if the project triggers M.G.L. c. 30, §§ 61 through 62H review, a copy of the Environmental Notification Form (ENF) and a Certificate from the Secretary of the Executive Office of Energy and Environmental Affairs demonstrating compliance with MEPA, with the exception of a joint MEPA Application under 310 CMR 9.11(2)(b)4. For a project subject to MEPA, the Department will not hold a public hearing until the Secretary has issued a Certificate on the Final EIR.

(c) The Department shall determine an application to be complete only if the following information has been submitted:

9.11: continued

1. a set of final plans which are prepared in accordance with the format standards required for recording of licenses in the appropriate Registry of Deeds or Land Court for the district in which the licensed activity is to be performed; and which are certified by a Registered Professional Engineer or Land Surveyor, as deemed appropriate by the Department containing, at a minimum, the following:
 - a. an appropriately-scaled location map of the project site, and of any area where dredged material disposal will occur;
 - b. appropriately-scaled principal dimensions and elevations of proposed and existing fill and structures and, if dredging is involved, the principal dimensions of all relevant footprints, contours and slopes;
 - c. a delineation of the present high and low water marks, as relevant;
 - d. a delineation of the historic high and low water marks, as relevant and in a manner acceptable to the Department in accordance with the definitions thereof at 310 CMR 9.02;
 - e. references to any previous licenses or other authorizations for existing fill, structures, or dredging at the project site, and a delineation thereof as well as a delineation of any historic dredging, filling, or impoundment;
 - f. indication of any base flood elevation of the statistical 100-year storm event, or of any coastal high hazard area, which is located on the project site; and
 - g. indication of the location of any on-site or nearby state harbor lines, federal pier and bulkhead lines, federal channel lines, and public landings or other easements for public access to the water.
2. a statement as to how the project serves a proper public purpose, provides greater benefit than detriment to public rights in tidelands or Great Ponds, and is consistent with the policies of the Coastal Zone Management Program, as applicable, in accordance with the provisions of 310 CMR 9.31(2); and a description of how the project conforms to any applicable provisions of an Approved Municipal Harbor Plan, pursuant to 310 CMR 9.34(2);
3. final documentation relative to other state and local approvals which must be obtained by the project, including:
 - a. if the project is subject to zoning, but will not require any municipal approvals thereunder, a certification to that effect pursuant to 310 CMR 9.34(1);
 - b. a certification that a copy of the license application has been submitted to the planning board of each city or town where the work is to be performed, except in the case of a proposed bridge, dam, or similar structure across a river, cove, or inlet, in which case notice shall be given to the planning board of every municipality into which the tidewater of said river, cove, or inlet extends;
 - c. if an EIR is required, the Certificate of the Secretary stating that it adequately and properly complies with M.G.L. c. 30, §§ 61 through 62H; and, if applicable, any Notice of Project Change and any determination issued thereon in accordance with M.G.L. c. 30, §§ 61 through 62H;
 - d. a final Order of Conditions and a Water Quality Certificate, if applicable pursuant to 310 CMR 9.33, unless the application is a Combined Application, and a certification of compliance with municipal zoning, if applicable pursuant to 310 CMR 9.34(1); or a satisfactory explanation as to why it is appropriate to postpone receipt of such documentation to a later time prior to license or permit issuance; and
 - e. copies of all other state regulatory approvals if applicable pursuant to 310 CMR 9.33; or a satisfactory explanation as to why it is appropriate to postpone receipt of such documentation to a later time prior to license or permit issuance, or to issue the license or permit contingent upon subsequent receipt of such approvals.
4. responses to public comment submitted to the Department within the public comment period, as deemed appropriate by the Department; and adequate proof that the responses were sent to all persons that submitted comments during the public comment period; and
5. any additional plans, documentation, and other information which have been requested by the Department, or a statement by the applicant indicating that no further information will be forthcoming in response to such request.

9.11: continued

(4) Additional Information and Extensions.

(a) The Department shall request additional information as soon as practicable when an application is incomplete or when otherwise allowed under 310 CMR 9.00. Applicants shall provide requested information as soon as practicable but no later than 180 days from the request.

(b) With the consent of the applicant or upon the applicant submitting revised or additional information, the Department may extend the period for actions under 310 CMR 9.11 as provided under 310 CMR 4.04: *Permit Applications Schedules and Fee.*

(5) Expiration of Application

(a) An application shall expire if the applicant has failed to diligently pursue the issuance of said license or permit in proceedings under 310 CMR 9.00.

(b) With the exception of applications filed under 310 CMR 9.28, an application shall be presumed to have expired six months after any request for additional information by the Department unless the applicant submits information showing that:

1. good cause exists for the delay of proceedings under 310 CMR 9.00; and
2. the applicant has continued to pursue the project diligently in other forums in the intervening period; provided, however, that unfavorable financial circumstances shall not constitute good cause for delay.

(c) No application shall be deemed to have expired under 310 CMR 9.11 when a completed application is pending and when the applicant has provided all information necessary for the Department to determine whether to issue a license or permit.

9.12: Determination of Water-dependency

(1) Prior to issuance of the public notice, the Department shall classify the project as a water-dependent use project or as a nonwater-dependent use project. The Department shall classify as a water-dependent use project any project which consists entirely of:

- (a) uses determined to be water-dependent in accordance with 310 CMR 9.12(2); and/or
- (b) uses determined to be accessory to a water-dependent use, in accordance with 310 CMR 9.12(3).

Any other project shall be classified as a nonwater-dependent use project.

(2) The Department shall determine a use to be water-dependent upon a finding that said use requires direct access to or location in tidal or inland waters, and therefore cannot be located away from said waters. In making this determination, the Department shall act in accordance with the following provisions.

(a) The Department shall find to be water-dependent the following uses:

1. any use found to be water-dependent-industrial in accordance with 310 CMR 9.12(2)(b);
2. marinas, boat basins, channels, storage areas, and other commercial or recreational boating facilities;
3. facilities for fishing, swimming, diving, and other water-based recreational activities;
4. parks, esplanades, boardwalks, and other pedestrian facilities that promote use and enjoyment of the water by the general public and are located at or near the water's edge, including but not limited to any park adjacent to a waterway and created by a public agency;
5. aquariums and other education, research, or training facilities dedicated primarily to marine purposes;
6. aquaculture facilities;
7. beach nourishment;
8. waterborne passenger transportation facilities, such as those serving ferries, cruise ships, commuter and excursion boats, and water shuttles and taxis;
9. dredging for navigation channels, boat basins, and other water-dependent purposes, and subaqueous disposal of the dredged materials below the low water mark;
10. navigation aids, marine police and fire stations, and other facilities which promote public safety and law enforcement on the waterways;

9.12: continued

11. shore protection structures, such as seawalls, bulkheads, revetments, dikes, breakwaters, and any associated fill which are necessary either to protect an existing structure from natural erosion or accretion, or to protect, construct, or expand a water-dependent use;
 12. flood, water level, or tidal control facilities;
 13. discharge pipes, outfalls, tunnels, and diffuser systems for conveyance of stormwater, wastewater, or other effluents to a receiving waterway;
 14. facilities and activities undertaken or required by a public agency for purposes of decontamination, capping, or disposal of polluted aquatic sediments; and
 15. wildlife refuges, bird sanctuaries, nesting areas, other wildlife habitats or an Ecological Restoration Project.
- (b) The Department shall find to be water-dependent-industrial the following uses:
1. marine terminals and related facilities for the transfer between ship and shore, and the storage of, bulk materials or other goods transported in waterborne commerce;
 2. facilities associated with commercial passenger vessel operations;
 3. manufacturing facilities relying primarily on the bulk receipt or shipment of goods by waterborne transportation;
 4. commercial fishing, shellfishing, and other seafood and fish processing facilities for fish, shellfish, and other seafood;
 5. boatyards, dry docks, and other facilities related to the construction, serving, maintenance, repair, or storage of vessels or other marine structures;
 6. facilities for tug boats, barges, dredges, or other vessels engaged in port operations or marine construction;
 7. any water-dependent use listed in 310 CMR 9.12(2)(a)9. through 14., provided the Department determines such use to be associated with the operation of a Designated Port Area;
 8. hydroelectric power generating facilities;
 9. Offshore renewable energy infrastructure facilities in the Commonwealth, including ocean wave energy facilities, ocean current energy facilities, tidal energy facilities, any ancillary facility thereto or any similar facility that obtains its energy from the ocean;
 10. infrastructure facilities used to deliver electricity, natural gas or telecommunications services to the public from an offshore facility located outside the Commonwealth; and
 11. facilities for the manufacture, servicing, maintenance, data collection, and other functions related to coastal or offshore structures, buoys, autonomous underwater vehicles or vessels, and for the development of new technologies and systems for these structures, buoys, vehicles or vessels, provided that the facility requires transfer between ship and shore or the withdrawal and/or discharge of large volumes of water;
 12. facilities for research and development or for the manufacture of technologies, *e.g.*, robotics and acoustics, related to the marine environment, provided that the facility requires transfer between ship and shore or the withdrawal and/or discharge of large volumes of water;
 13. facilities for research on, and the treatment of, marine species which require transfer between ship and shore or the withdrawal and/or discharge of large volumes of water;
 14. facilities for the development and testing of offshore renewable energy infrastructure or components, provided that the facility requires transfer between ship and shore or the withdrawal and/or discharge of large volumes of water;
 15. commercial aquaculture facilities that require transfer between ship and shore or the withdrawal and/or discharge of large volumes of water; and
 16. other industrial uses or infrastructure facilities which cannot reasonably be located at an inland site as determined in accordance with 310 CMR 9.12(2)(c) or (d).
- (c) In the case of industrial and infrastructure facilities not listed in 310 CMR 9.12(2)(b), which are dependent on marine transportation or require large volumes of water to be withdrawn from or discharged to a waterway for cooling, process, or treatment purposes, the Department shall act in accordance with the following provisions:
1. the Department shall presume to be water-dependent any alteration or expansion of a facility existing or licensed as of the effective date of 310 CMR 9.00, and any energy facility for which the proposed location has been approved by the Energy Facilities Siting Board; this presumption may be overcome only upon a clear showing that the proposed alteration or expansion or energy facility can reasonably be located or operated away from tidal or inland waters;

9.12: continued

2. except as provided in 310 CMR 9.12(2)(c)1., the Department shall presume that any such industrial or infrastructure facility is not water-dependent; this presumption may be overcome only upon a clear showing that such facility cannot reasonably be located or operated away from tidal or inland waters.

If an EIR is submitted, the findings necessary to overcome the above presumptions shall be based on a comprehensive analysis of alternatives and other information analyzing measures that can be taken to avoid or minimize impacts on the environment, in accordance with M.G.L. c. 30, §§ 61 through 62H. If an EIR is not submitted, such findings shall be based on information presented to the Department in the application and during the public comment period thereon.

(d) In the case of an infrastructure crossing facility, or any ancillary facility thereto, for which an EIR is submitted, the Department shall find such facility to be water-dependent only if the Secretary has determined that such facility cannot reasonably be located or operated away from tidal or inland waters, based on a comprehensive analysis of alternatives and other information analyzing measures that can be taken to avoid or minimize adverse impacts on the environment, in accordance with M.G.L. c. 30, §§ 61 through 62H. If an EIR is not submitted, such finding may be made by the Department based on information presented in the application and during the public comment period thereon.

9.12: continued

(e) In the case of a facility generating electricity from wind power (wind turbine facility), or any ancillary facility thereto, for which an EIR is submitted, the Department shall presume such facility to be water-dependent if the Secretary has determined that such facility requires direct access to or location in tidal waters and cannot reasonably be located or operated away from tidal or inland waters, based on a comprehensive analysis of alternatives and other information analyzing measures that can be taken to avoid or minimize adverse impacts on the environment, in accordance with M.G.L. c. 30, §§ 61 through 62I. If an EIR is not submitted, the Department shall presume such facility to be water-dependent. Whether or not an EIR is filed, this presumption may be overcome only upon a clear showing that the proposed facility can reasonably be located or operated away from tidal or inland waters.

(f) The Department shall not find the following uses to be water-dependent:

1. restaurants and other food/beverage service establishments;
2. retail shops and stores;
3. parking facilities;
4. office facilities;
5. housing units and other residential facilities;
6. hotels, motels, and other facilities for transient lodging;
7. parks, esplanades, boardwalks, and other pedestrian facilities other than those described in 310 CMR 9.12(2)(a)4.;
8. roads, causeways, railways, and other facilities for land-based vehicular movement, other than those found to be water-dependent in accordance with 310 CMR 9.12(2)(c) or (d); and
9. subaqueous disposal, below the low water mark, of material excavated or otherwise originating on land.

(3) Accessory Uses.

(a) The Department may determine a use to be accessory to a water-dependent use upon a finding that said use is customarily associated with and necessary to accommodate a principal water-dependent use. Such a finding shall be made only if the proposed use is:

1. integral in function to the construction or operation of the water-dependent use in question, or provides related goods and services primarily to persons engaged in such use; and
2. commensurate in scale with the operation of the water-dependent use in question.

Examples of uses that may be determined to be accessory to a water-dependent use include, but are not limited to, access and interior roadways, parking facilities, administrative offices and other offices primarily providing services to water-dependent uses on the site, yacht clubhouses, restaurants and retail facilities primarily serving patrons of the water-dependent use on the site, bait shops, chandleries, boat sales, and other marine-oriented retail facilities. Uses that may not be determined to be accessory to a water-dependent use include, but are not limited to, general residential facilities, hotels, general office facilities, and major retail establishments.

(b) The Department may find a use to be accessory to a water-dependent industrial use if, in addition to the criteria listed in 310 CMR 9.12(3)(a)1. and 2., the hours of operation of the use do not extend beyond the hours of operation of the water-dependent industrial use, except for support services which occur outside of the hours of the accessory use, and the use does not require a significant additional investment in infrastructure apart from that necessary for the primary water-dependent industrial use. Examples of water-dependent industrial accessory uses include, but are not limited to, ticketing booths for ferry operations, snack bars, and administrative offices associated with the water-dependent industrial use.

(4) The Department shall find to be nonwater-dependent any use which has not been found to be water-dependent or accessory to a water-dependent use, pursuant to 310 CMR 9.12(2) and (3).

9.13: Public Notice and Participation Requirements(1) Notice Requirements.

(a) Public notice shall be issued by the Department but distributed and published by the applicant. The date of the public notice and, when required, the date of the public hearing, shall be determined by the Department. The applicant shall send a notice of license or permit application as described in 310 CMR 9.13(1)(c), by first class mail, return receipt, and provide proof of such notification to the Department, to:

9.13: continued

1. the municipal official, the planning board, the conservation commission, and the harbormaster, if any, in the city or town where the project is located;
 2. if the application is for a proposed bridge, dam or similar structure across a tidal river, cove or inlet, the municipal official, the planning board, the conservation commission, and the harbormaster of every municipality into which the tidewater of said river, cove, or inlet extends;
 3. the Martha's Vineyard Commission or the Cape Cod Commission, if the project is located within an area subject to the jurisdiction of said Commission;
 4. CZM, if the project is located within the coastal zone; DCR, if the project is located in an Ocean Sanctuary; and the Department of Fish and Game.
 5. the *Environmental Monitor* for all projects exceeding M.G.L. c. 30, §§ 61 through 62H review thresholds for Waterways activities;
 6. all landowners and easement holders of the project site and abutters thereto, as identified pursuant to 310 CMR 9.11(3)(b)1.; and
 7. U.S. Army Corps of Engineers, New England Division.
- (b) At least 45 days prior to issuance of a license, or 21 days prior to issuance of a permit, the applicant shall cause, at his own expense and at the direction of the Department, notice as described in 310 CMR 9.13(1)(c)1. through 9., to be published in one or more newspapers having circulation in the area affected by the project.
- (c) Notice shall contain:
1. the name and address of the applicant and the applicant's representative, if any;
 2. a description of the location of the project, including whether it is located in an ACEC, DPA, or an Ocean Sanctuary;
 3. a description of the project including a listing of uses and the Department's determination of water-dependency;
 4. for nonwater-dependent use projects, and for any water-dependent use project for which the Department decides to hold a hearing, the time, place and location of the public hearing and the date on which the public comment period ends;
 5. for other water-dependent use projects, a statement that within 30 days of the notification date of a license application or within 15 days of the notification date of a permit application, written comments will be accepted, and that a public hearing may be held upon request by the municipal official;
 6. the address where the application may be viewed, where a copy of the draft license conditions may be obtained if applicable, and where public comments regarding the application may be sent;
 7. a statement that a municipality, ten citizen group or any aggrieved person that has submitted written comments before the close of the public comment period may appeal and that failure to submit written comments will result in the waiver of any right to an adjudicatory hearing;
 8. the notification date, as defined in 310 CMR 9.02;
 9. for applications submitted under 310 CMR 9.11(2)(b)2. and 4., the date that copies of the Department's draft license conditions will be available seven days prior to the public hearing; and
 10. an 8½" x 11" copy of the site plan, including a locus insert, of the project site.
- (d) An applicant for a license, permit or other written approval pursuant to 310 CMR 9.00 and whose project is also subject to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* and/or 310 CMR 10.00: *Wetlands Protection* may provide joint public notice by appending to the notice required under 310 CMR 10.05(5): *Public Hearings by Conservation Commissions* or 314 CMR 9.05(3): *Public Notice of an Application* a statement that an application for a license, permit or other written approval pursuant to 310 CMR 9.00 is pending before the Department, provided that the joint notice contains the information required by 310 CMR 9.13(1)(c). An applicant may provide a joint public notice even if the application is not a Combined Application.

9.13: continued

(2) Participation by CZM or DCR.

(a) Within the public comment period specified in 310 CMR 9.13(4), CZM may participate in license or permit proceedings for nonwater-dependent projects subject to federal consistency review identified in 301 CMR 21.04: *Activities Subject to Federal Consistency Review*, when the Department requests CZM participation for nonwater-dependent projects in writing, or for other nonwater-dependent projects in the coastal zone that the Secretary has issued a final MEPA Certificate specifying that CZM shall participate in such license or permit proceedings, or when the Secretary otherwise directs CZM to participate. CZM participation is limited to those issues identified in writing to the Department in the public comment period and necessary for making a federal consistency determination, or for those nonwater-dependent projects identified by the Department in writing or by the Secretary in a final MEPA Certificate for CZM participation or when the Secretary otherwise directs CZM to participate, necessary to determine consistency with CZM Program policies. In license or permit proceedings for such projects, CZM shall submit a written statement to the Department as to whether the project is consistent with the policies of the CZM Program prior to issuance of the written determination, license, permit or draft thereof by the Department pursuant to 310 CMR 9.14 for its consideration. The Department shall presume that a project is consistent with CZM Program policies for projects other than those identified in 310 CMR 9.13(2)(a), and for those projects which CZM does not submit written comments during the public comment period. The Department will make a determination regarding the consistency of the project with the Massachusetts coastal zone program when issuing the license determination.

(b) Within the public comment period specified in 310 CMR 9.13(4), DCR, for projects in an Ocean Sanctuary, may notify the Department in writing that it intends to participate in license or permit proceedings. DCR's notice shall identify issues relevant to the Ocean Sanctuaries Act, M.G.L. c. 132A, §§ 13 through 16 and 18, and participation shall be limited to identified issues. A copy of any such notice shall be sent to the applicant. If DCR files such notice, the Department shall give DCR an opportunity to participate in all meetings between the applicant and the Department concerning issues identified in the notice. If DCR has filed a notice of participation regarding a license or permit proceeding, DCR shall prepare a written statement as to whether the project complies with M.G.L. c. 132A, §§ 13 through 16 and 18, the Ocean Sanctuaries Act, prior to issuance of the written determination, license, permit, or draft thereof by the Department pursuant to 310 CMR 9.14. The Department shall presume that a project is consistent with the Ocean Sanctuaries Act unless DCR submits a notice of its intent to participate and written comments during the public comment period.

(3) Public Hearing

(a) For nonwater-dependent use projects, the Department shall hold a public hearing in the city or town in which the project is located.

(b) For water-dependent use projects, the municipal official in the city or town in which the project is located may, within the public comment period specified in 310 CMR 9.13(4), request that the Department conduct a public hearing on the application. If such a request is filed, a hearing shall be conducted in said municipality if reasonable arrangements for such hearing are made by the municipality.

(c) The Department may conduct a public hearing on a project for which a hearing is not otherwise required. Any person requesting that the Department exercise its discretion to conduct such hearing must file a written request, including a statement of reasons, within the public comment period specified in 310 CMR 9.13(4).

(d) In the event that the project requires a federal action which is subject to CZM federal consistency review under 301 CMR 21.00: *Coastal Zone Management Program Federal Consistency Review Procedures* and CZM determines a public hearing related to consistency certification is appropriate pursuant to 301 CMR 20.04: *Consistency Review of Federal Actions with Coastal Effects*, CZM and the Department may conduct a joint hearing. The Department may also conduct joint hearings on the project with the US Army Corps of Engineers.

(e) The public hearing shall be noticed in accordance with 310 CMR 9.13(1), and shall be scheduled no later than 20 days after the notification date. For projects requiring an EIR, such public hearing generally will occur after issuance by the Secretary of a Certificate stating that the final EIR adequately and properly complies with M.G.L. c. 30, §§ 61 through 62H, unless otherwise deemed appropriate by the Department.

9.13: continued

- (f) In the event that a project is located in more than one municipality, the Department may conduct a single public hearing in one of such municipalities.
 - (g) For projects identified pursuant to 310 CMR 9.13(2) for participation by CZM or DCR the Department shall give CZM or DCR the opportunity to co-chair said hearing.
- (4) Public Comment Period and Intervention
- (a) If a public hearing is held, any person may submit written comments to the Department on the license or permit application within 20 days of the close of the public hearing or within any additional public comment period granted by the Department.
 - (b) If no public hearing is held, any person may submit written comments to the Department on a license application within 30 days, or on a permit application within 15 days of the notification date or within any additional public comment period granted by the Department.
 - (c) A municipality, ten citizen group, or any aggrieved person that has submitted written comments before the close of the public comment period specified above may appeal in accordance with 310 CMR 9.17. Failure to submit written comments will result in the waiver of any right to an adjudicatory hearing.
- (5) Planning Board Recommendation
- (a) Within 30 days of receipt of a license application for a project on tidelands and Great Ponds, the planning board of the municipality where the project is located may hold a public hearing.
 - (b) Within 15 days of conducting said public hearing, or within 45 days of receipt of the license application if no public hearing has been conducted, the planning board shall submit a written recommendation to the Department stating whether and why said planning board believes the project:
 - 1. would not be detrimental to the public rights in tidelands and Great Ponds; and
 - 2. serves a proper public purpose, except in the case of water-dependent use projects entirely on private tidelands.
 - (c) If the planning board provides a written recommendation as provided above, the Department shall take into consideration the recommendation in making its decision whether to grant a license. If the planning board fails to conduct a public hearing or submit a written recommendation as provided in 310 CMR 9.13(5)(a) and (b), the Department may proceed to make a determination whether to issue a license without the benefit of the planning board's recommendation.

9.14: Decision on License and Permit Applications

- (1) For all nonwater-dependent use projects the Department shall issue a written determination in accordance with the provisions of 310 CMR 9.31 through 9.60, including proposed license conditions, for public review prior to issuance of a license.
- (2) For water-dependent use projects the Department may issue a license or permit without issuing a written determination, in accordance with the provisions of 310 CMR 9.31 through 9.50, unless:
 - (a) the Department has conducted a public hearing, in which case the Department shall issue a written determination including proposed license or permit conditions, for public review prior to issuance of the license or permit;
 - (b) written comments have been submitted pursuant to 310 CMR 9.13(4)(c), in which case the Department may issue a draft license or draft permit, including proposed license or permit conditions, for public review prior to issuance of the license or permit; or
 - (c) the Department has decided to deny the license or permit application, in which case the Department shall issue a written determination setting forth the reasons for such decision.
- (3) A written determination shall include a description of the project and a statement of whether the project serves a proper public purpose which provides greater benefits than detriments to the public rights in tidelands. Unless the Department has decided to deny the license or permit application, the written determination will be issued with the draft license or permit conditions.

9.14: continued

(4) If the project includes a set of activities including, without limitation, those to which 310 CMR 9.11(1)(b) applies, which cannot reasonably be incorporated into a single license, the Department may upon request of the applicant issue a consolidated written determination which allows for multiple licenses to be issued independently for phases of said project, provided the Department finds that the licenses can be sequenced or conditioned in a manner which ensures that overall public benefits will exceed public detriments as each portion of the project is completed. Notwithstanding 310 CMR 9.14(3), licenses may be issued pursuant to a consolidated written determination issued under this provision for up to five years, with opportunity for extensions as deemed appropriate by the Department.

(5) The Department shall issue a license, permit, draft license, draft permit, or written determination, as appropriate after the application is determined to be complete by the Department, in accordance with the provisions of 310 CMR 9.11(3)(c). The Department may extend such deadline upon request by the applicant. Where a draft license, draft permit, or written determination is issued, the final license or permit shall not be issued prior to receipt of the state and local approvals specified in 310 CMR 9.11(3)(c)3. Notwithstanding the foregoing, the Department may issue a license, permit, draft license, draft permit or written determination as part of a Combined Permit or as a separate license, permit, draft license, draft permit or written determination issued at the same time as the issuance of or after the issuance of the final Order of Conditions and/or Water Quality Certification.

(6) Upon issuance, the Department shall send a copy of the license, permit, or written determination to:

- (a) the applicant;
- (b) any intervenor and any person who has requested a copy of said license, permit, or written determination;
- (c) CZM or DCR, for projects identified for participation pursuant to 310 CMR 9.13(2); and
- (d) the municipal official, conservation commission, planning board, and harbormaster, if any, of the city or town where the project is located.

In the case of a draft license or draft permit, the Department shall send copies to all parties listed in 310 CMR 9.14(6)(a) through (c) and to any party listed in 310 CMR 9.14(6)(d) who has commented on the application within the public comment period.

(7) The Department shall issue a license or permit after the completion of any appeal period established pursuant to 310 CMR 9.17(2) or the receipt of any plans, documentation, or other information requested by the Department in a written determination, whichever is later, unless a notice of claim for adjudicatory hearing has been filed pursuant to 310 CMR 9.17.

9.15: Terms

(1) Term of License

(a) All licenses issued by the Department shall contain a condition stating the term for which license is in effect, if any. All licenses shall be in effect for a fixed term not to exceed 30 years, unless otherwise deemed appropriate by the Department in accordance with 310 CMR 9.15(1)(b) through (d).

(b) Notwithstanding 310 CMR 9.15(1)(a), the Department may issue a license that establishes an extended fixed term, in accordance with the following provisions:

- 1. said term shall not exceed 65 years for any project or portion thereof which, upon completion, will be located on flowed tidelands or other waterways, and shall not exceed 99 years for any project or portion thereof which will be located on filled tidelands or Great Ponds; in the event the project site includes both flowed and filled tidelands, the Department may upon request of the applicant establish a single weighted average term for the entire project, or for a portion thereof as deemed appropriate by the Department, based on the relative amounts of the surface area of the flowed and filled tidelands associated therewith;
- 2. the applicant shall provide justification that an extended term is warranted given the expected life of the structure, typical financing requirements, consistency with an Approved Municipal Harbor Plan, if any, appropriateness of long-term dedication of tidelands to the proposed use(s) in the particular location, and any other relevant factors;

9.15: continued

3. for projects on Commonwealth tidelands or Great Ponds, the Department shall conduct a public hearing and issue written findings concerning the extended term, in accordance with the provisions of 310 CMR 9.13(3) and 9.14;
 4. for projects on Commonwealth tidelands or Great Ponds held by the Commonwealth, the licensee shall pay an occupation fee based on an appraisal, in accordance with the provisions of 310 CMR 9.16(3)(b) through (c); and
 5. the Department shall require the licensee to submit periodic license compliance inspection reports as a condition of the license for nonwater-dependent use projects, and for other projects as deemed appropriate by the Department.
- (c) The Department shall issue a license for an unlimited term for any project whose entire control, development, and operation is undertaken by a public agency for the provision of services directly to the public (or to another public agency for such provision to the public) by the public agency, its contractor or agent, unless an unlimited term is not deemed appropriate by the Department.
- (d) Notwithstanding the terms of license specified in 310 CMR 9.15(1)(b) and (c):
1. in Designated Port Areas, the term of license for any nonwater-dependent use in a marine industrial park shall not exceed 65 years; the term of license for any supporting DPA use shall not exceed 30 years; and the term of license for any temporary use shall not exceed ten years; and
 2. outside of Designated Port Areas, the term of license for any stationary vessel for uses as described in 310 CMR 9.32(1)(a)6. shall not exceed 30 years.
- (e) The term of a license may be renewed in accordance with the provisions of 310 CMR 9.25(2).
- (2) Term of Permit. Any permit shall be valid for a fixed term not to exceed five years; provided, however, that maintenance dredging may be performed for up to ten years after the permit has been issued, if such terms are so stated in the permit.

9.16: Fees

- (1) Application Fee. An application fee shall be charged in accordance with the accompanying fee schedule (Table 1) per application for a determination of applicability, license, permit, amendment, interim approval, General License Certification or certificate of compliance. An application fee is non-refundable and shall be paid at the time of submission of the original application or Certification, by check or money order made payable to the Commonwealth of Massachusetts, DEP.
- (2) Tidewater Displacement Fee. Except as provided in 310 CMR 9.16(4), prior to issuance of a license or General License Certification for any fill or structure that will displace tidewaters below the high water mark, the applicant, or his or her heirs or assignees responsible for such displacement, shall, at the direction of the Department:
- (a) pay to the Commonwealth a tidewater displacement fee, based on the net amount of tidewater displaced between the elevations of the high and the low water marks, at the rate set forth in the accompanying fee schedule (Table 1); or
 - (b) excavate, in some part of the same harbor, previously filled tidelands between the high and low water marks, subject to the requirements of 310 CMR 9.00 and the approval of the Department, in order to form a basin for a quantity of water equal to that displaced; or
 - (c) improve public harbor facilities in tidelands in any other manner satisfactory to the Department, provided that the cost of such improvement is comparable to the amount otherwise due for displacement; any improvements identified under 310 CMR 9.16 shall be in addition to any actions required under 310 CMR 9.31 through 9.40 and 310 CMR 9.51 through 9.55; the Department may consider the following improvements:
 1. a harbor cleanup activity which is part of a plan approved by a public agency;
 2. a shellfish reseeding program;
 3. a beach nourishment program on beaches open to the public;
 4. a contribution to a special fund or other program managed by a public agency or non-profit organization in order to directly provide public harbor improvements.

9.16: continued

An applicant for a license for any existing, previously unlicensed fill or structure shall be liable for any unpaid tidewater displacement fee, unless the applicant was not responsible for the construction of the structure or the placement of the fill, and the applicant acquired the real estate upon which the structure was constructed or the fill placed before January 4, 1974.

(3) Occupation Fee. Except as provided in 310 CMR 9.16(4), any person granted a license or Certification for any activity in 310 CMR 9.05 in, on, or over any land the title to which is in the Commonwealth shall compensate the Commonwealth for the rights granted in such lands, in accordance with the following provisions:

- (a) except as provided in 310 CMR 9.16(3)(b), the licensee shall pay a fee which shall be:
 1. fixed for the term of the license;
 2. calculated by the Department in accordance with the accompanying fee schedule (Table 1); and
 3. assessed on either a lump sum or annual basis, in accordance with the provisions of 310 CMR 9.16(3)(d).
- (b) the licensee shall pay an annual fee based on the full fair market rental value over the term of the license, as determined in accordance with 310 CMR 9.16(3)(c), in the event that the license is issued for:
 1. an extended term, in accordance with the provisions of 310 CMR 9.15(1)(b); or
 2. long term exclusive assignment of berths in a private recreational boating facility, in accordance with the provisions of 310 CMR 9.38(2)(a)2.

The Department shall presume that land the title to which is in the Commonwealth includes all Commonwealth tidelands and Great Ponds unless the applicant presents evidence of a chain of title indicating that the Commonwealth is not the fee owner of the land in question.

(c) Appraisal Procedure.

1. The determination of fair market value and fair market rental value shall be based on an appraisal of the value of the rights granted in land the title to which is in the Commonwealth and which is occupied in accordance with the license. Such determination shall include an index or other method by which periodic fee adjustments shall be made over the term of the license. The appraisal report shall be prepared at the expense of the applicant by a state-certified appraiser. The appraisal report shall be submitted to the Department after issuance of the Department's written determination to issue a license.
2. Within 45 days of receipt of the appraisal report, the Department shall conduct a review of the appraisal report. Said review appraisal shall be prepared by a state-certified appraiser. If the Department determines that the appraisal report is complete and accurate, the annual license fee shall be established based on the fair market rental value determined by the Department, based on said report. If the Department determines that the appraisal report is incomplete or inaccurate, the Department shall inform the applicant in writing of the deficiencies in the appraisal report. Upon review of the Department's evaluation, the applicant may:
 - a. submit a new or revised appraisal report to the Department for its review and approval; or
 - b. notify the Department of disagreement with the Department's review appraisal and provide the reasons therefor. If the Department and the applicant cannot agree within 30 days of said notification, both the Department and the applicant shall within 30 days designate a third, impartial state-certified appraiser. The cost of the third appraiser shall be born equally by the Department and the applicant. The third appraiser shall prepare an appraisal report after reviewing the initial report, the review appraisal and any other information deemed appropriate and shall make a recommendation to the Department as to the fair market value and fair market rental value. The Department shall presume that the values determined in that report are accurate and shall establish the annual license fee based on the fair market rental value determined therein. This presumption may be overcome only if the Commissioner issues written findings based on evidence presented in the appraisal reports before the Department explaining the reasons for disagreement with the recommendations of the third appraisal report.

9.16: continued

- (d) Payment of fees. Any fee the total amount of which during the term of the license is less than \$10,000 shall be assessed as a lump sum payable in full prior to license issuance. Any fee the total amount of which during the term of the license is more than \$10,000 may be assessed at the discretion of the applicant as a lump sum payable in full prior to license issuance or as a series of fixed annual payments which shall be required as a condition of the license. The initial payment of such annual fee shall be paid in full prior to the issuance of the license. All such fees shall be paid by certified check or money order made payable to the Commonwealth of Massachusetts, DEP.
- (e) Payment of occupation fee for existing fill or structures
1. Any person who is granted a license for existing fill or structures, the fee for which has not been paid, shall pay the fee, if any, in effect at the time the license is granted.
 2. Any person who is granted a license or license amendment for a water-dependent use project involving a change in use or structural alteration to existing fill or structures shall pay the occupation fee in effect at the time the license is granted for any portion of the project site for which a lump sum occupation fee has not been previously paid.
 3. Any person who is granted a license or license amendment for a nonwater-dependent use project involving a change in use or structural alteration to existing fill or structures shall pay the occupation fee in effect at the time the license is granted for the entire project site; but shall be given credit for any lump sum occupation fee previously paid for the portion of tidelands previously occupied, pro-rated for the remaining term of the license. For purpose of calculating the credit pursuant to 310 CMR 9.16(3)(e), the lump sum occupation fee for any license with an unlimited term shall be pro-rated over a 30-year period from the date said license was issued.
 4. Notwithstanding 310 CMR 9.16(3)(e)2., any person who is granted a license or license amendment for a private recreational boating facility with long-term exclusive assignment of berths pursuant to 310 CMR 9.38(2)(a)2. shall pay the fee in accordance with 310 CMR 9.16(3)(e)3.
- (4) Exemption from Fees for Certain Projects.
- (a) Public Agencies. The fees described in 310 CMR 9.16(2) and 9.16(3) shall not be applicable to a municipality or other public agency undertaking a public service project, provided that said project does not deny access to its services and facilities to any citizen of the Commonwealth in a discriminatory manner.
 - (b) Non-profit Organizations. The fees described in 310 CMR 9.16(2) and 9.16(3) shall not be applicable to a non-profit organization as defined in 310 CMR 9.02, if:
 1. the project is a facility of public accommodation which does not deny access to its services and facilities to any citizen of the Commonwealth in a discriminatory manner;
 2. the project is not intended to generate revenues in excess of that needed for construction, operation and maintenance of the uses specified in the license; and
 3. said organization has not been created for the purpose of avoiding said fees while sheltering profits in another entity.
 - (c) Projects Authorized by Permits. The fees described in 310 CMR 9.16(2) and 9.16(3) shall not be applicable to any project authorized by permit.
 - (d) Recreational boating facilities authorized by the Metropolitan District Commission (MDC). For any recreational boating facility authorized by the MDC, the occupation fees described in 310 CMR 9.16(3) shall be reduced by the amount of any fee paid to the MDC for occupation of a waterway.
 - (e) Projects licensed under the Simplified Procedures for Small Structures Accessory to Residences pursuant to 310 CMR 9.10 shall be exempted from payment of Tidewater Displacement Fees.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.16: continued

TABLE 1 - FEES

Application Type	Permit Code	Fee Reg Citation (310 CMR 4.00)
Determination of Waterways Applicability	WW04	4.10(8)(d)
General License Certification	WW24	4.10(8)(f)(2)
Test Project Permit	WW25	4.10(8)(f)(3)
Combined Application with Water Quality Certification and/or Notice of Intent	WW26	4.10(8)(1)
Combined Application for Amendment with Water Quality Certification	WW27	4.10(8)(l)(1)
Chapter 91 Waterways License - Water-dependent ¹		
Water-dependent Residential Project, accessory to a residential use of four units or less	WW01a	4.10(8)(a)
Other Water-dependent Use Projects	WW01b	4.10(8)(a)
Water-dependent License with extended terms	WW01c	4.10(8)(a)
Chapter 91 Simplified License		
Water Dependent Use of Small Structures, Accessory to Residence	WW06	4.10(8)(f)
Renewal, Water-dependent Use of Small Structures, Accessory to Residence	WW12	4.10(8)(f)(1)
Chapter 91 Waterways License - Non Water-dependent		
Partial Initial Application - Non Water-dependent Residential four units or less	WW14a	4.10(8)(a)(1)
Partial Initial Application - Other Non Water-dependent Use Projects	WW14b	4.10(8)(a)(1)
Partial Initial Application Non Water-dependent Use Project with Extended Terms	WW14c	4.10(8)(a)(1)
Full Initial Application - Non Water-dependent Residential Use, four units or less	WW15a	4.10(8)(a)(2)
Full Initial Application - Other Non Water-dependent Use Projects	WW15b	4.10(8)(a)(2)
Full Initial Application Non W-D Use Project with Extended Terms	WW15c	4.10(8)(a)(2)
Application for License within an Approved Municipal Harbor Plan - Residential Non Water-dependent Project, four units or less	WW16a	4.10(8)(a)(3)
Application for License within an Approved Municipal Harbor Plan, Other Non Water-dependent Projects	WW16b	4.10(8)(a)(3)
Application for License within an Approved Municipal Harbor Plan, Non Water-dependent Use Project with Extended Terms	WW16c	4.10(8)(a)(3)

¹ Except for facilities subject to 310 CMR 9.16(3)(b)(2), for which the applicable fees shall be the same as those listed for license with extended terms

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.16: continued

TABLE 1 - FEES (continued)

Application Type	Permit Code	Fee Reg Citation (310 CMR 4.00)
License Application with joint MEPA application, Residential Non Water-dependent Projects, four units or less	WW17a	4.10(8)(a)(4)
License Application with joint MEPA application, Other Non Water-dependent Projects	WW17b	4.10(8)(a)(4)
License Application Non Water-dependent Use Project with joint MEPA application and extended terms	WW17c	4.10(8)(a)(4)
License or Permit Amendment		
Chap 91 Amendment; Residential Water-dependent Use Project, four units or less	WW03a	4.10(8)(c)
Chap 91 Amendment; Other Water-dependent Use Projects	WW03b	4.10(8)(c)
Amendment; Residential Non Water-dependent Use Project, four units or less	WW03c	4.10(8)(c)
Amendment; Other Non Water-dependent Use Projects	WW03d	4.10(8)(c)
Amendment to License with extended terms	WW03e	4.10(8)(c)
Certificate of Compliance		
Certificate of Compliance: Water-dependent	WW05a	4.10(8)(e)
Certificate of Compliance: Non Water-dependent	WW05b	4.10(8)(e)
Certificate of Compliance: License with Extended Terms	WW05c	4.10(8)(e)
Tidewater Displacement Fee (per cubic yard)		
Rate		
Water-dependent Projects	\$2.00	
Non Water-dependent Projects	\$10.00	
Licenses with Extended Terms	\$10.00	
Any Small Scale Project under 310 CMR 9.10	N/A	
Occupation Fee² (per square yard of land held by the Commonwealth)		
Rate		
Water-dependent Projects	\$1.00 x term of license	
Non Water-dependent Projects	\$2.00 x term of license	
Licenses with Extended Terms	Appraisal	
Simplified License per 310 CMR 9.10	\$1.00 x term of license	

² The fee is calculated by multiplying the dollar rate shown by the length of the license term, in years, and by the area of occupied land held by the Commonwealth. This is a fixed fee for the term of the license and is assessed on a lump sum basis, except as provided in 310 CMR 9.16(3)(d)

9.17: Appeals

- (1) The following persons shall have the right to an adjudicatory hearing concerning a decision by the Department to grant or deny a license or permit:
 - (a) an applicant who has demonstrated property rights in the lands in question, or which is a public agency;
 - (b) any person aggrieved by the decision of the Department to grant a license or permit who has submitted written comments within the public comment period;
 - (c) ten residents of the Commonwealth, pursuant to M.G.L. c. 30A, § 10A, who have submitted comments within the public comment period; at least five of the ten residents shall reside in the municipality(s) in which the license or permitted activity is located. The appeal shall clearly and specifically state the facts and grounds for the appeal and the relief sought, and each appealing resident shall file an affidavit stating the intent to be part of the group and to be represented by its authorized representative.
 - (d) the municipal official in the affected municipality(s) who has submitted written comments within the public comment period;
 - (e) CZM, for any project identified in 310 CMR 9.13(2)(a) for CZM participation; and
 - (f) DCR, for any project in an Ocean Sanctuary, if it has filed a notice of participation within the public comment period.

- (2) Any notice of claim for an adjudicatory hearing must be sent by certified mail or hand delivery to the Department within 21 days of the date of the written determination, draft license or draft permit, or if no such determination or draft is required, within 21 days of the date of issuance of the license or permit, as appropriate under 310 CMR 9.14(1) and (2). A copy must be sent at the same time by certified mail or hand delivery to the applicant and to the municipal official of the city or town where the project is located.

- (3) Any notice of claim for an adjudicatory hearing must include the following information:
 - (a) the DEP Waterways Application File Number, name of the applicant and address of the project;
 - (b) the complete name, address, and telephone number of the party filing the request and, if represented by counsel, the name, address and telephone number of the attorney and, if claiming to be a person aggrieved, the specific facts that demonstrate that the party satisfies the definition of "aggrieved person" found in 310 CMR 9.02;
 - (c) a clear statement that a formal adjudicatory hearing is being requested;
 - (d) a clear and concise statement of the facts which are grounds for the proceeding, the specific objections to the Department's written determination, draft license, draft permit, license or permit, and the relief sought through the adjudicatory hearing, including specifically the changes desired in the final written determination, license, or permit; and
 - (e) a statement that a copy of the request has been sent to:
 1. the applicant; and
 2. the municipal official of the city or town where the project is located.

- (4) The Department may coordinate adjudicatory hearings under 310 CMR 9.17 and under M.G.L. c. 131, § 40, 310 CMR 10.00: *Wetlands Protection* and 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* as follows:
 - (a) if a final order has been issued pursuant to the Wetlands Protection Act, M.G.L. c. 131, § 40, the Department shall exclude issues solely within the jurisdiction of that statute at an adjudicatory hearing held under 310 CMR 9.17, except as provided in 310 CMR 9.33(3);
 - (b) if a Water Quality Certification has been issued pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*, the Department shall exclude issues solely within the jurisdiction of 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*;
 - (c) if an adjudicatory hearing has been requested under 310 CMR 9.17, 314 CMR 9.10: *Appeals* and 310 CMR 10.05(7)(j), the Department may consolidate these proceedings; and

9.17: continued

(d) notwithstanding 310 CMR 9.17(4)(a) and (b), in the event that the Department has issued a Combined Permit that serves as the license, permit or other written approval for a water-dependent use project issued pursuant to 310 CMR 9.00, the appeal may include issues solely within the jurisdiction of 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* and 310 CMR 10.00: *Wetlands Protection* only as follows: The appeal may include issues solely within the jurisdiction of 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* only if the appeal has been requested in accordance with the requirements of 314 CMR 9.10: *Appeals*. The appeal may include issues solely within the jurisdiction of 310 CMR 10.00: *Wetlands Protection* only if the appeal has been requested in accordance with the requirements of 310 CMR 10.05(7)(j).

9.18: Recording

(1) The license and accompanying plan shall be recorded at the Registry of Deeds within the chain of title of the affected property within 60 days of the date of issuance. In the case of recorded land, the license shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the project is located. In the case of registered land, the license shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the project is located. When a license involves more than one parcel of land the license shall be recorded in the chain of title for all relevant deeds.

(2) Written notice of said recording shall be given to the Department within 30 days of recording, including an identification of the Registry of Deeds or Land Court in which the license is recorded, the date of recording and the instrument or document number, prior to commencement of the project authorized under the license.

(3) Failure to record the license and accompanying plan within 60 days will render said license void in accordance with 310 CMR 9.26(2)(b)1.

9.19: Certificate of Compliance

(1) Within 60 days of the completion of any licensed project, but in no event later than five years from the date of license issuance, or any extension thereof, the applicant shall request in writing that the Department issue a certificate of compliance. The request shall be accompanied by a certification by a registered professional engineer licensed to do business in the Commonwealth that the project was completed according to the plans, specifications, and conditions of the license. The Department may conduct a site inspection at any time to determine compliance prior or subsequent to issuing a certificate. The Department may issue a partial certificate of compliance for a portion of a project if all public benefits associated with such portion have also been provided.

(2) The license for any project for which such a request is not filed and certificate issued may be revoked pursuant to 310 CMR 9.26(1).

9.20: Authorization of Emergency Actions

In an emergency situation where swift and immediate action is essential to avoid or eliminate a serious and immediate threat to health, safety, or the environment, the Department may approve a project or portion thereof, without a license or permit, in accordance with the following procedures.

(1) A written request shall be submitted to DEP which describes the location, and work to be performed and specifies why the project is necessary for the protection of the health or safety of the public or the environment. Accompanying this request shall be a written statement from a federal, state or municipal agency certifying that there is an emergency and specifying why said project is necessary to avoid or eliminate a serious and immediate threat to public health, safety, or the environment.

9.20: continued

- (2) Emergency approval shall be issued in writing and shall specify the limits of activities necessary to abate the emergency.
- (3) When the necessity for undertaking the emergency action no longer exists, any emergency action taken under 310 CMR 9.20 shall cease until the provisions of 310 CMR 9.00 have been complied with. In any event, the time limit for performance of emergency work shall not exceed 30 days, unless a written extension is approved by the Commissioner or appropriate Regional Director.
- (4) In all cases under 310 CMR 9.20, the person performing any emergency work is required to submit a license or permit application in accordance with 310 CMR 9.11 within 30 days of the date of emergency approval unless a written extension is approved by the Commissioner. Following the review of the application, the Department may require any modification to the emergency work that it deems necessary.
- (5) In emergency situations where written notice is not feasible, verbal notice to and approval by the Commissioner or appropriate Regional Director may be substituted until written notice can be feasibly submitted.
- (6) No work authorized under an emergency approval pursuant to 310 CMR 9.00 may be undertaken without emergency authorization under M.G.L. c. 131, § 40 and 310 CMR 10.00: *Wetlands Protection* and M.G.L. c. 30, §§ 61 through 62H, where applicable.

9.21: Variances

- (1) Required Findings. The Commissioner may waive the application of any other section of 310 CMR 9.00 by making a written finding following a public hearing that:
 - (a) there are no reasonable conditions or alternatives that would allow the project to proceed in compliance with 310 CMR 9.00;
 - (b) the project includes mitigation measures to minimize interference with the public interests in waterways and that the project incorporates measures designed to compensate the public for any remaining detriment to such interests; and
 - (c) the variance is necessary:
 1. to accommodate an overriding municipal, regional, state or federal interest; or
 2. to avoid such restriction on the use of private property as to constitute an unconstitutional taking without compensation; or
 3. to avoid substantial hardship for the continuation of any use or structure existing as of October 4, 1990, and for which no substantial change in use or substantial structural alteration has occurred since that date.
- (2) Procedure
 - (a) A request for a variance shall be filed by the applicant prior to publication of the notice of public hearing pursuant to 310 CMR 9.13(1). The request shall be in writing and shall include, at a minimum, the following information:
 1. an identification of the regulation(s) from which the variance is sought;
 2. a description of alternative designs, locations, or construction methods which would achieve the purpose of the project without the need for the variance;
 3. an explanation of why each of the alternatives is unreasonable;
 4. an analysis of any detriments to interests of the public in waterways due to the proposed project and an explanation of how the detriments have been minimized;
 5. a description of the measures that will be provided to compensate for any remaining detriment to public interests in waterways; and
 6. a description and supporting documentation of the overriding public interest served by the project, if applicable; or
 7. documentation that the project is a continuation of a use or structure existing as of October 4, 1990; that there has not been a substantial change in use or substantial structural alteration since that date; and that application of 310 CMR 9.00 would cause substantial hardship to the applicant, if applicable; or

9.21: continued

8. a legal analysis, with supporting documentation, explaining why application of 310 CMR 9.00 would so restrict the use of private property as to constitute an unconstitutional taking without compensation, if applicable.

(b) Notice of the variance request shall be published in accordance with 310 CMR 9.13(1) and shall explicitly indicate that a variance is being requested. The Department shall hold a public hearing in accordance with 310 CMR 9.13(3) upon which the Commissioner's findings shall be based. Upon issuance of a variance an adjudicatory hearing is available in accordance with 310 CMR 9.17.

(c) For projects for which an EIR will be prepared in accordance with M.G.L. c. 30, §§ 61 through 62H, the information required pursuant to the provisions of 310 CMR 9.21(2)(a)1. through 7., should be included in the EIR if the need for a variance is reasonably foreseeable. If the variance issue was addressed in the final EIR, the Commissioner shall presume that the description of alternatives contained therein satisfies the requirements of 310 CMR 9.21(2)(a)2. Notwithstanding this presumption, the Commissioner may require any modification of the project reasonably within the scope of an alternative within the final EIR.

(3) Commentary. The variance process is intended to apply in the rare and unusual circumstance where a proposed project satisfies a public interest which overrides the public interest in waterways but cannot be implemented in a manner which is fully consistent with the provisions of 310 CMR 9.00; where application of 310 CMR 9.00 would so restrict the use of private property as to constitute an unconstitutional taking of property; or where application of 310 CMR 9.00 would cause substantial hardship for the continuation of a use or structure existing as of October 4, 1990. The variance process is designed to ensure that a full investigation is made to determine whether the proposed project serves an overriding public interest which outweighs harm to the public resulting from lack of adherence to 310 CMR 9.21 and whether all measures are taken which ensure that detriments to the public interests in waterways are minimized.

9.22: Maintenance, Repair, and Minor Project Modifications

(1) Maintenance and Repair of Fill and Structures. During the term for which the license is in effect, the licensee shall maintain and repair all authorized fill and structures in good working order for the uses authorized in the license, and in accordance with the conditions specified therein. No application for license or license amendment shall be required for such activity. Maintenance and repair include, among other things, the following activities:

(a) replacement of old pilings, decking, or rip-rap, all with material of the same dimensions and quality and in the same locations and elevations as that authorized in the license;

(b) repaving of road surfaces, installation of road curbs and lighting, replacement of railroad track, stabilization of road or rail beds, reconstruction of culverts and catch basins, and other maintenance or repair of existing public transportation facilities and associated drainage systems, as necessary to preserve or restore the serviceability of such facilities for the original use, provided that maintenance and repair shall not include the substantial enlargement of such facilities, such as roadway widening, adding shoulders, or upgrading substandard intersections;

(c) restoration to the original license specifications of licensed fill or structures that have been damaged by catastrophic events, provided that no change in use occurs and that:

1. such restoration is completed within two years of the damage-causing event;

2. in the case of flood-related damage, the cost of such restoration does not exceed 50% of the cost of total replacement according to the original license specifications;

3. the licensee provides the Department with written notice of the restoration at least ten days prior to commencement of such work; in the case of flood-related damage, said notice shall include written estimates of restoration and replacement costs; and

4. the licensee provides the Department with written notice that the repair work has been completed in accordance with the license specifications, as certified by a Registered Professional Engineer, within 60 days of such completion; and

(d) demolition and removal of unused structures that are obsolete or otherwise no longer suitable for the uses authorized in the license, provided that written approval by the Department is obtained prior to the commencement of such work.

9.22: continued

(2) Maintenance Dredging. Maintenance dredging may occur for five years from the date of issuance of the license or permit or for such other term, not exceeding ten years, specified therein, provided that the written notice required pursuant to the Wetlands Protection Act (M.G.L. c. 131, § 40 and 310 CMR 10.00: *Wetlands Protection*) has been filed with the Conservation Commission and a copy has been sent to the Department.

(3) Minor Project Modifications. The licensee may undertake minor modifications to a licensed project, or a project exempt from licensing pursuant to 310 CMR 9.05(3)(b) through (h), without filing an application for license or license amendment. Such modifications are limited to:

(a) structural alterations which are confined to the existing footprint of the fill or structures being altered and which represent an insignificant deviation from the original specifications of the license, in terms of size, configuration, materials, or other relevant design or fabrication parameters;

(b) changes of use which maintain or enhance public benefits provided by the project and which represent an insignificant deviation from the original use statement of the license, in terms of function, character, duration, patronage, or other relevant parameters; or

(c) replacement of subsurface utilities, or installation of additional utility lines in an existing right of way within previously authorized filled tidelands connecting to existing structures, provided the work will not restrict or impair access to water-dependent uses.

No such modifications shall be undertaken until the licensee has submitted written notice to the Department describing the proposed work in sufficient detail, with reference to any relevant license plans, for the Department to determine compliance with the above conditions. If the Department does not object within 30 days, the licensee may proceed with the described work without further approval by the Department.

(4) Nothing in 310 CMR 9.22(1) through (3) provisions shall be construed to exempt the work in question from obtaining other applicable approvals, including but not limited to an order of conditions under M.G.L. c. 131, § 40 and 310 CMR 10.00: *Wetlands Protection*.

9.23: Transfer of License Upon Change of Ownership

(1) Unless otherwise provided in the license, a valid license shall run with the land and shall automatically be transferred upon a change of ownership of the affected property within the chain of title of which the license has been recorded. All rights, privileges, obligations, and responsibilities specified in the license shall be transferred to the new landowner upon recording of the changed ownership.

(2) For transferability of permits issued by the harbormaster for the temporary placement of moorings, floats, and rafts, see 310 CMR 9.07(2)(d).

9.24: Amendments

(1) Upon written request by the licensee accompanied by appropriate plans, the Department may amend a license and associated written determination to authorize a structural alteration or change in use not defined as substantial in accordance with 310 CMR 9.02, or to delineate a reconfiguration zone within a marina in accordance with 310 CMR 9.39(1)(b), or to renew a term of license in accordance with 310 CMR 9.25(2). A written request may also be made to amend a permit. No license or permit shall be amended unless the project, as modified, complies with the applicable provisions of 310 CMR 9.00 wherever feasible.

(2) The Department shall review the request for amendment and determine whether the proposed changes are so significant as to require a new license or permit application or are appropriate for consideration of an amendment to the existing license or permit.

(3) If the Department determines that the proposed changes are appropriate to allow consideration of an amendment, notice shall be provided in accordance with the requirements of 310 CMR 9.13(1), and to any intervenor on the original license application to the maximum reasonable extent.

9.24: continued

- (4) The Department may, at its discretion, conduct a public hearing on the request for amendment. Any such hearing shall be conducted in accordance with the requirements of 310 CMR 9.13(3).
- (5) Any person who would otherwise have the right to an adjudicatory hearing pursuant to 310 CMR 9.17 may appeal the issuance of any amendment within 21 days of the date of its issuance, in accordance with the procedures set forth at 310 CMR 9.17.
- (6) The amended license and accompanying plan shall be recorded within 60 days of the date of issuance in accordance with the procedures set forth in 310 CMR 9.18.
- (7) Notwithstanding the procedures for amendment described above, the Department may issue in writing, at the request of the licensee, clarification and corrections regarding any license or permit previously issued.

9.25: Expiration and Renewal

- (1) Expiration.
 - (a) Any license, permit, or legislative authorization shall expire as to all work licensed, permitted, or authorized which is not completed within five years of the date thereof, or such other period of time specified therein; provided, however, that for good cause shown the Department may extend, without public hearing or notice, the construction period of the license, permit, or legislative authorization for one or more one year periods upon written request of the licensee or permittee.
 - (b) All licenses or permits shall expire upon reaching the term, if any, stated in the license or permit or any extension thereof.
 - (c) Any license shall expire if the fill or structures are abandoned and not used for the purpose for which they were licensed for a period of five consecutive years or more.
- (2) Renewal of Licenses and Permits. A renewal may be granted for a term of years not to exceed that authorized in the original license or permit, in accordance with 310 CMR 9.15, upon written application by the licensee or permittee and in accordance with the procedures for amendments set forth at 310 CMR 9.24.

9.26: Revocation and Nullification

- (1) Revocation.
 - (a) Unless otherwise specifically provided by law, the Department may revoke a license or permit for non-compliance with the terms and conditions set forth therein, including any change of use from that expressly authorized in said license or permit or, if no such statement was included, from that reasonably determined by the Department to be implicit therein. Such revocation may not occur until after the Department has given notice of the alleged non-compliance to the licensee or permittee and any person who has filed a written request for such notice with the Department, and after it has afforded them an opportunity for a hearing and a reasonable opportunity to correct said non-compliance.
 - (b) In accordance with the procedures established in 310 CMR 9.26(1)(a), the Department may revoke any license or permit upon a finding that the licensee denies access to project services and facilities in a discriminatory manner, as determined in accordance with the constitution of the Commonwealth of Massachusetts, of the United States of America, or with any statute, regulation, or executive order governing the prevention of discrimination. Such a finding shall be made upon a final determination of discrimination, issued by any federal, state or local court or agency with jurisdiction to investigate discrimination issues.
 - (c) Notice of revocation of a license shall be recorded at the Registry of Deeds or Land Court by the Department, in accordance with 310 CMR 9.18.
- (2) Nullification.
 - (a) All licenses issued prior to January 1, 1984 are void if:
 1. the license and the accompanying plan were not recorded within one year of date of issuance at the Registry of Deeds for the county or district where the work was to be performed;

9.26: continued

2. there has been an unauthorized substantial change in use; or
3. there has been an unauthorized substantial structural alteration.

Notwithstanding the foregoing, no license for filled private tidelands shall be void for unauthorized substantial changes in use or unauthorized substantial structural alterations which occurred prior to January 1, 1984.

(b) All licenses issued after January 1, 1984 are void if:

1. the license and accompanying plan were not recorded within 60 days of date of issuance at the Registry of Deeds for the county or district where the work was to be performed;
2. there has been an unauthorized substantial change in use; or
3. there has been an unauthorized substantial structural alteration.

9.27: Removal of Previously Licensed Structures

Upon the nullification, expiration, or revocation of a license, the licensee shall remove all structures authorized in such previous license which are located:

- (1) below the high water mark, unless the Department determines that continued existence of said structures will promote the public interests served by M.G.L. c. 91;
- (2) above the high water mark, if the Department determines that continued existence of said structures will have a significant adverse effect on the public interests served by M.G.L. c. 91. Such removal shall take place upon written notice to and at the direction of the Department.

9.28: Amnesty

(1) General. Notwithstanding the provisions of 310 CMR 9.09(2), certain substantive and procedural standards of 310 CMR 9.11 through 9.55 shall not apply to the licensing of existing unauthorized fill or structures provided the Department received an application by October 4, 1996. Furthermore, during the amnesty period the Department may postpone the requirement to obtain a license for certain small-scale water-dependent structures on residential property by issuing an interim approval for said structures. The Department will initiate enforcement action to require the removal or licensing of any such structure pursuant to 310 CMR 9.00 only upon the expiration or revocation of the interim approval or the violation of the terms and conditions thereof. After the close of the amnesty period, the Department will require strict compliance with all provisions of 310 CMR 9.00 and will take enforcement action, including the assessment of penalties if appropriate, to ensure that all unauthorized fill and structures are either licensed or removed.

(2) Projects Which May Be Authorized under the Amnesty Program.

(a) An application for a license under the amnesty program may be submitted only for a project consisting entirely of the continuation in use of existing fill or structures not previously authorized, or for which a grant or license is not presently valid pursuant to 310 CMR 9.00, provided that:

1. said fill or structures have been in use since January 1, 1984, and no unauthorized substantial change in use or substantial structural alteration has occurred since that date; and
2. an application has been filed with the Department by October 4, 1996.

(b) An application for an interim approval under the amnesty program may be submitted only for a project meeting the criteria of 310 CMR 9.28(2)(a), and which consists entirely of an existing dock, pier, seawall, bulkhead, or other small-scale water dependent structure that is accessory to a single family residence.

(3) Standards for Applications under Amnesty Program. For purposes of authorizing any project under the amnesty program, the applicable substantive standards found at 310 CMR 9.07 and 9.20 through 9.27, effective September 15, 1978, shall remain in full force and effect in *lieu* of the substantive standards found at 310 CMR 9.31 through 9.60.

9.28: continued

(4) Procedures for Applications under Amnesty Program. For purposes of authorizing projects under the amnesty program, the applicable procedural rules found at 310 CMR 9.11 through 9.30 shall be in effect, except for any time schedule for Department action specified therein, and except as modified in accordance with the following provisions.

(a) Plans, 310 CMR 9.11(2) and (3): In the case of an application for an interim approval, the plan need not be certified by a Registered Professional Engineer or Registered Land Surveyor if the fill or structure is accurately drawn on a scaled plan in accordance with application instructions issued by the Department.

(b) Other State and Local Approvals, 310 CMR 9.11(4): In the case of an application for an interim approval, except for any project located in an ACEC, the application need not provide evidence of compliance with the applicable state and local requirements, and the Department shall presume compliance with these requirements unless the Department receives information to the contrary during the public comment period.

(c) Terms, 310 CMR 9.15: In the case of an application for an amnesty license for a water-dependent use project on Commonwealth tidelands, the license term shall be 99 years unless the Department determines that a shorter term is necessary to protect the public interest in said lands. In the case of an application for an interim approval, said approval shall expire in 30 years unless the affected property is transferred to a new owner for valuable consideration, in which case said approval shall expire one year from the date of recording of the transfer at the Registry of Deeds. An interim approval shall not be renewed upon expiration; further authorization from the Department must be obtained in the form of a license.

(d) Fees, 310 CMR 9.16(2) through (4): In the case of an application for an amnesty license for a water-dependent use project, the applicable regulations governing tidewater displacement and occupation fees found at 310 CMR 9.08, effective September 15, 1978, shall remain in full force and effect in lieu of the fee regulations found at 310 CMR 9.16(2) through (4). In the case of an application for an interim approval no such fees shall apply. All applications under the amnesty program shall pay the appropriate application fee in accordance with 310 CMR 9.16(1).

(e) Recording, 310 CMR 9.18: In the case of an application for an interim approval, said approval shall be recorded, without the accompanying plan, at the Registry of Deeds in accordance with 310 CMR 9.18.

(f) Transfer, 310 CMR 9.23: In the case of an application for an interim approval, said approval shall not run with the land, but shall automatically expire one year from the date of recording of the transfer of the affected property to a new owner for valuable consideration.

9.29: General License Certification

(1) The General License. In accordance with M.G.L. c. 91, § 18C, the Department will issue a General License for noncommercial, small-scale, water-dependent structures accessory to a residential use. The General License shall be a final license signed by the Governor and may authorize eligible small-scale, water-dependent structures accessory to a residential use in lieu of an individual license. The General License shall be issued under the following procedures:

(a) The draft General License will be posted on the Department website and published in the Environmental Monitor for a 30-day public comment period. After the close of the public comment period, the Department will issue the final General License and notify the public of its availability on the Department website.

(b) The General License shall be in effect for a fixed term not to exceed 30 years for structures in coastal waters, and 15 years for structures in fresh waters, unless a shorter effective term is specified by the Department in the General License.

(c) The General License shall be recorded at every Registry of Deeds in the Commonwealth, indexed under "Commonwealth of Massachusetts" as the Grantor.

(d) The Department may amend or modify the General License in accordance with the procedures of 310 CMR 9.29(1)(a) through (c).

(2) Projects Eligible for General License Certification. A Certification to the General License issued under 310 CMR 9.29(1) must be submitted for all proposed structures, previously unauthorized structures, and previously licensed structures applying for renewal, that meet the following eligibility criteria:

(a) Are for a water-dependent, noncommercial use accessory to residential property;

9.29: continued

- (b) Are for pile-supported (*e.g.*, by wooden or metal posts) small-scale dock, pier, and similar structures with associated ramp(s) and float(s) that require no fill or dredging;
- (c) Are not located within an Area of Critical Environmental Concern (ACEC);
- (d) Are not located within a Designated Port Area (DPA); and
- (e) Otherwise meet the General License standards and procedures described in 310 CMR 9.29(3) and (4).

The above thresholds are established for determination of eligibility only; structures licensed under 310 CMR 9.29 shall be the minimum size necessary to achieve the intended water-related purposes.

(3) Standards. The General License contains specific conditions that will ensure that projects certified under 310 CMR 9.29 will meet the following performance standards which shall supersede the standards listed in 310 CMR 9.35 and 9.37.

(a) An eligible project shall not:

1. Exceed the minimum size necessary to achieve the intended water-dependent use;
2. Extend beyond the length required to achieve safe berthing;
3. Impair the lines of sight necessary for navigation;
4. Interfere with access to adjoining areas by extending substantially beyond the projection of existing structures adjacent to the site;
5. Interfere with access or public rights associated with a public landing, easement, or other public access to water;
6. Generate water-borne traffic that would substantially interfere with other vessels; and
7. Impair in any other substantial manner the ability of the public to swim or float freely upon the waterways.

(b) An eligible project shall:

1. Preserve all rights held by the Commonwealth in trust for the public to use tidelands, Great Ponds and other waterways for lawful purposes;
2. Preserve public rights of access on private tidelands for fishing, fowling, and navigation;
3. be structurally sound; and
4. meet all other standards and conditions stated in the General License, including but not limited to the dimensional criteria for flowed tidelands or fresh waters.

(c) The Department may consider the cumulative impact of docks, piers and similar structures in a geographic area in determining whether a project is appropriate for coverage under a General License.

(4) Certification Procedures. Unless otherwise specified in 310 CMR 9.29, the procedural requirements of 310 CMR 9.10 through 9.19, 9.21, 9.23 through 25, 9.34, 9.37, shall not apply to Certifications submitted under the General License issued pursuant to 310 CMR 9.29 and M.G.L. c. 91, § 18C. A Certification shall assert under the pains and penalties of perjury that the proposed project meets all eligibility requirements set forth in 310 CMR 9.29(2), and that the project proponent will comply with all standards and conditions of the General License. For purpose of authorizing eligible projects under the General License, the following certification procedure shall apply.

(a) Application and Plans. A project proponent shall submit a completed Certification form provided by the Department, which shall be signed by the project proponent and landowner, if other than the project proponent. The Certification shall be prepared in accordance with the instructions contained in the Department's Certification package and include a copy of any legislative grant. The Certification shall include a plan that clearly demonstrates that the project meets the General License eligibility criteria of 310 CMR 9.29(2), will comply with all standards and conditions of the General License; and is drawn in accordance with the formatting and information requirements described in the Department's Certification package. When plans have been submitted with a Notice of Intent or referenced in an Order of Conditions under the Wetlands Protection Act, a copy of those plans shall accompany the application. When plans have not been prepared under the Wetlands Protection Act, a plot plan or other scaled plan with structures to be licensed measured accurately from lot lines or other fixed structures shall be prepared in accordance with the application instructions.

9.29: continued

(b) Coordination with Municipal Officials. The project proponent shall coordinate with the following municipal officials on the proposed project and provide an opportunity to comment prior to submitting the completed Certification package to the Department.

1. Planning Board. The project proponent shall submit to the planning board a statement and plan that includes the proposed use, location, dimensions and limits and mode of work to be performed, and describes the proposed project with sufficient detail for the planning board to determine if the proposed project complies with the eligibility criteria and applicable standards and conditions of the General License. The planning board may solicit the opinions of other municipal officials such as the board of selectmen, harbormaster or conservation commission. Within 45 days of receipt of an adequate statement from the project proponent, the planning board may submit a written opinion to the Department on whether the project meets the eligibility criteria listed in 310 CMR 9.29(2) and will comply with the standards and conditions of the General License and 310 CMR 9.29(3). The Department may affirm a Certification after the expiration of 45 days without local planning board comment or upon receiving notification from the local planning board that it does not oppose the project's eligibility for a Certification.

2. Conservation Commission. The project proponent shall provide to the Department adequate documentation with the Certification package that the project complies with the Wetlands Protection Act, in the form of an Order of Conditions, negative or conditionally negative Determination of Applicability, or Certificate of Compliance.

3. Zoning Compliance. The project proponent shall include on the Certification form a certification from the local Zoning Enforcement Officer that the project complies with applicable zoning ordinances and bylaws.

(c) Public Notice. The project proponent shall publish in a newspaper of general circulation in the area where the project is located, a public notice including the proponent's name and address, the project location, a description of the project, and a statement that written comments will be accepted by the planning board within 30 days of the submittal of the statement to the planning board. At the same time the proponent submits its statement to the planning board, a copy of the public notice shall be distributed to the Municipal Official, harbormaster, if any, and the conservation commission. The notice shall indicate that the proposed project is under review by the planning board. No public hearing will be required by the Department for a General License Certification. The public notice of the project shall be published before or at the same time as the statement is provided to the planning board and other municipal officials and may be included in a public notice for the proposed project required by other applicable statutes or regulations, such as the Wetlands Protection Act.

(d) Fees. Any Certification submitted to the Department shall include the applicable Certification form and payment of the applicable tidewater displacement or occupation fee described at 310 CMR 9.16. Notwithstanding the provisions of 310 CMR 9.16(3)(d) and (e) to the contrary, all such fees shall be paid in full by certified check or money order made payable to the Commonwealth of Massachusetts at the same time as the Certification is submitted to the Department.

(e) Any change in use or structural alteration of a previously licensed structure that is eligible for the General License, regardless of when the structure was first licensed or certified, on or after the effective date of this section, shall require a new Certification. The new Certification shall be submitted to the Department for a shortened local review that includes only the planning board in accordance with 310 CMR 9.29(4)(b)1. and M.G.L. c. 18(C). The new Certification shall be submitted to the Department and Planning Board at least 60 days prior to the start of construction.

(5) Decision on Certifications. The Department shall acknowledge receipt of a complete Certification package, or request additional information, within 60 days of the date of receipt by the Department. The submission of the Certification to the Department shall not occur until the latter of the completion of the public comment period or the expiration of the planning board's 45 day review period. The Department shall affirm the Certification if the project meets the eligibility criteria of 310 CMR 9.29(2), will comply with all standards and conditions of the General License, and the applicant has met all the requirements of 310 CMR 9.29(3) and (4), except that the Department shall not affirm a Certification if the planning board recommends that the project be subject to individual licensing. If an existing, previously unauthorized structure is found ineligible for Certification, an application shall be submitted for an annual local permit, a simplified license, or an individual license in accordance with 310 CMR 9.07, 9.10, or 9.11.

9.29: continued

(6) Terms of Certifications and Recording.

(a) The term of the affirmed Certification shall expire on the same date as the General License, unless the Department specifies in its affirmation that a shorter term is necessary to protect the public interest.

(b) The affirmed Certification, with the plan as an exhibit, shall be recorded at the Registry of Deeds within the chain of title of the affected property within 60 days of the date of the Department's affirmation. The Certification becomes valid on the date the affirmed Certification is recorded. Failure to record the Certification and accompanying plan within 60 days will render the Certification void in accordance with M.G.L. c. 91, § 18C. The applicant shall provide notification to the Department within 30 days of the recording in accordance with 310 CMR 9.18(2).

(c) Work or change in use shall not commence until the affirmed Certification is recorded and the Department has received notification of the recordation.

(d) All work authorized by an affirmed Certification under this General License shall be completed within five years of the date of the Department's affirmation. Said construction period may be extended by the Department for one or more one year periods without public notice, provided that the Applicant submits to the Department, 30 days prior to the expiration of said construction period, a written request to extend the period and provides an adequate justification for said extension.

(7) Recertification and Transfer of Certifications from the Department. The Department may reissue a General License under the procedures of 310 CMR 9.29(1) twelve months prior to the expiration of the General License term. At least 90 days prior to the expiration of the General License, or the date of reissuance of the General License whichever is later, a person responsible for a structure with an affirmed Certification under the General License shall file a request for continued coverage with the Department. The Department may require planning board review in accordance with 310 CMR 9.29(4)(b)1. based on comments received about the structure or other relevant information. The Certification procedures of 310 CMR 9.29(4) shall apply to requests to recertify.

(a) Projects meeting the eligibility provisions of 310 CMR 9.29(2), which previously obtained a license, simplified license, amnesty license or interim approval, shall request Certification under 310 CMR 9.29 instead of renewal, before the expiration of the previously issued license or interim approval.

(b) Any person applying for a recertification under 310 CMR 9.29 shall compensate the Commonwealth for the rights granted in such lands through payment of an occupation fee, in accordance with the provisions of 310 CMR 9.16.

(c) Unless otherwise provided in the Certificate, a valid affirmed Certificate shall run with the land and shall automatically be transferred upon a change of ownership of the affected property within the chain of title of which the license has been recorded. All rights, privileges, obligations, and responsibilities specified in the General License shall be transferred to the new landowner upon recording the changed ownership in the Registry of Deeds.

(8) Appeals. The appeal provisions of 310 CMR 9.17 shall apply to the issuance of a General License. Copies of a Notice of Claim filed concerning the issuance of a General License pursuant to 310 CMR 9.29 shall be provided as required by 310 CMR 9.17(2) and (3) to the extent applicable. The appeal provisions of 310 CMR 9.17 shall not apply to the Certification of a project under the General License issued in accordance with 310 CMR 9.29.

(9) Enforcement, Suspension or Revocation of a Certification under a General License. The enforcement provisions of 310 CMR 9.08 shall apply to any structure eligible for certification or Certified under the General License pursuant to 310 CMR 9.29. The Department shall perform annual audits to monitor compliance with the General License standards and conditions in accordance with M.G.L. c. 91, § 18C. Consistent with the provisions of 310 CMR 9.26, the Department may revoke a Certification for non-compliance with the standards and conditions set forth in the General License or the individual Certification.

9.30: Permitting of Test Projects

(1) General. The Department may, at its discretion, issue a permit authorizing a Test Project that the Department determines has minimal impacts. The Department may require that an applicant document the readiness of the device or technology for *in situ* testing with the results of laboratory testing, modeling, technical evaluations, or similar forms of supporting material.

(2) Standards. Except as otherwise provided, the procedural requirements of 310 CMR 9.11 through 9.27 shall not apply to Test Projects. The procedural requirements of 310 CMR 9.12, 9.16, 9.17, 9.22, and 9.26 shall apply to the permitting of Test Projects. The application shall include sufficient documentation to demonstrate that the Test Project complies with 310 CMR 9.35(2). During the operation of the Test Project, the Permittee shall comply with all applicable performance standards set forth in 310 CMR 9.32 through 9.55 except as otherwise provided in 310 CMR 9.30(2). During the operation of the Test Project, the Permittee shall also comply with the following standards:

(a) In the event that the project does not comply with one or more of the applicable performance standards, the Permittee shall notify the Department in writing within 72 hours of the discovery of such noncompliance. The written notice shall include a plan and schedule for bringing the Test Project into compliance as soon as is practicable. Upon receipt of said written notice, the Department may require the Permittee: to modify the Project to comply with all applicable performance standards or to remove the Test Project immediately and restore the area to pre-project conditions.

(b) The Permittee shall remove all structures authorized by the permit and restore the Project Site to pre-project conditions prior to expiration of the permit.

(c) A certification by a Registered Professional Engineer pursuant to 310 CMR 9.37(1)(a) is not required for a Test Project.

(3) Application Requirements. For the purpose of authorizing eligible Test Projects under 310 CMR 9.30, the following provisions shall apply:

(a) Application. An applicant for a Test Project permit shall submit a written application on forms provided by the Department, signed by the applicant and landowner if other than the applicant. The information required below in 310 CMR 9.30(3)(b) and (c) may be provided in a separate application for a Chapter 91 permit or as part of a Combined Application for a permit pursuant to Chapter 91 and an Order of Conditions pursuant to the Wetlands Protection Act, M.G.L. c. 131, § 40.

(b) The application shall be prepared in accordance with all applicable instructions contained in the Department's application package. Plans submitted with a Notice of Intent or referenced in an Order of Conditions under the Wetlands Protection Act, M.G.L. c. 131, § 40, shall accompany the application. In *lieu* of plans prepared by a Registered Professional Engineer or Registered Land Surveyor, the applicant shall show the proposed Project Site on a plan designating all project components by coordinates referenced to the Massachusetts State Plane Coordinate System.

(c) The following documentation shall be submitted with the application:

1. a description of the Test Project; and
2. a plan for installing, testing, and removing project components;

(4) Public Notice and Notice to Abutters. At least 21 days prior to issuance of a permit, the applicant shall cause, at his or her own expense, notice to be published in a newspaper of general circulation in the area where the project is located. Such notice shall contain:

(a) the applicant's name and address;

(b) a description of the project location;

(c) a description of the project;

(d) a statement that within 15 days of the date of publication written comments will be accepted, the address where comments regarding the application may be sent, the address where the application may be viewed, a statement that a public hearing may be held upon request by the municipal official, and a statement that a municipality, ten citizen group or any aggrieved person who has submitted written comments before the close of the public comment period may appeal and that failure to submit written comments will result in the waiver of any right to an adjudicatory hearing.

9.30: continued

The applicant shall also send a copy of the notice to the persons identified in 310 CMR 9.13(1)(a) by certified mail, return receipt, and provide proof of such notice to the Department. With the agreement of the conservation commission, joint notice under M.G.L. c. 131, § 40, and M.G.L. c. 91 may be published and sent to abutters, provided it contains the requisite information and meets the requisite standards pursuant to each statute and its implementing regulations. Joint notice may be provided even if the applicant does not submit a Combined Application.

(5) Fees. All applicants for a permit under these procedures shall pay the application fee, or the renewal fee, in accordance with the provisions of 310 CMR 9.16. No tidewater displacement fees or occupation fees shall be assessed.

(6) Decision on Applications. The Department shall issue a permit or permit denial within 30 days of the close of the public comment period or receipt of the Order of Conditions, whichever is later.

(7) Term. A permit issued under 310 CMR 9.30 shall be valid for no more than one year.

(8) Extension of Permit. Upon request of the Permittee, the Department may extend the term of the permit for one additional one year period, without the filing of a new application. Notice of the extension request shall be published by the Permittee and distributed to the persons identified in 310 CMR 9.30(4) above at least 30 days prior to the expiration of the permit.

(9) Appeals. The appeal provisions in 310 CMR 9.17 shall apply to proceedings under 310 CMR 9.30; provided, however, that if the Department determines that an application submitted for a permit under 310 CMR 9.30 is not eligible for permitting as a Test Project pursuant to 310 CMR 9.30, the applicant shall seek authorization for the proposed project in accordance with the applicable permit or licensing procedures set forth in 310 CMR 9.11 through 9.27 and the performance standards set forth in 310 CMR 9.32 through 9.55 in lieu of requesting an adjudicatory hearing.

9.31: Summary of License and Permit Requirements

(1) Basic Requirements. No license or permit shall be issued by the Department for any project subject to 310 CMR 9.03 through 9.05 and 9.09, unless said project:

- (a) includes only fill and structures for uses that have been categorically determined to be eligible for a license, according to the provisions of 310 CMR 9.32;
- (b) complies with applicable environmental regulatory programs of the Commonwealth, according to the provisions of 310 CMR 9.33;
- (c) conforms to applicable provisions of an Approved Municipal Harbor Plan, if any, and local zoning law, according to the provisions of 310 CMR 9.34;
- (d) complies with applicable standards governing the preservation of water-related public rights, according to the provisions of 310 CMR 9.35;
- (e) complies with applicable standards governing the protection of water-dependent uses, according to the provisions of 310 CMR 9.36;
- (f) complies with applicable standards governing engineering and construction of structures, according to the provisions of 310 CMR 9.37;
- (g) complies with applicable standards governing use and design of boating facilities for recreational or commercial vessels, according to the provisions of 310 CMR 9.38 and 9.39;
- (h) complies with applicable standards governing dredging and disposal of dredge materials, according to the provisions of 310 CMR 9.40; and
- (i) does not deny access to its services and facilities to any person in a discriminatory manner, as determined in accordance with the constitution of the Commonwealth of Massachusetts, of the United States of America, or with any statute, regulation, or executive order governing the prevention of discrimination.

(2) Proper Public Purpose Requirement. No license or permit shall be issued by the Department for any project on tidelands or Great Ponds, except for water-dependent use projects located entirely on private tidelands, unless said project serves a proper public purpose which provides greater benefit than detriment to the rights of the public in said lands. In applying 310 CMR 9.31(2), the Department shall act in accordance with the following provisions:

9.31: continued

- (a) Water-dependent Use Projects - The Department shall presume 310 CMR 9.31(2) is met if the project is a water-dependent use project.
- (b) Nonwater-dependent Use Projects - The Department shall presume 310 CMR 9.31(2) is met if the project is a nonwater-dependent use project which:
1. complies with the standards for conserving and utilizing the capacity of the project site to accommodate water-dependent use, according to the applicable provisions of 310 CMR 9.51 through 9.52; and complies with the additional standard for activating Commonwealth tidelands for public use, according to the applicable provisions of 310 CMR 9.53;
 2. if located in the coastal zone, complies with the standard governing consistency with the policies of the Massachusetts Coastal Zone Management Program, according to 310 CMR 9.54; and
 3. if consisting entirely of infrastructure facilities, to which 310 CMR 9.31(2)(b)1. does not apply, complies with the special mitigation and public access standards governing such facilities, according to 310 CMR 9.55.
- (3) Rebuttal of Presumptions. The presumptions of 310 CMR 9.31(2) may be overcome only if:
- (a) the basic requirements specified in 310 CMR 9.31(1) have not been met; or
 - (b) a clear showing is made by a municipal, state, regional, or federal agency that requirements beyond those contained in 310 CMR 9.00 are necessary to prevent overriding detriment to a public interest which said agency is responsible for protecting; in the case of a project for which a final EIR has been prepared, the presumption may be overcome only if such detriment has been identified during the M.G.L. c. 30, §§ 61 through 62H review process.
- (4) Requirements for Projects with Special Legislative Authorization. Notwithstanding the provisions of 310 CMR 9.31(1) through (3), the Department shall issue a license or permit where the project comprises fill or structures that have been specifically authorized in a grant or other enactment of the legislature, provided that the Department may prescribe such alterations and conditions as it deems necessary to ensure the project conforms with:
- (a) any requirements contained in the legislative authorization; and
 - (b) the standards of 310 CMR 9.31 through 9.60, to the extent consistent with the legislative authorization.

9.32: Categorical Restrictions on Fill and Structures

- (1) The Department has determined that in certain situations fill or structures categorically do not meet the statutory tests for approval under M.G.L. c. 91 or are otherwise not in keeping with the purposes of 310 CMR 9.00. Accordingly, a project shall be eligible for a license only if it is restricted to fill or structures which accommodate the uses specified below, within the geographic areas specified in 310 CMR 9.32(1)(a) through (e).
- (a) Tidelands (Outside of ACECs and DPAs).
1. fill or structures for any use on previously filled tidelands;
 2. fill or structures for water-dependent use located below the high water mark, provided that, in the case of proposed fill, reasonable measures are taken to minimize the amount of fill, including substitution of pile-supported or floating structures and relocation of the use to a position above the high water mark;
 3. structures to accommodate public pedestrian access on flowed tidelands, provided that it is not reasonable to locate such structures above the high water mark or within the footprint of existing pile-supported structures or pile fields;
 4. pile-supported structures located below the high water mark for nonwater-dependent uses which replace or modify existing, previously authorized wharves, piers, pile fields, or other filled or pile-supported structures, in accordance with the provisions of 310 CMR 9.51(3)(a) and (b);
 5. new fill located below the high water mark for accessory or nonwater-dependent use provided that:
 - a. the purpose of such fill is to eliminate irregularities in previously altered portions of the project shoreline; and

9.32: continued

- b. such fill will replace previously authorized fill elsewhere along the project shoreline, on a 1:1 square foot basis and without seaward projection beyond the adjacent shoreline;
 - 6. stationary vessels located below the high water mark and proposed for conversion to accessory use or to nonwater-dependent facilities of public accommodation, provided that such vessels:
 - a. do not consist of platform-like floating structures, such as barges, built or modified to serve primarily as support for new buildings; and
 - b. will be licensed for a limited term, in accordance with the provisions of 310 CMR 9.15(1)(d)2.
 - 7. fill or structures located below the high water mark for wind turbine facilities found to be non-water dependent, pursuant to 310 CMR 9.12(2)(e), in accordance with the mitigation and/or compensation measures for non-water dependent infrastructure facilities required by 310 CMR 9.55.
- (b) Tidelands Within Designated Port Areas (DPAs).
- 1. fill or structures for any water dependent industrial use, and accessory uses thereto, provided that:
 - a. in the case of proposed fill, neither pile supported nor floating structures are a reasonable alternative; and
 - b. in the case of parking, where the use cannot reasonably be located above the high water mark, and is not located within a water dependent use zone; and
 - c. when parking is limited to persons employed by or doing business with the water-dependent industrial use over flowed tidelands;
 - 2. fill or structures for recreational boating facilities of nine slips or less under the conditions specified in a DPA Master Plan;
 - 3. Supporting DPA Uses, as defined at 310 CMR 9.02, shall not exceed 25% of the area of the project site, excluding tidelands seaward of the project shoreline.
 - 4. Supporting DPA Uses on pile-supported structures over flowed tidelands may be allowed only through a DPA Master Plan or a Marine Industrial Park Master Plan, provided that said plan is based on a clear showing that the use meets the following requirements and is appropriate for the harbor in question:
 - a. no Supporting Use structure may be allowed in the Water-dependent Use Zone;
 - b. no Supporting Use parking shall be allowed on pile-supported structures over flowed tidelands;
 - c. non Water-dependent Supporting Use structure meet the standards of 310 CMR 9.51(3)(b) through (e); and
 - d. Supporting Use structures shall otherwise be appropriately sized and located, in accordance with 310 CMR 9.36(5)(b).
 - 5. The Department shall waive the numerical standard for Supporting DPA Uses as defined at 310 CMR 9.02, if the project conforms to a DPA Master Plan or Marine Industrial Park Master Plan which specifies alternative site coverage ratios and other requirements which ensure that:
 - a. said Supporting Uses are relatively condensed in footprint and compatible with existing water-dependent industrial uses on said pier;
 - b. said Supporting Use locations shall preserve and maintain the site's utility for existing and prospective water-dependent industrial uses;
 - c. parking associated with a Supporting Use is limited to the footprint of existing licensed fill and is not located within a Water-dependent Use Zone; and
 - d. The use of tidelands for this purpose in a DPA shall also be governed by the provisions of 310 CMR 9.15(1)(d)1. and 310 CMR 9.36(5).
 - 6. maintenance of existing, previously-authorized recreational boating facilities;
 - 7. recreational berths authorized in connection with a Boatyard in accordance with 310 CMR 9.39(2)(b), or as included in an approved Designated Port Area Master Plan pursuant to 301 CMR 23.05(2)(e)5.;
 - 8. structures to accommodate public pedestrian access, provided that such structures are located above the high water mark or within the footprint of existing pile supported structures or pile fields, wherever feasible;
 - 9. structures on filled tidelands to accommodate the following uses on a limited basis:
 - a. a use to be licensed in combination with water dependent industrial uses within a marine industrial park, as defined in 310 CMR 9.02; or

9.32: continued

b. a temporary use, as defined in 310 CMR 9.02.

The use of filled tidelands in a DPA for the above purposes shall also be governed by the provisions of 310 CMR 9.15(1)(d)1. and 9.36(5).

(c) Great Ponds.

1. fill or structures for any use on previously filled lands below the natural high water mark;

2. structures for water-dependent use on submerged lands below the natural high water mark, provided such structures are designed to avoid unnecessary encroachment in the water;

3. fill or structures on submerged lands above the natural high water mark, for uses listed for flowed tidelands in 310 CMR 9.32(1)(a).

(d) Non-tidal Rivers and Streams (Outside ACECs). Fill or structures for uses below the high water mark, as listed for flowed tidelands in 310 CMR 9.32(1)(a).

(e) Areas of Critical Environmental Concern (ACECs).

1. fill or structures for any use on previously filled tidelands;

2. structures to accommodate public pedestrian access on flowed tidelands, provided that it is not feasible to locate such structures above the high water mark or within the footprint of existing pile-supported structures or pile fields;

3. fill or structures to accommodate an Ecological Restoration Project, subject to approval under 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*, 310 CMR 10.00: *Wetlands Protection*, and 310 CMR 40.000: *Massachusetts Contingency Plan* if applicable, provided that any fill or dredged material used in an Ecological Restoration Project may not contain a chemical above the RCS-1 concentration, as defined in 310 CMR 40.000: *Massachusetts Contingency Plan*;

4. publicly-owned structures for other water-dependent use below the high water mark, provided that such structures are designed to minimize encroachment in the water;

5. privately-owned structures for other water-dependent use below the high water mark, provided that:

a. the proposed use is not industrial and is located within the footprint of existing previously authorized pile-supported structures, unless an insignificant deviation from said footprint is authorized by the Department in order to protect public health, safety, or the environment; or

b. such structures are necessary to accommodate infrastructure facilities, provided that such structures are designed to minimize encroachment in the water; or

c. such structures were existing on October 4, 1990 or the effective date of the ACEC designation, whichever is later, and if a resource management plan for the ACEC has been adopted by the municipality and approved by the Secretary said structures are consistent with said plan; or

d. such structures, if built or substantially altered after October 4, 1990 or the effective date of the ACEC designation, whichever is later, are consistent with a resource management plan adopted by the municipality and approved by the Secretary.

(2) Notwithstanding the provisions of 310 CMR 9.32(1), the Department may license fill or structures necessary for the following uses, provided that reasonable measures are taken to avoid, minimize, and mitigate any encroachment in a waterway:

(a) shoreline stabilization or the rehabilitation of an existing shore protection structure, irrespective of the uses proposed landward of such fill or structures;

(b) installation of drainage, ventilation, or utility structures, or placement of minor and incidental fill, necessary to accommodate any replacement, reconstruction or other modification to existing public roadways or existing railroad track and/or rail bed;

(c) improvement or rehabilitation of existing public roadways or existing railroad track and/or rail bed, provided that any net encroachment with respect to public roadways is limited to widening by less than a single lane, adding shoulders, and upgrading substandard intersections; or

(d) except as may be provided in 310 CMR 9.32(1)(b)1., accessory uses, other than parking, which are clearly subordinate and incidental to a water-dependent use, provided that:

9.32: continued

1. the fill or structures in question are not located in an ACEC, and do not result in any encroachment in the waterway beyond the area occupied by the water-dependent use itself; and
2. the accessory use cannot reasonably be located above the high water mark, and is not located within a water-dependent use zone.

9.33: Environmental Protection Standards

- (1) All projects must comply with applicable environmental regulatory programs of the Commonwealth, including but not limited to:
 - (a) Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61 through 62H and 301 CMR 11.00: *MEPA Regulations*.
 - (b) Wetlands Protection Act, M.G.L. c. 131, § 40, and 310 CMR 10.00: *Wetlands Protection*.
 - (c) Wetlands Restriction Acts, M.G.L. c. 130, § 105 and c. 131, § 40A, and 310 CMR 12.00: *Adopting Coastal Wetlands Orders* and 310 CMR 13.00: *Adopting Inland Wetlands Orders*. All projects shall comply with wetland restriction orders recorded pursuant to these statutes.
 - (d) Areas of Critical Environmental Concern, M.G.L. c. 21A, § 2(7) and St. 1974, c. 806, § 40(E), and 301 CMR 12.00: *Areas of Critical Environmental Concern*.
 - (e) Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26 through 53, and 314 CMR 3.00: *Surface Water Discharge Permit Program*, 314 CMR 5.00: *Ground Water Discharge Permit Program*, 314 CMR 7.00: *Sewer System Extension and Connection Permit Program*, 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*, and 310 CMR 15.00: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*.
 - (f) Ocean Sanctuaries Act, M.G.L. c. 132A, §§ 13 through 16 and 18, and 302 CMR 5.00: *Ocean Sanctuaries*. No license or permit shall be issued for any structure or fill that is expressly prohibited in M.G.L. c. 132A, §§ 1 through 16.
 - (g) Marine Fisheries Laws, M.G.L. c. 130, and 322 CMR 1.00: *Enforcement of Rules and Regulations*.
 - (h) Scenic Rivers Act, M.G.L. c. 21, § 17B, and 302 CMR 3.00: *Scenic and Recreational Rivers Orders*.
 - (i) Massachusetts Historical Commission Act, M.G.L. c. 9, §§ 26 through 27C, as amended by St. 1982, c. 152 and St. 1988, c. 254, and 950 CMR 71.00: *Protection of Properties Included in the State Register of Historic Places*. For projects for which a Project Notification Form must be submitted pursuant to 950 CMR 71.07: *Review of Projects* the applicant shall file said form with the Massachusetts Historical Commission.

9.33: continued

- (j) Mineral Resources Act, M.G.L. c. 21, §§ 54 through 58.
- (k) Massachusetts Drinking Water Act, M.G.L. c. 111, §§ 159 through 174A, and 310 CMR 22.00: *Land Application of Sludge and Septage*.
- (l) Underwater Archeological Resources Act, M.G.L. c. 91 and c. 6, §§ 179 and 180, and 312 CMR 2.00: *Massachusetts Underwater Archaeological Resources*.
- (m) Hazardous Waste Management Act, M.G.L. c. 21C, and 310 CMR 30.000: *Hazardous Waste*.
- (n) Solid Waste Disposal Act, M.G.L. c. 16, §§ 18 through 24, and 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities*.
- (o) Air Pollution Act, M.G.L. c. 111, §§ 142A through I, and 310 CMR 7.00: *Air Pollution Control*.
- (p) State Highway Curb Cuts, M.G.L. c. 81, § 21.
- (q) Energy Restructuring Act, M.G.L. c. 164, §§ 69G through S, and 980 CMR 1.00 through 12.00.
- (r) Regional land use control statutes, including the Martha's Vineyard Commission Act, St. 1974, c. 637, c. 831, and the Cape Cod Commission Act, St. 1989, c. 716.

(2) Where a state or regional agency has authority to issue regulatory approval, issuance of such approval shall be conclusive as to compliance with the regulatory program in question.

(3) With respect to M.G.L. c. 131, § 40, and 310 CMR 10.00: *Wetlands Protection*, if the Department has issued a final order of conditions the project shall be presumed to comply with the statute and the final order shall be deemed to be incorporated in the terms of the license or permit, with no additional wetland conditions imposed. If an order of conditions has been issued by the conservation commission and the Department has not taken jurisdiction, the Department shall presume the project complies with state wetland standards, except upon a clear showing of substantial noncompliance with such standards. In that event, the Department shall impose such additional conditions in the license or permit as will make the project substantially comply with state wetlands standards.

(4) Where a state agency has statutory responsibility but no authority to issue regulatory approval, the Department shall act in accordance with any MOU with said agency governing incorporation of its standards and requirements into waterways licenses and permits. In the absence of an MOU, the Department shall presume that the project complies with the statutes and regulations in question, unless the responsible state agency informs the Department otherwise. In that event, the Department shall consult with the responsible state agency and may adopt any formal recommendations received therefrom, provided such recommendations do not conflict with 310 CMR 9.00 or the purposes of M.G.L. c. 91.

9.34: Conformance with Municipal Zoning and Approved Municipal Harbor Plans

(1) Zoning Law. Any project located on private tidelands or filled Commonwealth tidelands must be determined to comply with applicable zoning ordinances and bylaws of the municipality(ies) in which such tidelands are located. The Department shall find this requirement is met upon receipt of written certification issued by the municipal clerk, or by another municipal official responsible for administering said zoning ordinances and bylaws, and signed by the municipal clerk, stating that the activity to be licensed is not in violation of said ordinances and bylaws. Compliance with zoning does not apply to any public service project that is exempted from such requirements by law including, but not limited to, action of the Department of Public Utilities pursuant to M.G.L. c. 40A, § 3.

(2) Approved Municipal Harbor Plan.

- (a) If the project is located within an area covered by an Approved Municipal Harbor Plan, said project must conform to the provisions of said plan to the degree applicable under plan approval at 301 CMR 23.00: *Review and Approval of Municipal Harbor Plans*, including substitute provisions adopted by the Department and listed in 310 CMR 9.57. In making this determination the Department shall take into account all relevant information in the public record, and shall act in accordance with the following provisions:

9.34: continued

1. the Department shall consult with the planning board or other municipal body with lead responsibility for plan implementation, as appropriate and in accordance with the provisions of 310 CMR 9.11(1). In the event a written recommendation as to plan conformance is submitted by such board or other body, the Department shall presume that the requirement is met or not met in accordance with said recommendation, except upon a clear showing to the contrary and except as otherwise provided in 310 CMR 9.34(2)(a)2.;
 2. the Department shall not find the requirement has been met if the project requires a variance or similar form of exemption from the substantive provisions of the Approved Municipal Harbor Plan, unless the Department determines the deviation to be *de minimis* or unrelated to the purposes of M.G.L. c. 91 or 310 CMR 9.00;
- (b) If the project conforms to the Approved Municipal Harbor Plan, the Department shall:
1. apply the use limitations or numerical standards specified in the Approved Municipal Harbor Plan and listed in 310 CMR 9.57 as a substitute for the respective limitations or standards contained in 310 CMR 9.32(1)(b)3., 9.51(3), 9.52(1)(b)1., and 9.53(2)(b) and (c), in accordance with the criteria specified in 310 CMR 9.32(1)(b)3., 9.51(3), 9.52(1)(b)1., and 9.53(2)(b) and (c) and in associated plan approval at 301 CMR 23.00: *Review and Approval of Municipal Harbor Plans* and associated guidelines of CZM;
 2. adhere to the greatest reasonable extent to applicable guidance specified in the Approved Municipal Harbor Plan which amplifies any discretionary requirements of 310 CMR 9.00, in accordance with the criteria specified in 301 CMR 23.00: *Review and Approval of Municipal Harbor Plans* and associated guidelines of CZM; and
 3. determine that the requirement of 310 CMR 9.54, governing consistency with CZM policies, has been met, if applicable, except upon a written showing by CZM for a project identified in 310 CMR 9.13(2)(a) for CZM participation that the project conflicts with CZM policy in effect when the license application was completed, in a manner that was not reasonably foreseeable at the time of plan approval.

9.35: Standards to Preserve Water-related Public Rights

(1) General. The project shall preserve any rights held by the Commonwealth in trust for the public to use tidelands, Great Ponds and other waterways for lawful purposes; and shall preserve any public rights of access that are associated with such use. In applying this standard the Department shall act in accordance with the provisions of 310 CMR 9.35(2) through (6), and shall give particular consideration to applicable guidance specified in an Approved Municipal Harbor Plan, as provided in 310 CMR 9.34(2)(b)2. Further, in assessing the significance of any interference with public rights pursuant to 310 CMR 9.35(2) and(3), the Department shall take into account that the provision of public benefits by certain water-dependent uses may give rise to some unavoidable interference with certain water-related public rights. Such interference may be allowed provided that mitigation is provided to the greatest extent deemed reasonable by the Department, and that the overall public trust in waterways is best served.

(2) Public Rights Applicable to All Waterways.

(a) Navigation. The project shall not significantly interfere with public rights of navigation which exist in all waterways. Such rights include the right to conduct any activity which entails the movement of a boat, vessel, float, or other watercraft; the right to conduct any activity involving the transport or the loading/unloading of persons or objects to or from any such watercraft; and the natural derivatives thereof.

1. The Department shall find that the standard is not met in the event a project will:
 - a. extend seaward of any state harbor line, unless said project is specifically authorized by law or, if not so authorized, is a pipeline, conduit or cable which is entirely embedded in the soil and does not in any part occupy or project into such tidewater beyond the harbor line, provided also that the Department may at any time require any pipeline, conduit or cable to be removed or relocated if channel changes or alterations demand the same, as required by M.G.L. c. 91, § 14;
 - b. extend into or over any existing channel such as to impede free passage;
 - c. impair any line of sight required for navigation;
 - d. require the alteration of an established course of vessels;
 - e. interfere with access to adjoining areas by extending substantially beyond the projection of existing structures adjacent to the site;

9.35: continued

- f. extend beyond the length required to achieve a safe berthing, where there are no adjacent structures;
- g. generate water-borne traffic that would substantially interfere with other water-borne traffic in the area at present, or in the future as may be evidenced by documented projections;
- h. alter, due to the building of a solid fill structure, tidal action or other currents so as to interfere with the ability to handle vessels;
- i. adversely affect the depth or width of an existing channel; or
- j. impair in any other substantial manner the ability of the public to pass freely upon the waterways and to engage in transport or loading/unloading activities.

The Department may require, among other things, warning devices and other navigation aids as it deems appropriate to reduce interference with navigation.

2. In the event that reducing the length of a structure to avoid significant interference with navigation would create adverse effects on the environment due to dredging, the Department may license or permit a longer structure provided its construction will entail less dredging without producing substantial interference with navigation.

3. In the event the project is located within a Designated Port Area, the Department may authorize fill, structures, or dredging that significantly interferes with navigation by recreational vessels or with shellfishing areas, provided that such activities are for water-dependent-industrial use and that all feasible measures will be taken to mitigate such interference.

(b) Free Passage Over and Through Water. The project shall not significantly interfere with public rights of free passage over and through the water, which exist in all waterways. Such rights include the right to float on, swim in, or otherwise move freely within the water column without touching the bottom, and, in Commonwealth Tidelands and Great Ponds, to walk on the bottom.

(c) Access to Town Landings. The project shall not significantly interfere with public rights associated with a common landing, public easement, or other historic legal form of public access from the land to the water that may exist on or adjacent to the project site.

(3) Public Rights Applicable to Tidelands and Great Ponds

(a) Fishing and Fowling. The project shall not significantly interfere with public rights of fishing and fowling which exist in tidelands and Great Ponds. Such rights include the right to seek or take any fish, shellfish, fowl, or floating marine plants, by any legal means, from a vessel or on foot; the right to protect habitat and nutrient source areas in order to have fish, fowl, or marine plants available to be sought and taken; and the natural derivatives thereof. The Department shall find that the standard is not met in the event the project:

- 1. poses a substantial obstacle to the public's ability to fish or fowl in waterway areas adjacent to the project site; or
- 2. results in the elimination of a traditional fishing or fowling location used extensively by the public.

(b) On-foot Passage. The project shall not significantly interfere with public rights to walk or otherwise pass freely on private tidelands for purposes of fishing, fowling, navigation, and the natural derivatives thereof; and on Commonwealth tidelands and Great Ponds for said purposes and all other lawful activities, including swimming, strolling, and other recreational activities. The Department shall find that the standard is not met if the project does not comply with the following conditions governing public pedestrian access:

- 1. if the project site includes flowed private tidelands, the project shall allow continuous, on-foot, lateral passage by the public in the exercise of its rights therein, wherever feasible; any pier, wharf, groin, jetty, or other structure on such tidelands shall be designed to minimize interference with such passage, either by maintaining at least a five-foot clearance above the ground along the high water mark or by providing a stairway for the public to pass laterally over such structures; where obstruction of continuous access below the high water mark is unavoidable, the project shall provide alternate lateral passage to the public above said mark in order to mitigate interference with the public right of passage on flowed private tidelands;
- 2. if the project site includes filled tidelands or Great Ponds, the project shall include reasonable measures to provide on-foot passage on such lands for the public in the exercise of its rights therein, in accordance with the following provisions:

9.35: continued

- a. if the project is a nonwater-dependent use project, said project shall provide public pedestrian access facilities in accordance with the applicable provisions of 310 CMR 9.52 or, for infrastructure facilities, of 310 CMR 9.55;
- b. if the project is a water-dependent use project on filled Commonwealth tidelands, said project shall provide for public passage thereon by such means as are consistent with the need to avoid undue interference with the water-dependent uses in question; measures which may be appropriate in this regard include, but are not limited to, allowing the public to pass laterally along portions of the project shoreline, or transversely across the site to a point on the project shoreline.

(4) Compensation for Interference with Public Rights in Commonwealth Tidelands and Great Ponds. Any water-dependent use project which includes fill or structures for private use of Commonwealth tidelands or Great Ponds shall provide compensation to the public for interfering with its broad rights to use such lands for any lawful purpose. Such compensation shall be commensurate with the extent of interference caused, and shall take the form of measures deemed appropriate by the Department to promote public use and enjoyment of the water, at a location on or near the project site if feasible. If the project includes a private recreational boating facility, the Department shall apply this standard in accordance with the following provisions:

- (a) for any private recreational boating facility, reasonable arrangements shall be made to accommodate public pedestrian access along or to the water's edge; generally, unless other measures are determined to be more appropriate by the Department, such access shall be provided by establishing, as a condition of the license, a lateral accessway at or near the high water mark wherein the public may pass freely across the seaward end of the property from dawn to dusk;
- (b) if the private recreational boating facility is a marina, additional arrangements shall be made to provide water-related benefits to the public commensurate with the scale of such facility; examples of such benefits include construction of a public boat launching ramp, operation of an ongoing program of community sailing or boating instruction, dedication of a substantial number of berths to public transient use, and provision of public pedestrian facilities beyond those required elsewhere in 310 CMR 9.00.

Nothing in the above provision shall be construed to prevent the licensee from restricting public access to slips, floats, ramps, and other docking facilities where security for recreational vessels is required.

(5) Management of Areas Accessible to the Public. Any project that includes tidelands or Great Ponds accessible to the public, in accordance with any of 310 CMR 9.35(1) through (4), shall provide for long-term management of such areas which achieves effective public use and enjoyment while minimizing conflict with other legitimate interests, including the protection of private property and natural resources. In applying this standard, the Department shall act in accordance with the following provisions.

- (a) No limitation on hours of availability or scope of allowed activity, or other substantial restriction, may be placed on said public access except as expressly authorized in the license; reasonable rules and regulations governing public use of such areas may be adopted by the licensee, and may be subject to review and approval by the Department, or its designee, if so provided in the license.
- (b) Any project required to provide public access facilities in accordance with 310 CMR 9.35(3)(b)2. or (4)(b), or any other project as deemed appropriate by the Department, shall encourage public patronage of such facilities by placing and maintaining adequate signage at all entryways and at other appropriate locations on the project site; said signage shall:
 - 1. conform to all local laws and regulations and any design guidelines that may be specified by the Department or its designee; and
 - 2. include at least one sign, in a prominent location, which advises the public of its access rights; discloses whatever access-related rules and regulations are in effect, including restrictions on hours of operation, if any; and discloses the license number of the project and a location on the site where a copy of the license may be inspected by the public.
- (c) No gates, fences, or other structures may be placed on any areas open to public access in a manner that would impede or discourage the free flow of pedestrian movement thereon; and all pedestrian exterior open spaces shall be open to the public 24 hours a day, unless otherwise authorized in writing by the Department.

9.35: continued

(d) The Department may include conditions in a license which restrict public pedestrian access in order to protect public health, safety, or the environment, and shall specify such additional access-related requirements as are deemed appropriate to offset any significant loss of benefits to the public which may be associated with such restrictions.

(6) Limitation on Liability. If a project includes measures to accommodate public pedestrian access in accordance with any provision of 310 CMR 9.35, the licensee shall be considered to be a private landowner who opens land to public recreational use without a fee and who is therefore not liable, pursuant to M.G.L. c. 21, § 17C, for injuries to persons or property due to public use, unless the owner's conduct is willful or reckless.

9.36: Standards to Protect Water-dependent Uses

(1) General. The project shall preserve the availability and suitability of tidelands, Great Ponds, and other waterways that are in use for water-dependent purposes, or which are reserved primarily as locations for maritime industry or other specific types of water-dependent use. In applying this standard the Department shall act in accordance with 310 CMR 9.36(2) through (5), and shall give particular consideration to applicable guidance specified in an Approved Municipal Harbor Plan, as provided in 310 CMR 9.34(2)(b)2.

(2) Private Access to Littoral or Riparian Property. The project shall not significantly interfere with littoral or riparian property owners' right to approach their property from a waterway, and to approach the waterway from said property, as provided in M.G.L. c. 91, § 17. In evaluating whether such interference is caused by a proposed structure, the Department may consider the proximity of the structure to abutting littoral or riparian property and the density of existing structures. In the case of a proposed structure which extends perpendicular to the shore, the Department shall require its placement at least 25 feet away from such abutting property lines, where feasible.

(3) The project shall not significantly disrupt any water-dependent use in operation, as of the date of license application, at an off-site location within the proximate vicinity of the project site. The project shall include such mitigation and/or compensation measures as the Department deems appropriate to avoid such disruption.

(4) The project shall not displace any water-dependent use that has occurred on the site within five years prior to the date of license application, except upon a clear showing by the applicant that said use:

- (a) did not take place on a reasonably continuous basis, for a substantial period of time; or
- (b) has been or will be discontinued at the site by the user, for reasons unrelated to the proposed project or as a result of voluntary arrangements with the applicant.

Absent the above showings, the project shall include arrangements determined to be reasonable by the Department for the water-dependent use to be continued at its existing facility, or at a facility at an alternative location having physical attributes, including proximity to the water, and associated business conditions which equal or surpass those of the original facility and as may be identified in an Approved Municipal Harbor Plan, if any. Permanent relocation to an off-site facility may occur in order to accommodate a public service project for which relocation arrangements are governed by law, or if the Department determines that it is not appropriate for the water-dependent use to continue on the site. Otherwise, only temporary relocation may occur as necessary for project construction.

(5) The project shall not include fill or structures for nonwater-dependent or water-dependent, non-industrial uses which preempt water-dependent-industrial use within a Designated Port Area (DPA). In applying this standard the Department shall act in accordance with the following provisions:

9.36: continued

(a) such fill or structures shall not occupy tidelands which the Department determines are necessary to accommodate a competing party who intends to develop such tidelands for water-dependent industrial use, provided written notice of such party's intention is submitted to the Department prior to the close of the public comment period on the license application; such determination shall be based upon a clear showing, within a period of time deemed reasonable by the Department, that the competing project would promote water-dependent-industrial use of the DPA to a greater degree than the proposed project, and that the competing party:

1. is a state or local government agency, or is a maritime business or other organization with the expertise, experience, and financial ability to implement the competing project;
2. has prepared detailed development plans for the competing project, including appropriate feasibility studies;
3. has tendered an offer to purchase title or other rights to the tidelands in question, at fair market value for water-dependent-industrial use; and
4. has proposed waterways license conditions or other arrangements which will restrict the tidelands in question to the uses contained in the competing projects for a period of time deemed appropriate by the Department;

(b) reasonable arrangements shall be made to prevent commitments of space or facilities that would significantly discourage present or future water-dependent-industrial activity on the project site or elsewhere in the DPA; such arrangements shall include, but are not limited to, the following:

1. in general, no structures shall be built or altered which cannot be subsequently removed or converted to water-dependent-industrial use with relative ease; otherwise, the Department may impose, as a condition of the license, a requirement for removal or restoration of such structures upon expiration of the license;
2. nonwater-dependent uses shall not be located in any spaces or facilities with attributes that are necessary to maintain the utility of the project site for prospective water-dependent-industrial use, especially that for which it is among the most suitable in the harbor in question; at a minimum, such nonwater-dependent uses shall not occur in new structures within the water-dependent use zone;
3. within a marine industrial park, conditions governing the duration of tenancy or other mechanisms must be established to ensure that nonwater-dependent activity occurs in a manner that preserves adequate flexibility over time for the park to accommodate water-dependent-industrial uses; at a minimum, reasonable steps shall be taken to assign a priority for said uses to occupy spaces or facilities as they become available in the future;
4. in the case of supporting DPA use, conditions governing the nature and extent of operational or economic support must be established to ensure that such support will be effectively provided to water-dependent-industrial uses.

9.37: Engineering and Construction Standards

(1) All fill and structures shall be designed and constructed in a manner that:

- (a) is structurally sound, as certified by a Registered Professional Engineer;
- (b) complies with applicable state requirements for construction in flood plains, in accordance with the State Building Code, 780 CMR and as hereafter may be amended, and will not pose an unreasonable threat to navigation, public health or safety, or adjacent buildings or structures, if damaged or destroyed in a storm; and
- (c) does not unreasonably restrict the ability to dredge any channels.

(2) In the case of a project within a flood zone, the project shall comply with the following requirements:

- (a) In coastal high hazard areas as defined in 310 CMR 9.02, new or expanded buildings for residential use shall not be located seaward of the high water mark.
- (b) New buildings for nonwater-dependent use intended for human occupancy shall be designed and constructed to:
 1. withstand the wind and wave forces associated with the statistical 100-year frequency storm event; and

9.37: continued

2. incorporate projected sea level rise during the design life of the buildings; at a minimum, such projections shall be based on historical rates of increase in sea level in New England coastal areas.
- (3) Projects with coastal or shoreline engineering structures shall comply with the following:
 - (a) any seawall, bulkhead, or revetment shall be located landward of the high water mark unless it must lie below the high water mark to permit proper tieback placement, to obtain a stable slope on bank areas, or to be compatible with abutting seawalls, bulkheads, or revetments in terms of design, size, function, and materials, or unless it is associated with new fill permitted according to the provisions of 310 CMR 9.32;
 - (b) any breakwater or similar structure designed to dissipate or otherwise reduce wave energy or to interfere with current flow shall not:
 1. cause or contribute to water stagnancy;
 2. reduce the ability of adjacent water bodies to flush adequately; or
 3. cause or contribute to sedimentation problems in adjacent or nearby navigation channels, anchorages, or wetland resource areas, or cause increased erosion to inland or coastal beaches, banks, or other wetland resource areas;
 - (c) in evaluating coastal or shoreline engineering structures, the Department shall require non-structural alternatives where feasible;
 - (d) the Department shall evaluate coastal or shoreline engineering structures for compatibility with abutting coastal or shoreline engineering structures in terms of design, size, function, and materials;
 - (e) if the Department finds significant adverse effects on the project site or adjacent or downcoast and downstream areas after construction of any coastal or shoreline engineering structure, the Department may, after an opportunity for a hearing, require modification of said structure the cost of which may not exceed 25% of the replacement cost of said structure, or may require the removal of said structure; 310 CMR 9.37(3)(e) shall be specifically stated in the license.
 - (4) Pipelines and conduits and their valves and protrusions shall be buried so that they will not present a hazard to navigation; will be adequately protected from scouring; will not be uncovered by sediment transport; and will not present a hazard or obstruction to fishing gear. Bottom contours shall be restored after burial. Pipelines carrying hazardous substances (*e.g.*, oil) shall also be protected from anchor dragging and fish trawls. When the burial of pipelines, conduits, valves, and protrusions is not feasible, equivalent protection shall be provided by shrouding or other means.

9.38: Use Standards for Recreational Boating Facilities

- (1) Public Recreational Boating Facilities. Any project that includes a public recreational boating facility, any portion of which is located on Commonwealth tidelands or Great Ponds, shall include measures to ensure patronage of such facility by the general public. In applying this standard the Department shall act in accordance with the following provisions:
 - (a) all vacant berths shall be assigned in a fair and equitable manner to the public patrons of said facility, by means of a waiting list or other comparably unbiased method; nothing in this provision shall be construed to prevent berthing assignments based on vessel characteristics, or the offer of first refusal rights to existing patrons of the facility who wish to relocate to a vacant berth;
 - (b) any contract or other agreement for exclusive use of berths at said facility shall have a maximum term of one year, and may be renewable upon each expiration for an additional period of up to one year;
 - (c) reasonable arrangements shall be made to accommodate transient boaters, including, at a minimum, a procedure for making any berth available for transient use during periods of vacancy in excess of 24 hours;
 - (d) all exterior pedestrian facilities on the project site shall be open to the general public, except where access restrictions are necessary in order to avoid significant interference with the operation of the facility or to maintain security at slips, ramps, floats, and other docking facilities; any such access restrictions shall be stated in the license.

9.38: continued

(2) Private Recreational Boating Facilities.

(a) Any project that includes a private recreational boating facility, any portion of which is located on Commonwealth tidelands or Great Ponds, shall include measures to avoid undue privatization in the patronage of said facility. In applying this standard, the Department shall act in accordance with the following provisions:

1. no berth in a marina shall be assigned pursuant to any contract or other agreement that makes use of the berth contingent upon ownership or occupancy of a residence or other nonwater-dependent facility of private tenancy;
2. no berth in a marina shall be assigned pursuant to a contract or other agreement for exclusive use with a maximum term that exceeds one year, unless:
 - a. for existing marinas, the lease agreement, master lease agreement or notice thereof for such berths was recorded at the Registry of Deeds prior to July 6, 1990 in which event all berths subject to such agreement shall be exempt from the provisions of 310 CMR 9.38(2)(b); or
 - b. for new marinas or berths in an existing marina not grandfathered pursuant to 310 CMR 9.38(2)(a), the following conditions are met:
 - i. said marina is located on tidelands outside of Designated Port Area;
 - ii. the Department expressly authorizes the assignment of long-term exclusive use of such berths in the license, and the license includes a condition requiring written notification to any assignee that said license does not convey ownership of Commonwealth tidelands;
 - iii. the number of berths authorized in the license does not exceed 50% of the total berths in said marina; and
 - iv. said marina provides water-related public benefits commensurate with the degree of privatization, as deemed appropriate by the Department.

(b) No project shall include a private recreational boating facility with fewer than ten berths on Commonwealth tidelands or Great Ponds, if the Department receives written certification from the municipal official or planning board of the municipality in which the project is located that such facility does not conform to a formal, areawide policy or plan which establishes municipal priorities among competing uses of the waterway, unless the Department determines that such certification:

1. is arbitrary, capricious, or an abuse of discretion; or
2. conflicts with an overriding state, regional, or federal interest.

9.39: Standards for Marinas, Boatyards, and Boat Ramps(1) Marinas.

(a) Design Standards for Marinas. Any project that includes a new marina, or any expansion thereof to ten or more berths greater than the number of berths existing on the effective date of 310 CMR 9.00, shall comply with the following design requirements:

1. all docking facilities, including passageways, shall be certified to be structurally sound by a registered professional engineer;
2. safe and unobstructed navigational ingress and egress to docking facilities shall be provided;
3. sanitary facilities shall be provided, including:
 - a. an adequate number of restrooms and refuse receptacles appropriate for the number of berths at the marina; in general, there should be one toilet fixture per sex for every 50 berths, and refuse receptacles at every gangway and restroom area; and
 - b. sewage pumpout facilities shall be provided as appropriate based on the number of berths and type of vessels at the marina, the availability of such facilities nearby, and environmental considerations including the water circulation patterns of the waterway and the proximity of shellfish resources; in general, there should be a sewage pumpout facility for marinas with more than 50 berths, or as otherwise specified in an Approved Municipal Harbor Plan; documentation shall be provided showing compliance with local, state, and federal requirements for said facilities;
4. any utility services provided at the marina shall be constructed and maintained in compliance with all applicable local and state requirements;
5. all lighting at the marina shall be designed to minimize interference with navigation by reflection, glare, or interference with aids to navigation;

9.39: continued

6. if the applicant proposes to provide facilities for storage, pumping or conveyance of petroleum fuels, the following information shall also be provided:
 - a. a detailed description and site location plan for marine related facilities necessary for the pumping, conveyance and storage of any petroleum products;
 - b. a list of methods and equipment to be used for containment and clean-up of any petroleum fuels accidentally discharged into the water, including minor spills during routine operations; and a detailed contingency plan for major spills;
 - c. documentation showing compliance with applicable local, state and federal requirements for said facilities.

(b) Reconfiguration of Docking Facilities in a Marina. In a license or license amendment, the Department may delineate a zone within a marina for purposes of future reconfiguration of existing, licensed docking facilities, including pile-held or bottom-anchored floating walkways and finger piers, floats, and mooring piles. Such reconfiguration may proceed upon written approval by the Department, but without further licensing action if:

1. the licensee submits to the Department a written request and plan for reconfiguration which does not extend beyond the delineated zone, and which does not result in an increase in the area of waterway occupied from that which was originally licensed;
2. the licensee submits to the Department a statement affirming that the material submitted to the Department under 310 CMR 9.39(1)(b)1. has, at the time of such submittal, also been sent to the harbormaster of the affected municipality or, if the municipality has no harbormaster, to the municipal official, and that said harbormaster or municipal official has been informed that he has 30 days to register any objections to the proposed reconfiguration plan with the Department;
3. all other applicable permits have been obtained, including any required approval under M.G.L. c. 131, § 40 and 310 CMR 10.00: *Wetlands Protection*.

The Department shall act upon any such request within 60 days of receipt.

(2) Boatyards.

(a) The license application for any boatyard or expansion thereof shall indicate on the license plan that the following facilities and information will be provided:

1. adequate oil, grease, sediment, and paint traps and other appropriate measures used to contain by-products of boat service, repair and construction to prevent them from discharging into the adjacent waterway;
2. boat out-hauling and launching facilities which have been certified as structurally sound by a registered professional engineer; and
3. documentation showing compliance with applicable local, state and federal requirements for the use and storage of hazardous materials.

(b) Recreational berths may be licensed in connection with a Boatyard in Designated Port Area in compliance with a MHP/DPA Master Plan, and in accordance with 310 CMR 9.32(1)(b)2., and the following:

1. the number of berths shall be commensurate in scale with the operation of the boatyard;
2. the berths may be licensed in connection with an active Boatyard only and shall be discontinued in the event that Boatyard operations at the site cease; and
3. the location of the berths and their use shall preserve water-related public rights and protect water-dependent uses.

(3) Boat Launching Ramps. The license application for any boat launching ramp for public use, or any expansion thereof, shall indicate on the license plan that the following facilities will be provided, to a degree deemed appropriate by the Department:

- (a) turning areas to facilitate the launching and retrieval of boats to or from the water;
- (b) parking areas for vehicles and boat trailers;
- (c) permanent or temporary sanitary facilities for boaters using the launching ramp, as necessary in light of anticipated water quality or other environmental concerns and maintenance considerations;
- (d) ramps constructed, where possible, at an angle no greater than 15% from the horizontal; where upland modification is necessary, the slope grade should be created, if possible, by cutting back into the upland; ramps should be approximately even with beach or upland grade elevations; and ramps should extend a sufficient distance inland to prevent washout at the inland edge and where possible should extend a minimum of five feet beyond the low water mark; and

9.39: continued

(e) sufficient access facilities and water depths so as to provide safe navigational ingress and egress; this may include adjacent catwalks, tie-off pilings, or access piers and suitable associated water area for staging of boat launching and retrieval; water depths at the launching area of the ramp should be the minimum depth necessary to accommodate the types of boats which will use the facility.

9.40: Standards for Dredging and Dredged Material Disposal

Any project that includes dredging or dredged material disposal shall comply with the following requirements:

(1) Limitations on Dredging and Disposal Activity

(a) The project shall not include any dredging of channels, mooring basins, or turnaround basins to a mean low water depth greater than 20 feet, unless said project:

1. is located within a Designated Port Area; or
2. serves a commercial navigation purpose of state, regional, or federal significance, and cannot reasonably be located in a Designated Port Area.

(b) If the project is located in an ACEC, the project shall not include any of the following activities:

1. improvement dredging, unless the dredging is: for the sole purpose of fisheries or wildlife enhancement; part of an Ecological Restoration Project; or conducted by a public entity for the sole purpose of the maintenance or restoration of historic, safe navigation channels or turnaround basins of a minimum length, width and depth consistent with a Resource Management Plan adopted by the municipality(ies) and approved by the Secretary.
2. dredged material disposal, except for the sole purpose of beach nourishment, dune construction, reconstruction or stabilization with proper vegetative cover, the enhancement of fishery or wildlife resources, or unless the dredged material disposal is part of an Ecological Restoration Project in accordance with 314 CMR 9.07(1)(c) and 310 CMR 10.11(6)(b) and 310 CMR 40.000: *Massachusetts Contingency Plan*, if applicable, provided that any fill or dredged material used in an Ecological Restoration Project may not contain a chemical above the RCS-1 concentration, as defined in 310 CMR 40.000: *Massachusetts Contingency Plan*.

(2) Resource Protection Requirements.

(a) The design and timing of dredging and dredged material disposal activity shall be such as to avoid interference with anadromous/catadromous fish runs. At a minimum, no such activity shall occur in such areas between March 15th and June 15th of any year, except upon a determination by the Division of Marine Fisheries, pursuant to M.G.L. c. 130, § 19, that such an activity will not obstruct or hinder the passage of fish.

(b) The design and timing of dredging and dredged material disposal activity shall be such as to minimize adverse impacts on shellfish beds, fishery resource areas, and submerged aquatic vegetation. The Department may consult with the Department of Fish and Game or the natural resource officer of the municipality regarding the assessment of such impacts.

(3) Operational Requirements for Dredging.

(a) The extent of dredging shall not exceed that reasonably necessary to accommodate the navigational requirements of the project and provide adequate water circulation.

(b) The shoreward extent of dredging shall be a sufficient distance from the edge of adjacent marshes to avoid slumping. In general, for improvement dredging projects the edge of the dredging footprint, including any side cuts, should be at least 25 feet from any marsh boundary. In areas where significant wake or wash will be generated by vessel traffic, increased setbacks may be incorporated based on appropriate design calculations.

(c) In general, no basin, canal, or channel shall be dredged deeper than the main channel to which it is connected.

(d) To the maximum reasonable extent, basins shall have wide openings and short entrance channels to promote tidal exchange within the basin.

(e) In general, hydraulic dredging shall be favored over mechanical methods, except when open water disposal of fine grained material is proposed.

9.40: continued

(4) Operational Requirements for Dredged Material Disposal.

(a) Where determined to be reasonable by the Department, clean dredged material shall be disposed of in a manner that serves the purpose of beach nourishment, in accordance with the following provisions:

1. in the case of a publicly-funded dredging project, such material shall be placed on publicly-owned eroding beaches; if no appropriate site can be located, private eroding beaches may be nourished if easements for public access below the existing high water mark can be secured by the applicant from the owner of the beach to be nourished; or
2. in the case of a privately-funded dredging project, such material may be placed on any eroding beach.

(b) In the event ocean disposal of dredged material is determined to be appropriate by the Department, the licensee or permittee shall:

1. publish in the *Notice to Mariners* the date, time, and proposed route of all ocean disposal activities and the coordinates of the ocean disposal site, as deemed appropriate by the U.S. Coast Guard;
2. ensure that transport vessels are not loaded beyond capacity; are equipped with sudden, high volume release mechanisms; and are at a complete stop when the material is released; and
3. ensure that disposal occurs within the boundaries of an approved or otherwise formally designated ocean disposal site; and that the discharge location is marked during disposal operations by a buoy equipped with a flashing light and radar reflectors which allow it to be located under variable sea/weather conditions.

(5) Supervision of Dredging and Disposal Activity.

(a) The licensee or permittee shall inform the Department in writing at least three days before commencing any authorized dredging or dredged material disposal.

(b) The licensee or permittee shall provide, at his or her expense, a dredging inspector approved by the Department who shall accompany the dredged material while in transit and during discharges, either upon the scows containing the dredged material or upon the boat towing them, for the following activities:

1. any offshore disposal;
2. any onshore disposal of dredged material greater than 10,000 cubic yards; or
3. the disposal of materials defined by the Department as potentially degrading or hazardous.

(c) The name, address, and qualifications of the dredging inspector shall be submitted to the Department as part of the license or permit application for approval.

(d) Within 30 days after the completion of the dredging, a report shall be submitted to the Department certified by the dredging inspector, including daily logs of the dredging operation indicating volume of dredged material, point of origin, point of destination, and other appropriate information.

9.51: Conservation of Capacity for Water-dependent Use

A nonwater-dependent use project that includes fill or structures on any tidelands shall not unreasonably diminish the capacity of such lands to accommodate water-dependent use. In applying this standard, the Department shall take into account any relevant information concerning the utility or adaptability of the site for present or future water-dependent purposes, especially in the vicinity of a water-dependent use zone; and shall adhere to the greatest reasonable extent to applicable guidance specified in an Approved Municipal Harbor Plan, as provided in 310 CMR 9.34(2)(b)2. At a minimum, the Department shall act in accordance with the following provisions:

(1) If the project includes nonwater-dependent facilities of private tenancy, such facilities must be developed in a manner that prevents significant conflict in operation between their users and those of any water-dependent facility which reasonably can be expected to locate on or near the project site. Characteristics of the respective facilities that may give rise to such user conflict include, but are not limited to:

- (a) presence of noise and odors;
- (b) type of equipment and accessory services;
- (c) hours of operation and spatial patterns of activity;
- (d) traffic flows and parking needs;

9.51: continued

- (e) size and composition of user groups;
- (f) privacy and security requirements; and
- (g) requirements for public infrastructure.

(2) If the project includes new structures or spaces for nonwater-dependent use, such structures or spaces must be developed in a manner that protects the utility and adaptability of the site for water-dependent purposes by preventing significant incompatibility in design with structures and spaces which reasonably can be expected to serve such purposes, either on or adjacent to the project site. Aspects of built form that may give rise to design incompatibility include, but are not limited to:

- (a) the total surface coverage by buildings and other permanent structures, insofar as it may affect the amount of open space where flexibility to serve water-dependent purposes will be retained;
- (b) the layout and configuration of buildings and other permanent structures, insofar as they may affect existing and potential public views of the water, marine-related features along the waterfront, and other objects of scenic, historic or cultural importance to the waterfront, especially along sight lines emanating in any direction from public ways and other areas of concentrated public activity;
- (c) the scale of buildings and other permanent structures, insofar as it may affect wind, shadow, and other conditions of the ground level environment that may affect users of water-dependent facilities; and
- (d) the landscape design of exterior open spaces, insofar as it may affect the attainment of effective pedestrian and vehicular circulation within and to areas of water-dependent activity.

(3) The Department shall find that the standard is not met if the project does not comply with the following minimum conditions which, in the absence of an Approved Municipal Harbor Plan which promotes the policy objectives stated herein with comparable or greater effectiveness, are necessary to prevent undue detriments to the capacity of tidelands to accommodate water-dependent use:

- (a) new pile-supported structures for nonwater-dependent use shall not extend beyond the footprint of existing, previously authorized pile-supported structures or pile fields, except where no further seaward projection occurs and the area of open water lost due to such extension is replaced, on at least a 1:1 square foot basis, through the removal of existing, previously authorized fill or pile-supported structures or pile fields elsewhere on the project site; as provided in 310 CMR 9.34(2)(b)1., the Department shall waive the on-site replacement requirement if the project conforms to an Approved Municipal Harbor Plan which, as determined by the Secretary in the approval of said plan and by the Department through the adoption of substitute provisions in said plan, specifies alternative replacement requirements which ensure that no net loss of open water will occur for nonwater-dependent purposes, in order to maintain or improve the overall capacity of the state's waterways to accommodate public use in the exercise of water-related rights, as appropriate for the harbor in question;
- (b) Facilities of Public Accommodation, but not nonwater-dependent Facilities of Private Tenancy, shall be located on any pile-supported structures on flowed tidelands and at the ground level of any filled tidelands within 100 feet of a project shoreline. The Department may allow any portion of the equivalent area of a Facility of Public Accommodation to be relocated within the building footprint, or in other buildings owned, controlled or proposed for development by the applicant within the Development Site if the Department determines the alternative location would more effectively promote public use and enjoyment of the project site. As provided in 310 CMR 9.34(2)(b)1., the Department shall waive the above use limitations if the project conforms to an Approved Municipal Harbor Plan which, as determined by the Secretary in the approval of said plan and by the Department through the adoption of substitute provisions in said plan, specifies alternative limitations and other requirements which ensure that no significant privatization of waterfront areas immediately adjacent to the water-dependent use zone will occur for nonwater-dependent purposes, in order that such areas will be generally free of uses that conflict with, preempt, or otherwise discourage water-dependent activity or public use and enjoyment of the water-dependent use zone, as appropriate for the harbor in question;

9.51: continued

(c) new or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; except as provided below, the width of said zone shall be determined as follows:

1. along portions of a project shoreline other than the edges of piers and wharves, the zone extends for the lesser of 100 feet or 25% of the weighted average distance from the present high water mark to the landward lot line of the property, but no less than 25 feet; and
2. along the ends of piers and wharves, the zone extends for the lesser of 100 feet or 25% of the distance from the edges in question to the base of the pier or wharf, but no less than 25 feet; and
3. along all sides of piers and wharves, the zone extends for the lesser of 50 feet or 15% of the distance from the edges in question to the edges immediately opposite, but no less than ten feet.

As provided in 310 CMR 9.34(2)(b)1., the Department shall waive the above numerical standards if the project conforms to an Approved Municipal Harbor Plan which, as determined by the Secretary in the approval of said plan and by the Department through the adoption of substitute provisions in said plan, specifies alternative setback distances and other requirements which ensure that new buildings for nonwater-dependent use are not constructed immediately adjacent to a project shoreline, in order that sufficient space along the water's edge will be devoted exclusively to water-dependent activity and public access associated therewith, as appropriate for the harbor in question;

(d) at least one square foot of the project site at ground level, exclusive of areas lying seaward of a project shoreline, shall be reserved as open space for every square foot of tideland area within the combined footprint of buildings containing nonwater-dependent use on the project site; in the event this requirement cannot be met by a project involving only the renovation or reuse of existing buildings, ground level open space shall be provided to the maximum reasonable extent; as provided in 310 CMR 9.34(2)(b)1., the Department shall waive the above numerical standard if the project conforms to an Approved Municipal Harbor Plan which, as determined by the Secretary in the approval of said plan and by the Department through the adoption of substitute provisions in said plan, specifies alternative site coverage ratios and other requirements which ensure that, in general, buildings for nonwater-dependent use will be relatively condensed in footprint, in order that an amount of open space commensurate with that occupied by such buildings will be available to accommodate water-dependent activity and public access associated therewith, as appropriate for the harbor in question;

(e) new or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark; as provided in 310 CMR 9.34(2)(b)1., the Department shall waive such height limits if the project conforms to an Approved Municipal Harbor Plan which, as determined by the Secretary in the approval of said plan and by the Department through the adoption of substitute provisions in said plan, specifies alternative height limits and other requirements which ensure that, in general, such buildings for nonwater-dependent use will be relatively modest in size, in order that wind, shadow, and other conditions of the ground level environment will be conducive to water-dependent activity and public access associated therewith, as appropriate for the harbor in question;

(4) the requirements of 310 CMR 9.51(1) through (3), shall also apply in the event a nonwater-dependent use project is located on a Great Pond;

(5) the requirements of 310 CMR 9.51(3), shall not apply to projects on filled tidelands in Designated Port Areas involving temporary uses, supporting DPA uses that are industrial, and marine industrial parks.

9.52: Utilization of Shoreline for Water-dependent Purposes

A nonwater-dependent use project that includes fill or structures on any tidelands shall devote a reasonable portion of such lands to water-dependent use, including public access in the exercise of public rights in such lands. In applying this standard, the Department shall take into account any relevant information concerning the capacity of the project site to serve such water-dependent purposes, especially in the vicinity of a water-dependent use zone; and shall give particular consideration to applicable guidance specified in an Approved Municipal Harbor Plan, as provided in 310 CMR 9.34(2)(b)2. Except as necessary to protect public health, safety, or the environment, the Department shall act in accordance with the following provisions.

(1) In the event the project site includes a water-dependent use zone, the project shall include at least the following:

(a) one or more facilities that generate water-dependent activity of a kind and to a degree that is appropriate for the project site, given the nature of the project, conditions of the water body on which it is located, and other relevant circumstances; in making this determination, the Department shall give particular consideration to:

1. facilities that promote active use of the project shoreline, such as boat landing docks and launching ramps, marinas, fishing piers, waterfront boardwalks and esplanades for public recreation, and water-based public facilities as listed in 310 CMR 9.53(2)(a); and
2. facilities for which a demonstrated need exists in the harbor in question and for which other suitable locations are not reasonably available; and

(b) a pedestrian access network of a kind and to a degree that is appropriate for the project site and the facility(ies) provided in 310 CMR 9.52(1)(a); at a minimum, such network shall consist of:

1. walkways and related facilities along the entire length of the water-dependent use zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in an Approved Municipal Harbor Plan, shall be no less than ten feet in width; and
2. appropriate connecting walkways that allow pedestrians to approach the shoreline walkways from public ways or other public access facilities to which any tidelands on the project site are adjacent. Such pedestrian access network shall be available to the public for use in connection with fishing, fowling, navigation, and any other purposes consistent with the extent of public rights at the project site.

(2) In the event the project site does not include a water-dependent use zone, the project shall provide connecting public walkways or other public pedestrian facilities as necessary to ensure that sites containing water-dependent use zones will not be isolated from, or poorly linked with, public ways or other public access facilities to which any tidelands on the project site are adjacent.

(3) The requirements of 310 CMR 9.52(1) and (2), shall also apply in the event a nonwater-dependent use project is located on a Great Pond.

9.53: Activation of Commonwealth Tidelands for Public Use

A nonwater-dependent use project that includes fill or structures on Commonwealth tidelands, except in Designated Port Areas, must promote public use and enjoyment of such lands to a degree that is fully commensurate with the proprietary rights of the Commonwealth therein, and which ensures that private advantages of use are not primary but merely incidental to the achievement of public purposes. In applying this standard, the Department shall take into account any factor affecting the quantity and quality of benefits provided to the public, in comparison with detriments to public rights associated with facilities of private tenancy, especially those which are nonwater-dependent; and shall give particular consideration to applicable guidance specified in an Approved Municipal Harbor Plan, as provided in 310 CMR 9.34(2)(b)2. At a minimum, the Department shall act in accordance with 310 CMR 9.53(1) through (4).

9.53: continued

(1) The project shall not include fill or structures for nonwater-dependent use of Commonwealth tidelands which the Department determines are necessary to accommodate a public agency which intends to pursue a water-dependent use project on such lands, provided written notice of such agency's intention is submitted to the Department prior to the close of the public comment period on the license application. Such determination shall be based upon a clear showing, within a period of time deemed reasonable by the Department, that the agency's project has met the criteria of 310 CMR 9.36(5)(a)2. through 4.

(2) The project shall attract and maintain substantial public activity on the site on a year-round basis, through the provision of water-related public benefits of a kind and to a degree that is appropriate for the site, given the nature of the project, conditions of the waterbody on which it is located, and other relevant circumstances. In making this determination, the Department shall act in accordance with 310 CMR 9.53(2)(a) through (e):

(a) in the event the project site includes a water-dependent use zone, at least one facility utilizing the shoreline in accordance with the provisions of 310 CMR 9.52(1)(a) must also promote water-based public activity; such facilities include, but are not limited to, ferries, cruise ships, water shuttles, public landings and swimming/fishing areas, excursion/charter/rental docks, and community sailing centers;

(b) the project shall include exterior open spaces for active or passive public recreation, examples of which are parks, plazas, and observation areas; such open spaces shall be located at or near the water to the maximum reasonable extent, unless otherwise deemed appropriate by the Department, and shall include related pedestrian amenities such as lighting and seating facilities, restrooms and trash receptacles, children's play areas, and safety ladders along shoreline walkways, as appropriate; such facilities shall be sized in accordance with 310 CMR 9.53(2)(b)1. through 2.:

1. the amount of such space shall be at least equal to the square footage of all Commonwealth tidelands on the project site landward of a project shoreline and not within the footprint of buildings, less any space deemed necessary by the Department to accommodate other water-dependent uses; the Department may also allow a portion of such open space to be devoted to public ways and/or surface parking open to the public, including users of the facility of public accommodation, provided that below grade or structured parking is not a reasonable alternative and that the open space devoted to public vehicular use does not exceed that devoted to public pedestrian use;

2. as provided in 310 CMR 9.34(2)(b)1., the Department shall waive the requirements of 310 CMR 9.53(2)(b)1., if the project conforms to an Approved Municipal Harbor Plan which, as determined by the Secretary in the approval of said plan and by the Department through the adoption of substitute provisions in said plan, specifies alternative requirements for public outdoor recreation facilities that will establish the project site as a year-round locus of public activity in a comparable and highly effective manner;

(c) the project shall devote interior space to facilities of public accommodation, other than public parking, with special consideration given to facilities that enhance the destination value of the waterfront by serving significant community needs, attracting a broad range of people, or providing innovative amenities for public use; such public interior space shall be located at the ground level of all buildings containing nonwater-dependent facilities of private tenancy, unless the Department determines that an alternative location would more effectively promote public use and enjoyment of the project site or is appropriate to make ground level space available for water-dependent use or upper floor accessory services; the extent of such interior space shall be determined in accordance with 310 CMR 9.53(2)(c)1. through 2.:

1. such space shall be at least equal in amount to the square footage of all Commonwealth tidelands on the project site within the footprint of buildings containing nonwater-dependent facilities of private tenancy;

2. as provided in 310 CMR 9.34(2)(b)1., the Department shall waive the requirements of 310 CMR 9.34(2)(c)1., if the project conforms to an Approved Municipal Harbor Plan which, as determined by the Secretary in the approval of said plan, and by the Department through the adoption of substitute provisions in said plan, specifies alternative requirements for interior facilities of public accommodation that will establish the project site as a year-round locus of public activity in a comparable and highly effective manner;

9.53: continued

(d) the project shall include a management plan for all on-site facilities offering water-related benefits to the public, to ensure that the quantity and quality of such benefits will be effectively sustained; management elements which may be covered by the plan include, but are not limited to, signage, maintenance, hours and rules of operation, organizational arrangements and responsibilities, pricing, financing, and procedures for resolving use conflicts; if deemed appropriate, the Department may require the applicant to offer to the public, in the form of an easement, an enforceable right of access to or use of a proposed water-dependent facility of public accommodation; and

(e) in the event that water-related public benefits which can reasonably be provided on-site are not appropriate or sufficient, the Department may consider measures funded or otherwise taken by the applicant to provide such benefits elsewhere in the harbor or otherwise in the vicinity of the project site.

(3) The project shall promote other development policies of the Commonwealth, through the provision of nonwater-related benefits in accordance with applicable governmental plans and programs and in a manner that does not detract from the provision of water-related public benefits. In making this determination, the Department shall act in accordance with 310 CMR 9.53(3)(a) through (d):

(a) the Department shall take into account any guidance forthcoming from a state, federal, regional, or municipal agency as to the extent to which the project will contribute to or detract from the implementation of any specific policy, plan or program relating to, among other things: education; employment; energy; environmental protection; historic or archeological preservation; housing; industry; land use; natural resources; public health and safety; public recreation; and transportation.

(b) the Department shall act in accordance with the written recommendation of the Secretary of any state Executive Office in whose area of agency or program jurisdiction the proposed project falls, provided that said recommendation is made pursuant to an MOU or other written agreement with the Department as to the manner and extent to which the nonwater-related policies, plans, and programs of said Executive Office will be promoted in relation to water-related public interests.

(c) the Department shall give primary consideration to the implementation of policies, plans, or programs that:

1. have been officially adopted by statute, regulation, or other formal instrument of legislative or administrative action; and
2. complement measures taken by the project to serve water-related public purposes; examples of such complementary policies include the improvement of public transportation systems in order to foster ease of public movement to and from waterfront facilities, and the inclusion of affordable housing in residential development in order to make waterfront tenancy and access available to a broader segment of the public than would be the case under prevailing market conditions;

(d) the Department shall consider only those nonwater-related benefits accruing to the public in a manner that is reasonably direct, rather than remote, diffuse, or theoretical. Examples of direct public benefits include meeting a community need for mixed-income residential development, creating a large number of permanent jobs on-site, and reutilizing idle waterfront properties. Corresponding examples of indirect public benefits include increasing the general supply of market-rate housing, improving overall economic conditions, and expanding the property tax base of a municipality.

(4) In the event a nonwater-dependent use project is located on Great Ponds, the Department shall apply the provisions of 310 CMR 9.53(1) through (3), to the portion of the project site lying below the natural low water mark.

9.54: Consistency with Coastal Zone Management Policies

Nonwater-dependent use projects located in the coastal zone shall be consistent with all policies of the Massachusetts Coastal Zone Management Program, pursuant to 301 CMR 20.05(3). In applying this standard for projects identified for CZM participation in license or permit proceedings pursuant to 310 CMR 9.13(2)(a), the Department shall consider any written statement submitted by the Coastal Zone Management Office pursuant to 310 CMR 9.13(2), and shall act in accordance with the following provisions:

9.54: continued

(1) If the Department concurs with the conclusions and recommendations of CZM, said written statement shall be adopted as part of the written determination on license application.

(2) If the Department disagrees with any conclusions or recommendations of CZM and the disagreement cannot be resolved through routine consultation, the assistance and direction of the Secretary shall be sought in accordance with the provisions of M.G.L. c. 21A, § 4, governing mediation of administrative and jurisdictional conflicts within EOEEA. If the disagreement is not eliminated through such mediation, the Department shall include in the written determination an explanation of the specific basis for its final decision on consistency with CZM policies.

If the project site is within an area covered by an Approved Municipal Harbor Plan, the Department shall presume this standard is met, in accordance with the provisions of 310 CMR 9.34(2)(b)3.

9.55: Standards for Nonwater-dependent Infrastructure Facilities

(1) The requirements of 310 CMR 9.51 through 9.53, shall not apply to nonwater-dependent use projects consisting of infrastructure facilities on tidelands or Great Ponds. Such projects shall include mitigation and/or compensation measures as deemed appropriate by the Department to ensure that all feasible measures are taken to avoid or minimize detriments to the water-related interests of the public. Such interests include, but are not limited to:

- (a) the protection of maritime commerce, industry, recreation and associated public access;
- (b) the protection, restoration, and enhancement of living marine resources;
- (c) the attainment of water quality goals;
- (d) the reduction of flood and erosion-related hazards on lands subject to the 100-year storm event or to sea level rise, especially those in damage-prone or natural buffer areas;
- (e) the protection and enhancement of public views and visual quality in the natural and built environment of the shoreline; and
- (f) the preservation of historic sites and districts, archaeological sites, and other significant cultural resources near waterways.

(2) All nonwater-dependent use projects consisting of infrastructure facilities on tidelands or Great Ponds shall take reasonable measures to provide open spaces for active or passive recreation at or near the water's edge, wherever appropriate. Such measures may be provided by any means consistent with the need to avoid undue interference with the infrastructure facilities in question, and to protect public health, safety, or the environment.

9.56: Standards for Facilities of Limited Accommodation

Facilities of Limited Accommodation may be authorized on filled Commonwealth Tidelands or filled Private Tidelands under certain circumstances where a project site cannot support Facilities of Public Accommodation for a period of time. Projects including Facilities of Limited Accommodation as a substitution for Facilities of Public Accommodation described in 310 CMR 9.53(2)(c) and referenced in 310 CMR 9.51(3)(b) must meet any otherwise applicable requirements of 310 CMR 9.00. The substitution of Facilities of Limited Accommodation for Facilities of Public Accommodation fulfills the requirements for licensing under 310 CMR 9.31(2)(b)1., provided otherwise applicable requirements are met. The calculation of the required amount of Facilities of Public Accommodation or the amount of the payment to allow the substitution shall be based on Facilities of Limited Accommodation located on the ground floor of buildings on filled Commonwealth Tidelands or Private Tidelands within 100 feet of the project shoreline. The substitution of Facilities of Limited Accommodation for Facilities of Public Accommodation may not be inconsistent with an Approved Municipal Harbor Plan under 310 CMR 9.34(2).

9.56: continued

(1) An application for a building less than or equal to 75' in height, may substitute Facilities of Limited Accommodation in up to 50% of the interior space required to be devoted to Facilities of Public Accommodation. The remainder of the required ground floor interior space, with the exception of Upper Floor Accessory Services, shall be devoted to Facilities of Public Accommodation. The requirement that no less than 25% of the otherwise required ground floor interior space be devoted to Facilities of Public Accommodation may not be waived by the Department, regardless of foot traffic, density, level of economic development, or the absence of potential revenues generated by the Facility of Public Accommodation. The Applicant shall provide notice of the project to the Local Economic Development Authority and any response it has received from the authority. If the Local Economic Development Authority responds in writing that the project area has a sufficient level of development to support a Facility of Public Accommodation, the Department shall not authorize the substitution of a Facility of Limited Accommodation. If the authority concurs in writing that the project area lacks sufficient development to support a Facility of Public Accommodation or does not respond to the notice and the Department does not request additional information within 60 days of receipt of a license application, the Local Economic Development Authority will be deemed to concur with the request and the substitution of a Facility of Limited Accommodation shall be authorized. The first floor design shall be capable of accommodating a Facility of Public Accommodation. 20% of the net operating income per year generated from the Facilities of Limited Accommodation shall be paid annually by the project to fund specific construction or activities, approved by the Department, to activate the waterfront in geographic proximity to the project site. The activation provided by the specific construction or activities shall extend to evening and/or weekend hours wherever feasible to compensate for any lack of activation that may result in the substitution of Facilities of Limited Accommodation for Facilities of Public Accommodation. The funding of specific construction or activities shall be in addition to applicable requirements at 310 CMR 9.52(1) and 9.53(2). The specific construction or activities to be funded shall be identified by the Applicant and approved by the Department prior to licensing.

A condition of the license shall include, on or before the 15th anniversary of the first certificate of occupancy, a requirement for the Department to review the uses of the Facilities of Limited Accommodation to determine whether the project site could support Facilities of Public Accommodation, typically based upon foot traffic and density, based on information provided by the Licensee. The Licensee shall file any relevant information at least six months prior to the 15th anniversary. If the Department determines that Facilities of Public Accommodation can be supported and the project is unable to obtain a contrary opinion as referenced in 310 CMR 9.56(2)(d), the Department shall provide the Licensee with a schedule for submittals for transition to such uses. If the Department determines that Facilities of Public Accommodation cannot be supported or the Licensee obtains such an opinion as referenced in 310 CMR 9.56(2)(d), the Department shall specify a time period for a subsequent review. The Licensee shall certify annually to the Department the amount of space devoted to Facilities of Limited Accommodation, the use of the space, the net operating income from the Facilities of Limited Accommodation, and a demonstration of payment for the substitution of Facilities of Limited Accommodation for Facilities of Public Accommodation as specified in 310 CMR 9.56(2)(f). The Licensee shall provide an electronic copy of the certifications and notice of any information submitted six months prior to the 15th anniversary review, upon request to any person who filed comments during the public comment period on the written determination for the project.

9.56: continued

(2) An application for a building greater than 75' in height that can demonstrate that its project site is unable to fully support Facilities of Public Accommodation, based on foot traffic and density, may apply for a short-term condition in a license to authorize up to 50% of the interior space required to be devoted to Facilities of Limited Accommodation in accordance with 310 CMR 10.51 and 10.53 for some portion of the ground floor interior space otherwise required to be devoted to Facilities of Public Accommodation, provided that no less than 25% of such required interior space shall be devoted to Facilities of Public Accommodation. The requirement that no less than 25% of the ground floor interior space otherwise required be devoted to Facilities of Public Accommodation may not be waived by the Department, regardless of foot traffic, density, level of economic development, or the absence of potential revenues generated by the Facility of Public Accommodation. The short-term condition in the license may not exceed ten years. At the expiration of the term, the ground floor shall be devoted to Facilities of Public Accommodation, unless the licensee applies for an extension for no more than ten years and proves that the provisions of 310 CMR 9.56(2)(a) through (d) are met. Applications for extensions prior to expiration of the term may be allowed only where necessary to maintain occupancy. For an Applicant seeking a short-term condition in the license to authorize Facilities of Limited Accommodation in the interior space otherwise required to be devoted to Facilities of Public Accommodation, 20% of net operating income per year generated from the Facilities of Limited Accommodation shall be paid by the licensee annually to fund specific construction or activities, approved by the Department, to activate the waterfront. The activation provided by the specific construction or activities shall extend to evening and/or weekend hours wherever feasible to compensate for any lack of activation that may result in the substitution of Facilities of Limited Accommodation for Facilities of Public Accommodation. The specific construction or activities to be funded shall be identified by the Applicant and approved by the Department prior to licensing. The funding of specific construction or activities shall be in addition to applicable requirements at 310 CMR 9.52(1) and 9.53(2). A project seeking a short term condition in a license shall:

- (a) not be inconsistent with any substitutions, offsets or conditions of approval established in an Approved Municipal Harbor Plan as provided in 310 CMR 9.34(2);
- (b) demonstrate that marketing efforts for at least one year have failed to identify any prospective Facility of Public Accommodation, even with the offer of up to 50% below market rents to civic or cultural not-for-profit organizations and a diligent good faith attempt to locate tenants which shall include advertisements in at least two commercial real estate marketing publications and listing with a commercial real estate brokerage;
- (c) comply with the conditions in the license requiring Facilities of Public Accommodation unless or until another use is authorized; this requirement may not be waived by the Department, regardless of foot traffic, density, level of economic development, or the absence of potential revenues generated by the Facility of Public Accommodation;
- (d) obtain the written concurrence of the Local Economic Development Authority that the project area lacks the level of development to support a Facility of Public Accommodation at the time of licensing or amendment. If the Local Economic Development Authority does not respond to the notice and the Department does not request additional information within 60 days of receipt of a license application, the Local Economic Development Authority will be deemed to concur with the request;
- (e) ensure that the first floor design will be capable of accommodating a Facility of Public Accommodation at the end of the term; and
- (f) certify annually the space devoted to Facilities of Limited Accommodation, the use of the space, the net operating income from those facilities, and demonstration of payment.

(3) A licensee may request an amendment of an existing license to authorize Facilities of Limited Accommodation, provided the request meets the requirements for an amendment at 310 CMR 9.24, the requirements identified in 310 CMR 9.56(2)(a) through (d), and other applicable requirements of 310 CMR 9.56(1) or (2). A short-term license condition for Facilities of Limited Accommodation amending an existing license may be for a limited term of ten years or 15 years, depending on the height of the building.

9.57: Approved Municipal Harbor Plans

(1) The following Municipal Harbor Plans are Approved Municipal Harbor Plans:

- (a) East Boston Waterfront District Municipal Harbor Plan (July 15, 2002, as renewed and amended on December 17, 2008, March 4, 2009, and August 2, 2012);
- (b) Fort Point Downtown (Boston) Municipal Harbor Plan Phase I (October 10, 2002, as renewed on February 12, 2013);
- (c) Fort Point Downtown (Boston) Municipal Harbor Plan Phase II (March 8, 2004, as renewed on April 9, 2014);
- (d) Harborpark (Boston) Plan (May 22, 1991, as renewed and amended on July 29, 1999, October 12, 2006, and April 4, 2008);
- (e) South Boston Waterfront District Municipal Harbor Plan (December 6, 2000, as renewed and amended on December 31, 2002, October 22, 2009, and December 21, 2016);
- (f) Cohasset Municipal Harbor Plan (November 25, 2020);
- (g) Central Waterfront (Everett) Municipal Harbor Plan (February 10, 2014);
- (h) Gloucester Municipal Harbor Plan and DPA Master Plan (July 6, 1999, as renewed and amended on December 11, 2009 and December 19, 2014);
- (i) Lynn Municipal Harbor Plan and DPA Master Plan (June 28, 2010, as renewed and amended on November 25, 2020);
- (j) Nantucket and Madaket Municipal Harbor Plan (December 21, 2009);
- (k) New Bedford Fairhaven Municipal Harbor Plan and DPA Master Plan (September 24, 2002, as renewed and amended on June 14, 2010);
- (l) Provincetown Harbor Management Plan (May 4, 1999, as renewed and amended on February 29, 2012 and April 10, 2019);
- (m) Salem Municipal Harbor Plan and DPA Master Plan (June 24, 2008);
- (n) Hull Harbor Plan (February 14, 2000);
- (o) South Coastal Harbor (Chatham) Management Plan (August 19, 1994, as renewed on July 23, 1999, October 21, 2005, and May 12, 2015); and
- (p) Edgartown Municipal Harbor Plan (October 2, 1997, as renewed on April 30, 2003).

(2) Approved Substitute Provisions: Substitute Standards, Offsets, Amplifications, and Other Provisions.

- (a) East Boston Waterfront District Municipal Harbor Plan, (July 15, 2002, as renewed and amended on December 17, 2008, March 4, 2009, and August 2, 2012).

1. Table 1. Substitute Standards and Offsetting Measures.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
Clippership Wharf (2002)			
<p>310 CMR 9.51(3): Conservation of Capacity for Water-dependent Use (Location of Facilities of Private Tenancy (“FPT”).</p>	<p>“nonwater-dependent Facilities of Private Tenancy shall not be located on any pile-supported structures on flowed tidelands, nor at the ground level of any filled tidelands within 100 feet of the project shoreline.”</p>	<p>FPTs may occupy a portion of the ground floors of nonwater-dependent structures located on private tidelands within 100 feet of the project shoreline (measured from the high water shoreline) and on Commonwealth tidelands, provided that the amount of Facility of Public Accommodation (“FPA”) space is greater than or equal to amount of interior space where FPT would otherwise be prohibited; all ground floor FPTs seaward of Marginal Street that would otherwise be for FPAs is for artist live/work space; and does not exceed 12,500 SF of area that would be otherwise required to be FPA.</p>	<ol style="list-style-type: none"> 1. A minimum of 6,000 SF of additional WDUZ on the western side of the site with associated outdoor programming; offset at 1:2 ratio (FPT:WDUZ). 2. Arts-related ground floor FPA space at the harbor-most end of building on westerly wharf of no less than 2,000 SF at no cost for rental or fit-out for life of the c. 91 license (1:1 ratio). 3. 1,000 SF of FPA space in buildings facing water on western side of site on Private Tidelands (1:1 ratio). 4. 1,000 SF environmental/arts education FPA use on western side of project at no cost for rental and fit-out for license term (1:1 ratio FPT:FPA). 5. 1,000 SF of community FPA space at no cost for rental or fit-out for license term (1:1 ratio on western side, 1:2 ratio -FPT:FPA elsewhere) 6. On Private Tidelands, 5,000 SF of FPA space in buildings facing Lewis Mall (1:2 ratio)

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<u>Clippership Wharf (2002) (continued)</u>			
310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)	New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; Plan may specify alternative setback distances and other requirements which ensure that new buildings for nonwater-dependent use are not constructed immediately adjacent to a project shoreline, in order that sufficient space along the water's edge will be devoted exclusively to water-dependent activity and public access.	Reconfigured WDUZ, provided no loss of area, measured from the project shoreline as defined by the high-water mark along upland shorelines and filled wharves. Public parking for up to two hours allowed in WDUZ on the western pier parallel to and landward of the public way to encourage public use of the site. Minimum width of 100 feet along the high water mark except for area immediately southwest of the Boston Housing Authority ("BRA") Heritage Apartments where it shall be a minimum of 25 feet; a minimum of 100 feet from high water mark along the solid fill wharf ends; minimum setbacks of 45 feet on the western side of the project, 40 feet on the eastern side of the westerly wharf, and 30 feet on the western side of the easterly wharf.	N/A
310 CMR 9.51(3)(e): Conservation of Capacity for Water-Dependent Use (Building height)	New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.	All buildings located along Sumner Street and within 100 feet of the high water mark at the wharf ends shall be no taller than 65 feet in height; landward of the wharf ends building height(s) may increase at the ratio of one vertical foot for every two additional feet from the 100 foot line up to a maximum 80 feet for the entire site, provided all buildings shall be set back a minimum of 100 feet from the high water mark along the solid fill wharf ends, all buildings shall have minimum setbacks of 45 feet on the western side of the project, 40 feet on the eastern side of the westerly wharf, and 30 feet on the western side of the easterly wharf. To accommodate greater floor-to-ceiling dimensions in FPAs, buildings may be up to 86 feet, provided that Net New Shadow ("NNS") is offset.	N/A

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
Hodge Boiler Works (2002)			
<p>310 CMR 9.51(3)(b): Conservation of Capacity for Water-Dependent Use (Location of facilities of private tenancy and facilities of public accommodation) and 310 CMR 9.53(2)(c): Activation of Commonwealth Tidelands for Public Use (Interior facilities of public accommodation)</p>	<p>“nonwater-dependent Facilities of Private Tenancy shall not be located on any pile-supported structures on flowed tidelands, nor at the ground level of any filled tidelands within 100 feet of the project shoreline.”</p>	<p>FPTs may occupy a portion of the ground floor of non-water-dependent structures located within 100 feet of the project shoreline, provided that the total area of ground floor FPA space is greater or equal to the amount of interior space where FPT would otherwise be prohibited; at least 50% of the FPA SF must be at the ground level of any non-water-dependent use structure located within 100 feet of the project shoreline adjacent to LoPresti Park; and no FPA SF is used to offset the SF for other non-water-dependent use structures within 100 feet of the project shoreline.</p>	<p>N/A</p>
<p>310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)</p>	<p>“new or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone...”</p>	<p>Reconfigured WDUZ, provided no loss of area, measured from the project shoreline as defined by the high-water mark along upland shorelines and filled wharves. Minimum setback is 75 feet except for the shoreline corner in common with LoPresti Park, where it may be 40 feet and, in order to accommodate a non-water-dependent use public activity structure at the London Street extension, 25 feet.</p>	<p>N/A</p>
<p>310 CMR 9.51(3)(e): Conservation of Capacity for Water-Dependent Use (Building height)</p>	<p>New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.</p>	<p>All buildings located along Sumner Street and within 100 feet of the high water mark at the wharf ends shall be no taller than 65 feet in height; landward of this line, building height(s) may increase at the ratio of one vertical foot for every two additional feet from the 100 foot line up to a maximum 80 feet for the entire site, provided all buildings shall be set back a minimum of 100 feet from the high water mark except at the corner shared with LoPresti Park, where the setback may be 40 feet. To accommodate greater floor-to-ceiling dimensions in FPAs, buildings may be up to 86 feet, provided that NNS is offset.</p>	<p>N/A</p>

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<u>Plan-wide (2002)</u>			
310 CMR 9.52(1)(b)1.: Utilization of Shoreline for Water-Dependent Purposes (Pedestrian access network)	“...walkways and related facilities along the entire length of the Water-Dependent Use Zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in a municipal harbor plan, shall be no less than ten feet in width...”	At a minimum, the pedestrian access network shall be no less than 12 feet wide, with 10 feet clear of an obstruction.	N/A
<u>6-26 New Street (2008)</u>			
310 CMR 9.51(3)(b): Conservation of Capacity for Water-Dependent Use (Location of facilities of private tenancy and facilities of public accommodation)	“non water-dependent Facilities of Private Tenancy shall not be located on any pile-supported structures on flowed tidelands, nor at the ground level of any filled tidelands within 100 feet of the project shoreline.”	Up to approximately 1,200 square feet of interior and exterior non-water dependent Facilities of Private Tenancy will be allowed to be located within 100 feet of the project shoreline, but not less than 70 feet from the project shoreline.	At least an equivalent area of Facilities of P u b l i c Accommodation (FPA) will be provided adjacent to other FPA space on the site, expanding the location of FPAs beyond 100 feet of the project shoreline.
310 CMR 9.52(1)(b)1.: Utilization of Shoreline for Water-Dependent Purposes (Pedestrian access network)	“...walkways and related facilities along the entire length of the Water-Dependent Use Zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in a municipal harbor plan, shall be no less than ten feet in width...”	The minimum width will be widened to 12 feet (10 feet clear). These enhancements shall replace the existing standard of 10 feet.	N/A
310 CMR 9.51(3)(e): Conservation of Capacity for Water-Dependent Use (Building height)	New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.	Allow non water-dependent buildings up to a height of 70 feet within 100 feet landward of the high-water mark in locations as generally indicated in the plans diagrams. Appurtenant to the nine-story building redevelopment project, façade treatments, fenestration, and exterior or enclosed balconies will be allowed up to the top of the existing structure and shall be considered part of the building footprint.	N/A

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
102-148 Border Street (2009) (continued)			
<p>310 CMR 9.51(3)(b): Conservation of Capacity for Water-Dependent Use (Location of facilities of private tenancy and facilities of public accommodation)</p>	<p>“nonwater-dependent Facilities of Private Tenancy shall not be located on any pile-supported structures on flowed tidelands, nor at the ground level of any filled tidelands within 100 feet of the project shoreline.”</p>	<p>“nonwater-dependent Facilities of Private Tenancy shall not be located on any pile-supported structures on flowed tidelands, nor at the ground level of any filled tidelands within 100 feet of the project shoreline.”</p>	<p>A minimum of 25% of the ground floor (excluding upper floor accessory uses) shall be devoted to Facilities of Public Accommodation, including but not limited to: gallery, archway, exhibition space, teaching space, maritime history interpretive exhibit space, community meeting room, and community center. These facilities will be located within the ground floor to effectively promote public use and enjoyment of the project site. The facilities will be managed and programmed to establish the project as a year-round locus of public activity. The McKay Community Gallery will be provided in accordance with the Plan, built-out and rent-free for the license term and the public archway shall be provided in accordance with the Plan.</p>

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<u>102-148 Border Street (2009) (continued)</u>			
310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)	“new or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone...”	A reconfigured WDUZ will be established that will allow a minimum setback from the project shoreline of 25 feet for buildings containing nonwater-dependent uses, as shown in the plans and diagrams in the Plan, while maintaining at least the same overall area (approximately 22,806sf) as the standard requirement.	The reconfigured WDUZ will provide setbacks along the waterfront and Harborwalk and setbacks in different areas of the site that are contiguous to the DPA and the proposed historic maritime interpretive area. There shall be no loss of WDUZ area.
310 CMR 9.52(1)(b)1.: Utilization of Shoreline for Water-Dependent Purposes (Pedestrian access network)	“...walkways and related facilities along the entire length of the Water-Dependent Use Zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in a municipal harbor plan, shall be no less than ten feet in width...”	At a minimum, the pedestrian access network shall be no less than 12 feet wide, with 10 feet clear of an obstruction.	N/A
310 CMR 9.51(3)(e): Conservation of Capacity for Water-Dependent Use (Building height)	New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.	The height of new or expanded buildings for non-water-dependent uses shall not exceed 85 feet as shown in the Plan’s massing and building diagrams.	Provisions of at least 2,201 SF of open space in addition to the standard requirement (1:2 open space-shadow ratio) that shall include paved pedestrian access, amenities such as benches and special landscaping features, and public recreational features to promote public access and use.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
125 Sumner Street (2009)			
<p>310 CMR 9.53(2)(c): Activation of Commonwealth Tidelands for Public Use (Interior facilities of public accommodation)</p>	<p>“the project shall include interior space to facilities of public accommodation other than public parking, with special consideration given to facilities that enhance the destination value of the waterfront by serving significant community needs...such space shall be at least equal in amount to the square footage of all Commonwealth tidelands on the project site within the footprint of buildings containing nonwater-dependent facilities of private tenancy...”</p>	<p>Permit facilities of private tenancy to occupy 75% of the ground floor (excluding upper floor accessory uses), provided that the site remains under the ownership or control of the Boston Housing Authority with the primary purpose to provide affordable housing to City residents.</p>	<p>A minimum of 25% of the ground floor (excluding upper floor accessory uses) shall be devoted to facilities of public accommodation including, but not limited to: gallery, exhibition space, maritime history interpretive exhibit space, community meeting room, and community center. These facilities will be located within the ground floor to effectively promote public use and enjoyment of the project site. The facilities will be managed and programmed to establish the project site as a year-round locus of public activity.</p>

9.57: continued

2. Table 2: Summary of Amplifications

Regulatory Provision	Chapter 91 Standard	Approved Amplification	Implementation Mechanism
6-26 New Street (2008)			
310 CMR 9.53(2)(b): Activation of Commonwealth Tidelands for Public Use (Exterior open space for public recreation)	"the project shall include exterior open space for active or passive recreation, examples of which are parks, plazas and observation areas; such open spaces shall be located at or near the water to the maximum reasonable extent..."	The location of the open space features that serve to activate the public open space on the site may be distributed within both Commonwealth and private tidelands in a manner that will enhance interest, access, and use. Additional activation of the Harborwalk and waterfront open space will be provided through the use of historic interpretive elements and displays. The particular type and location of exhibits will be appropriate to this particular location in the harbor and will follow guidance provided in Section 9 and Appendix 1 of the Plan Amendment.	Plan Amendment Appendix 1, Section 9

3. Table 3: Summary of Planning Principles and Priorities.

Planning Principle/Priority	Decision Standard	Implementation Mechanism	Notes
6-26 New Street (2008)			
Preserve and enhance capacity of DPA for Water-dependent industrial use ("WDIU")	Preserve and enhance capacity of DPA for WDIU	Removal or restoration of all on-site piles (both DPA and non-DPA watersheet areas); site-wide reconstruction of all deteriorated sections of the bulkhead; and inclusion of a permanent vehicular access route from New or Sumner Street to the DPA and WDUZ; provision of buffer between uses; provision of language in lease forms or deeds regarding existence of WDIU; docking facility for water taxi; site improvements for DPA area to be accessible.	N/A

9.57: continued

Planning Principle/Priority	Decision Standard	Implementation Mechanism	Notes
102-148 Border Street (2009)			
Preserve and enhance capacity of DPA for WDIU	Preserve and enhance capacity of DPA for WDIU	Additionally, DPA improvements at the site will enhance water-dependent uses: <ul style="list-style-type: none"> ● Removal of dilapidated pile fields ● Restoration of seawalls and adjacent surfaces ● Regrading and remediation of site ● Language in lease forms with notice of nearby WDIU ● Use of appropriate construction materials for the non-water dependent (“non-WD”) building to mitigate adverse impacts of neighboring WDIU ● Provision of buffer land uses along the ground floor of the non-WD building 	

(b) Fort Point Downtown (Boston) Waterfront Municipal Harbor Plan Phase 1 (October 10, 2002, as renewed on February 12, 2013).

1. Table 1. Substitute Standards and Offsetting Measures.

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
500 Atlantic Avenue (2002)			
310 CMR 9.51(3)(e): Conservation of Capacity for Water-Dependent Use (Building height)	New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.	Allows building heights up to 55 feet in the Height Zone 1 (0 to 35 feet from the high water mark); 63 feet in Height Zone 2 (35 to 70 feet); 132 feet in Height Zone 3 (70 to 79 feet); and 239 feet in Height Zone 4 (more than 79 feet) to the cornice line height of the maximum habitable space.	N/A

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
Plan-wide (2002)			
310 CMR 9.52(1)(b)1.: Utilization of Shoreline for Water-Dependent Purposes (Pedestrian access network)	"...walkways and related facilities along the entire length of the Water-Dependent Use Zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in a municipal harbor plan, shall be no less than ten feet in width..."	At a minimum, the pedestrian access network shall be no less than twelve feet wide, with ten feet clear of an obstruction.	N/A

(c) Fort Point Downtown (Boston) Municipal Harbor Plan Phase II (March 8, 2004, as renewed on April 9, 2014).

1. Table 1. Substitute Standards and Offsetting Measures.

Russia Wharf (2004)			
Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
310 CMR 9.51(3)(c) Conservation of Capacity for Water-dependent Use (Water-dependent use zone)	New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; Plan may specify alternative setback distances and other requirements which ensure that new buildings for nonwater-dependent use are not constructed immediately adjacent to a project shoreline, in order that sufficient space along the water's edge will be devoted exclusively to water-dependent activity and public access.	To accommodate the preservation of the historic structure, a reconfigured WDUZ that results in a loss of not more than 2,700 SF of WDUZ.	N/A

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Russia Wharf (2004) (continued)			
Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
310 CMR 9.51(3)(d): Conservation of Capacity for Water-Dependent Use (Lot coverage)	At least one square foot of the project site at ground level (exclusive of areas lying seaward of a project shoreline) shall be preserved as open space for every square foot of tideland area within the combined footprint of buildings containing nonwater-dependent use on the project site.	To accommodate the preservation of the historic structure, approximately 65,130 SF may be occupied by the redevelopment of structures within the existing footprint with slight alterations.	Secondary ramping system to Channel Walk West from the Fort Point Channel Watersheet Activation Plan ("FPCWAP"), Congress Street Bridge Lighting Project; improvements to Congress Street sidewalk; and provision of interpretive signage (Historic Piers Network Plan), combined value of \$1,125,000
310 CMR 9.51(3)(e): Conservation of Capacity for Water-Dependent Use (Building height)	New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.	The roof of the highest occupied floor of 395 feet, provided that the elevation of the existing Tufts roof (91 feet) shall be maintained for a horizontal distance 15 feet landward of the present mean high water line and increase at the rate of 4.5 vertical feet for each additional foot landward to a maximum height of 395 feet.	Additional FPA space (25,000 SF more than required under c. 91), including two of the FPA spaces as SPDFs (6,000-7,000 SF total); \$1,000,000 to implementation of FPCWAP and maintenance of Children's Wharf Park (1/2 each).
Russia Wharf and Plan-wide (2004)			
310 CMR 9.52(1)(b)1.: Utilization of Shoreline for Water-Dependent Purposes (Pedestrian access network)	"...walkways and related facilities along the entire length of the Water-Dependent Use Zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in a municipal harbor plan, shall be no less than ten feet in width..."	At a minimum, the pedestrian access network shall be no less than twelve feet wide, with ten feet clear of an obstruction.	N/A

9.57: continued

Table 2. Summary of Amplifications.

Regulatory Provision	Chapter 91 Standard	Approved Amplification	Implementation Mechanism
<u>Russia Wharf and Plan-wide (2004)</u>			
310 CMR 9.53(2)(a), (c), and (d): Activation of Commonwealth Tidelands for Public Use (Facilities for water-based public activity, interior facilities of public accommodation, management plan)	The project shall attract and maintain substantial public activity on the site on a year-round basis, through the provision of water-related public benefits of a kind and to a degree that is appropriate for the site, given the nature of the project, conditions of the waterbody on which it is located, and other relevant circumstances... Where there is a WDUZ, the project must include at least one facility that promotes water-based public activity; the project shall devote interior space to FPAs; and the project shall include a management plan.	<ul style="list-style-type: none"> ● Where there is a WDUZ, the project shall provide at least one facility recommended by the FPCWAP that promotes water-based public activity in the WDUZ or provide a monetary contribution for implementation of the FPCWAP. ● The project shall devote interior space to FPAs with special consideration given to facilities that enhance the year round destination value of the waterfront. ● Management plan for water-based activities. 	FPCWAP, Section III.C and Section V of the Decision,

(d) Harborpark (Boston) Plan (May 22, 1991, as renewed and amended on July 29, 1999, October 12, 2006, and April 4, 2008).

1. Table 1. Substitute Standards and Offsetting Measures.

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<u>Charlestown Navy Yard (1991)</u>			
310 CMR 9.51(3)(d): Conservation of Capacity for Water-Dependent Use (Lot coverage) and 310 CMR 9.53(2)(b) Activation of Commonwealth Tidelands for Public Use (Exterior open space for public recreation)	At least one square foot of the project site at ground level (exclusive of areas lying seaward of a project shoreline) shall be preserved as open space for every square foot of tideland area within the combined footprint of buildings containing nonwater-dependent use on the project site.	Within the Charlestown Navy yard, the aggregate of open space of all lots in the subdistrict exclusive of the Historic Monument Area must be equal to or greater than 50% (excluding roads and surface parking) at all times.	N/A
310 CMR 9.53(2)(c): Activation of Commonwealth Tidelands for Public Use (Interior facilities of public accommodation)	“the project shall include interior space to facilities of public accommodation other than public parking, with special consideration given to facilities that enhance the destination value of the waterfront by serving significant community needs...such space shall be at least equal in amount to the square footage of all Commonwealth tidelands on the project site within the footprint of buildings containing nonwater-dependent facilities of private tenancy...”	Any project with more than 10,000 SF of floor area must include at least 40 percent of the ground floor to public facilities (not including public parking).	Requirement 4a

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

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Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
Charlestown Gateway and North End (1991)			
<p>310 CMR 9.53(2)(c): Activation of Commonwealth Tidelands for Public Use (Interior facilities of public accommodation)</p>	<p>“the project shall include interior space to facilities of public accommodation other than public parking, with special consideration given to facilities that enhance the destination value of the waterfront by serving significant community needs...such space shall be at least equal in amount to the square footage of all Commonwealth tidelands on the project site within the footprint of buildings containing nonwater-dependent facilities of private tenancy...”</p>	<p>Any project with more than 10,000 SF of floor area must include at least 40 percent of the ground floor to public facilities; at least 50 percent of the ground floor spaces within all buildings containing nonwatery-dependent FPTs on pile-supported structures on flowed tidelands shall be FPAs in accordance with Requirement 8 not including public parking; and any project with non-water-dependent use containing ground floor interior public space within 100 feet of a project shoreline, such space is for FPAs unless an alternative location would promote public use and enjoyment of the project site in a clearly superior manner, is necessary for upper floor accessory services, or is appropriate to accommodate or to avoid detriments to WDU.</p>	<p>Requirement 4b-c</p>
Charlestown Navy Yard, Charlestown Gateway, and North End (1991)			
<p>310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)</p>	<p>New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; Plan may specify alternative setback distances and other requirements which ensure that new buildings for nonwater-dependent use are not constructed immediately adjacent to a project shoreline, in order that sufficient space along the water's edge will be devoted exclusively to water-dependent activity and public access.</p>	<p>35 feet along shoreline and ends of piers, 12 feet along sides of piers based upon existing or new pile-supported structures that meets the criterion of 310 CMR 9.32(1)(a)(3); otherwise computed in accordance with 310 CMR 9.51(3)(c), but not less than 25 feet from the ends and not less than 10 from the sides; and only if such reconfiguration promotes public use or other water-dependent activity in a clearly superior manner with no net loss of area and in accordance with a specific plan for vessel-related programming or a set of guidelines for determining sufficient setback space for various types of water-based activity</p>	<p>Requirement 5</p>

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<u>Charlestown Navy Yard, Charlestown Gateway, and North End (1991) (continued)</u>			
<p>310 CMR 9.51(3)(e): Conservation of Capacity for Water-Dependent Use (Building height)</p>	<p>New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.</p>	<ul style="list-style-type: none"> ● 75 feet for Sargents and Tudor Wharf; ● 90-135 feet on Parcel 4/4A and 125-155 feet on Parcel 6/7 (Charlestown Navy Yard) 	<p>Development and contribution/compliance with a special mitigation program to avoid or minimize adverse wind, shadow, and other impacts to ground-level environment (the program shall specific standards, guidelines, or other parameters to serve as a framework for reaching appropriate mitigation decisions).</p>
<p>310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)</p>	<p>“nonwater-dependent Facilities of Private Tenancy shall not be located on any pile-supported structures on flowed tidelands, nor at the ground level of any filled tidelands within 100 feet of the project shoreline.”</p>	<p>FPTs over flowed tidelands are allowed only at the following locations:</p> <ul style="list-style-type: none"> ● Battery Wharf (North End) ● Tudor Wharf (Charlestown Gateway) ● Pier 5 (Charlestown Navy Yard) <p>Provided that all buildings are no higher than 55 feet and conform to setback requirements of 5(a-c), and site coverage limits of 310 CMR 9.51(3)(d); no more than 50% of ground floor within such buildings may be occupied by FPTs, including upper-floor accessory uses, and no parking is seaward of high water mark; residential uses only on Battery Wharf and Pier 5, but not at ground level and only on the second level if accompanied by a commensurate increase in one or a combination of public open space, building setbacks, interior facilities of public accommodation, or water-based public activities; and shall avoid conflict/minimize incompatibility with nearby water-dependent and/or public activities.</p>	<p>Requirements 7 and 8: Harborpark Plan must be revised to include one or more plans to develop a network of SPDFs within interior spaces along or near the Harborwalk, primarily at the ground level.</p>

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<u>226 Causeway (1999)</u>			
310 CMR 9.51(3)(e): Conservation of Capacity for Water-dependent Use (Building height)	New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.	Maximum height of 155 feet to the top of the highest occupiable floor, insignificant net new shadow and no significant deterioration in wind conditions.	Maintenance of Port Park (DCR) for the term of the c. 91 license; fall and spring clear-up of the Prince Street Park for ten years; 13,000 SF of FPAs on building ground floor; provisions for the sale of tickets for ferry/water transportation in the building lobby; additional landscaping, planting along 226 Causeway Street; 10% of residential units for affordable housing for 20 years (14 of which are restricted for elderly tenants for indefinite tenancy).
<u>Lovejoy Wharf (2006)</u>			
310 CMR 9.52(1)(b)1.: Utilization of Shoreline for Water-dependent Purposes (Pedestrian access network)	“...walkways and related facilities along the entire length of the Water-Dependent Use Zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in a municipal harbor plan, shall be no less than ten feet in width...”	At a minimum, the pedestrian access network shall be no less than 12 feet wide, with ten feet clear of an obstruction.	N/A
310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)	New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; Plan may specify alternative setback distances and other requirements which ensure that new buildings for nonwater-dependent use are not constructed immediately adjacent to a project shoreline, in order that sufficient space along the water's edge will be devoted exclusively to water-dependent activity and public access.	Reconfigured, no net loss: minimum 76 feet from seaward edge of wharf, except for a 15 feet to accommodate Pavilion building on easterly portion of site (which will include upper level public viewing platform, foot access <i>via</i> interior and exterior stairways, and handicapped access <i>via</i> elevator).	N/A

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
Lovejoy Wharf (2006) (continued)			
310 CMR 9.51(3)(d): Conservation of Capacity for Water-dependent Use (Lot coverage)	At least one square foot of the project site at ground level (exclusive of areas lying seaward of a project shoreline) shall be preserved as open space for every square foot of tideland area within the combined footprint of buildings containing nonwater-dependent use on the project site.	All exterior space not within the footprint of the buildings (42,949 SF) or the Pavilion (5,819 SF) shall be open space and all open space seaward of the building shall be for pedestrian use only.	4,429 SF of upper level terrace on the Pavilion with associated public access (<i>see</i> WDUZ requirement), public restrooms, and ground level, rent-free space for a visitor center or other public use.
310 CMR 9.51(3)(e): Conservation of Capacity for Water-dependent Use (Building height)	New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.	Heights ranging from 115 feet to 155 feet (to the roof of the highest occupiable floor) as shown in municipal harbor planning area (MHPA), provided wind meets Boston Redevelopment Authority's (BRA) standards and minimal NNS.	\$150,000 annual water transportation facility operations subsidy for five years, maintenance of dock and shoreside facility for ten years.

(e) South Boston Waterfront District Municipal Harbor Plan (December 6, 2000, as renewed and amended on December 31, 2002, October 22, 2009, and December 21, 2016).

1. Table 1. Substitute Standards and Offsetting Measures.

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
Plan-wide (2000, not including 100 Acres Master)			
310 CMR 9.52(1)(b)1.: Utilization of Shoreline for Water-dependent Purposes (Pedestrian access network)	"...walkways and related facilities along the entire length of the Water-Dependent Use Zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in a municipal harbor plan, shall be no less than ten feet in width..."	At a minimum, the pedestrian access network shall be no less than 12 feet wide, with ten feet clear of an obstruction.	N/A

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
Plan-wide (2000, not including 100 Acres Master) (continued)			
<p>310 CMR 9.51(3)(b): Conservation of Capacity for Water-dependent Use (Location of facilities of private tenancy and facilities of public accommodation) and 310 CMR 9.53(2)(b)1.: Activation of Commonwealth Tidelands for Public Use (Exterior open space for public recreation)</p>	<p>At a minimum, at least 50% of the project site must be reserved as open space for water-dependent activity and public access. The open space must be located on land (<i>i.e.</i>, cannot include watershed) and be accessible to the general public at all times. On Commonwealth Tidelands, a maximum of 50% of the required open space (<i>i.e.</i>, 25% or more of the total project site) can be devoted to streets and ways.</p>	<p>All projects within the harbor planning area must comply, at a minimum, with the 50% open space area requirements of the Waterways Regulations. However, only a maximum of 20% of the lot area can be devoted to streets and ways, and surface parking lots are not allowed.</p>	<p>N/A</p>
<p>310 CMR 9.53(2)(c): Activation of Commonwealth Tidelands for Public Use (Interior facilities of public accommodation) and 310 CMR 9.02: <i>Definitions</i> (Facilities of private tenancy and facilities of public accommodation)</p>	<p>A project within Commonwealth Tidelands must provide Facilities of Public Accommodation on the ground floor of all buildings containing Facilities of Private Tenancy (FPTs). At a maximum, ground floor accessory uses to upper floor FPTs must not exceed 25% of the area of the building footprint.</p>	<p>The amount of ground floor space that can be devoted to upper floor FPT accessory uses cannot exceed 20% of the building footprint. Further, residential lobbies and entrances cannot front along the waterside of any building(s).</p>	<p>N/A</p>

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
Fan Pier (2000)			
<p>310 CMR 9.51(3)(e): Conservation of Capacity for Water-dependent Use (Building height)</p>	<p>New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.</p>	<p>Moving landward from WDUZ, proposed height zones increase from 175 feet to 250 feet to 275 feet and 300 feet along Old Northern Avenue and Courthouse Way, except for Parcels H (175 feet) and J (75 feet).</p>	<ul style="list-style-type: none"> ● 42,400 square feet of additional open space, in excess of 50% of the site area, at a ratio of 2:1; ● Approximately 21,000 square feet of publicly accessible space on the surface of the breakwater, at a ratio of 1:1; ● 15,500 square feet of the footprint of the civic building on Parcel J, at a ratio of 1:1; and ● Approximately 30,000 square feet of pedestrian-usable open space, calculated as part of the 20% of the site area that could be devoted to streets and ways, at a ratio of 1:1. If other offsets are required under the formula, they may be provided from any of the above categories. In addition, the following offsets may be used: <ul style="list-style-type: none"> ● No more than 15% of the total allowable offset in the form of water transportation benefits in excess of the baseline Chapter 91 requirements; and ● No more than 10% of the total allowable offset as improvements to water-related public access facilities within the Boston Harbor Islands National Park Area.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<u>Fan Pier (2000) (continued)</u>			
310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)	New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; Plan may specify alternative setback distances and other requirements which ensure that new buildings for nonwater-dependent use are not constructed immediately adjacent to a project shoreline, in order that sufficient space along the water's edge will be devoted exclusively to water-dependent activity and public access.	<ul style="list-style-type: none"> ● 150 feet along fan edge ● 60-75 feet along cove edge ● 30 feet (preference for 40 feet) along civic site ● No net loss of WDUZ area 	N/A
<u>Pier 4 (2000)</u>			
310 CMR 9.51(3)(e): Conservation of Capacity for Water-Dependent Use (Building height)	New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.	Landward of a 200-foot no-build zone at the seaward end of the pier, heights may increase from 100 feet to 170 feet to 250 feet.	200-foot no-build zone and 1 SF of open space for every 2 SF of NNS
310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)	New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; Plan may specify alternative setback distances and other requirements which ensure that new buildings for nonwater-dependent use are not constructed immediately adjacent to a project shoreline, in order that sufficient space along the water's edge will be devoted exclusively to water-dependent activity and public access.	<ul style="list-style-type: none"> ● 46 feet along cove edge ● 100 feet at seaward end of pier (with additional 100 feet as height offset) ● 26 feet along easterly edge of Pier 4 ● No net loss of WDUZ area 	N/A

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<u>McCourt/Broderick Parcels A, B, C and D</u>			
<p>310 CMR 9.51(3)(c): Conservation of Capacity for Water-Dependent Use (Water-dependent use zone) and 310 CMR 9.51(3)(d): Conservation of Capacity for Water-Dependent Use (Lot coverage)</p>	<p>New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; Plan may specify alternative setback distances and other requirements which ensure that new buildings for nonwater-dependent use are not constructed immediately adjacent to a project shoreline, in order that sufficient space along the water's edge will be devoted exclusively to water-dependent activity and public access. At least one square foot of the project site at ground level (exclusive of areas lying seaward of a project shoreline) shall be preserved as open space for every square foot of tideland area within the combined footprint of buildings containing nonwater-dependent use on the project site.</p>	<p>No open space is required</p>	<p>Parcel E (approximately 8,100 SF) will be 100% public open space; open space requirements for Parcels A-D, F shall be aggregated on Parcel E at a 1:1 ratio until Parcel E is completed and then at a 1.25:1 ratio on the McCourt Fan Pier Gateway Project property (i.e., outside of jurisdiction, thus 25% more open space), all of which shall be located adjacent to land subject to c. 91 jurisdiction and with a visual connection to the waterfront; all open space must be standards for open space on Commonwealth Tidelands and provided concurrent with impacts of individual projects.</p>
<p>310 CMR 9.51(3)(e): Conservation of Capacity for Water-Dependent Use (Building height)</p>	<p>New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.</p>	<p>Parcel A: 200 feet Parcels B and C: 250 feet Parcel D: 75 feet</p>	<p>For Parcels A-C: 1 SF of open space for every 2 SF of NNS No offset for Parcel D</p>

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<u>Barking Crab (2000)</u>			
310 CMR 9.51(3)(e): Conservation of Capacity for Water-dependent Use (Building height)	New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.	75 feet	
310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)	New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; Plan may specify alternative setback distances and other requirements which ensure that new buildings for nonwater-dependent use are not constructed immediately adjacent to a project shoreline, in order that sufficient space along the water's edge will be devoted exclusively to water-dependent activity and public access.	12 feet wide coincident with public access structure, which may be an interior arcaded walkway within the first floor of the new structure	N/A
310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone) and 310 CMR 9.51(3)(d): Conservation of Capacity for Water-dependent Use (Lot coverage)	New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; Plan may specify alternative setback distances and other requirements which ensure that new buildings for nonwater-dependent use are not constructed immediately adjacent to a project shoreline, in order that sufficient space along the water's edge will be devoted exclusively to water-dependent activity and public access. At least one square foot of the project site at ground level (exclusive of areas lying seaward of a project shoreline) shall be preserved as open space for every square foot of tideland area within the combined footprint of buildings containing nonwater-dependent use on the project site.	No open space is required.	Payment into open space fund.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<u>Barking Crab (2000) (continued)</u>			
<p>310 CMR 9.51(3)(b): Conservation of Capacity for Water-dependent Use (Location of facilities of private tenancy and facilities of public accommodation)</p>	<p>“...nonwater-dependent Facilities of Private Tenancy shall not be located on any pile-supported structures on flowed tidelands, nor at the ground level of any filled tidelands within 100 feet of the project shoreline...”</p>	<p>FPTs allowed on pile-support structures, except on the first, second and top floors; all structures must be within the existing pile field FPTs allowed on second floor if the exterior docking facilities, marine services, and interior space dedicated to WD uses are fully retained.</p>	<p>Top floor public observation area (100% of the gross floor area (GFA) on the top floor), capable of being enclosed for all-season use; with appropriate amenities; fully accessible; identified prominently by signage; no purchase required.</p>
<u>Fort Point Historic North District (2000)</u>			
<p>310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone) and 310 CMR 9.51(3)(d): Conservation of Capacity for Water-dependent Use (Lot coverage)</p>	<p>New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; Plan may specify alternative setback distances and other requirements which ensure that new buildings for nonwater-dependent use are not constructed immediately adjacent to a project shoreline, in order that sufficient space along the water's edge will be devoted exclusively to water-dependent activity and public access. At least one square foot of the project site at ground level (exclusive of areas lying seaward of a project shoreline) shall be preserved as open space for every square foot of tideland area within the combined footprint of buildings containing nonwater-dependent use on the project site.</p>	<p>No open space is required.</p>	<p>1)The City-owned parcel located on Sleeper Street, immediately adjacent to the MBTA Mitigation Park and Parcel “E”, should be designated as the specific locus for investment of the Open Space Fund, unless the City can propose an alternative site that meets the same standards. 2) 33 Sleeper Street, 11-13 Sleeper Street, and 321-323 Congress Street shall participate in the City’s Open Space Fund as provided in the MHP, in accordance with the schedule of contribution proposed in the MHP. 3) The Open Space Fund contributions of 33 Sleeper Street, 11-13 Sleeper Street, and 321-323 Congress Street should be used specifically for the design and construction of open space on the City-owned Sleeper Street parcel, compatible with and supplemental to open space designs for the MBTA Mitigation Park and Parcel “E”. 4) At a minimum, the final design and construction of open space provided to meet these requirements shall satisfy the Chapter 91 standards for open space located on Commonwealth Tidelands.</p>

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<u>Fort Point Historic North District (2000) (continued)</u>			
			<p>5) All open space commitments must be provided concurrent with the individual development projects. However, overall project work may be phased; for example, one project's contribution may be sufficient to fund the design of a proposed open space, with construction dependent upon contributions from other projects. If necessary, any shortfall in funding beyond the project-specific contributions shall be made up from other sources to fully complete the design and construction of designated open spaces.</p> <p>6) The City shall develop a system that accounts for the status of the aggregation program, and shall maintain a running balance of the parcel to which open space funds are to be credited. Using this open space accounting system, the City shall include a certification of open space status to DEP as part of its Section 18 recommendation on Waterways licenses.</p>
<u>Fort Point Historic South and Industrial Districts (2000)</u>			
<p>310 CMR 9.51(3)(e): Conservation of Capacity for Water-dependent Use (Building height)</p>	<p>New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.</p>	<p>Historic South District: 150 feet south of Summer Street and 100 feet for remainder of district, except at 60 Necco Court, which is limited to 80 feet.</p>	<p>NNS offset at 2:1 ratio</p>

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
Fort Point Historic South and Industrial Districts (2000) (continued)			
310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)	New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; Plan may specify alternative setback distances and other requirements which ensure that new buildings for nonwater-dependent use are not constructed immediately adjacent to a project shoreline, in order that sufficient space along the water's edge will be devoted exclusively to water-dependent activity and public access.	18 feet along edge of Fort Point Channel for 60 Necco Court, no net loss of WDUZ area in rest of Fort Point Historic South District.	N/A
ICA (2002)			
310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)	New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; Plan may specify alternative setback distances and other requirements which ensure that new buildings for nonwater-dependent use are not constructed immediately adjacent to a project shoreline, in order that sufficient space along the water's edge will be devoted exclusively to water-dependent activity and public access.	Fourth-floor gallery space may cantilever over WDUZ at least 40 feet vertically above grade.	N/A

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
ICA (2002) (continued)			
310 CMR 9.53(2)(b): Activation of Commonwealth Tidelands for Public Use (Exterior open space for public recreation)	At a minimum, at least 50% of the project site must be reserved as open space for water-dependent activity and public access. The open space must be located on land (<i>i.e.</i> , cannot include watersheet) and be accessible to the general public at all times. On Commonwealth Tidelands, a maximum of 50% of the required open space (<i>i.e.</i> , 25% or more of the total project site) can be devoted to streets and ways.	Public grandstand setback approximately 24 feet from project shoreline, not less than 74 feet from the project shoreline to the structure at the northeastern edge of the building and not less than 68 feet from the project shoreline to the northwestern edge of the building.	N/A
100 Acres (2009)			
310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)	“New or expanded buildings for non waterdependent use... shall not be located within a waterdependent use zone”. The WDUZ in the MHP area includes a setback for non-water dependent uses that would vary from 80 to 100 feet, depending upon location and characteristics of projects that may be proposed.”	An alternative WDUZ will be established that generally increases the minimum setback to 110 feet from the project shoreline, except for that portion of the planning area between the Fort Point Channel and 60 Necco Court which will have a setback of 18 feet.	The reconfigured WDUZ will provide at least the same land area as would occur under the standard provisions. The WDUZ is larger throughout most of the planning area and will enhance public access and enjoyment of this area of the waterfront. No net loss of WDUZ will occur.
310 CMR 9.52(1)(b)1.: Utilization of Shoreline for Water-dependent Purposes (Pedestrian access network)	“...walkways and related facilities along the entire length of the Water-Dependent Use Zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in a municipal harbor plan, shall be no less than ten feet in width...”	The minimum width will be widened to 18 feet clear in areas where the WDUZ is at least 100 feet wide and 12 feet clear along the remainder of the shoreline.	The substitution directly benefits the public through enhanced access (open 24 hours/seven days per week); no offsetting public benefit is required.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<u>100 Acres (2009) (continued)</u>			
310 CMR 9.51(3)(e): Conservation of Capacity for Water-dependent Use (Building height)	New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.	Allow non water-dependent buildings ranging in height from 80 feet to 180 feet.	The substitution results in a required offset for net new shadow. The proposed offset is additional public open space. This offset is permitted on a 1:2 ratio of additional open space to net new shadow.
<u>150 Seaport Boulevard (2016)</u>			
310 CMR 9.51(3)(e): Conservation of Capacity for Water-dependent Use (Building height)	New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.	Allow height up to 250 feet Proposed building will create 16,640 sf in net new shadow.	\$1.5 million to improve open space within or adjacent to the South Boston MHP planning area, specifically Martin’s Park at Children’s Wharf. Interior public waiting area and reception space on the ground floor of the proposed development integrated within the general lobby areas, including amenities and programming described above with clear signage on the interior and exterior of the building.
310 CMR 9.51(3)(d): Conservation of Capacity for Water-dependent Use (Lot coverage)	At least one square foot of the project site at ground level (exclusive of areas lying seaward of a project shoreline) shall be preserved as open space for every square foot of tideland area within the combined footprint of buildings containing nonwater-dependent use on the project site.	Up to 75% lot coverage may be permitted.	
310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)	“New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone”. On the Development Site, the required WDUZ would total 5,768 sf.	The required WDUZ dimensions may be reconfigured as long as a minimum width of ten feet is maintained along the project shoreline and as long as the modification results in no net loss of WDUZ area.	The reconfigured WDUZ will include the ten ft. setback from the existing project shoreline (except that area which is under the cantilevered balcony areas) and one of two alternative areas of approximately 2,000 sf described above, with a preference for “Massport Wharf”.

9.57: continued

2. Table 2: Summary of Amplifications.

Regulatory Provision	Chapter 91 Standard	Approved Amplification	Implementation Mechanism
<u>100 Acres (2009)</u>			
310 CMR 9.52: Utilization of Shoreline for Water-dependent Purposes	“A facility that promotes active use of the project shoreline and requires the provision of a pedestrian network of a kind and to a degree appropriate for the project site.”	<p>The amplification of these requirements directs the implementation of these regulations to the provision of the boating dock facility and pedestrian network envisioned in the Fort Point Channel Watersheet Activation Plan.</p> <p>Additional activation of the Harborwalk and waterfront open space will be provided through the use of historic interpretive elements and displays. The particular type and location of exhibits will be appropriate to this particular location in the harbor, and will follow guidance provided in Section 9 and Appendix 1 of the Plan.</p>	FPCWAP and South Boston Waterfront District Municipal Harbor Planning Area (SBWDMHPA), Section 9 and Appendix 1
310 CMR 9.53: Activation of Commonwealth Tidelands for Public Use	Nonwater-dependent use projects located on Commonwealth Tidelands must promote public use and enjoyment of such lands to a degree that is fully commensurate with the proprietary rights of the Commonwealth and that ensures that private advantages of use are not primary merely incidental to the achievement of public purposes.	The amplification of this requirement will provide public benefits recommended by the Fort Point Channel Watersheet Activation Plan in the WDUZ and adjacent watersheet to promote public uses and enjoyment of Commonwealth tidelands.	FPCWAP

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Amplification	Implementation Mechanism
150 Seaport Boulevard (2016)			
310 CMR 9.53(2)(b): Activation of Commonwealth Tidelands for Public Use (Exterior open space for public recreation)	At a minimum, at least 50% of the project site must be reserved as open space for water-dependent activity and public access. The open space must be located on land (<i>i.e.</i> , cannot include watersheet) and be accessible to the general public at all times. On Commonwealth Tidelands, a maximum of 50% of the required open space (<i>i.e.</i> , 25% or more of the total project site) can be devoted to streets and ways.	5,000 SF of exterior open space on a deck beyond the existing project shoreline.	Easements with Massport

(f) Cohasset Municipal Harbor Plan (November 25, 2020).

1. Table 1. Substitute Standards and Offsetting Measures.

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
310 CMR 9.51(3)(e): Conservation of Capacity for Water-dependent Use (Building height)	New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.	New or expanded buildings shall not exceed 35 feet in height above Base Flood Elevation within the Harbor Village District (HVB) Overlay District.	No offset is required because, no new or expanded non-water dependent buildings will be greater than the waterways maximum numerical standard of 55 feet in height.
310 CMR 9.52(1)(b)1.: Utilization of Shoreline for Water-dependent Purposes (Pedestrian access network)	“...walkways and related facilities along the entire length of the Water-Dependent Use Zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in a municipal harbor plan, shall be no less than ten feet in width...”	Walkways within the HVB Overlay District shall be along the entire length of the water-dependent use zone adjacent to the project shoreline and shall be no less than 25 feet in width.	N/A

9.57: continued

(g) Central Waterfront (Everett) Municipal Harbor Plan (February 10, 2014)

1. Table 1. Substitute Standards and Offsetting Measures

Regulatory Provision	Chapter 91 Standard	Substitution	Offsetting Measures
<p>310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)</p>	<p>“New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone”.</p> <p>On the Development Site, the required WDUZ would be 100 feet from the southernmost shoreline along the Mystic River, 85 feet along the embayment, and 100 feet from the northern portion of the shoreline along the embayment.</p>	<p>The required WDUZ dimensions may be modified as long as a minimum width of 25 feet is maintained along the project shoreline and as long as the modification results in no net loss of WDUZ area.</p>	<p>The reconfigured WDUZ will provide at least the same land area as would occur under the standard provisions. A minimum of 25 feet will be maintained along the project shoreline and only Facilities of Public Accommodation will be allowed on the ground floor of any portions of buildings that are located within 50 feet of the project shoreline. No net loss of WDUZ will occur.</p>
<p>310 CMR 9.51(3)(b): Conservation of Capacity for Water-dependent Use (Location of Facilities of Private Tenancy and Facilities of Public Accommodation)</p>	<p>“...nonwater-dependent Facilities of Private Tenancy shall not be located on any pile-supported structures on flowed tidelands, nor at the ground level of any filled tidelands within 100 feet of the project shoreline...”</p>	<p>Lower Broadway: FPTs may be allowed within 100 feet of the shoreline.</p>	<p>At least an equivalent area of Facilities of Public Accommodation as required by the regulations will be provided elsewhere on the site in appropriate locations to effectively promote the public use and enjoyment of the project site. FPTs are not allowed within 50 feet of the project shoreline.</p>
<p>310 CMR 9.51(3)(e): Conservation of Capacity for Water-dependent Use (Building height)</p>	<p>New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.</p>	<p>Wynn Everett: Allow heights up to 55 feet in Area A and up to 400 feet in Area B, as shown in Figure 2.</p> <p>Lower Broadway: Allow heights up to 105 feet in Area A and up to 150 feet in Area B, as shown in Figure 2.</p>	<p>Where increased heights result in net new shadow, one square foot of new/additional open space beyond what is required in the Waterways regulations will be provided in the Harbor Planning area within or immediately adjacent to jurisdiction for every one square foot of net new shadow.</p>

9.57: continued

Regulatory Provision	Chapter 91 Standard	Substitution	Offsetting Measures
<p>310 CMR 9.51(3)(d): Conservation of Capacity for Water-dependent Use (Lot coverage)</p>	<p>At least one square foot of the project site at ground level (exclusive of areas lying seaward of a project shoreline) shall be preserved as open space for every square foot of tideland area within the combined footprint of buildings containing nonwater-dependent use on the project site.</p>	<p>Up to 60% lot coverage (resulting in 40% open space) may be permitted.</p>	<p>For Lower Broadway scenario development exceeding 50% lot coverage, one or more of the following open space improvements or public amenities must be provided:</p> <p>As a first priority, and to be pursued before alternative offsets below, unless proven unfeasible due to property ownership or other restrictions, construct and maintain a continuous landscaped pedestrian/bicycle connection between on-site riverfront pathways and DCR open space at Gateway Park, including a minimum of 50,000 square feet of off-site open space located on the MBTA-owned peninsula along and underneath the commuter rail line and/or other portions of the Gateway Center property.</p> <p>For Wynn scenario development, and if the priority offset above is not feasible for the Lower Broadway scenario, one or more of the following should be provided (in prioritized order) to equal at least the amount of lot coverage in excess of the 50% baseline:</p> <ul style="list-style-type: none"> ● For the first 10,000 square feet, provide and maintain a facility to provide river access by boat in Gateway Park (such as a canoe/kayak launch); ● For the next 20,000 square feet, provide and maintain a fishing platform or pier with associated amenities; ● For the next 10,000 square feet, provide and maintain 3,000 linear feet of improved walking and/or bicycle paths in Gateway Park, widened to a minimum of ten feet clear; and ● For every remaining one square foot, provide 25 square feet of ongoing maintenance of DCR facilities and/or property in the planning area which is not already maintained by Gateway Center.

9.57: continued

(h) Gloucester Municipal Harbor Plan and DPA Master Plan (July 6, 1999, as renewed and amended on December 11, 2009 and December 19, 2014).

1. Table 1. Substitute Standards and Offsetting Measures.

Plan-wide (2009, 2014)			
Regulatory Provision	Chapter 91 Standard	Substitution	Offsetting Measures
310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)	New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; except as provided below, the width of said zone shall be determined as follows: 1. along portions of a project shoreline other than the edges of piers and wharves, the zone extends for the lesser of 100 feet or 25% of the weighted average distance from the present high water mark to the landward lot line of the property, but no less than 25 feet; and 2. along the ends of piers and wharves, the zone extends for the lesser of 100 feet or 25% of the distance from the edges in question to the base of the pier or wharf, but no less than 25 feet; and 3. along all sides of piers and wharves, the zone extends for the lesser of 50 feet or 15% of the distance from the edges in question to the edges immediately opposite, but no less than ten feet.	For project sites that meet the eligibility standard, the required WDUZ dimensions may be modified as long as a minimum width of 25 feet is maintained along the project shoreline and the ends of piers and wharfs and a minimum of 10 feet along the sides of piers and wharves, and as long as the modification results in no net loss of WDUZ area.	Substitution provision can only be applied to those project sites where it is shown that application of the c. 91 standard would result in an inefficient siting of uses in the WDUZ, and where the reconfiguration achieves greater effectiveness in the use of the water's edge for water-dependent industrial use. The reconfigured zone must be adjacent to the waterfront and result in an increase in WDUZ immediately adjacent to the water. In no case will a reconfigured WDUZ that results in an area separated from the waterfront or in a net loss of WDUZ be allowed.

9.57: continued

Table 2. Summary of Amplifications.

Plan-wide (2009, 2014 (continued))		
Regulatory Provision	Chapter 91 Standard	Approved Amplification
310 CMR 9.36(4)(b): Standards to Protect Water-dependent Uses (Displacement of water-dependent uses)	“...the project shall include arrangements determined to be reasonable by the Department for the water-dependent use to be continued at its existing facility, or at a facility at an alternative location having physical attributes, including proximity to the water, and associated business conditions which equal or surpass those of the original facility and as may be identified in a municipal harbor plan...”	No project will displace existing commercial fishing vessel berthing in Gloucester Harbor without providing reasonably equivalent berthing space on site or at a suitable alternative site not already used by commercial fishing vessels.
310 CMR 9.36(5)(b)4.: Standards to Protect Water-dependent Uses (Supporting DPA Use)	“...in the case of supporting DPA use, conditions governing the nature and extent of operational or economic support must be established to ensure that such support will be effectively provided to water-dependent-industrial uses...”	For properties with a water-dependent industrial hub port use, economic support from the supporting use to the hub use will be presumed. If no water-dependent industrial use exists or is proposed on the site, an investment in on-site waterfront infrastructure (piers, wharves, dredging) to improve capacity for water-dependent industrial use will be required. Whenever feasible, maintenance of existing berthing and creation of new berthing for commercial vessels should be required. If, and only if, none of the above can be achieved adequately, a contribution to the Gloucester Port Maintenance and Improvement Fund will be required as mitigation. This fund shall be used only for investment in water dependent industrial infrastructure (piers, wharves, dredging) within the DPA.
310 CMR 9.52(1)(b)1.: Utilization of Shoreline for Water-dependent Purposes (Pedestrian access network)	“...walkways and related facilities along the entire length of the Water-Dependent Use Zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in a municipal harbor plan, shall be no less than ten feet in width...”	To the extent practicable for a site, public access facilities shall be integrated into a project to activate the waterfront as part of the open space required with a non-water dependent supporting DPA use but must be sited to be compatible with and not interfere with water-dependent industrial uses and activities. Open areas used to support working waterfront activities seasonally during the year shall accommodate temporary public access when possible. Within the WDUZ no use shall be licensed, unless it provides access to water-borne vessels wherever possible.

9.57: continued

	Plan-wide (2009, 2014) continued	
Regulatory Provision	Chapter 91 Standard	Approved Amplification
310 CMR 9.12(2)(b): Determination of Water-dependency (Water-dependent industrial uses)	The Department shall find to be water-dependent industrial the following uses: 1. Marine terminals and related facilities for the transfer between ship and shore, and the storage of bulk materials or other goods transported in waterborne commerce 2. Facilities associated with commercial passenger vessel operations 3. Manufacturing facilities relying primarily on the bulk receipt or shipment of goods by waterborne transportation 4. Commercial fishing and fish processing facilities 5. Boatyards, dry docks, and other facilities related to the construction, serving, maintenance, repair, or storage of vessels or other marine structures 6. Facilities for tugboats, barges, dredges, or other vessels engaged in port operations or marine construction 7. Any water-dependent use listed in 310 CMR 9.12(2)(a)9. through 14., provided the Department determines such use to be associated with the operations of a Designated Port Area 8. Hydroelectric power generating facilities 9. Offshore renewable energy infrastructure facilities in the Commonwealth, including ocean wave energy facilities used to deliver electricity, natural gas or Telecommunications services to the public from an offshore facility located outside the Commonwealth; and 10. Other industrial uses or infrastructure facilities which cannot reasonably be located at an inland site as determined in accordance with 310 CMR 9.12(2)(c) or (d).	In addition to existing allowable water-dependent industrial uses, MassDEP may find that marine research, testing or development activities are water-dependent industrial uses if they include the following characteristics: 1. Access to coastal waters for research, testing or development; and 2. Commercial fishing facilities, including those engaged in research, testing, or development related to commercial fishing safety, conservation, and sustainability; or 3. Boatyards, dry docks, and other fishing facilities related to the construction, serving, maintenance, repair, or storage of vessels or other marine structures engaged in marine science and technology, including research, development, or testing; or 4. Facilities for tugboats, barges, dredges, or other vessels engaged in port operations or marine construction, including those related to marine research, development, or testing.

Table 3: Planning Principles and Priorities.

Planning Principle/Priority	Decision Standard	Implementation Mechanism
Allow up to 50% DPA supporting commercial uses on filled tidelands for most properties within the DPA by transferring the supporting use allowances for certain key parcels that will be 100% water-dependent industrial use.	MassDEP shall not license commercial DPA supporting uses within the Gloucester DPA within filled and flowed tidelands in the following areas: on the State Fish Pier; the U.S. Coast Guard Facility; Cruiseport Gloucester; or within or on any DPA roadway or pile-supported pier. MassDEP may license commercial DPA supporting uses on up to 50% of a project site on filled tidelands on DPA properties not listed above.	Chapter 91 Licensing

9.57: continued

(i) Lynn Municipal Harbor Plan and DPA Master Plan (June 28, 2010, as renewed and amended on November 25, 2020).

1. Table 1. Substitute Standards and Offsetting Measures.

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<p>310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)</p>	<p>New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; except as provided below, the width of said zone shall be determined as follows:</p> <ol style="list-style-type: none"> 1. along portions of a project shoreline other than the edges of piers and wharves, the zone extends for the lesser of 100 feet or 25% of the weighted average distance from the present high water mark to the landward lot line of the property, but no less than 25 feet; and 2. along the ends of piers and wharves, the zone extends for the lesser of 100 feet or 25% of the distance from the edges in question to the base of the pier or wharf, but no less than 25 feet; and 3. along all sides of piers and wharves, the zone extends for the lesser of 50 feet or 15% of the distance from the edges in question to the edges immediately opposite, but no less than ten feet. 	<p>A minimum WDUZ setback of 100 feet from the shoreline, with a net total WDUZ area equal to or greater than the area of a 200 feet WDUZ setback for the project site. Applies to the harbor focus area only.</p>	<p>No offset is required as the substitution increases the WDUZ required under 310 CMR 9.51(3)(c).</p>
<p>310 CMR 9.52(1)(b)1.: Utilization of Shoreline for Water-dependent Purposes (Pedestrian access network)</p>	<p>“...walkways and related facilities along the entire length of the Water-Dependent Use Zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in a municipal harbor plan, shall be no less than ten feet in width...”</p>	<p>Minimum walkway width of 15 to 30 feet outside of the DPA and within the harbor focus area, unless the width is physically constrained. In no cases will the allowed width be less than ten feet. Width shall be consistent with the guidance provided in the 2019 Waterfront Open Space Master Plan (“2019 WOSMP”) included as Appendix A. All opportunities to provide the appropriate width should be considered, including cantilevering as appropriate.</p>	<p>No offset is required because in all cases the waterfront promenade will be no less than the waterways minimum numerical standard of ten feet wide.</p>

9.57: continued

2. Table 2. Summary of Amplifications

Regulatory Provision	Chapter 91 Standard	Approved Amplification
310 CMR 9.52: Utilization of Shoreline for Water-dependent Purposes	A nonwater-dependent use project that includes fill or structures on any tidelands shall devote a reasonable portion of such lands to water-dependent use, including public access in the exercise of public rights in such lands. In applying this standard, the Department shall take into account any relevant information concerning the capacity of the project site to serve such water-dependent purposes, especially in the vicinity of a water-dependent use zone; and shall give particular consideration to applicable guidance specified in a municipal harbor plan, as provided in 310 CMR 9.34(2)(b)2.	Applies the tidelands standards at 310 CMR 9.53(2) for public use to any tideland areas within the expanded WDUZ outside of the DPA and within the harbor focus area, with specific guidance from the 2019 Waterfront Open Space Master Plan (2019 WOSMP). This amplification requires that these areas are designed to “maintain substantial public activity on the site on a year-round basis, with public parks, plazas, and observation areas that also have public amenities that shall include seating, lighting, trash receptacles, restrooms, and children’s play areas, as appropriate” and must be consistent with the 2019 WOSMP.
310 CMR 9.52(1)(b)1.: Utilization of Shoreline for Water-dependent Purposes (Pedestrian access network)	A pedestrian access network of a kind and to a degree that is appropriate for the project site and the facility(ies) provided in 310 CMR 9.52(1)(a).	Design, materials, and layout for the waterfront promenade within the WDUZ and outside of the DPA and within the harbor focus area shall be consistent with the guidelines provided in the 2019 WOSMP.
310 CMR 9.52(1)(b)2.: Utilization of Shoreline for Water-dependent Purposes (Pedestrian access network)	A pedestrian access network of a kind and to a degree that is appropriate for the project site and the facility(ies) provided in 310 CMR 9.52(1)(a); at a minimum, such network shall consist of: appropriate connecting walkways that allow pedestrians to approach the shoreline walkways from public ways or other public access facilities to which any tidelands on the project site are adjacent. Such pedestrian access network shall be available to the public for use in connection with fishing, fowling, navigation, and any other purposes consistent with the extent of public rights at the project site.	Specifies locations, with a process for substitute locations, for public access walkways to connect the Lynnway to the project shoreline through the harbor planning area (HPA). Design and amenity requirements for these lateral accessways shall be as shown and described in the 2019 WOSMP.

3. Table 3: Planning Principles and Priorities.

Planning Principle/Priority	Decision Standard	Implementation Mechanism
Continue lateral pedestrian access network with consistent design and amenities to the Lynnway	Lateral accessways shall be in the locations and with design and amenity requirements as shown and described in the 2019 WOSMP for entire length	Required through the Secretary’s discretionary provisions for a public benefits determination under 301 CMR 13.00

9.57: continued

Planning Principle/Priority	Decision Standard	Implementation Mechanism
Require the use of nature-based shorelines and incorporation of increased elevation to address future climate-related impacts.	Where feasible and appropriate, consistent with guidance from the 2019 WOSMP	Chapter 91 licensing

(j) Nantucket and Madaket Municipal Harbor Plan (December 21, 2009)

1. Table 1. Summary of amplifications

Regulatory Provision	Chapter 91 Standard	Amplification
310 CMR 9.51: Conservation of Capacity for Water-dependent Use	A nonwater-dependent use project on any tidelands shall not unreasonably diminish the capacity of such lands to accommodate water-dependent use. Facilities of Private Tenancy must be developed in a manner that prevents significant conflicts in operation with water-dependent uses that can reasonably be expected to locate on or near the water.	The amplification of these requirements prohibits any new non-water dependent use, or extension of an existing non-water dependent use, that would: <ol style="list-style-type: none"> 1. displace or significantly disrupt an existing water dependent use; 2. unreasonably disrupt an existing water-dependent use; 3. unreasonably diminish the capacity of the site to accommodate future water-dependent uses; and 4. impede or infringe upon existing public access
310 CMR 9.51: Conservation of Capacity for Water-dependent Use and 310 CMR 9.35(2)(a): Standards to Preserve Water-related Public Rights (Public Navigation Rights Applicable to All Waterways)	A nonwater-dependent use project on any tidelands shall not unreasonably diminish the capacity of such lands to accommodate water-dependent use. Facilities of Private Tenancy must be developed in a manner that prevents significant conflicts in operation with water-dependent uses that can reasonably be expected to locate on or near the water. The project shall not significantly interfere with public rights of navigation.	The amplification of these requirements prohibits certain water-dependent uses determined in the Plan to conflict with the traditional and historic use and character of the Harbor Overlay District, including: <ul style="list-style-type: none"> ● Cruise ship terminals or support services; ● Personal watercraft rental; and ● New facilities of private tenancy.
310 CMR 9.35(3)(a)1. and 2.: Standards to Preserve Water-related Public Rights (Public Rights of Fishing and Fowling Applicable to Tidelands and Great Ponds) and 310 CMR 9.35(2)(a): Standards to Preserve Water-related Public Rights (Public Navigation Rights Applicable to All Waterways)	The project shall not: <ol style="list-style-type: none"> 1. pose a substantial obstacle to the public's ability to fish or fowl in waterway areas adjacent to the project site; 2. result in the elimination of a traditional fishing or fowling location used extensively by the public; or 3. interfere with public rights of navigation 	The amplification of these requirements prohibits the construction of new private docks or piers, but exempts certain public or commercial water-dependent dock and pier projects within the Harbor Overlay District.

9.57: continued

(k) New Bedford Fairhaven Municipal Harbor Plan and DPA Master Plan (September 24, 2002, as renewed and amended on June 14, 2010)

1. Table 1. Substitute Standards and Offsetting Measures

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<u>Shoreline within MHP Planning Area and outside of the DPA</u>			
310 CMR 9.52(1)(b)1.: Utilization of Shoreline for Water-dependent Purposes (Pedestrian access network)	“...walkways and related facilities along the entire length of the Water-Dependent Use Zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in a municipal harbor plan, shall be no less than ten feet in width...”	Plan proposes to establish a dedicated 20-foot wide public access walkway along the portion of New Bedford and Fairhaven shoreline that is located outside the DPA and within that portion of the harbor bounded by the hurricane barrier on the South and the Rt. 195 bridge on the North.	No offsetting measures were necessary as the proposed substitution “will promote, with comparable or greater effectiveness, the state tidelands policy objectives.”

2. Table 2: Planning Principles and Priorities.

Planning Principle/Priority	Decision Standard	Implementation Mechanism	Notes
<u>Area-wide</u>			
2010 MHP and 2020 MHP Clarification approved Potential Navigational Dredge Areas (PNDA) and potential Waterfront Development Shoreline Facility (WDSF) locations. Inclusion in the MHP and Clarification allowed these areas to be eligible for navigational dredging and potential filling of shoreline facilities with clean material through a stream-lined permitting process within the Superfund Regulations known as the State Enhanced Remedy (SER).	EPA makes all final decisions on SER Work Plans for PNDA’s and WDSFs. Approved SER activities are exempt from all state and federal procedural regulatory requirements, but must continue to meet all substantive environmental standards.	MADEP coordinates the SER Work Plan reviews and inputs from state and federal agencies. EPA makes all final decisions on SER Work Plans for PNDA’s and WDSFs.	<i>See 2020 MHP Clarification for potential PNDA and WDSF location.</i>

(l) (Provincetown Harbor Management Plan (May 4, 1999, as renewed and amended on February 29, 2012 and April 10, 2019)

9.57: continued

1. Table 1. Substitute standards and offsetting measures

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
<u>Fisherman's Wharf</u>			
310 CMR 9.32(1)(a): Categorical Restrictions on Fill and Structures [Tideland (Outside of ACECs and DPAs)]	Public walkway must be located within the footprint of the existing pile supported structure	The required ten feet wide walkway on the western side of the wharf may be located either within the existing pier footprint or cantilevered beyond the footprint of the existing pier.	Payment of \$205,500 to the Harbor Access Gift Fund
<u>227R Commercial Street</u>			
310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)	New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone.	WDUZ reconfiguration (no net loss); no less than 25 feet setback	N/A
310 CMR 9.51(3)(d): Conservation of Capacity for Water-Dependent Use (Lot coverage)	At least one square foot of the project site at ground level (exclusive of areas lying seaward of a project shoreline) shall be preserved as open space for every square foot of tideland area within the combined footprint of buildings containing nonwater-dependent use on the project site.	Lot Coverage shall not exceed 60%	Monetary contribution to Harbor Access Fund; Public amenities. Amount to be determined at time of licensing

2. Table 2. Summary of Amplifications.

Regulatory Provision	Chapter 91 Standard	Approved Amplification
310 CMR 9.16(2)(c): Fees (Tidewater displacement fee)	Except as provided in 310 CMR 9.16(4), prior to issuance of a license for any fill or structure that will displace tidewaters below the high water mark, the applicant, or his or her heirs or assignees responsible for such displacement, shall, at the discretion of [DEP] [consider] a contribution to a special fund or other program managed by a public agency or nonprofit organization in order to directly provide public harbor improvements.	The Provincetown Harbor Plan requires that tidewater displacement fees levied by DEP be paid directly to the Provincetown Harbor Access Fund, as described in Section 6(a)(2) of this Plan.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Amplification
<p>310 CMR 9.22(1): Maintenance, Repair, and Minor Project Modifications (Maintenance and repair of fill and structures)</p>	<p>“No application for license or license amendment shall be required for [maintenance and repair] activity. Maintenance and repair include... restoration to the original license specifications of licensed fill or structures that have been damaged by catastrophic events, provided that no change in use occurs and that... in the case of flood related damage, the cost of such restoration does not exceed 50% of the cost of total replacement according to the original license specifications...”</p>	<p>The Provincetown Harbor Plan calls for a strict enforcement of this requirement and for close coordination between DEP and the Provincetown Building Inspector, to determine when further licensing is required for structures that have been damaged beyond the 50% replacement cost limit.</p>
<p>310 CMR 9.22(3): Maintenance, Repair, and Minor Project Modifications (Minor project modifications)</p>	<p>The licensee may undertake minor modifications to a license project without filling an application for license or license amendment. Such modifications are limited to... No such modifications shall be undertaken until the licensee has submitted written notice to the Department describing the proposed work in sufficient detail with reference to any relevant license plans, for the Department to determine compliance with the above conditions.</p>	<p>The Provincetown Harbor Plan calls for strict enforcement of this requirement and for DEP to provide the Harbor Committee with opportunity to review and comment upon any written notice of proposed minor project modification.</p>

9.57: continued

(m) Salem Municipal Harbor Plan and DPA Master Plan (June 24, 2008)

1. Table 1. Substitute Standards and Offsetting Measures

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
310 CMR 9.51(3)(c): Conservation of Capacity for Water-dependent Use (Water-dependent use zone)	New or expanded buildings for nonwater-dependent use, and parking facilities at or above grade for any use, shall not be located within a water-dependent use zone; except as provided below, the width of said zone shall be determined as follows: 1. along portions of a project shoreline other than the edges of piers and wharves, the zone extends for the lesser of 100 feet or 25% of the weighted average distance from the present high water mark to the landward lot line of the property, but no less than 25 feet;	The minimum width of the WDUZ along the waterfront will be no less than 20 feet; the remaining area required by the Chapter 91 WDUZ calculation may be redistributed to create pedestrian/view corridors. Applies only to Sub-area A South Commercial Waterfront District.	There can be no net loss of WDUZ area. Requires the creation of two permanent pedestrian access corridors and one permanent view corridor linking the downtown area of Salem to the waterfront.
310 CMR 9.51(3)(e): Conservation of Capacity for Water-dependent Use (Building height)	New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.	Allow non-water dependent buildings to be 70 feet in height, consistent with local zoning. Applies only in Sub-area A in the South Harbor District.	Additional public open space is required on the site calculated by determining the additional shadow cast at the ground level by the additional building mass during full sun conditions on October 23 rd between 9:00 A.M. and 3:00 P.M. No more than half the additional open space may be used for parking.
310 CMR 9.51(3)(e): Conservation of Capacity for Water-dependent Use (Building height)	New or expanded buildings for nonwater-dependent use shall not exceed 55 feet in height if located over the water or within 100 feet landward of the high water mark; at greater landward distances, the height of such buildings shall not exceed 55 feet plus ½ foot for every additional foot of separation from the high water mark.	Allow non-water dependent buildings to be 70 feet in height, consistent with local zoning. Applies only in the Waterfront Complex site at Pickering Wharf.	Require the addition of a ground-level public space in a “turret” portion of the new Harborwalk gateway adjacent to Congress Street. Require additional landscaping and design elements to improve appearance and to screen the gateway from the building’s loading and service areas. Require construction of an observation platform on the southeast corner of Pickering Wharf.

9.57: continued

Regulatory Provision	Chapter 91 Standard	Approved Substitution	Approved Offsetting Measures
310 CMR 9.52(1)(b)1.: Utilization of Shoreline for Water-dependent Purposes (Pedestrian access network).	“...walkways and related facilities along the entire length of the Water-Dependent Use Zone; wherever feasible, such walkways shall be adjacent to the project shoreline and, except as otherwise provided in a municipal harbor plan, shall be no less than ten feet in width...”	Require a dedicated 20-foot wide public walkway around the South River, of which a minimum of ten feet shall be an unobstructed pathway. The inland ten feet will be used for landscaping and accessory amenities to enhance the general public’s waterfront experience. Applies only in the South River Waterfront Sub-area	The substitution directly benefits the public through improved access of 20 feet instead of ten feet. No additional offsetting benefit is required.

2. Table 2. Summary of Amplifications.

Regulatory Provision	Chapter 91 Standard	Approved Amplification
310CMR 9.02: <i>Definitions</i> (Supporting DPA Uses)	The amount of supporting Designated Port Area Uses on filled tidelands within a DPA shall not exceed 25% of the area of the project site.	Only water-dependent industrial uses and temporary uses will be allowed in the Industrial Port District sub-area of the DPA.

(n) Hull Harbor Plan (February 14, 2000)

This Approved Harbor Plan does not include any substitute provisions.

(o) South Coastal Harbor (Chatham) Management Plan (August 19, 1994, as renewed on July 23, 1999, October 21, 2005, and May 12, 2015)

This Approved Harbor Plan does not include any substitute provisions.

(p) Edgartown Municipal Harbor Plan (October 2, 1997, as renewed on April 30, 2003)

This Approved Harbor Plan does not include any substitute provisions.

REGULATORY AUTHORITY

310 CMR 9.00: M.G.L. c. 21A, §§ 2, 4, 8 and 14; M.G.L. c. 91, §§ 1 through 63; M.G.L. c. 91, § 18.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 10.00: WETLANDS PROTECTION

Section

Regulations for All Wetlands

- 10.01: Introduction and Purpose
- 10.02: Statement of Jurisdiction
- 10.03: General Provisions
- 10.04: Definitions
- 10.05: Procedures
- 10.06: Emergencies
- 10.07: Compliance with M.G.L. c. 30, §§ 61 through 62H
- 10.08: Enforcement Orders
- 10.09: Severability
- 10.10: Effective Date
- 10.11: Actions Required Before Submitting a Notice of Intent for an Ecological Restoration Project
- 10.12: Notice of Intent for an Ecological Restoration Project
- 10.13: Eligibility Criteria for Restoration Order of Conditions
- 10.14: Restoration Order of Conditions

Additional Regulations for Coastal Wetlands

- 10.21: Introduction
- 10.22: Purpose
- 10.23: Additional Definitions for 310 CMR 10.21 through 10.37
- 10.24: General Provisions
- 10.25: Land under the Ocean
- 10.26: Designated Port Areas
- 10.27: Coastal Beaches
- 10.28: Coastal Dunes
- 10.29: Barrier Beaches
- 10.30: Coastal Banks
- 10.31: Rocky Intertidal Shores
- 10.32: Salt Marshes
- 10.33: Land under Salt Ponds
- 10.34: Land Containing Shellfish
- 10.35: Banks of or Land under the Ocean, Ponds, Streams, Rivers, Lakes or Creeks that Underlie Anadromous/Catadromous ("Fish Run")
- (10.36: Reserved: Variance Provision is found at 310 CMR 10.05(10))
- 10.37: Estimated Habitats of Rare Wildlife (for Coastal Wetlands)

Additional Regulations for Inland Wetlands

- 10.51: Introduction
- 10.52: Purpose
- 10.53: General Provisions
- 10.54: Bank (Naturally Occurring Banks and Beaches)
- 10.55: Bordering Vegetated Wetlands (Wet Meadows, Marshes, Swamps and Bogs)
- 10.56: Land under Water Bodies and Waterways (under any Creek, River, Stream, Pond or Lake)
- 10.57: Land Subject to Flooding (Bordering and Isolated Areas)
- 10.58: Riverfront Area
- 10.59: Estimated Habitats of Rare Wildlife (for Inland Wetlands)
- 10.60: Wildlife Habitat Evaluations

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Appendices: Prefaces to Previous Regulatory Revisions

Protection of Wildlife Habitat; 1987

Rights of Way Management; 1987

1983 Regulatory Revisions

Fees; 1989

Technical Changes; 1992

Maintenance and Improvement of Land in Agricultural Use; 1993

Preface to Wetlands Regulatory Revisions Effective January 1, 1994

10.01: Introduction and Purpose

(1) Introduction. 310 CMR 10.00 is promulgated by the Commissioner of the Massachusetts Department of Environmental Protection pursuant to the authority granted under The Wetlands Protection Act, M.G.L. c. 131, § 40. 310 CMR 10.00 shall complement M.G.L. c. 131, § 40, and shall have the force of law.

310 CMR 10.01 through 10.10 provide definitions and procedures. 310 CMR 10.01 through 10.10 pertains to both inland and coastal areas subject to protection under M.G.L. c. 131, § 40. 310 CMR 10.21 through 10.60 provide standards for work within those areas. 310 CMR 10.21 through 10.37 pertains only to coastal areas and 310 CMR 10.51 through 10.60 pertains only to inland areas. A project may be subject to regulation under 310 CMR 10.00 in which case compliance with all applicable regulations is required.

(2) Purpose. M.G.L. c. 131, § 40 sets forth a public review and decision-making process by which activities affecting Areas Subject to Protection under M.G.L. c. 131, § 40 are to be regulated in order to contribute to the following interests:

- protection of public and private water supply
- protection of ground water supply
- flood control
- storm damage prevention
- prevention of pollution
- protection of land containing shellfish
- protection of fisheries
- protection of wildlife habitat

The purpose of 310 CMR 10.00 is to define and clarify that process by establishing standard definitions and uniform procedures by which conservation commissions and the Department may carry out their responsibilities under M.G.L. c. 131, § 40. Applicants and issuing authorities shall use forms provided by the Department to implement 310 CMR 10.00.

310 CMR 10.00 is intended solely for use in administering M.G.L. c. 131, § 40; nothing contained in 310 CMR 10.00 should be construed as preempting or precluding more stringent protection of wetlands or other natural resource areas by local by-law, ordinance or regulation.

10.02: Statement of Jurisdiction

(1) Areas Subject to Protection under M.G.L. c. 131, § 40. The following areas are subject to protection under M.G.L. c. 131, § 40:

- (a) Any bank, the ocean
- any freshwater wetland, any estuary
- any coastal wetland, any creek
- any beach, bordering any river
- any dune, on any stream
- any flat, any pond
- any marsh, or any lake
- or any swamp
- (b) Land under any of the water bodies listed above
- (c) Land subject to tidal action
- (d) Land subject to coastal storm flowage
- (e) Land subject to flooding
- (f) Riverfront area.

(2) Activities Subject to Regulation under M.G.L. c. 131, § 40.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

(a) Activities Within the Areas Subject to Protection under M.G.L. c. 131, § 40. Any activity proposed or undertaken within an area specified in 310 CMR 10.02(1), which will remove, fill, dredge or alter that area, is subject to Regulation under M.G.L. c. 131, § 40 and requires the filing of a Notice of Intent except:

1. minor activities within the riverfront area meeting the requirement of 310 CMR 10.02(2)(b)1. and 2.; and

10.02: continued

2. activities conducted to maintain, repair or replace, but not substantially change or enlarge an existing and lawfully located structure or facility used in the service of the public and used to provide electric, gas, water, sewer, telephone, telegraph and other communication services, provided said work utilizes the best practical measures to avoid or minimize impacts to wetland resource areas outside the footprint of said structure or facility. A project proponent claiming that work to remove, fill, dredge or alter an area specified in 310 CMR 10.02(1) does not require the filing of a Notice of Intent has the burden of establishing that the work is not subject to Regulation under M.G.L. c. 131, § 40.

(b) Activities Within the Buffer Zone. Any activity other than minor activities identified in 310 CMR 10.02(2)(b)2. proposed or undertaken within 100 feet of an area specified in 310 CMR 10.02(1)(a) (hereinafter called the Buffer Zone) which, in the judgment of the issuing authority, will alter an Area Subject to Protection under M.G.L. c. 131, § 40 is subject to regulation under M.G.L. c. 131, § 40 and requires the filing of a Notice of Intent. (See also 310 CMR 10.05(3)(a)2.). The areas subject to jurisdiction identified in 310 CMR 10.02(1)(b) through (f) do not have a buffer zone.

1. Minor activities, as described in 310 CMR 10.02(2)(b)2., within the buffer zone and outside any areas specified in 310 CMR 10.02(1)(a) through (e) are not otherwise subject to regulation under M.G.L. c. 131, § 40 provided that the work is performed: solely within the buffer zone, as prescribed in 310 CMR 10.02(2)(b)2.a. through q., in a manner so as to reduce the potential for any adverse impacts to the resource area during construction, and with post-construction measures implemented to stabilize any disturbed areas. Factors to consider when measuring the potential for adverse impacts to resource areas include the extent of the work, the proximity to the resource area, the need for erosion controls, and the measures employed to prevent adverse impacts to resource areas during and following the work.

2. The following minor activities, provided that they comply with 310 CMR 10.02(2)(b)1., are not otherwise subject to regulation under M.G.L. c. 131, § 40:

- a. Unpaved pedestrian walkways less than 30 inches wide for private use and less than three feet wide for public access on conservation property;
- b. Fencing, provided it will not constitute a barrier to wildlife movement; stonewalls; stacks of cordwood;
- c. Vista pruning, provided the activity is located more than 50 feet from the mean annual high water line within a Riverfront Area or from Bordering Vegetated Wetland, whichever is farther. (Pruning of landscaped areas is not subject to jurisdiction under 310 CMR 10.00.);
- d. Plantings of native species of trees, shrubs, or groundcover, but excluding turf lawns;
- e. The conversion of lawn to uses accessory to residential structures such as decks, sheds, patios, pools, replacement of a basement bulkhead and the installation of a ramp for compliance with accessibility requirements, provided the activity, including material staging and stockpiling is located more than 50 feet from the mean annual high-water line within the Riverfront Area, Bank or from Bordering Vegetated Wetland, whichever is farther, and erosion and sedimentation controls are implemented during construction. The conversion of such uses accessory to existing single family houses to lawn is also allowed. (Mowing of lawns is not subject to jurisdiction under 310 CMR 10.00);
- f. The conversion of impervious to vegetated surfaces, provided erosion and sedimentation controls are implemented during construction;
- g. Activities that are temporary in nature, have negligible impacts, and are necessary

for planning and design purposes (*e.g.*, installation of monitoring wells, exploratory borings, sediment sampling and surveying and percolation tests for septic systems provided that resource areas are not crossed for site access);

h. Installation of directly embedded utility poles and associated anchors, push braces or grounding mats/rods along existing paved or unpaved roadways and private roadways/driveways, and their existing maintained shoulders, or within existing railroad rights-of-way, provided that all work is conducted within ten feet of the road or driveway shoulder and is a minimum of ten feet from the edge of the Bank or Bordering Vegetated Wetland and as far away from resource areas as practicable, with no additional tree clearing or substantial grading within the buffer zone, and provided that all vehicles and machinery are located within the roadway surface during work;

10.02: continued

- i. Installation of underground utilities (*e.g.*, electric, gas, water) within existing paved or unpaved roadways and private roadways/driveways, provided that all work is conducted within the roadway or driveway and that all trenches are closed at the completion of each workday;
- j. Installation and repair of underground sewer lines within existing paved or unpaved roadways and private roadways/driveways, provided that all work is conducted within the roadway or driveway and that all trenches are closed at the end of completion of each workday;
- k. Installation of new equipment within existing or approved electric or gas facilities when such equipment is contained entirely within the developed/disturbed existing fenced yard;
- l. Installation of access road gates at public or private road entrances to existing utility right-of-way access roads, provided that all vehicles and machinery are located within the roadway surface during work;
- m. Removal of existing utility equipment (poles, anchors, lines) along existing or approved roadways or within existing or approved electric, water or gas facilities, provided that all vehicles and machinery are located within the roadway surface during work;
- n. Vegetation cutting for road safety maintenance, limited to the following:
 - i. Removal of diseased or damaged trees or branches that pose an immediate and substantial threat to driver safety from falling into the roadway;
 - ii. Removal of shrubbery or branches to maintain clear guardrails; such removal shall extend no further than six feet from the rear of the guardrail;
 - iii. Removal of shrubbery or branches to maintain sight distances at existing intersections; such removal shall be no farther than five feet beyond the "sight triangles" established according to practices set forth in *American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets, 2011*, 6th edition, and such removal is a minimum of ten feet from a resource area, other than Riverfront Area; and
 - iv. Removal of shrubbery, branches, or other vegetation required to maintain the visibility of road signs and signals.

Cuttings of shrubs and branches from mature trees will be performed with suitable horticultural equipment and methods that do not further damage the trees. To prevent the possible export of invasive plants, cut vegetation should be chipped and evenly spread on site, provided the chips are spread outside the buffer zone, and raked to a depth not to exceed three inches, clear of all drainage ways. Alternatively, all cuttings and slash shall be removed from the site and properly disposed;
- o. Installation, repair, replacement or removal of signs, signals, sign and signal posts and associated supports, braces, anchors, and foundations along existing paved roadways and their shoulders, provided that work is conducted as far from resource areas as practicable, and is located a minimum of ten feet from a resource area, any excess soil is removed from the project location, and any disturbed soils are stabilized as appropriate;
- p. Pavement repair, resurfacing, and reclamation of existing roadways within the right-of-way configuration provided that the roadway and shoulders are not widened, no staging or stockpiling of materials, all disturbed road shoulders are stabilized within 72 hours of completion of the resurfacing or reclamation, and no work on the drainage system is performed, other than adjustments and/or repairs to respective

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

structures within the roadway;

q. The repair or replacement of an existing and lawfully located driveway servicing not more than two dwelling units provided that all work remains within the existing limits of the driveway and all surfaces are permanently stabilized within 14 days of final grade.

3. Activities within the buffer zone which do not meet the requirements of 310 CMR 10.02(2)(b)1. and 2. are subject to preconstruction review through the filing of a Determination of Applicability to clarify jurisdiction or a Notice of Intent under the provisions of 310 CMR 10.05(4) and 10.53(1).

10.02: continued

(c) Notwithstanding the provisions of 310 CMR 10.02(1) and (2)(a) and (b), stormwater management systems designed, constructed, installed, operated, maintained, and/or improved as defined in 310 CMR 10.04 in accordance with the *Stormwater Management Standards* as provided in the *Stormwater Management Policy (1996)* or 310 CMR 10.05(6)(k) through (q) do not by themselves constitute Areas Subject to Protection under M.G.L. c. 131, § 40 or Buffer Zone provided that:

1. the system was designed, constructed, installed, and/or improved as defined in 310 CMR 10.04 on or after November 18, 1996; and
2. if the system was constructed in an Area Subject to Protection under M.G.L. c. 131, § 40 or Buffer Zone, the system was designed, constructed, and installed in accordance with all applicable provisions in 310 CMR 10.00.

(d) Activities Outside the Areas Subject to Protection under M.G.L. c. 131, § 40 and the Buffer Zone. Any activity proposed or undertaken outside the areas specified in 310 CMR 10.02(1) and outside the Buffer Zone is not subject to regulation under M.G.L. c. 131, § 40 and does not require the filing of a Notice of Intent unless and until that activity actually alters an Area Subject to Protection under M.G.L. c. 131, § 40. In the event that the issuing authority determines that such activity has in fact altered an Area Subject to Protection under M.G.L. c. 131, § 40, it may require the filing of a Notice of Intent and/or issuance of an Enforcement Order and shall impose such conditions on the activity or any portion thereof as it deems necessary to contribute to the protection of the interests identified in M.G.L. c. 131, § 40.

(3) Notwithstanding the provisions of 310 CMR 10.02(1) and (2), the maintenance of a stormwater management system constructed and/or improved as defined in 310 CMR 10.04 from November 18, 1996 through January 1, 2008, in accordance with the *Stormwater Management Standards*, as provided in the *Massachusetts Stormwater Policy*, issued by the Department on November 18, 1996 or on or after January 2, 2008, in accordance with the *Stormwater Management Standards* as provided in 310 CMR 10.05(6)(k) through (q) is not subject to regulation under M.G.L. c. 131, § 40 provided that:

- (a) if the system was constructed in an Area Subject to Protection under M.G.L. c. 131, § 40 or associated Buffer Zone, the system was constructed in accordance with all applicable provisions of 310 CMR 10.00;
- (b) the work to maintain the stormwater management system is limited to maintenance of a stormwater management system as defined in 310 CMR 10.04; and
- (c) said work utilizes best practical measures to avoid and minimize impacts to wetland resource area outside the footprint of the stormwater management system.

Notwithstanding the provisions of 310 CMR 10.02(1) and (2), any bordering vegetated wetland, bank, land under water, land subject to flooding, or riverfront area created solely for the purpose of stormwater management shall not require the filing of a Notice of Intent to maintain the stormwater management system, provided that:

1. the work to maintain the stormwater management system is limited to the maintenance of a stormwater management system as defined in 310 CMR 10.04;
2. the stormwater management system was proposed in a Notice of Intent filed before January 2, 2008, and conforms to an Order of Conditions issued after April 1, 1983;
3. the area is not altered for other purposes; and
4. said work utilizes best practical measures to avoid and minimize impacts to wetland resource areas outside the footprint of the stormwater management system.

(4) Notwithstanding anything to the contrary in 310 CMR 10.00, work other than maintenance that may alter or affect a stormwater management system (including work to repair or replace

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

the stormwater management system, and any change to the site that increases the total or peak volume of stormwater managed by the system, directs additional stormwater to the system, and/or increases the volume of stormwater exposed to land uses with higher potential pollutant loads) that was designed, constructed, installed and/or improved after November 18, 1996, as defined in 310 CMR 10.04, and if constructed in an Area Subject to Protection under M.G.L. c. 131, § 40 or Buffer Zone, as described in 310 CMR 10.02(1) and (2)(a) through (d), the system was constructed in accordance with all applicable provisions of 310 CMR 10.00, solely for the purpose of stormwater management, in accordance with the *Stormwater Management Standards* as provided in the *Stormwater Management Policy (1996)* or 310 CMR 10.05(6)(k) through (q), may be permitted through an Order of Conditions, or Negative Determination of Applicability provided that the work:

10.02: continued

- (a) at a minimum provides the same capacity as the original design to attenuate peak discharge rates, recharge the ground water, and remove total suspended solids;
- (b) complies with the *Stormwater Management Standards* as provided in 310 CMR 10.05(6)(k) through (q); and
- (c) meets all the applicable performance standards for any work that expands the existing stormwater management system into an Area Subject to Protection under M.G.L. c. 131, § 40 or Buffer Zone as described in 310 CMR 10.02(1) and (2)(a) through (d).

(5) For purposes of 310 CMR 10.02(2)(c) and (4), the applicant has the burden of proving that the proposed project involves a stormwater management system designed, constructed, installed, operated, maintained and/or improved as defined at 310 CMR 10.04 in accordance with the Stormwater Management Standards as provided in the *Stormwater Management Policy (1996)* or 310 CMR 10.05(6)(k) through (q) and that the system was designed, constructed, installed and/or improved on or after November 18, 1996. The applicant also has the burden of establishing whether said stormwater management system was installed in an Area Subject to Protection under M.G.L. c. 131, § 40 or associated Buffer Zone, and, if so, that the system was constructed in accordance with all applicable provisions of 310 CMR 10.00. An applicant shall use the best evidence available to meet the burden of proof required. For purposes of 310 CMR 10.02(2)(c) and (4), the best evidence is the Order of Conditions, Order of Resource Area Delineation or Determination of Applicability for the project served by the stormwater management system together with the plans referenced in and accompanying such Order or Determination, and, if applicable, the Certificate of Compliance. If the best evidence is available, the date the system was designed shall be the date the Notice of Intent, Request for Determination or Notice of Resource Area Delineation was filed. If the best evidence is not available, the applicant shall rely on other credible evidence to meet the required burden of proof such as local approval of the stormwater management system along with the plans referenced in and accompanying said approval and any wetland conservancy maps and wetland change maps for the relevant time period published by the Department on MassGIS.

Commentary

The Department has determined that activities within Areas Subject to Protection under M.G.L. c. 131, § 40 are so likely to result in the removing, filling, dredging or altering of those areas that preconstruction review is always justified, and that the issuing authority shall therefore always require the filing of a Notice of Intent for said activities.

The Department has determined that activities within 100 feet of those areas specified in 310 CMR 10.02(1)(a) are sufficiently likely to alter said areas that preconstruction review may be necessary. Therefore, a request for a Determination of Applicability must be filed for some activities within the Buffer Zone. The issuing authority shall then make a determination as to whether the activity so proposed will alter an Area Subject to Protection under M.G.L. c. 131, § 40 and, if so, shall require the filing of a Notice of Intent for said activities. The issuing authority shall not require the filing of a Notice of Intent if it determines that the activity proposed within the Buffer Zone will not alter an Area Subject to Protection under M.G.L. c. 131, § 40.

The Department has determined that activities outside the Areas Subject to Protection under M.G.L. c. 131, § 40 and outside the Buffer Zone are so unlikely to result in the altering of Areas Subject to Protection under M.G.L. c. 131, § 40 that preconstruction review is not required, and therefore the issuing authority shall not regulate said activities unless and until they actually result in the altering of an Area Subject to Protection under M.G.L. c. 131, § 40.

10.03: General Provisions

(1) Burden of Proof.

(a) Any person who files a Notice of Intent to perform any work within an Area Subject to Protection under M.G.L. c. 131, § 40 or within the Buffer Zone has the burden of demonstrating to the issuing authority:

1. that the area is not significant to the protection of any of the interests identified in M.G.L. c. 131, § 40; or
2. that the proposed work within a resource area will contribute to the protection of the interests identified in M.G.L. c. 131, § 40 by complying with the general performance standards established by 310 CMR 10.00 for that area.

10.03: continued

3. that proposed work within the buffer zone will contribute to the protection of the interests identified in M.G.L. c. 131, § 40, except that proposed work which lies both within the riverfront area and within all or a portion of the buffer zone to another resource area shall comply with the performance standards for riverfront areas at 310 CMR 10.58. For minor activities as specified in 310 CMR 10.02(2)b.1. within the riverfront area or the buffer zone to another resource area, the Department has determined that additional conditions are not necessary to contribute to the protection of the interests identified in M.G.L. c. 131, § 40.

(b) Any person who requests the issuing authority to regulate work taking place outside an Area Subject to Protection under M.G.L. c. 131, § 40 and outside the Buffer Zone has the burden of demonstrating to the satisfaction of the issuing authority that the work has in fact altered an Area Subject to Protection under M.G.L. c. 131, § 40.

(2) Burden of Going Forward. The burden of going forward means having to produce at least some credible evidence from a competent source in support of the position taken. This burden shall be upon the person contesting the Department's position when the Department has been requested to hold an adjudicatory hearing. In the event that under the provisions of 310 CMR 10.03 two or more persons have the burden of going forward, said burden may be placed on all or any number of them, in the discretion of the hearing officer.

(3) Presumption Concerning 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage.* A subsurface sewage disposal system that is to be constructed in compliance with the requirements of 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*, or more stringent local board of health requirements, shall be presumed to protect the eight interests identified in M.G.L. c. 131, § 40, but only if none of the components of said system is located within the following resource areas:

(a) Coastal.

1. coastal bank;
2. coastal beach;
3. coastal dune;
4. salt marsh.

(b) Inland.

- | | | |
|----------------|-----------|---------|
| 1. wet meadows | | creek; |
| 2. marsh | bordering | river; |
| 3. swamp | on any | stream; |
| 4. bog | | pond; |
| | | lake. |

and only if the soil absorption system of said system is set back at least 50 feet horizontally from the boundary of said areas, as required by 310 CMR 15.211: *Minimum Setback Distances*, or a greater distance as may be required by more stringent local ordinance, by-law or regulation. To protect wildlife habitat within riverfront areas, the soil absorption system shall not be located within 100 feet of the mean annual high-water line unless there is no alternative location on the lot which conforms to 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site*

Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage without requiring a variance as determined by the local Board of Health, with less adverse effects on resource areas.

This presumption, however, shall apply only to impacts of the discharge from a sewage disposal system, and not to the impacts from construction of that system, such as erosion and siltation from the excavation, placement of fill, or removal of vegetation. Impacts from construction shall be minimized by the placement of erosion and sedimentation controls during excavation, limiting the placement of fill, confining the removal of vegetation to that necessary for the footprint of the system, and taking other measures deemed necessary by the issuing authority.

10.03: continued

The setback distance specified above shall be determined by measuring from the boundary of the area in question, from the contour at the mean annual flood elevation in inland areas, or from the top of a coastal bank or the contour at the highest spring tide elevation in coastal areas, whichever is further from the water body.

The setback distance specified above shall not be required for the renovation or replacement (but is required for the substantial enlargement) of septic systems constructed prior to the effective date of 310 CMR 10.00, provided no alternative location is available on the lot and such work has been approved by the local board of health or the Department, as required by law.

This presumption may be overcome only by credible evidence from a competent source that compliance with 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage* or more stringent local requirements will not protect the interests identified in M.G.L. c. 131, § 40.

(4) Presumption Concerning Point-source Discharges. If the Department has issued a permit pursuant to M.G.L. c. 21, § 43, in conjunction with a federal NPDES (National Pollutant Discharge Elimination System) permit for any new point-source discharge of pollutants, or will issue such a permit, prior to commencement of the discharge, the effluent limitations established in the permit shall be presumed to protect the eight interests identified in M.G.L. c. 131, § 40 with respect to the effects of the discharge on water quality. The permit and any subsequent amendments thereto shall be referenced in the Order and deemed incorporated therein.

This presumption shall apply only to impacts of the discharge from the source, and not to impacts from construction of the source.

This presumption may be overcome only by credible evidence from a competent source that said effluent limitations will not protect the interests identified in M.G.L. c. 131, § 40.

(5) Presumption of Significance. Each Area Subject to Protection under M.G.L. c. 131, § 40 is presumed to be significant to one or more of the interests identified in M.G.L. c. 131, § 40. These presumptions are rebuttable and are set forth in 310 CMR 10.21 through 10.60.

For riverfront areas, the issuing authority may find that the presumptions of significance are partially rebutted as provided in 310 CMR 10.58(3).

(6) Presumption Concerning Application of Herbicides.

(a) Any application of herbicides within any Area Subject to Protection under M.G.L. c. 131, § 40 or the Buffer Zone associated with a structure or facility which is:

1. existing and lawfully located;
2. used in the service of the public; and
3. used to provide electric, gas, water, sewer, telephone, telegraph and other telecommunication services

shall be presumed to constitute work performed in the course of maintaining such structure or facility, and shall be accorded the exemption of such work under M.G.L. c. 131, § 40, only if the application of herbicides to that structure or facility is performed in accordance with such plans as are required by the Department of Food and Agriculture pursuant to 333 CMR 11.00: *Rights of Way Management*, effective July 10, 1987.

(b) Any application of herbicides within the Buffer Zone, other than as provided in 310 CMR 10.03(6)(a), shall be presumed not to alter an Area Subject to Protection under M.G.L. c. 131, § 40, only if the work is performed in accordance with such plans as are required by the Department of Food and Agriculture pursuant to 333 CMR 11.00: *Rights of Way Management*, effective July 10, 1987. This presumption shall apply only if the

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

person proposing such activity has requested and obtained a determination of the boundaries of the Buffer Zone and Areas Subject to Protection under M.G.L. c. 131, § 40 in accordance with 310 CMR 10.05(3)(a)1. and 2.; and has submitted that determination as part of the Vegetation Management Plan.

(c) Any application of herbicides for management of rights of way within a riverfront area not subject to 310 CMR 10.03(6)(a) or (b), provided the area is outside any other resource area and qualifies under the provisions of 310 CMR 10.58(6)(a), shall be accorded an exemption of such work under M.G.L. c. 131, § 40, provided that the application of herbicides is performed in accordance with such plans as are required by the Department of Food and Agriculture pursuant to 333 CMR 11.00: *Rights of Way Management*.

10.03: continued

(7) Fees.(a) General Fee Provisions.

1. Notices of Intent. All Notices of Intent filed pursuant to 310 CMR 10.00 shall be accompanied by a filing fee, the amount of which shall be determined by 310 CMR 4.00: *Timely Action Schedule and Fee Provisions* and a brief statement indicating how the applicant calculated the fee. 50% of any filing fee in excess of \$25.00 shall be made payable, by check or money order, to the Commonwealth of Massachusetts and shall be sent to the DEP Lock Box accompanied by the Notice of Intent Fee Transmittal Form. The remainder of said fee shall be made payable, by check or money order, to the city or town in which the work is proposed.

2. Requests for Action by the Department. Any person who files a Request for a Superseding Determination of Applicability (310 CMR 10.05(3)(c)), a Request for Superseding Order of Conditions or superseding Order of Resource Area Delineation (310 CMR 10.05(7)(a)), a Request for Adjudicatory Hearing (310 CMR 10.05(7)(j)), a Request to Intervene in any Adjudicatory Hearing (310 CMR 1.01(9)(a)), or a Request for a Variance, (310 CMR 10.05(10)), (*see* also 310 CMR 10.03(7)(e)), shall simultaneously submit a filing fee, in the amount specified by 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*. All such fees shall be paid by check or money order payable to the Commonwealth of Massachusetts and shall be sent to the DEP Lock Box, accompanied by the Request for Departmental Action Fee Transmittal Form. A copy of the Request for Departmental Action Fee Transmittal Form and a copy of the check shall accompany the request for Departmental action.

(b) Specific Provisions for Notice of Intent Fees. In accordance with General Instructions for Completing a Notice of Intent and Abbreviated Notice of Intent, the minimum submittal requirements shall include payment of the filing fee specified in 310 CMR 10.03(7)(c). A conservation commission shall notify, in writing, the appropriate Department Regional Office and the applicant when the correct filing fee has not been paid to the city or town and the filing is therefore incomplete. Said notification shall specify the correct fee amount. The Department shall also notify, in writing, the applicant and the conservation commission when the fee due to the Department has not been paid to the Department and the filing is therefore incomplete. Said notification shall specify the fee due to the Department. The fee will be based on the initial project design as proposed in the Notice of Intent.

1. Disputes over Notice of Intent Filing Fees. Whenever the conservation commission or the Department determines that an inadequate fee has been paid, the time period for the conservation commission or the Department to act shall be stayed until the balance of the fee is paid.

a. Where, in the opinion of the conservation commission or the Department, less than the full filing fee has been included with the Notice of Intent, the Notice shall be deemed complete (assuming all other minimum submittal requirements have been met), and the stay shall be lifted, upon payment of the additional fee specified by the Department or the conservation commission. If the applicant has disputed all or a part of the balance of the fee, after issuance of a Final Order which resolves the fee dispute, in favor of the applicant any disputed funds paid by the applicant in excess of the filing fee as determined in the Final Order shall be paid to the applicant by the Commonwealth and the city or town.

b. In *lieu* of paying any disputed amount of the filing fee, the applicant may file a Request for Determination of Applicability under 310 CMR 10.05(3)(a), with sufficient information to enable the conservation commission to determine the extent of the area, or the type and extent of the activity, subject to protection under

M.G.L. c. 131, § 40.

When a Request for Determination of Applicability is filed by an Applicant to resolve a dispute over the filing fee, all proceedings under the Notice of Intent shall be stayed until all appeal periods for the Determination have elapsed or, if the Determination is appealed until all proceedings before the Department have been completed.

A Final Determination of Applicability as to the area, or the type and extent of the activity, subject to protection under M.G.L. c. 131, § 40 shall be binding on all parties and shall be used in calculating the fee.

10.03: continued

(c) Activities Subject to Notice of Intent Fees. The following activity descriptions are intended to include all activities subject to filing of a Notice of Intent under M.G.L. c. 131, § 40. The fees imposed by 310 CMR 10.03 are applicable only to those activities subject to jurisdiction under M.G.L. c. 131, § 40. The fee for work proposed under a single Notice of Intent that involves more than one activity noted below, shall be determined by adding the fees for each of the proposed activities. When the work involves activities within the riverfront area as well as another resource area or the buffer zone, the fee shall be determined by adding an additional 50% of the fee calculated for activities in another resource area(s) or the buffer zone to another resource area for each of the proposed activities within the riverfront area. When the work involves activities within the riverfront area but no other resource area, the fee shall be determined by adding the fees for each of the proposed activities within the riverfront area.

1. Category 1.

- a. Any work on a single family residential lot including a house addition, deck, garage, garden, pool, shed, or driveway. Activities excluded from Category 1 include driveways reviewable under 310 CMR 10.53(3)(e) (*See Category 2f.*); construction of an unattached single family house; and construction of a dock, pier, or other coastal engineering structure.
- b. Site preparation of each single family house lot, including removal of vegetation, excavation and grading, where actual construction of the house is not proposed under the Notice of Intent.
- c. Control of nuisance vegetation by removal, herbicide treatment or other means, from a resource area, on each single family lot, as allowable under 310 CMR 10.53(4).
- d. Resource improvement allowed under 310 CMR 10.53(4), other than removal of aquatic nuisance vegetation, as allowed under 310 10.53(4).
- e. Construction, repair, replacement or upgrading of a subsurface septic system or any part of such a system.
- f. Activities associated with installation of a monitoring well, other than construction of an access roadway thereto.
- g. New agriculture, including forestry on land in forest use (310 CMR 10.53(3)(r) and (s)), and aquacultural projects.

2. Category 2.

- a. Construction of each single family house (including single family houses in a subdivision), any part of which is in a buffer zone or resource area. Any activities associated with the construction of said house(s), including associated site preparation and construction of retention/detention basins, utilities, septic systems, roadways and driveways other than those roadways or driveways reviewable under 310 CMR 10.53(3)(e) (*See Category 2f.*), shall not be subject to additional fees if all said activities are reviewed under a single Notice of Intent. (For apartment/condominium type buildings *See Category 3.*)
- b. Parking lot of any size.
- c. The placement of sand for purposes of beach nourishment.
- d. Any projects reviewable under 310 CMR 10.24(7)(a) through (c).
- e. Any activities reviewable under 310 CMR 10.53(3)(d) and (f) through (l), except for those subject to 310 CMR 10.03(7)(c)4.b. Where more than one activity is proposed within an identical footprint (*e.g.*, construction of a sewer within the footprint of a new roadway), only one fee shall be payable.
- f. Construction of each crossing for a driveway associated with an unattached single

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

family house, reviewable under 310 CMR 10.53(3)(e).

g. Any point source discharge.

h. Control of nuisance vegetation, other than on a single family lot, by removal, herbicide treatment or other means, reviewable under 310 CMR 10.53(4).

i. Raising or lowering of surface water levels for flood control or any other purpose.

j. Any other activity not described in Categories 1, 3, 4, 5 or 6 (*e.g.*, the determination of whether a stream is perennial or intermittent).

k. The exploration for (but not development, construction, expansion, maintenance, operation or replacement of) public water supply wells or wellfields derived from groundwater, reviewable under 310 CMR 10.53(3)(o).

l. Test projects pursuant to 310 CMR 10.05(11).

10.03: continued

3. Category 3.

- a. Site preparation, for any development other than an unattached single family house(s), including the removal of vegetation, excavation and grading, where actual construction is not proposed in the Notice of Intent.
- b. Construction of each building for any commercial, industrial, institutional, or apartment/condominium/townhouse-type development, any part of which is in a buffer zone or resource area. Any activities associated with the construction of said building, including associated site preparation and construction of retention/detention basins, septic systems, parking lots, utilities, point source discharges, package sewage treatment plants, and roadways and driveways other than those roadways or driveways reviewable under 310 CMR 10.53(3)(e), shall not be subject to additional fees if all said activities are reviewed under a single Notice of Intent.
- c. Construction of each roadway or driveway, not reviewable under 310 CMR 10.53(3)(e), and not associated with construction of an unattached single family house.
- d. Any activity associated with the clean up of hazardous waste, except as otherwise noted in Category 4, including excavation, destruction of vegetation, change in subsurface hydrology, placement of collection wells or other structures for collection and treatment of contaminated soil and/or water.
- e. The development, construction, expansion, maintenance, operation, or replacement of (but not exploration for) public water supply wells or wellfields derived from groundwater, reviewable under 310 CMR 10.53(3)(o).

4. Category 4.

- a. Construction of each crossing for a limited project access roadway or driveway reviewable under 310 CMR 10.53(3)(e) associated with a commercial, industrial, or institutional development or with any residential construction (other than a roadway or driveway associated with construction of an unattached single family house).
- b. Construction, modification, or repair of a flood control structure such as a dam, reservoir, tidegate, sluiceway, or appurtenant works.
- c. Creation, operation, maintenance or expansion of a public or private landfill.
- d. Creation, operation, maintenance or expansion of a public or private sand and/or gravel operation including but not limited to excavation, filling, and stockpiling.
- e. Construction of new railroad lines or extensions of existing lines, including ballast area, placement of track, signals and switches and other related structures.
- f. Construction, reconstruction, expansion, or maintenance of any bridge, except to gain access to a single family house lot.
- g. Any alteration of a resource area(s) to divert water for the clean up of a hazardous waste site, for non-exempt mosquito control projects, or for any other purpose not expressly identified elsewhere in this fee schedule.
- h. Any activities, including the construction of structures, associated with a dredging operation conducted on land under a waterbody, waterway, or the ocean. If the dredging is directly associated with the construction of a new dock, pier or other structure identified in Category 5, only the Category 5 fee shall apply.
- i. Construction of, or the discharge from, a package sewage treatment plant.
- j. Airport vegetation removal projects reviewable under 310 CMR 10.24(7)(c)5. and 10.53(3)(n).
- k. Landfill closure projects reviewable under 310 CMR 10.24(7)(c)4. and 10.53(3)(p).
- l. Any activities, including the construction of structures, associated with the assessment, monitoring, containment, mitigation, and remediation of, or other

response to, a release or threat of release of oil and/or hazardous material reviewable under 310 CMR 10.24(7)(c)6. or 10.53(3)(q).

5. Category 5. Construction, reconstruction, repair or replacement of docks, piers, revetments, dikes, or other engineering structures on coastal or inland resource areas, including the placement of rip rap or other material on coastal or inland resource areas.
6. Category 6. The linear delineation (*e.g.* bordering vegetated wetland, riverfront area, bordering land subject to flooding) of each resource area under an Abbreviated Notice of Resource Area Delineation constitutes a separate activity. The fee associated with each resource area delineation proposed under an Abbreviated Notice of Resource Area Delineation shall be determined by adding the fees for each type of resource area delineation.

10.03: continued

(d) Requests for Action by the Department. Any person's request for action by the Department will not be deemed complete and time periods, if any, shall not commence, unless the person making the request has paid the appropriate filing fee specified in 801 CMR 4.02: *Fees of Licenses, Permits, and Services to Be Charged by State Agencies* (310).

(e) Fees for Requests for Action by Department. The following requests for action by the Department are subject to the fees established in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

1. Request for a Superseding Determination of Applicability.
2. Request for a Superseding Order of Conditions.
3. Request for an Adjudicatory Hearing or for a Variance which is necessary to avoid an unconstitutional taking.
4. Request to Intervene in an Adjudicatory Proceeding.
5. Request for a Variance, except where necessary to avoid an unconstitutional taking.

(f) Waivers and Exemptions. See 310 CMR 4.00: *Timely Action Schedule and Fee Provisions* for provisions concerning waivers or exemptions from the requirements of 310 CMR 10.03(7).

10.04: Definitions

Abutter means the same as owner of land abutting the activity.

Act means the Wetlands Protection Act, M.G.L. c. 131, § 40.

Activity means any form of draining, dumping, dredging, damming, discharging, excavating, filling or grading; the erection, reconstruction or expansion of any buildings or structures; the driving of pilings; the construction or improvement of roads and other ways; the changing of run-off characteristics; the intercepting or diverging of ground or surface water; the installation of drainage, sewage and water systems; the discharging of pollutants; the destruction of plant life; and any other changing of the physical characteristics of land.

Aggrieved means the same as person aggrieved.

Agriculture. For the purposes of 310 CMR 10.04 the following words and phrases have the following meanings:

(a) Land in Agricultural Use means land within resource areas or the Buffer Zone presently and primarily used in producing or raising one or more of the following agricultural commodities for commercial purposes:

1. animals, including but not limited to livestock, poultry, and bees;
2. fruits, vegetables, berries, nuts, maple sap, and other foods for human consumption;
3. feed, seed, forage, tobacco, flowers, sod, nursery or greenhouse products, and ornamental plants or shrubs; and
4. forest products on land maintained in forest use, including but not limited to biomass, sawlogs, and cordwood, but not including the agricultural commodities described in 310 CMR 10.04: Agriculture(a)1. through 3.

Additionally, land in agricultural use means land within resource areas or the Buffer Zone presently and primarily used in a manner related to, and customarily and necessarily used in, producing or raising such commodities, including but not limited to: existing access roads and livestock crossings; windbreaks; hedgerows; field edges; bee yards; sand pits; landings for forest products; fence lines; water management projects such as reservoirs, farm ponds, irrigation

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

systems, field ditches, cross ditches, canals/channels, grass waterways, dikes, sub-surface drainage systems, watering facilities, water transport systems, and water storage systems; agricultural composting sites; agricultural storage and work areas; and land under farm structures.

Land in agricultural use may lie inactive for up to five consecutive years unless it is under a United States Department of Agriculture (USDA) contract for a longer term pursuant to the Conservation Reserves Program (the Food Securities Act of 1985, as amended by the Food, Agriculture, Conservation and Trade Act of 1990; and 7 CFR 1410), or it is used for the forestry purposes described in 310 CMR 10.04: Agriculture(b)14. through 17. The issuing authority may require appropriate documentation, such as a USDA Farm Plan or aerial photography, to demonstrate agricultural use.

10.04: continued

(b) Normal Maintenance of Land in Agricultural Use, which in all cases does not include placing substantial amounts of fill in Bordering Land Subject to Flooding or filling or dredging a Salt Marsh, means the following activities, without enlargement as to geographical extent, that are occurring on land in agricultural use, when directly related to production or raising of the agricultural commodities referenced in 310 CMR 10.04: Agriculture(a), when undertaken in such a manner as to prevent erosion and siltation of adjacent water bodies and wetlands, and when conducted in accordance with federal and state laws:

1. all crop management practices, not to include drainage in a Bordering Vegetated Wetland, customarily employed to enhance existing growing conditions, including but not limited to: tillage, trellising, pruning, mulching, shading, and irrigating; and all customary harvesting practices such as digging, picking, combining, threshing, windrowing, baling, curing, and drying;
2. the use of fertilizers, manures, compost materials, and other soil amendments; pesticides and herbicides; traps; and other such materials;
3. the repair or replacement of existing access roads and livestock crossings;
4. the maintenance of:
 - a. existing forest boundary lines up to five feet wide limited to cutting vegetation within the existing boundary lines;
 - b. windbreaks;
 - c. hedgerows; and
 - d. fire breaks on land maintained in forest use and owned by the Metropolitan District Commission, the Department of Environmental Management, or the Department of Fisheries, Wildlife, and Environmental Law Enforcement;
5. the management of existing field edges, limited to within 100 feet from the land in production, including the following practices:
 - a. mowing;
 - b. burning;
 - c. brush cutting; and
 - d. removing trees.

The management of any field edge that falls within a Bordering Vegetated Wetland is not intended to allow the conversion of Bordering Vegetated Wetland into cropland. Therefore, the field management practices described in 310 CMR 10.04: Agriculture (b)(5)a. through d. may occur in a Bordering Vegetated Wetland provided that:

- i. the cutting or removal of trees and understory vegetation shall not occur within 25 feet of the bank of a water body that is not managed within the land in production (field ditches, cross ditches, grass waterways, irrigation systems, and farm ponds are examples of managed water bodies) unless the trees or understory vegetation are removed to control alternative hosts but no more than 50% of the canopy may be removed, or except to maintain existing dikes;
 - ii. slash, branches, and limbs resulting from the cutting and removal operations shall not be placed within 25 feet of the bank of a water body that is not managed within the land in production; and
 - iii. no tilling, filling, excavation, or other change in the existing topography shall occur within the field edge;
6. the maintenance and repair of existing fences and the management of temporary fence lines;
 7. the cleaning, clearing, grading, repairing, dredging, or restoring of existing man-made or natural water management systems such as reservoirs, farm ponds, irrigation systems,

field ditches, cross ditches, canals/channels, grass waterways, dikes, sub-surface drainage systems, watering facilities, water transport systems, vents, and water storage systems, all in order to provide drainage, prevent erosion, provide more effective use of water, or provide for efficient use of equipment, and all for the purpose of maintaining favorable conditions for ongoing growing or raising of agricultural commodities;

8. the maintenance and repair of ongoing agricultural composting sites, storage areas, and work areas and the storage of fertilizers, pesticides, manures, compost materials, and other soil amendments, provided that such storage occurs only in the Buffer Zone or Bordering Land Subject to Flooding;

9. the repair and maintenance of existing farm structures;

10.04: continued

10. the seeding of eroded or disturbed areas;
11. maintaining the flow of existing natural waterways;
12. the keeping of livestock and poultry and the management of beehives;
13. the cultivation of cranberries, including the following practices:
 - a. the activities described in 310 CMR 10.04: Agriculture(b)1. through 11.;
 - b. the application of sand to existing bogs and the excavation of sand from sand pits;
 - c. the repair and reconstruction of water control structures including flumes, pumps, dikes, and piping above and below the ground;
 - d. the regrading, including modification of drainage, and replanting of existing cranberry bogs;
 - e. the repair and replacement of dikes;
 - f. water harvesting activities; and
 - g. flooding and flood release;
14. the cutting and removal of trees for the purpose of selling the trees or any products derived therefrom, when carried out in accordance with a Forest Cutting Plan approved by the Department of Environmental Management (DEM) under the provisions of M.G.L. c. 132, §§ 40 through 46, and subject to the following:
 - a. the cutting and removal of trees within Bordering Vegetated Wetland shall be limited to no more than 50% of the basal area of the area to be cut and the work shall be conducted when the soil is frozen, dry or otherwise stable to support the equipment used;
 - b. except for the construction or maintenance of access described in 310 CMR 10.04(b)16., there shall be no filling, excavation, or other change in topography or hydrology of resource areas;
 - c. all soils that are exposed during or after any work described in 310 CMR 10.04: Agriculture(b)14. shall be stabilized to prevent the soils from eroding into Bordering Vegetated Wetlands beyond the work area or into open water bodies, in accordance with the Massachusetts Forestry Best Management Practices Manual;
 - d. the person claiming the exemption shall submit by certified mail or hand delivery at the same time to the conservation commission and the appropriate DEM Regional Office not less than ten days prior to the commencement of the activity, a copy of the Forest Cutting Plan that describes the proposed cutting and removal of trees and any activity within resource areas or the Buffer Zone. The conservation commission shall have the opportunity to comment to DEM on the plan;
 - e. landings for forest products shall not be located in Bordering Vegetated Wetland or Bank; and
 - f. any Forest Cutting Plan that is not affirmatively approved by DEM under M.G.L. c. 132, §§ 40 through 46 but instead is deemed approved due to the expiration of some period of time following the submittal of the plan to DEM for approval shall not be considered "approved" by DEM for the purposes of 310 CMR 10.04.
15. notwithstanding the use of the words "for commercial purposes" in the first sentence of 310 CMR 10.04: Agriculture(a), the cutting of trees within resource areas and the Buffer Zone by owners for their own use, not to exceed 5,000 board feet or ten cords of wood during any 12 month period without an approved Forest Cutting Plan or the cutting of trees within resources areas of greater than 5,000 board feet or ten cords but less than 10,000 board feet or 20 cords of wood during any 12 month period with an approved Forest Cutting Plan, provided that:
 - a. after the cutting, the remaining trees in the resource area (and the Buffer Zone,

if the activity is being conducted without an approved Forest Cutting Plan) shall be evenly distributed throughout the area where cutting occurred and the crown cover shall not be less than 50%. Crown cover is determined as the percent of the ground's surface that would be covered by a vertical projection of foliage from trees with a diameter at breast height of five inches or greater, where minor gaps between branches are disregarded and areas of overlapping foliage are counted only once;

b. the cutting and removal of trees shall occur only during those periods when the ground is sufficiently frozen, dry, or otherwise stable to support the equipment used;

10.04: continued

- c. the cutting, removal, or other destruction of trees and understory vegetation without a Forest Cutting Plan shall not occur within 25 feet of the Bank, except for the purpose of providing access for the activities described in 310 CMR 10.04: Agriculture(b)15;
 - d. the placement of slash, branches, and limbs resulting from the cutting and removal operations shall not occur within 25 feet of Bank;
 - e. no filling, excavation, or other change shall occur in the existing topography or hydrology of a resource area;
 - f. landings for forest products shall not be located in Bordering Vegetated Wetland or Bank; and
 - g. any Forest Cutting Plan that is not affirmatively approved by DEM under M.G.L. c. 132, §§ 40 through 46, but instead is deemed approved due to the expiration of some period of time following the submittal of the plan to DEM for approval shall not be considered "approved" by DEM for the purposes of 310 CMR 10.04.
16. the construction of new temporary access or the maintenance of existing legally constructed access for forestry activities described in 310 CMR 10.04: Agriculture(b)14. or 15. provided that:
- a. every practicable effort shall be made to avoid access, including stream crossings, and the construction of landings through and in resource areas;
 - b. where access, including stream crossings, through resource areas cannot be avoided, every practicable effort shall be made to minimize impacts resulting from construction of new access including, but not limited to, maintaining and improving (but not enlarging) existing access. Activities shall be conducted when the soil is frozen, dry, or otherwise stable to support the equipment used;
 - c. where DEM has determined through its review and approval of the Forest Cutting Plan that access is impracticable without constructing new access or stream crossings:
 - i. access shall be designed, constructed, and maintained in accordance with the Massachusetts Forestry Best Management Practices Manual;
 - ii. stream crossings shall be stabilized to prevent erosion using methods described in the Massachusetts Forestry Best Management Practices Manual. When crossings involve fill, culverts or other structures that will obstruct flow, they shall be designed, constructed, and maintained in accordance with the Massachusetts Forestry Best Management Practices Manual to allow the unobstructed passage of existing flows for at least the 25 year storm;
 - iii. access or stream crossings shall be removed within one year of completion of the work described in the approved Forest Cutting Plan;
 - iv. following removal of access, the topography and site conditions shall be substantially restored to allow pre-existing vegetation to be reestablished; and
 - v. activities shall be conducted when the soil is frozen, dry, or otherwise stable to support the equipment used.
17. non-harvest management practices for forest products on land maintained in forest use limited to pruning, pre-commercial thinning or planting of tree seedlings.
- (c) Normal Improvement of Land in Agricultural Use, which in all cases does not include filling or dredging a Salt Marsh, includes but is not limited to:
- 1. the following activities when they occur on land in agricultural use or when they occur within the Buffer Zone or Bordering Land Subject to Flooding that is not land in agricultural use, when they are directly related to production or raising of the agricultural

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

commodities referenced in 310 CMR 10.04: Agriculture(a), and when they are undertaken in such a manner as to prevent erosion and siltation of adjacent water bodies and wetlands and the activity is conducted in accordance with federal and state laws:

- a. the installation of permanent fencing, windbreaks, hedgerows, or the cutting of vegetation to create forest boundaries up to five feet wide;
- b. the installation of dikes within a cranberry bog;
- c. the construction of farm structures, not including habitable dwellings, provided that the footprint of the farm structure does not exceed 4,000 square feet and no filling of Bordering Land Subject to Flooding occurs beyond the footprint of the building;

10.04: continued

- d. the squaring-off of fields and bogs, provided that the activity does not alter a Bordering Vegetated Wetland, there is no increase in the amount of land in production beyond the minimum increase necessarily resulting from making the boundary of any field or bog more regular, and no fill is placed within Bordering Land Subject to Flooding;
- e. the construction of by-pass canals/channels and tail water recovery systems;
- f. a change in commodity other than from maple sap production or forest products to any other commodity, provided that there is no filling of Bordering Vegetated Wetland and drainage ditches or the subsurface drainage system are not increased or enlarged;
- g. the construction of a water management system such as a reservoir, farm pond, irrigation system, field ditch, cross ditch, canal/channel, grass waterway, dike, sub-surface drainage system, watering facility, water transport system, vent, or water storage system, or of a livestock access; and
- h. the construction of composting and storage areas.

For the activities described in 310 CMR 10.04: Agriculture(c)(1)d. through h. there shall be no net loss of flood storage capacity; and

2. the reconstruction of existing dikes, the reconstruction and expansion of existing ponds and reservoirs, and the construction of tailwater recovery ponds and by-pass canals/channels occurring partly or entirely within a Bordering Vegetated Wetland, when directly related to production or raising of the agricultural commodities referenced in 310 CMR 10.04: Agriculture(a), in accordance with the following:

- a. Prior to performing the work, the person claiming the exemption shall submit to the conservation commission for its review at a public meeting that portion of a certified farm Conservation Plan (CP) which relates to the work to be conducted in a Bordering Vegetated Wetland. The CP must be prepared in cooperation with the U.S.D.A. Natural Resource Conservation Service (NRCS), Memorandum of Understanding (MOU) between the Department and NRCS concerning CPs;
- b. The conservation commission may, within 21 days of receiving the CP, provide the person claiming the exemption with written notification containing specific comments detailing the manner in which the CP has not been prepared in compliance with the terms of the MOU;
- c. The person claiming the exemption shall provide SCS with a complete copy of the notification;
- d. All revisions to the CP that relate to the delineation of Bordering Vegetated Wetlands shall be submitted to the conservation commission in accordance with 310 CMR 10.04: Agriculture(c)2.;
- e. All work shall be done in accordance with the CP; and
- f. The maximum amount of Bordering Vegetated Wetland which may be altered by the above activities is:
 - i. 5,000 square feet for reconstruction of an existing dike;
 - ii. 10,000 square feet for expansion of an existing pond or reservoir;
 - iii. 10,000 square feet for construction of a tailwater recovery pond; and
 - iv. 5,000 square feet for construction of a by-pass canal/channel.

Alter means to change the condition of any Area Subject to Protection under M.G.L. c. 131, § 40. Examples of alterations include, but are not limited to, the following:

- (a) the changing of pre-existing drainage characteristics, flushing characteristics, salinity distribution, sedimentation patterns, flow patterns and flood retention areas;

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

- (b) the lowering of the water level or water table;
- (c) the destruction of vegetation;
- (d) the changing of water temperature, biochemical oxygen demand (BOD), and other physical, biological or chemical characteristics of the receiving water.

Provided, that when the provisions of 310 CMR 10.03(6) and 10.05(3) or 333 CMR 11.03(9) have been met, the application of herbicides in the Buffer Zone in accordance with such plans as are required by the Department of Food and Agriculture pursuant to 333 CMR 11.00: *Right of Way Management*, effective July 10, 1987, is not an alteration of any Area Subject to Protection under M.G.L. c. 131, § 40.

10.04: continued

Applicant means any person who files a Notice of Intent, or on whose behalf such a notice is filed.

Aquaculture.

(a) Land in Aquacultural Use means land presently and primarily used in the growing of aquatic organisms under controlled conditions, including one or more of the following uses: raising, breeding or producing a specified type of animal or vegetable life including, but not limited to, municipal shellfish propagation, finfish such as carp, catfish, black bass, flatfishes, herring, salmon, shad, smelt, sturgeon, striped bass, sunfishes, trout, whitefish, eel, tilapia; shellfish such as shrimp, crabs, lobster, crayfish, oysters, clams, periwinkles, scallops, mussels, squid; amphibians such as frogs; reptiles such as turtles; seaweeds such as irish moss and dulse; and edible freshwater plants.

(b) Normal Maintenance or Improvement of land in aquacultural use means the following activities, when done in connection with the production of aquatic organisms as defined above: draining, flooding, heating, cooling, removing, filling, grading, compacting, raking, tilling, fertilizing, seeding, harvesting, filtering, rafting, culverting or applying chemicals in conformance with all state and federal laws; provided, however, that such activities are clearly intended to improve and maintain land in aquacultural use and that best available measures are utilized to ensure that there will be no adverse effect on wetlands outside the area in aquacultural use, and further provided that removing, filling, dredging or altering of a salt marsh is not to be considered normal maintenance or improvement of land in aquacultural use.

Area Subject to Protection under M.G.L. c. 131, § 40 means any area specified in 310 CMR 10.02(1). It is used synonymously with Resource Area, each one of which is defined in greater detail in 310 CMR 10.21 through 10.66.

Bank (Coastal) is defined in 310 CMR 10.30(2).

Bank (Inland) is defined in 310 CMR 10.54(2).

Beach (Barrier) is defined in 310 CMR 10.29(2).

Beach (Coastal) is defined in 310 CMR 10.27(2).

Beach (Inland), a naturally occurring inland beach, means an unvegetated bank as defined in 310 CMR 10.54(2).

Best Available Measures means the most up-to-date technology or the best designs, measures or engineering practices that have been developed and that are commercially available.

Best Practical Measures means technologies, designs, measures or engineering practices that are in general use to protect similar interests.

Bordering means touching. An area listed in 310 CMR 10.02(1)(a) is bordering on a water body listed in 310 CMR 10.02(1)(a) if some portion of the area is touching the water body or if some portion of the area is touching another area listed in 310 CMR 10.02(1)(a) some portion of which is in turn touching the water body.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bordering Vegetated Wetland is defined in 310 CMR 10.55(2).

Boundary means the boundary of an Area Subject to Protection under M.G.L. c. 131, § 40. A description of the boundary of each area is found in the appropriate section of 310 CMR 10.00. For coastal areas, *see* 310 CMR 10.21 through 10.37; for inland areas, *see* 310 CMR 10.51 through 10.60.

Breeding Areas mean areas used by wildlife for courtship, mating, nesting or other reproductive activity, and rearing of young.

10.04: continued

Buffer Zone means that area of land extending 100 feet horizontally outward from the boundary of any area specified in 310 CMR 10.02(1)(a).

Certificate of Compliance means a written determination by the issuing authority that work or a portion thereof has been completed in accordance with an Order. It shall be made on Form 8.

Coastal Wetlands are defined in M.G.L. c. 131, § 40, para. 6.

Cold-water Fishery means waters in which the mean of the maximum daily temperature over a seven day period generally does not exceed 68°F (20°C) and, when other ecological factors are favorable (such as habitat) are capable of supporting a year round population of cold-water stenothermal aquatic life such as trout. Waters designated as cold-water fisheries by the Department in 314 CMR 4.00: *Massachusetts Surface Water Quality Standards* and waters designated as cold-water fishery resources by the Division of Fisheries and Wildlife are cold-water fisheries. Waters where there is evidence based on a fish survey that a cold-water fish population and habitat exist are also cold-water fisheries. Cold-water fish include but are not limited to brook trout (*Salvelinus fontinalis*), rainbow trout (*Oncorhynchus mykiss*), brown trout (*Salmo trutta*), creek chubsucker (*Erimyzon oblongus*) and fallfish (*semotilus corporalis*).

Combined Application means an application that may serve as a Notice of Intent pursuant to 310 CMR 10.00, an application for a 401 Water Quality Certification pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*, and/or an application for a Chapter 91 license, permit or other written approval for a water-dependent use, pursuant to 310 CMR 9.00: *Waterways*. Notwithstanding the foregoing, a Combined Application may not serve as an application for an annual permit for a mooring, float, raft or small structure accessory to a residence in accordance with 310 CMR 9.07: *Activities Subject to Annual Permit*, an application for a Chapter 91 license for a small structure accessory to a residence in accordance with the simplified process set forth in 310 CMR 9.10: *Simplified Procedures for Small Structures Accessory to Residences* or the certification submitted as an application for a General License in accordance with 310 CMR 9.29: *Permitting of Test Projects*.

Combined Permit means a decision issued in response to a Combined Application that serves as two or more of the following: a Superseding Order of Conditions issued pursuant to 310 CMR 10.00; a 401 Water Quality Certification issued pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*; and/or a Chapter 91 permit, license or other written approval issued pursuant to 310 CMR 9.00: *Waterways*.

Commissioner means the Commissioner of the Department of Environmental Protection pursuant to St. 1989, c. 240, § 101.

Conditions means those requirements set forth in a written Order issued by a conservation commission or the Department for the purpose of permitting, regulating or prohibiting any activity that removes, fills, dredges or alters an Area Subject to Protection under M.G.L. c. 131, § 40. (See also 310 CMR 10.05(6).)

Confined Disposal Facility means a facility created in open water or wetlands consisting of

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

confinement walls or berms built up or extending into existing land and is a “confined disposal facility” as defined in 314 CMR 9.02: *Definitions*.

Conservation Commission means that body comprised of members lawfully appointed pursuant to M.G.L. c. 40, § 8C. For the purposes of M.G.L. c. 131, § 40 and 310 CMR 10.00, it shall also mean a mayor or board of selectmen, where no conservation commission has been established under M.G.L. c. 40, § 8C.

Creek means the same as a stream, as defined in 310 CMR 10.04

10.04: continued

Critical Areas mean Outstanding Resource Waters as designated in 314 CMR 4.00, Special Resource Waters as designated in 314 CMR 4.00: *Massachusetts Surface Water Quality Standards* recharge areas for public water supplies as defined in 310 CMR 22.02: *Definitions* (Zone Is, Zone IIs, and Interim Wellhead Protection Areas for ground water sources and Zone As for surface water sources), bathing beaches as defined in 105 CMR 445.000: *Minimum Standards for Bathing Beaches (State Sanitary Code: Chapter VII)*, cold-water fisheries and shellfish growing areas.

Dam means for the purposes of 310 CMR 10.11 through 310 CMR 10.14, 310 CMR 10.24(8), and 10.53(4) any artificial barrier placed across a watercourse that raises or has the potential to raise the level of water or which impounds and/or diverts water.

Date of Issuance means the date an Order is mailed, as evidenced by a postmark, or the date it is hand delivered.

Date of Receipt means the date of delivery to an office, home or usual place of business by mail or hand delivery.

Densely Developed Area means a riverfront area that has been designated by the Secretary of the Executive Office of Energy and Environmental Affairs at the request of a city or town, limited to an area of ten acres or more that is being utilized, or includes existing vacant structures or vacant lots formerly utilized as of January 1, 1944 or sooner, for intensive industrial, commercial, institutional, or residential activities or combinations of such activities, including, but not limited to the following: manufacturing, fabricating, wholesaling, warehousing, or other commercial or industrial activities; retail trade and service activities; medical and educational institutions; residential dwelling structures at a density of three or more per two acres; and mixed or combined patterns of the above. Land which is zoned for intensive use but is not utilized for such use as of January 1, 1997 shall not be designated as a densely developed area. Rivers within the municipalities identified in 310 CMR 10.58(2)(a)3.a. also have 25 foot riverfront areas.

Department means the Department of Environmental Protection, and shall include the Commissioner and any other person employed by said Department, pursuant to St. 1989, c. 240, § 101.

Designated Port is defined in 310 CMR 10.26(2).

Determination.

(a) a Determination of Applicability means a written finding by a conservation commission or the Department as to whether a site or the work proposed thereon is subject to the jurisdiction of M.G.L. c. 131, § 40. It shall be made on Form 2.

(b) a Determination of Significance means a written finding by a conservation commission, after a public hearing, or by the Department, that the area on which the proposed work is to be done, or which the proposed work will alter, is significant to one or more of the interests identified in M.G.L. c. 131, § 40. It shall be made as part of the Order, on Form 5.

(c) a Notification of Non-significance means a written finding by a conservation commission, after a public hearing, or by the Department, that the area on which the proposed work is to be done, or which the proposed work will alter, is not significant to any of the interests of M.G.L. c. 131, § 40. It shall be made on Form 6.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Direct Case means the evidence that a party seeks to introduce in support of its position, as well as any legal argument the party wishes to provide. The Direct Case may include, but is not limited to, statements under oath by lay witnesses and expert witnesses, technical reports, studies, memoranda, maps, plans, and other information that a party seeks to have the Presiding Officer review as part of the adjudicatory proceeding.

Disposal Site means a structure, well, pit, pond, lagoon, impoundment, ditch, landfill, or other place or area, excluding ambient air or surface water, where uncontrolled oil or hazardous material has come to be located as a result of any spilling, leaking, pouring, ponding, emitting, emptying, discharging, injecting, escaping, leaching, dumping, discarding or otherwise disposing of such oil or hazardous material and is a “disposal site” as defined in M.G.L. c. 21E.

10.04: continued

Dredge means to deepen, widen or excavate, either temporarily or permanently, land below the mean high tide line in coastal waters and below the high water mark for inland waters. The term dredge shall not include activities in Bordering or isolated vegetated wetlands.

Dune means coastal dune, as defined in 310 CMR 10.28(2).

Ecological Restoration Project means a project whose primary purpose is to restore or otherwise improve the natural capacity of a Resource Area(s) to protect and sustain the interests identified in M.G.L. c. 131, § 40, when such interests have been degraded or destroyed by anthropogenic influences. The term Ecological Restoration Project shall not include projects specifically intended to provide mitigation for the alteration of a Resource Area authorized by a Final Order or Variance issued pursuant to 310 CMR 10.00 or a 401 Water Quality Certification issued pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* other than projects implemented pursuant to a US Army Corps of Engineers-approved in-lien fee program.

Ecological Restoration Limited Project means an Ecological Restoration Project that meets the eligibility criteria set forth in 310 CMR 10.24(8) or 10.53(4).

Estimated Habitat Map of State-listed Rare Wetlands Wildlife means the map of the estimated habitats of state-listed rare wetlands wildlife published by the Natural Heritage and Endangered Species Program (the Program or NHESP) in accordance with 321 CMR 10.12: *Delineation of Priority Habitat of State-listed Species*.

Environmentally Sensitive Site Design means design that incorporates low impact development techniques to prevent the generation of stormwater and non-point source pollution by reducing impervious surfaces, disconnecting stormwater sheet flow paths and treating stormwater at its source, maximizing open space, minimizing disturbance, protecting natural features and processes, and/or enhancing wildlife habitat.

Estuary means:

- (a) any area where fresh and salt water mix and tidal effects are evident; or
- (b) any partially enclosed coastal body of water where the tide meets the current of any stream or river.

Extension Permit means a written extension of time within which the authorized work shall be completed. It shall be made on Form 7.

Fill means to deposit any material so as to raise an elevation, either temporarily or permanently.

Final Order means the Order issued by the Commissioner after an adjudicatory hearing or, if no request for hearing has been filed, the Superseding Order or, if no request for a Superseding Order has been filed, the Order of Conditions.

Flat (Tidal) is defined in 310 CMR 10.27(2)(b).

Flood Control means the prevention or reduction of flooding and flood damage.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Formerly or Presently Owned means owned by the same owner at any time on or after August 1, 1996.

Freshwater Wetlands are defined in M.G.L. c. 131, § 7, para. 7.

General Performance Standards means those requirements established by 310 CMR 10.00 for activities in or affecting each of the Areas Subject to Protection under M.G.L. c. 131, § 40. They are found in 310 CMR 10.25 through 10.35, 10.37, and 10.54 through 10.60.

10.04: continued

Ground Water Supply means water below the earth's surface in the zone of saturation.

Historic Mill Complex means the mill complexes in, but not limited to, Holyoke, Taunton, Fitchburg, Haverhill, Methuen, and Medford in existence prior to 1946 and situated landward of the waterside facade of a retaining wall, building, sluiceway, or other structure existing on August 7, 1996. An historic mill complex also means any historic mill included on the *Massachusetts Register of Historic Places*. An historic mill complex includes only the footprint of the area that is or was occupied by interrelated buildings (manufacturing buildings, housing, utilities, parking areas, and driveways) constructed before and existing after 1946, used for any type of manufacturing or mechanical processing and including associated structures to provide water for processing, to generate water power, or for water transportation.

Illicit Discharge means a discharge that is not entirely comprised of stormwater. Notwithstanding the foregoing, an illicit discharge does not include discharges from the following activities or facilities: firefighting, water line flushing, landscape irrigation, uncontaminated ground water, potable water sources, foundation drains, air conditioning condensation, footing drains, individual resident car washing, flows from riparian habitats and wetlands, dechlorinated water from swimming pools, water used for street washing and water used to clean residential buildings without detergents.

Important Wildlife Habitat Functions mean important food, shelter, migratory or overwintering areas, or breeding areas for wildlife.

Innovative Technology means technology that has not been commercially deployed or is in limited deployment in Massachusetts, and includes, but is not limited to, energy technology that obtains energy from the ocean, waterway, or conditions associated with the ocean or waterway, or other forms of renewable energy technology.

Interests Identified in M.G.L. c. 131, § 40 means public or private water supply, ground water supply, flood control, storm damage prevention, prevention of pollution, protection of land containing shellfish, protection of fisheries, and protection of wildlife habitat.

Issuing Authority means a conservation commission, mayor, the selectmen or the Department, whichever is applicable.

Lake means any open body of fresh water with a surface area of ten acres or more, and shall include great ponds.

Land Containing Shellfish is defined in 310 CMR 10.34(2).

Land Subject to Coastal Storm Flowage means land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater.

Land Subject to Flooding is defined in 310 CMR 10.57(2).

Land Subject to Tidal Action means land subject to the periodic rise and fall of a coastal water body, including spring tides.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Land under Salt Ponds is defined in 310 CMR 10.33(2).

Land under Water Bodies and Waterways means the bottom of, or land under, the surface of the ocean or any estuary, creek, river, stream, pond, or lake. Land under the ocean and estuaries is further defined in 310 CMR 10.25(2); land under inland water bodies is further defined in 310 CMR 10.56(2).

10.04: continued

Land Uses with Higher Potential Pollutant Loads mean the following land uses: land uses identified in 310 CMR 22.20B(2), 22.20C(2)(a) through (k) and (m), 22.21(2)(a)1. through 8., and (b)1. through 6.; areas within a site that are the location of activities that are subject to an individual National Pollutant Discharge Elimination System (NPDES) permit or the NPDES Multi-sector General Permit; auto fueling facilities (gas stations); exterior fleet storage areas; exterior vehicle service and equipment cleaning areas; marinas and boatyards; parking lots with high intensity use; confined disposal facilities and disposal sites.

Landowner means the owner of record of land or an interest in land that is subject of a Reviewable Decision.

Linear-shaped Project, for purposes of 310 CMR 10.05(4), means a project that is substantially longer than it is wide and is a project for the construction, reconstruction, or substantial enlargement of facilities that will be used in the service of the public to provide electric, gas, sewer, water, telephone, telegraph and other communication services, a project by a public agency or authority for the construction, reconstruction, expansion, repair or maintenance of public roads, bike paths or other paths for pedestrians, or public railways.

Lot means an area of land in one ownership, with definite boundaries.

Low Impact Development Techniques mean innovative stormwater management systems that are modeled after natural hydrologic features. Low impact development techniques manage rainfall at the source using uniformly distributed decentralized micro-scale controls. Low impact development techniques use small cost-effective landscape features located at the lot level.

Maintenance of a Stormwater Management System means the work to keep a stormwater management system functional and in good repair so that it may continue to operate as originally designed. Maintenance of a stormwater management system does not include work that:

- (a) reduces the capacity of the system to treat stormwater, provide recharge or attenuate peak flow;
- (b) increases the total and peak volume of the stormwater managed by the system;
- (c) directs additional stormwater discharges to the system; or
- (d) results in reduced use of above ground stormwater best management practices.

Major or Complex means an appeal of a Reviewable Decision issued for work in a resource area that will be so designated due to the complexity or novelty of the issues, the magnitude of the project, the potential for environmental harm or benefit, significant public interest or public financing or other relevant consideration, as determined by the Commissioner or a Presiding Officer.

Majority means more than half of the members of the conservation commission then in office.

Marsh is defined in M.G.L. c. 131, § 40, para. 10.

Massachusetts Erosion and Sediment Control Guidelines means the *Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas* originally prepared by the Franklin, Hampden, and Hampshire Conservation Districts in 1997, for the Massachusetts Executive Office of Environmental Affairs State Commission for Conservation of Soil, Water and Related Resources, the Massachusetts Department of Environmental Protection, the U.S. Environmental

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Protection Agency, Region I, and the Natural Resources Conservation Service, United States Department of Agriculture and reprinted in May 2003.

Massachusetts River and Stream Crossing Standards or the Stream Crossing Standards means the standards developed by the River and Stream Continuity Partnership as corrected on March 8, 2012.

Meadow (or Wet Meadow) is defined in M.G.L. c. 131, § 40, para. 9.

Mean Annual High-water Line is defined at 310 CMR 10.58(2).

10.04: continued

MEPA means the Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 6 through 62H, and 301 CMR 11.00: *General Application and Administration Environmental Code, Title 1*.

Migratory Areas mean those areas used by wildlife moving from one habitat to another, whether seasonally or otherwise.

Mitigation means rectifying an adverse impact by repairing, rehabilitating or restoring the affected resource area or compensating for an adverse impact by enhancing or providing replacement resource areas.

Notice of Intent means the written notice filed by any person intending to remove, fill, dredge or alter an Area Subject to Protection under M.G.L. c. 131, § 40. It shall be made on Form 3 or 4.

Ocean means the Atlantic Ocean and all contiguous waters subject to tidal action.

Openness Ratio means the cross-sectional area of a structure opening divided by crossing length when measured in consistent units. For a box culvert, the openness ratio equals (height x width)/length. For crossing structures with multiple cells or barrels openness is calculated separately for each cell or barrel. The embedded portion of a culvert is not included in the calculation of the cross-sectional area.

Order means an Order of Conditions, Order of Resource Area Delineation, Superseding, Order or Final Order, whichever is applicable.

Order of Conditions means the document issued by a conservation commission containing conditions which regulate or prohibit an activity. It shall be made on Form 5.

Outstanding Resource Water means a surface water of the Commonwealth so designated in the Massachusetts Surface Water Quality Standards at 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*.

Owner of Land Abutting the Activity means the owner of land sharing a common boundary or corner with the site of the proposed activity in any direction, including land located directly across a street, way, creek, river, stream, brook or canal.

Party to any proceeding before the Department means the applicant, the conservation commission and the Department, and pursuant to 310 CMR 10.05(7)(a) may include the owner of the site, any abutter, any person aggrieved, any ten residents of the city or town where the land is located and any ten persons pursuant to M.G.L. c. 30A, § 10A.

Person Aggrieved means any person who, because of an act or failure to act by the issuing authority, may suffer an injury in fact which is different either in kind or magnitude from that suffered by the general public and which is within the scope of the interests identified in M.G.L. c. 131, § 40. Such person must specify in writing sufficient facts to allow the Department to determine whether or not the person is in fact aggrieved.

Plans means such data, maps, engineering drawings, calculations, specifications, schedules and other materials, if any, deemed necessary by the issuing authority to describe the site and/or the

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

work, to determine the applicability of M.G.L. c. 131, § 40 or to determine the impact of the proposed work upon the interests identified in M.G.L. c. 131, § 40. (*See* also General Instructions for Completing Notice of Intent (Form 3) and Abbreviated Notice of Intent (Form 4).)

Pond (Coastal) means Salt Pond as defined in 310 CMR 10.33(2).

10.04: continued

Pond (Inland) means any open body of fresh water with a surface area observed or recorded within the last ten years of at least 10,000 square feet. Ponds may be either naturally occurring or human-made by impoundment, excavation, or otherwise. Ponds shall contain standing water except for periods of extended drought. Periods of extended drought for purposes of 310 CMR 10.00 shall be those periods, in those specifically identified geographic locations, determined to be at the “Advisory” or more severe drought level by the Massachusetts Drought Management Task Force, as established by the Executive Office of Energy and Environmental Affairs and the Massachusetts Emergency Management Agency in 2001, in accordance with the Massachusetts Drought Management Plan (MDMP).

Notwithstanding the above, the following human-made bodies of open water shall not be considered ponds:

- (a) basins or lagoons which are part of wastewater treatment plants;
- (b) swimming pools or other impervious human-made basins; and
- (c) individual gravel pits or quarries excavated from upland areas unless inactive for five or more consecutive years.

Practicable means available and capable of being done after taking into consideration costs, existing technology, proposed use, logistics and potential adverse consequences (*e.g.*, degradation of Rare Species habitat, increased flood impacts to the built environment) in light of the overall project purposes and is permissible under existing federal and state statutes and regulations.

Prevention of Pollution means the prevention or reduction of contamination of surface or ground water.

Primary Frontal Dune or Primary Dune means a continuous or nearly continuous mound or ridge of sediment with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and overtopping from high tides and waves during coastal storms. The Primary Frontal Dune is the dune closest to the beach. The inland limit of the Primary Frontal Dune occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.

Private Water Supply means any source or volume of surface or ground water demonstrated to be in any private use or demonstrated to have a potential for private use.

Project Locus means the lot on which an applicant proposes to perform an activity subject to regulation under M.G.L. c. 131, § 40.

Project Purpose means the general, functional description of an activity proposed within the riverfront area (*e.g.*, construction of a single family house, expansion of a commercial development).

Project Site means the area within the Project Locus that comprises the limit of work for activities, including but not limited to, the dredging, excavating, filling, grading, the erection, reconstruction or expansion of a building or structure, the driving of pilings, the construction or improvement of roads or other ways, and the installation of drainage, stormwater treatment, environmentally sensitive site design practices, sewage and water systems.

Protection of Fisheries means protection of the capacity of an Area Subject to Protection under

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

M.G.L. c. 131, § 40:

- (a) to prevent or reduce contamination or damage to fish; and
- (b) to serve as their habitat and nutrient source. Fish includes all species of fresh and salt water finfish and shellfish.

See also the definition of Marine Fisheries contained in 310 CMR 10.23(15).

Protection of Land Containing Shellfish means protection of the capacity of an Area Subject to Protection under M.G.L. c. 131, § 40:

- (a) to prevent or reduce contamination or damage to shellfish; and
- (b) to serve as their habitat and nutrient source.

See also the definitions of Shellfish and Land Containing Shellfish in 310 CMR 10.34(2).

10.04: continued

Public Water Supply means any source or volume of surface or ground water demonstrated to be in public use or approved for water supply pursuant to M.G.L. c. 111, § 160 by the Division of Water Supply of the Department, or demonstrated to have a potential for public use.

Rare Species mean those vertebrate and invertebrate animal species officially listed as endangered, threatened, or of special concern by the Massachusetts Division of Fisheries and Wildlife under 321 CMR 10.60.

Redevelopment means replacement, rehabilitation, or expansion of existing structures, improvement of existing roads or reuse of degraded or previously developed areas for purposes of 310 CMR 10.58, governing work in the riverfront area. For purpose of the Stormwater Management Standards as provided in 310 CMR 10.05(6)(k) through (q), redevelopment is defined to include the following projects:

- (a) maintenance and improvement of existing roadways including widening less than a single lane, adding shoulders, correcting substandard intersections, improving existing drainage systems and repaving;
- (b) development, rehabilitation, expansion and phased projects on previously developed sites provided the redevelopment results in no net increase in impervious area; and
- (c) remedial projects specifically designed to provide improved stormwater management such as projects to separate storm drains and sanitary sewers and stormwater retrofit projects.

Remove means to take away any type of material, thereby changing an elevation, either temporarily or permanently.

Request for Determination of Applicability means a written request made by any person to a conservation commission or the Department for a determination as to whether a site or work thereon is subject to M.G.L. c. 131, § 40. It shall be submitted on Form 1.

Resource Area means any of the areas specified in 310 CMR 10.25 through 10.35 and 10.54 through 10.58. It is used synonymously with Area Subject to Protection under M.G.L. c. 131, § 40, each one of which is enumerated in 310 CMR 10.02(1).

Restoration Order of Conditions means an Order of Conditions issued pursuant to 310 CMR 10.05(6) and 10.14 for a project that meets the eligibility criteria set forth in 310 CMR 10.13.

Reviewable Decision means a MassDEP decision that is a superseding order of condition or superseding denial of an order of conditions, a superseding determination of applicability, and/or a superseding order of resource area delineation, or a variance.

River means any natural flowing body of water that empties to any ocean, lake, pond, or other river and which flows throughout the year. River is defined further at 310 CMR 10.58(2).

Riverfront Area is defined at 310 CMR 10.58(2).

Rocky Intertidal Shore is defined in 310 CMR 10.31(2).

Salt Marsh is defined in 310 CMR 10.32(2).

Severe Weather Emergency Declaration is a declaration issued by the Commissioner, following

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

a destructive weather event, which authorizes widespread emergency recovery, debris cleanup, or roadway or utility repair, necessary for the protection of the health or safety of the residents of the Commonwealth, without filing a Notice of Intent or requesting an emergency certification or authorization pursuant to 310 CMR 10.06(1) through (7).

Sediment, for the purpose of dredging, means all inorganic or organic matter including detritus situated under tidal waters below the mean high water line as defined in 310 CMR 10.23, and for inland waters, below the upper boundary of a bank, as defined in 310 CMR 10.54(2).

10.04: continued

Shellfish Growing Area means land under the ocean, tidal flats, rocky intertidal shores and marshes and land under salt ponds when any such land contains shellfish. Shellfish growing areas include land that has been identified and shown on a map published by the Division of Marine Fisheries as a shellfish growing area including any area identified on such map as an area where shellfishing is prohibited. Shellfish growing areas shall also include land designated by the Department in 314 CMR 4.00: *Massachusetts Surface Water Quality Standards* as suitable for shellfish harvesting with or without depuration. In addition, shellfish growing areas shall include shellfish growing areas designated by the local shellfish constable as suitable for shellfishing based on the density of shellfish, the size of the area and the historical and current importance of the area for recreational and commercial shellfishing.

Shellfish Suitability Area means an area located within land containing shellfish and identified on maps prepared in May 2011 by the Massachusetts Division of Marine Fisheries with input from local Shellfish Constables and commercial fishermen as suitable for shellfish. The areas covered include sites where shellfish have been observed since the mid 1970s but may not currently support shellfish and thus represent both existing and potential shellfish habitat areas.

Shelter means protection from the elements or predators.

Significant means plays a role. A resource area is significant to an interest identified in M.G.L. c. 131, § 40 when it plays a role in the provision or protection, as appropriate, of that interest. Within the context of the protection of the riverfront area, no significant adverse impact means the level of protection of the performance standards provided under 310 CMR 10.58.

Special Flood Hazard Area means the area of land in the flood plain that is subject to a 1% chance of flooding in any given year as determined by the best available information, including, but not limited to, the currently effective or preliminary Federal Emergency Management Agency (FEMA) Flood Insurance Study or Rate Map (except for any portion of a preliminary map that is the subject of an appeal to FEMA) for Land Subject to Coastal Storm Flowage, the Velocity Zone as defined in 310 CMR 10.04, and the Flood Insurance Study for Bordering Land Subject to Flooding as defined in 310 CMR 10.57.

Spring Tides means those tides which occur with the new and full moons, and which are perceptibly higher and lower than other tides.

State-listed Species mean the same as rare species, as defined in 310 CMR 10.04.

Storm Damage Prevention means the prevention of damage caused by water from storms, including, but not limited to, erosion and sedimentation, damage to vegetation, property or buildings, or damage caused by flooding, water-borne debris or water-borne ice.

Stormwater Best Management Practice means a structural or nonstructural technique for managing stormwater to prevent or reduce non-point source pollutants from entering surface waters or ground waters. A structural stormwater best management practice includes a basin, discharge outlet, swale, rain garden, filter or other stormwater treatment practice or measure either alone or in combination including without limitation any overflow pipe, conduit, weir control structure that:

- (a) is not naturally occurring;
- (b) is not designed as a wetland replication area; and

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

(c) has been designed, constructed, and installed for the purpose of conveying, collecting, storing, discharging, recharging or treating stormwater.

Nonstructural stormwater best management practices include source control and pollution prevention measures.

Stormwater Management System means a system for conveying, collecting, storing, discharging, recharging or treating stormwater on-site including stormwater best management practices and any pipes and outlets intended to transport and discharge stormwater to the ground water, a surface water or a municipal separate storm sewer system.

10.04: continued

Stormwater Management System Improvement means:

- (a) expansion of a stormwater management system beyond its existing geographic footprint to provide treatment for additional stormwater volume, provide additional groundwater recharge or enhance groundwater recharge or pollutant removal capability such as the addition of treatment train components; or
- (b) modification to, or addition of, features within the existing geographic footprint of a stormwater management system to enhance groundwater recharge or pollutant removal capability, such as modifying outlet control structures.

Stream means a body of running water, including brooks and creeks, which moves in a definite channel in the ground due to a hydraulic gradient, and which flows within, into or out of an Area Subject to Protection under M.G.L. c. 131, § 40. A portion of a stream may flow through a culvert or beneath a bridge. Such a body of running water which does not flow throughout the year (*i.e.*, which is intermittent) is a stream except for that portion upgradient of all bogs, swamps, wet meadows and marshes.

Superseding Determination means a determination of applicability, of significance or of non-significance, as the case may be, issued by the Department. It shall be made on Form 2.

Superseding Order means a document issued by the Department containing conditions which regulate or prohibit an activity. It shall be made on Form 5.

Surface Waters means all waters other than ground water within the jurisdiction of the Commonwealth including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, and coastal waters.

Swamp is defined in M.G.L. c. 131, § 40, para. 8.

Test Project means the installation or deployment of water dependent Innovative Technology in situ for purposes of evaluating its performance and environmental effects.

Velocity Zone or V-zone also known as the Coastal High Hazard Area means an area within the Special Flood Hazard Area that is subject to high velocity wave action from storms or seismic sources. The Velocity Zone Boundaries are determined by reference to the currently effective or preliminary Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), whichever is more recent (except for any portion of a preliminary map that is the subject of an appeal to FEMA), or at a minimum to the inland limit of the Primary Frontal Dune, whichever is farther landward.

Vernal Pool Habitat means confined basin depressions which, at least in most years, hold water for a minimum of two continuous months during the spring and/or summer, and which are free of adult fish populations, as well as the area within 100 feet of the mean annual boundaries of such depressions, to the extent that such habitat is within an Area Subject to Protection under M.G.L. c. 131, § 40 as specified in 310 CMR 10.02(1). These areas are essential breeding habitat, and provide other extremely important wildlife habitat functions during non breeding season as well, for a variety of amphibian species such as wood frog (*Rana sylvatica*) and the spotted salamander (*Ambystoma maculatum*), and are important habitat for other wildlife species.

Vista Pruning means the selective thinning of tree branches or understory shrubs to establish a

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

specific "window" to improve visibility. Vista pruning does not include the cutting of trees which would reduce the leaf canopy to less than 90% of the existing crown cover and does not include the mowing or removal of understory brush.

Wastewater Residuals Landfill means a facility or part of a facility approved by the Department for the disposal of wastewater residuals into or on land, but not including a site where wastewater residuals are land applied in accordance with 310 CMR 32.00: *Land Application of Sludge and Septage*.

10.04: continued

Water-dependent Uses mean those uses and facilities which require direct access to, or location in, marine, tidal or inland waters and which therefore cannot be located away from said waters, including but not limited to: marinas, public recreational uses, navigational and commercial fishing and boating facilities, water-based recreational uses, navigation aids, basins, and channels, industrial uses dependent upon waterborne transportation or requiring large volumes of cooling or process water which cannot reasonably be located or operated at an upland site, crossings over or under water bodies or waterways (but limited to railroad and public roadway bridges, tunnels, culverts, as well as railroad tracks and public roadways connecting thereto which are generally perpendicular to the water body or waterway), and any other uses and facilities as may further hereafter be defined as water-dependent in 310 CMR 9.00: *Waterways*.

Waters of the Commonwealth means all waters within the jurisdiction of the Commonwealth, including without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters and ground waters.

Wildlife means all mammals, birds, reptiles and amphibians and, for the purposes of 310 CMR 10.37 and 10.59, all vertebrate and invertebrate animal species which are officially listed in 321 CMR 8.00: *Endangered Wildlife and Wild Plants* as endangered, threatened, or of special concern.

Wildlife Habitat means an Area Subject to Protection under M.G.L. c. 131, § 40, which due to its plant community, composition and structure, hydrologic regime or other characteristics provides important food, shelter, migratory or overwintering areas or breeding areas for wildlife.

Wildlife Specialist means an individual with at least a masters degree in wildlife biology or ecological science from an accredited college or university, or other competent professional with at least two years experience in wildlife habitat evaluation.

Work means the same as activity.

10.05: Procedures

(1) Time Periods. All time periods of ten days or less specified in M.G.L. c. 131, § 40 and 310 CMR 10.00 shall be computed using business days only. In the case of a determination or Order, such period shall commence on the first day after the date of issuance and shall end at the close of business on the tenth business day thereafter. All other time periods specified in M.G.L. c. 131, § 40 and 310 CMR 10.00 shall be computed on the basis of calendar days, unless the last day falls on a Saturday, Sunday or legal holiday, in which case the last day shall be the next business day following.

(2) Actions by Conservation Commission. Where M.G.L. c. 131, § 40 states that a particular action (except receipt of a request or notice) is to be taken by the conservation commission, that action is to be taken by more than half the members present at a meeting of at least a quorum. A quorum is defined as a majority of the members then in office.

Where M.G.L. c. 131, § 40 states that an order or notification shall be signed by a majority of the conservation commission, that action is to be taken by a majority of the members then in office, who need not convene as a body in order to sign, provided they met pursuant to the open meeting law, M.G.L. c. 39, §§ 23A through 23C, when voting on the matter.

Where M.G.L. c. 131, § 40 states that the conservation commission is to receive a request

or notice, conservation commission means a member of the conservation commission or an individual designated by the conservation commission to receive such request or notice.

(3) Determinations of Applicability.

(a) Requests for Determination of Applicability.

1. Any person who desires a determination as to whether M.G.L. c. 131, § 40 applies to land, or to work that may affect an Area Subject to Protection under M.G.L. c. 131, § 40, may submit to the conservation commission by certified mail or hand delivery a Request for a Determination of Applicability, Form 1. To obtain confirmation of a delineated boundary of bordering vegetated wetlands and other resource areas on the site to establish the extent of the buffer zone and resource areas prior to filing a Notice of

10.05: continued

Intent for proposed work, an applicant generally should file an Abbreviated Notice of Resource Area Delineation. Alternatively, the boundary of bordering vegetated wetland (or other resource areas) may be determined through the filing of a Notice of Intent. For work within riverfront areas, an applicant may submit to the conservation commission by certified mail or hand delivery a Request for Determination of Applicability to identify the scope of alternatives to be evaluated under 310 CMR 10.58(4)(c)2., including sufficient information to enable the conservation commission to determine the applicable scope.

2. Any person who proposes to perform work within the Buffer Zone shall submit to the conservation commission either a Notice of Intent for such work or a Request for Determination of Applicability. Said request shall include sufficient information, as required on Form 1, to enable the conservation commission to find and view the area and to determine whether the proposed work will alter an Area Subject to Protection under M.G.L. c. 131, § 40. Applicants may use the Abbreviated Notice of Resource Area Delineation to confirm the boundaries of resource areas and the buffer zone.

Any person who proposes to apply herbicides in the Buffer Zone pursuant to the presumption of 310 CMR 10.03(6)(b) shall be required only to submit a request for determination of the boundaries of the Buffer Zone and the Areas Subject to Protection under M.G.L. c. 131, § 40. Such Request for Determination shall be submitted prior to the filing of the Vegetation Management Plan, as required by 333 CMR 11.00: *Rights of Way Management*, on maps of a scale which will enable the issuing authority to find and delineate those Areas Subject to Protection under M.G.L. c. 131, § 40 identified in 310 CMR 10.02(1)(a) through (c) and the Buffer Zone identified in 310 CMR 10.02(2) within the vicinity of the project area.

3. A request for a Determination of Applicability shall include certification that the Department and the owner of the area subject to the request, if the person making the request is not the owner, have been notified that a determination is being requested under M.G.L. c. 131, § 40.

(b) Determination of Applicability.

1. Within 21 days after the date of receipt of the Request for a Determination of Applicability, the conservation commission shall issue a Determination of Applicability, Form 2. Notice of the time and place of the public meeting at which the determination will be made shall be given by the conservation commission at the expense of the person making the request not less than five days prior to such meeting, by publication in a newspaper of general circulation in the city or town in which the land is located, and by mailing a notice to the person making the request, the owner, the board of health and the planning board of said city or town. Notice shall also be given in accordance with the open meeting law, M.G.L. c. 39, § 23B. Said determination shall be signed by a majority of the conservation commission, and copies thereof shall be sent by the conservation commission to the Department, to the person making the request, and to the owner. Delivery of the copy to the person making the request shall be by hand delivery or certified mail, return receipt requested. Said determination shall be valid for three years from the date of issuance, except that a determination of the boundaries of the Areas Subject to Protection under M.G.L. c. 131, § 40 and the Buffer Zone which are to apply to such plans as are required by the Department of Food and Agriculture pursuant to 333 CMR 11.00: *Rights of Way Management*, effective July 10, 1987, shall be valid throughout the effective duration of the Vegetation Management Plan.

2. The conservation commission shall find that M.G.L. c. 131, § 40 applies to the land, or a portion thereof, if it is an Area Subject to Protection under M.G.L. c. 131, § 40 as

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

defined in 310 CMR 10.02(1). The conservation commission shall find that M.G.L. c. 131, § 40 applies to the work, or portion thereof, if it is an Activity Subject to Regulation under M.G.L. c. 131, § 40 as defined in 310 CMR 10.02(2). The conservation commission shall identify the scope of alternatives to be evaluated, if requested, for work within riverfront areas under 310 CMR 10.58(4)(c)2.

3. A Notice of Intent which is filed as a result of a positive determination, whether such determination is made by the Department or a conservation commission, shall be filed with the conservation commission, and all of the procedures set forth in 310 CMR 10.05(4) shall apply.

10.05: continued

(c) Appeal to the Department. Following a positive or negative Determination of Applicability, the identification of the scope of alternatives for work within the riverfront area, or the failure of a conservation commission to make a determination within 21 days, any person specified in 310 CMR 10.05(7) may, within ten days, request the Department to issue a Superseding Determination of Applicability pursuant to the procedures set forth in 310 CMR 10.05(7). The Department shall issue its determination within 35 days from receipt of such request.

(d) Work Pending Appeal of Determination.

1. Upon a positive Determination of Applicability by a conservation commission, work may not proceed until the Department or the Commissioner issues a negative determination, or until a Notice of Intent has been filed, a final order has been issued and recorded, and all administrative appeal periods have elapsed, except that a Notice of Intent shall not be required for the application of herbicides in accordance with 310 CMR 10.03(6).

2. Upon a positive Determination of Applicability by the Department, work may not proceed until the Commissioner issues a negative determination or until a Notice of Intent has been filed, a final order has been issued and recorded, and all administrative appeal periods have elapsed.

3. Upon a positive Determination of Applicability by the Commissioner, work may not proceed until a judicial determination is made that the proposed work is not subject to M.G.L. c. 131, § 40 or until a Notice of Intent has been filed and a final order has been issued and recorded, and all administrative appeal periods have elapsed.

4. Upon a negative Determination of Applicability by a conservation commission or upon the failure of a conservation commission to act within the 21 day time period, and where the Department has been requested to issue a Superseding Determination of Applicability but has failed to do so within 35 days, work may proceed at the owner's risk upon notice to the Department and to the conservation commission.

5. Upon a negative Determination of Applicability by the Department, work may proceed at the owner's risk even if a request for an adjudicatory hearing has been made.

6. Upon a negative Determination of Applicability by the Commissioner after an adjudicatory hearing, work may proceed at the owner's risk even if a petition for judicial review has been filed.

7. Upon a positive Determination of Applicability by a conservation commission, the Department, or the Commissioner which identifies the scope of alternatives to be evaluated under 310 CMR 10.58(4)(c)2. for work within the riverfront area, work may not proceed until a Notice of Intent has been filed and a final Order has been issued and recorded and all administrative appeal periods have elapsed.

(4) Notices of Intent.

(a) Any person who proposes to do work that will remove, fill, dredge or alter any Area Subject to Protection under M.G.L. c. 131 § 40 shall file a Notice of Intent on Form 3 and other application materials in accordance with the submittal requirements set forth in the *General Instructions for Completing Notice of Intent (Form 3)*. If the applicant is not a landowner of the Project Locus, the applicant shall obtain written permission from a landowner(s) prior to filing a Notice of Intent for proposed work, except for work proposed on Great Ponds or Commonwealth tidelands. Two copies of the completed Notice of Intent with supporting plans and documents shall be sent by certified mail or hand delivery to the conservation commission, and one copy of the same shall be sent concurrently in like manner to the Department. If the project requires a 401 Water Quality Certification pursuant to

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* and/or is a water-dependent use project that requires a permit, license or written approval pursuant to 310 CMR 9.00: *Waterways* the applicant may file a Notice of Intent that is a Combined Application. In that event, an additional copy of the Combined Application shall be sent to the Department's Boston Office.

10.05: continued

Concurrent with the filing of the Notice of Intent, the applicant shall provide notification to all Abutters. Notwithstanding the foregoing, the requirement to provide Abutter notification is subject to the following limits. An applicant is required to provide notification to an Abutter whose Lot is separated from the Project Locus by a public or private street or body of water only if the Abutter's Lot is within 100 feet from the property line of the Project Locus. An applicant who proposes work solely within Land under Water Bodies or Waterways, or solely within a Lot with an area greater than 50 acres, is required to provide notification only to Abutters whose Lot is within one hundred feet from the Project Site. An applicant proposing a Linear-shaped Project greater than 1,000 feet in length is required to provide notification only to Abutters whose Lot is within 1,000 feet from the Project Site. Abutter notification is not required for projects proposed by the Massachusetts Department of Transportation Highway Division pursuant to St. 1993, c. 472 as approved on January 13, 1994. The applicant shall provide notification at the mailing addresses shown on the most recent applicable tax list from the municipal assessor. Notification shall be at the applicant's expense. The notification shall state where within the municipality copies of the Notice of Intent may be examined or obtained and where information on the date, time, and location of the public hearing may be obtained. To ensure compatibility with local procedures, applicants must comply with any rules of the local conservation commission pertaining to the location for examining or obtaining the Notice of Intent and information about the hearing. The applicant shall provide written notification to all Abutters required to be notified by hand delivery or certified mail, return receipt requested, or by certificates of mailing. Mailing at least seven days prior to the public hearing shall constitute timely notice. The applicant shall present either the certified mail receipts or certificate of mailing receipts for all Abutters at the beginning of the public hearing. The presentation of the receipts for all abutters required to be notified as identified on the tax list shall constitute compliance with Abutter notification requirements. The conservation commission shall determine whether the applicant has complied with Abutter notification requirements. The Department will dismiss Requests for Action based on allegations of failure to comply with Abutter notification requirements, absent a clear showing by an Abutter seeking Department action that the applicant failed to notify the Abutter. An applicant submitting a Notice of Intent for a project that is also subject to 310 CMR 9.00: *Waterways* and/or 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* may provide joint public notice by appending to the public notice required by 310 CMR 9.13: *Public Notice and Participation Requirements* and/or 314 CMR 9.05: *Submission of an Application*, as applicable, notification that a Notice of Intent is pending before the issuing authority, provided the notification complies with 310 CMR 10.05(4). An applicant may provide a joint public notice, even if the Notice of Intent is not a Combined Application.

(b) For certain purposes, other forms of Notices may be used.

1. For certain projects, applicants may at their option use the Abbreviated Notice of Intent. This latter form may only be used when all three of the following circumstances exist:

- a. the proposed work is within the Buffer Zone, as defined in 310 CMR 10.04, or within Land Subject to Flooding, as defined in 310 CMR 10.57(2) or within the Riverfront Area, as defined in 310 CMR 10.58.
- b. the proposed work will disturb less than 1,000 square feet of surface area within the Buffer Zone and/or Land Subject to Flooding or less than 1000 square feet of riverfront area, provided the work conforms to 310 CMR 10.58(4)(c)2.a.
- c. the proposed work will not require U.S. Army Corps of Engineer Section 10 or

Section 404 permits, or a license from the Division of Waterways pursuant to M.G.L. c. 91.

2. To establish the extent of bordering vegetated wetland and/or other resource areas on land subject to protection under M.G.L. c. 131, § 40, applicants may use the Abbreviated Notice of Resource Area Delineation for the confirmation of a delineated boundary of bordering vegetated wetlands and/or other resource areas on the site, prior to filing a Notice of Intent for proposed work. Alternatively, the boundary of bordering vegetated wetland or other resource areas may be determined through the filing of a Notice of Intent.

10.05: continued

3. To confirm the boundaries of resource areas applicants shall use the Abbreviated Notice of Resource Area Delineation.

(c) Upon receipt of the application materials referred to in 310 CMR 10.05(4)(a), the Department shall issue a file number. The designation of a file number shall not imply that the plans and supporting documents have been judged adequate for the issuance of an Order, but only that copies of the minimum submittal requirements contained in the General Instructions have been filed.

(d) In the event that only a portion of a proposed project or activity lies within an Area Subject to Protection under M.G.L. c. 131, § 40 or within the Buffer Zone, and the remainder of the project or activity lies outside those areas, only that portion within those areas must be described in the detail called for by the General Instructions and Form 3 and 4; provided, however, that in such circumstances the Notice of Intent shall also contain a description and calculation of peak flow and estimated water quality characteristics of discharge from a point source (both closed and open channel) when the point of discharge falls within an Area Subject to Protection under M.G.L. c. 131, § 40 or within the Buffer Zone.

Notwithstanding the foregoing, when the issuing authority has determined that an activity outside the Areas Subject to Protection under M.G.L. c. 131, § 40 and outside the Buffer Zone has in fact altered an Area Subject to Protection under M.G.L. c. 131, § 40, it may require such plans, supporting calculations and other documentation as are necessary to describe the entire activity.

(e) The requirement under M.G.L. c. 131, § 40 to obtain or apply for all obtainable permits, variances and approvals required by local by-law with respect to the proposed activity shall mean only those which are feasible to obtain at the time the Notice of Intent is filed. Permits, variances, and approvals required by local by-law may include, among others, zoning variances, permits from boards of appeals, permits required under floodplain or wetland zoning by-laws and gravel removal permits. They do not include, among others, building permits under the State Building Code, M.G.L. c. 23B, § 16, or subdivision control approvals under the State Subdivision Control Law, M.G.L. c. 41, §§ 81K through 81GG, which are issued by local authorities. When an applicant for a comprehensive permit (under M.G.L. c. 40B, §§ 20 through 23) from a board of appeals has received a determination from the board granting or denying the permit and, in the case of a denial, has appealed to the Housing Appeals Committee (established under M.G.L. c. 23B, § 5A), said applicant shall be deemed to have applied for all permits obtainable at the time of filing.

(f) If the issuing authority rejects a Notice of Intent because of a failure to obtain or apply for all permits, variances and approvals required by local by-law, it shall specify in writing the permit, variance or approval that has not been applied for. A ruling by the municipal agency within whose jurisdiction the issuance of the permit, variance or approval lies, or by the town counsel or city solicitor, concerning the applicability or obtainability of such permit, variance or approval shall be accepted by the issuing authority. In the absence of such a ruling, other evidence may be accepted.

(g) A Notice of Intent shall expire where the applicant has failed to diligently pursue the issuance of a Final Order in proceedings under 310 CMR 10.00. A Notice of Intent shall be presumed to have expired two years after the date of filing unless the applicant submits information showing that (a) good cause exists for the delay of proceedings under 310 CMR 10.00; and (b) the applicant has continued to pursue the project diligently in other forums in the intervening period; provided, however, that unfavorable financial circumstances shall not constitute good cause for delay. No Notice of Intent shall be deemed expired under 310 CMR 10.05 when an adjudicatory hearing is pending and when the applicant has provided all information necessary to continue with the prosecution of the case.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Notwithstanding the provisions contained in 310 CMR 10.10, 310 CMR 10.05(4)(g) shall apply to any Notice of Intent whenever filed.

10.05: continued

(h) The issuing authority may require that supporting plans and calculations be prepared and stamped by a registered professional engineer (PE) when, in its judgment, the complexity of the proposed work warrants this professional certification. The issuing authority may also require the preparation of supporting materials by other professionals including, but not limited to, registered landscape architect, registered land surveyor, environmental scientist, geologist or hydrologist when in its judgment the complexity of the proposed work warrants the relevant specialized expertise. The issuing authority may require a delineation in an Abbreviated Notice of Resource Area Delineation to be performed by a professional with relevant specialized expertise. If the Notice of Intent is a Combined Application, the supporting plans and calculations shall also conform to the requirements of 310 CMR 9.11(3)(b) and 314 CMR 9.05(1): *Application Requirements* to the extent they are applicable.

(5) Public Hearings by Conservation Commissions.

(a) A public hearing shall be held by the conservation commission within 21 days of receipt of the minimum submittal requirements set forth in the *General Instructions for Completing Notice of Intent (Form 3)*, *Abbreviated Notice of Intent (Form 4)* and Abbreviated Notice of Resource Area Delineation, and shall be advertised in accordance with M.G.L. c. 131, § 40 and the requirements of the open meeting law, M.G.L. c. 39, § 23B.

(b) Public hearings may be continued as follows:

1. without the consent of the applicant to a date, announced at the hearing, within 21 days, of receipt of the Notice of Intent;
2. with the consent of the applicant, to an agreed-upon date, which shall be announced at the hearing; or
3. with the consent of the applicant for a period not to exceed 21 days after the submission of a specified piece of information or the occurrence of a specified action. The date, time and place of said continued hearing shall be publicized in accordance with M.G.L. c. 131, § 40, and notice shall be sent to any person at the hearing who so requests in writing.

(6) Orders of Conditions Regulating Work and Orders of Resource Area Delineation.

(a) Within 21 days of the close of the public hearing, the conservation commission shall either:

1. make a determination that the area on which the work is proposed to be done, or which the proposed work will remove, fill, dredge or alter, is not significant to any of the interests identified in M.G.L. c. 131, § 40, and shall so notify the applicant and the Department on Form 6;
2. make a determination that the area on which the work is proposed to be done, or which the proposed work will remove, fill, dredge or alter, is significant to one or more of the interests identified in M.G.L. c. 131, § 40, and shall issue an Order of Conditions for the protection of said interest(s), on Form 5. If the issuing authority also determines that the project meets the eligibility criteria for issuance of a Restoration Order of Conditions set forth in the applicable provisions of 310 CMR 10.00, the Order of Conditions for the project shall be a Restoration Order of Conditions; or
3. make a determination that bordering vegetated wetland and other resource areas subject to jurisdiction have been identified and delineated according to the definitions in 310 CMR 10.00 and shall issue an Order of Resource Area Delineation to confirm or modify the delineations submitted. The Order of Resource Area Delineation shall be effective for three years.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

The standards and presumptions to be used by the issuing authority in determining whether an area is significant to the interests identified in M.G.L. c. 131, § 40, are found in 310 CMR 10.21 through 10.37 (for coastal wetlands) and 10.51 through 10.60 (for inland wetlands).

(b) The Order of Conditions shall impose such conditions as are necessary to meet the performance standards set forth in 310 CMR 10.21 through 10.60 for the protection of those areas found to be significant to one or more of the interests identified in M.G.L. c. 131, § 40 and the Stormwater Management Standards provided in 310 CMR 10.05(6)(k) through (q). The Order shall prohibit any work or any portion thereof that cannot be conditioned to meet said standards.

10.05: continued

The Order shall impose conditions only upon work or the portion thereof that is to be undertaken within an Area Subject to Protection under M.G.L. c. 131, § 40 or within the Buffer Zone. The Order shall impose conditions to control erosion and sedimentation within resource areas and the Buffer Zone. The Order shall impose conditions setting limits on the quantity and quality of discharge from a point source (both closed and open channel), when said limits are necessary to protect the interests identified in M.G.L. c. 131, § 40; provided, however, that the point of discharge falls within an Area Subject to Protection under M.G.L. c. 131, § 40 or within the Buffer Zone, and further provided that said conditions are consistent with the limitations set forth in 310 CMR 10.03(4).

Notwithstanding the foregoing, when the issuing authority has determined that an Activity outside the Areas Subject to Protection under M.G.L. c. 131, § 40 and outside the Buffer Zone has in fact altered an Area Subject to Protection under M.G.L.c. 131, § 40, it shall impose such conditions on any portion of the activity as are necessary to contribute to the protection of the interests identified in M.G.L.c. 131, § 40.

When the issuing authority determines that a project meets the eligibility criteria for a Restoration Order of Conditions, the issuing authority shall impose only the conditions set forth in the applicable provisions of 310 CMR 10.00 for that Restoration Order of Conditions. A Restoration Order of Conditions may reference the plans and specifications approved by the issuing authority. If the Department issues a Combined Permit, the Department may append to the Restoration Order of Conditions any conditions that the Department has authority to impose pursuant to 310 CMR 9.00: *Waterways* and 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* to the extent they are applicable. The requirement that an Order shall impose conditions only upon work or the portion thereof that is to be undertaken within an Area Subject to Protection under M.G.L. c. 131, § 40, or within the Buffer Zone does not restrict the authority of the Department to append to a Combined Permit any conditions that the Department has the authority to impose under 310 CMR 9.00: *Waterways* and 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* to the extent they are applicable.

(c) If the conservation commission finds that the information submitted by the applicant is not sufficient to describe the site, the work or the effect of the work on the interests identified in M.G.L. c. 131, § 40, it may issue an Order prohibiting the work. The Order shall specify the information which is lacking and why it is necessary.

(d) Except as provided in M.G.L. c. 131, § 40 for maintenance dredging, an Order of Conditions, Order of Resource Area Delineation, or Notification of Non-significance shall be valid for three years from the date of its issuance; provided, however, that the issuing authority may issue an Order for up to five years where special circumstances warrant and where those special circumstances are set forth in the Order. An Order of Resource Area Delineation shall be valid for three years, and may be extended by the issuing authority for one or more years up to three years each under 310 CMR 10.05(8) upon written confirmation by a professional with relevant expertise that the resource area delineations remain accurate.

(e) The Order or Notification of Non-significance shall be signed by a majority of the conservation commission and shall be mailed by certified mail (return receipt requested) or hand delivered to the applicant or his or her agent or attorney, and a copy mailed or hand delivered at the same time to the Department. If the Order imposes conditions necessary to meet any performance standard contained in 310 CMR 10.37 or 10.59, a copy shall be mailed or hand delivered at the same time to the Massachusetts Natural Heritage and Endangered

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Species Program.

(f) A copy of the plans describing the work and the Order shall be kept on file by the conservation commission and by the Department, and shall be available to the public at reasonable hours.

10.05: continued

(g) Prior to the commencement of any work permitted or required by the Final Order, including a Final Order of Resource Area Delineation, or Notification of Non-significance, the Order or Notification shall be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the final order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of registered land, the final order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is to be done. Certification of recording shall be sent to the issuing authority on the form at the end of Form 5. If work is undertaken without the applicant first recording the Order, the issuing authority may issue an Enforcement Order (Form 9) or may itself record the Order of Conditions.

(h) Notwithstanding the provisions contained in 310 CMR 10.10(1) and (3), any Order of Conditions not containing an expiration date, issued for work proposed in a Notice of Intent filed under M.G.L. c. 131, § 40 prior to November 18, 1974, shall expire on April 17, 1986.

(i) An Order of Conditions does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of property rights.

(j) Failure to comply with conditions stated in the Order and with all related statutes and other regulatory measures shall be deemed cause to revoke or modify the Order of Conditions.

(k) No Area Subject to Protection under M.G.L. c. 131, § 40 other than bordering land subject to flooding, isolated land subject to flooding, land subject to coastal storm flowage, or riverfront area may be altered or filled for the impoundment or detention of stormwater, the control of sedimentation or the attenuation of pollutants in stormwater discharges, and the applicable performance standards shall apply to any such alteration or fill. Except as expressly provided, stormwater runoff from all industrial, commercial, institutional, office, residential and transportation projects that are subject to regulation under M.G.L. c. 131, § 40 including site preparation, construction, and redevelopment and all point source stormwater discharges from said projects within an Area Subject to Protection under M.G.L. c. 131, § 40 or within the Buffer Zone shall be provided with stormwater best management practices to attenuate pollutants and to provide a setback from the receiving waters and wetlands in accordance with the following Stormwater Management Standards as further defined and specified in the Massachusetts Stormwater Handbook:

1. No new stormwater conveyances (*e.g.* outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

2. Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This Standard may be waived for discharges to land subject to coastal storm flowage as defined in 310 CMR 10.04.

3. Loss of annual recharge to ground water shall be eliminated or minimized through the use of infiltration measures including environmentally sensitive site design, low impact development techniques, stormwater best management practices and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from the pre-development conditions based on soil type.

This Standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook.

4. Stormwater management systems shall be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS). This Standard is met

when:

- a. Suitable practices for source control and pollution prevention are identified in a long-term pollution prevention plan and thereafter are implemented and maintained;
- b. Structural stormwater best management practices are sized to capture the required water quality volume determined in accordance with *Massachusetts Stormwater Handbook*; and
- c. Pretreatment is provided in accordance with the *Massachusetts Stormwater Handbook*.

10.05: continued

5. For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. If through source control and/or pollution prevention, all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt and stormwater runoff, the proponent shall use the specific structural stormwater BMPs determined by the Department to be suitable for such use as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26 through 53, and the regulations promulgated thereunder at 314 CMR 3.00: *Surface Water Discharge Permit Program*, 314 CMR 4.00: *Massachusetts Surface Water Quality Standards* and 314 CMR 5.00: *Ground Water Discharge Permit Program*.
 6. Stormwater discharges within the Zone II or Interim Wellhead Protection Area of a public water supply and stormwater discharges near or to any other critical area require the use of the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such area as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area, if there is a strong likelihood of a significant impact occurring to said area, taking into account site-specific factors. Stormwater discharges to Outstanding Resource Waters and Special Resource Waters shall be removed and set back from the receiving water or wetland and receive the highest and best practical method of treatment. A “storm water discharge” as defined in 314 CMR 3.04(2)(a) or (b) to an Outstanding Resource Water or Special Resource Water shall comply with 314 CMR 3.00: *Surface Water Discharge Permit Program* and 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*. Stormwater discharges to a Zone I or Zone A are prohibited, unless essential to the operation of the public water supply.
 7. A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural stormwater best management practice requirements of Standards 4, 5 and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.
 8. A plan to control construction related impacts including erosion, sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation and pollution prevention plan) shall be developed and implemented.
 9. A long-term operation and maintenance plan shall be developed and implemented to ensure that the stormwater management system functions as designed.
 10. All illicit discharges to the stormwater management system are prohibited.
- (1) The Stormwater Management Standards shall not apply to:
1. A single-family house;
 2. Housing development and redevelopment projects comprised of detached single-family dwellings on four or fewer lots, provided that there are no stormwater discharges that may potentially affect a critical area;
 3. Multi-family housing development and redevelopment projects, with four or fewer units, including condominiums, cooperatives, apartment buildings and townhouses,

provided that there are no stormwater discharges that may potentially affect a critical area; and

4. Emergency repairs to roads or their drainage systems.

(m) The Stormwater Management Standards shall apply to the maximum extent practicable to the following:

1. Housing development and redevelopment projects comprised of detached single-family dwellings on four or fewer lots that have a stormwater discharge that may potentially affect a critical area;

2. Multi-family housing developments and redevelopment projects with four or fewer units, including condominiums, cooperatives, apartment buildings, and townhouses, that have a stormwater discharge that may potentially affect a critical area;

10.05: continued

3. Housing development and redevelopment projects comprised of detached single-family dwellings, on five to nine lots, provided there is no stormwater discharge that may potentially affect a critical area; and
4. Multi-family housing development and redevelopment projects, with five to nine units, including condominiums, cooperatives, apartment buildings and townhouses, provided there is no stormwater discharge that may potentially affect a critical area.
5. Marinas and boatyards provided that the hull maintenance, painting and service areas are protected from exposure to rain, snow, snowmelt, and stormwater runoff; and
6. Footpaths bikepaths and other paths for pedestrian and/or nonmotorized vehicle access.

(n) For phased projects the determination of whether the *Stormwater Management Standards* apply is made on the entire project as a whole including all phases. When proposing a development or redevelopment project subject to the *Stormwater Management Standards*, proponents shall consider environmentally sensitive site design that incorporates low impact development techniques in addition to stormwater best management practices.

(o) Project proponents seeking to demonstrate compliance with some of all of the Stormwater Management Standards to the maximum extent practicable shall demonstrate that:

1. They have made all reasonable efforts to meet each of the Standards;
2. They have made a complete evaluation of possible stormwater management measures including environmentally sensitive site design and low impact development techniques that minimize land disturbance and impervious surfaces, structural stormwater best management practices, pollution prevention, erosion and sedimentation control and proper operation and maintenance of stormwater best management practices; and
3. If full compliance with the Standards cannot be achieved, they are implementing the highest practicable level of stormwater management.

(p) Notwithstanding anything to the contrary in 310 CMR 10.00, stormwater runoff from all industrial, commercial, institutional, office, residential and transportation projects subject to regulation under M.G.L. c. 131, § 40, including site preparation, construction, and redevelopment, and all point source stormwater discharges from said projects within an Area Subject to Protection under M.G.L. c. 131, § 40, or within the Buffer Zone, for which a Notice of Intent or Notice of Resource Area Delineation has been filed prior to January 2, 2008 shall be managed according to the *Stormwater Management Standards* as set forth in the Stormwater Policy issued by the Department on November 18, 1996.

(q) Compliance with the *Stormwater Management Standards* set forth in 310 CMR 10.05(6)(k) through (q) does not relieve a discharger of the obligation to comply with all applicable Federal, State, and local laws, regulations and permits including without limitation all applicable provisions of 310 CMR 10.00, 314 CMR 3.00: *Surface Water Discharge Permit Program*, 4.00: *Massachusetts Surface Water Quality Standards*, 5.00: *Ground Water Discharge Permit Program*, 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*, local land use controls adopted to comply with 310 CMR 22.21: *Ground Water Supply Protection* or the NPDES General Permit for Small Municipal Separate Storm Sewer Systems, the requirements of the NPDES General Stormwater permits such as the Construction General Permit, and the Multi-sector General Permit.

(7) Requests for Actions by the Department (Appeals).

- (a) The following persons may request the Department to act:
1. the applicant;

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

2. the owner, if not the applicant;
 3. any person aggrieved by a Determination or an Order;
 4. any owner of land abutting the land on which the work is to be done;
 5. any ten residents of the city or town where the land is located; and
 6. the Department.
- (b) Any person(s) permitted to request the Department to act under 310 CMR 10.05(7)(a) may request the Department to issue a Superseding Determination of Applicability or to issue a Superseding Order, whichever is appropriate, whenever a conservation commission has:
1. issued a Determination of Applicability (Form 2);

10.05: continued

2. issued a Notification that an area is not significant to any interest identified in M.G.L. c. 131, § 40 (Form 6);
3. issued an Order of Conditions allowing, conditioning or prohibiting work (Form 5) or an Order of Resource Area Delineation; or
4. failed to hold a public hearing or issue an Order, Notification or Determination within the time period required by M.G.L. c. 131, § 40.

Where the Department is requested to issue a Superseding Determination or Order of Conditions, the conservation commission shall be a party to all agency proceedings and hearings before the Department.

(c) A request for a Superseding Order or Determination shall be made in writing and shall be sent by certified mail or hand delivered within ten days of issuance of the Order, Determination or Notification which is being appealed. When the basis of such request is the conservation commission's failure to act, the request may be made at any time up to 70 days after the expiration of the period within which the conservation commission was to have acted. Said request shall state clearly and concisely the objections to the Order, Determination or Notification which is being appealed and, in the case of a request for a Superseding Order, how the Order of Conditions or Notification of Non-significance issued by the conservation commission is inconsistent with 310 CMR 10.00 and does not contribute to the protection of the interests identified in M.G.L. c. 131, § 40. When the Order is a Restoration Order of Conditions, the basis of the request is limited to claim(s) that the applicant did not comply with one or more of the applicable procedural requirements of 310 CMR 10.05 and/or the conservation commission issued the Restoration Order of Conditions in contravention of one or more of the applicable eligibility criteria. The request for Department action shall specifically identify any procedural requirements and eligibility criteria that the person requesting Department action alleges have not been met.

(d) All requests for the Department to act shall be sent to the appropriate Regional Office of the Department. A copy of the request shall at the same time be sent by certified mail or hand delivered to the conservation commission and the applicant, if he is not the appellant.

(e) Within 35 days from receipt of such a request, the Department shall issue a Superseding Determination of Applicability (Form 2) or a Notification that an area is not significant to any interest identified in M.G.L. c. 131, § 40 (Form 6).

(f) Within 70 days from receipt of such a request, the Department shall issue a Superseding Order unless either of the following apply, or in the event that both apply, whichever is later:

1. compliance with M.G.L. c. 30, §§ 61 through 62H and 301 CMR 11.00 is required, in which case the Department shall issue a Superseding Order within 40 days of the issuance of a statement by the Secretary of the Executive Office of Energy and Environmental Affairs that the applicant has complied with M.G.L. c. 30, §§ 6 through 62H and 301 CMR 11.00: *MEPA Regulations*;
2. the Department has requested additional plans, information or documentation pursuant to 310 CMR 10.05(7)(g), in which case the Department shall issue a Superseding Order within 40 days of receipt of such plans, information, or documentation, or of the failure of the applicant to comply with such request.

(g) The Department shall notify the applicant within 30 days of receipt of a request for the Department to act if additional information or documentation is necessary to make its determination; provided, however, that further information may be requested should the information supplied in response to the original notification so require. When requested to issue a Superseding Order of Resource Area Delineation, the Department shall limit its review to the resource area delineations. The Department shall consider the objections to the resource area delineations stated in the request. The Department may affirm an Order of

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Resource Area Delineation based upon a conclusion that the Order of Resource Area Delineation substantially conforms to the locations identified by the Department through a site inspection.

(h) When the request for a Superseding Order concerns an Order prohibiting work and issued pursuant to 310 CMR 10.05(6)(c), the Department shall limit its review to the information submitted to the conservation commission. If the Department determines that insufficient information was submitted, it shall affirm the denial and instruct the applicant to refile with the conservation commission and include the appropriate information. If the Department determines that sufficient information was submitted, it shall so inform the applicant and the conservation commission, and shall proceed to issue a Superseding Order as provided in 310 CMR 10.05.

10.05: continued

(i) After receipt of a request for a Superseding Determination or Order, the Department may conduct an informal meeting and may conduct an inspection of the site. In the event an inspection is conducted, all parties shall be invited in order to present any information necessary or useful to a proper and complete review of the proposed activity and its effects upon the interests identified in M.G.L. c. 131, § 40. Any party presenting information as a result of such a meeting shall provide copies to the other parties.

Based upon its review of the Notice of Intent, the Order, any informal meeting or site inspection, and any other additional plans, information, or documentation submitted under 310 CMR 10.05(7)(f) or (g), the Department shall issue a Superseding Order for the protection of the interests identified in M.G.L. c. 131, § 40. The Superseding Order shall impose such conditions as are necessary to meet the performance standards set forth in 310 CMR 10.21 through 10.60 and stormwater standards set forth at 301 CMR 10.05(6)(k) for the protection of those interests. The Superseding Order shall prohibit any work or any portions thereof that cannot be conditioned to protect such interests. The Department may issue a Superseding Order which affirms the Order issued by the conservation commission. The Department shall issue a Restoration Order of Conditions as the Superseding Order of Conditions in the event it determines that the project meets the eligibility criteria for a Restoration Order of Conditions. If the applicant submitted a Combined Application for a project that requires a 401 Water Quality Certification pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*, or a water-dependent use project that requires a Chapter 91 license, permit or other written approval pursuant to 310 CMR 9.00: *Waterways*, the Department may issue a Combined Permit that serves as the Superseding Order of Conditions, the 401 Water Quality Certification, and/or the Chapter 91 permit, license or other written approval, whichever is applicable, provided the Department determines that the project meets the requirements for obtaining such Order, Certification, permit, license or other written approval.

(j) Administrative Hearings.

1. Timely Filings. Papers required or permitted to be filed under 310 CMR 10.05 must be filed with the Department, at the address designated in the Reviewable Decision, within the timelines specified in 310 CMR 10.05. Papers shall be considered filed as set forth in 310 CMR 1.01(3): *Time*.

2. Appeal Notice.

a. Any applicant, landowner, aggrieved person if previously a participant in the permit proceedings, conservation commission, or any ten residents of the city or town where the land is located, if at least one resident was previously a participant in the permit proceeding may request review of a Reviewable Decision by filing an Appeal Notice no later than ten business days after the issuance of the Reviewable Decision. Previously participating in the permit proceeding means the submission of written information to the conservation commission prior to close of the public hearing, requesting an action by the Department that would result in a Reviewable Decision, or providing written information to the Department prior to issuance of a Reviewable Decision. The Appeal Notice must be filed with the Department with a copy sent to the appropriate regional Department office by certified mail or hand delivered within ten days after the date of issuance of the Reviewable Decision, and a copy thereof must at the same time be sent by certified mail or hand delivered to the conservation commission (if not filed by the conservation commission) and to the applicant (if not filed by the applicant). The Appeal Notice shall also be served by certified mail or hand delivered on any person that requested the action by the Department that

resulted in the Reviewable Decision. In the event that the entity that requested the action is a ten resident group, the Appeal Notice shall be served on the designated representative of the ten resident group, whose name and contact information shall be included in the Reviewable Decision. Any party listed in 310 CMR 10.05(7)(j)2.a. that fails to timely file an Appeal Notice pursuant to 310 CMR 10.05, shall be deemed to have waived its right to appeal the Reviewable Decision.

- b. The Appeal Notice shall include all of the following:
 - i. the Petitioner's complete name, address, phone number, fax number and email address and, if represented, counsel's name, address, phone number, fax number and email address, and if a ten resident group, the same information for the group's designated representative.

10.05: continued

- ii. the department's wetlands file number, if applicable, the name of applicant and address of the project.
 - iii. if filed by an aggrieved person, demonstration of participation in previous proceedings, in accordance with 310 CMR 10.05(7)(j)3.a. and sufficient written facts to demonstrate status as a person aggrieved;
 - iv. if filed by a ten resident group, demonstration of participation in previous proceedings, in accordance with 310 CMR 10.05(7)(j)(3)(a);
 - v. a clear and concise statement of the alleged errors contained in the Reviewable Decision and how each alleged error is inconsistent with 310 CMR 10.00 and does not contribute to the protection of the interests identified in the Wetlands Protection Act, M.G.L. c. 131, § 40, including reference to the statutory or regulatory provisions the Party alleges has been violated by the Reviewable Decision, and the relief sought, including specific changes desired in the Reviewable Decision. In the event that the Reviewable Decision is a Superseding Order of Conditions that is a Restoration Order of Conditions, the appeal is limited to a claim that the applicant did not comply with one or more of the applicable procedural requirements of 310 CMR 10.05 and/or the Department issued the Reviewable Decision in contravention of one or more of the applicable eligibility criteria. The notice of claim shall specifically identify the procedural requirements and eligibility criteria that the person requesting an adjudicatory hearing alleges have not been met;
 - vi. a copy of the Reviewable Decision appealed and a copy of the underlying Conservation Commission decision if the Reviewable Decision affirms the Conservation Commission decision; and
 - vii. if asserting that a matter is Major or Complex, a statement requesting that the Presiding Officer make a designation of Major or Complex, with specific reasons supporting the request.
- c. An Appeal Notice that does not contain all of the information required in 310 CMR 10.05(7)(j)1.b. may be dismissed.
- d. Within five business days of receipt of a written request by any potential party, the applicant shall make all documents submitted to the department in support of the Reviewable Decision, including but not limited to the notice of intent, plan of record, or other information, available to any person who states that they intend to appeal or intervene. In the case of a ten resident group, or a group intervening pursuant to M.G.L. c. 30A, the applicant need only make one copy available to the group's designated representative.
- e. Within five days of the receipt by the applicant and/or property owner of a written request by any person who has filed an appeal or intervened, and/or such person's consultants, attorneys, or other representatives, shall be allowed to visit the site with the property owner, upon reasonable conditions of the applicant and/or property owner. The purpose of a site visit shall be related solely to the Reviewable Decision under appeal and shall be specifically identified by the requesting party. The person requesting the site visit may request a later date for the site visit, which shall be reasonably accommodated by the applicant and/or property owner.
- f. The Department, the conservation commission, the petitioner, the applicant, and any interveners pursuant to 310 CMR 10.05(7)(j) shall be deemed to be parties to the proceeding and are entitled to service of all documents filed in the proceeding, and shall be included in a certificate of service to accompany all filings in accordance with 310 CMR 1.01(4)(f).

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

g. No work shall be undertaken until all administrative appeal periods from a Reviewable Decision have elapsed, or if such an appeal has been taken, until all procedures before the Department have been completed.

h. The Presiding Officer may rule on the timeliness, standing and compliance with the requirements of 310 CMR 10.05(7)(j)3.b., *sua sponte*, and provide a prompt ruling to the parties; or if in response to a motion, within ten days of the filing of such motion.

3. Petitioner's Direct Case.

a. A Party who has timely filed an Appeal Notice must file with the Department and serve a copy on all parties its Direct Case no later than 45 days after the Prescreening Conference.

10.05: continued

- b. The Petitioner has the burden of going forward pursuant to 310 CMR 10.03(2), and proving its direct case by a preponderance of the evidence.
 - c. In its Direct Case, the Petitioner must establish the legal and factual basis for its position on the issues identified by the Presiding Officer in the pre-screening report. Failure to do so will result in a waiver of Petitioner's Direct Case for that issue. In addition, the Direct Case at a minimum shall include:
 - i. a description of the subject matter of the Reviewable Decision;
 - ii. credible evidence from a competent source in support of each claim of factual error, including any relevant expert report(s), plan(s), or photograph(s).
4. Respondents' Direct Case. A party that seeks to support or defend the Reviewable Decision shall file and serve on all parties a Direct Case within 30 days of the filing of the Petitioner's Direct Case. A responding party shall be deemed to be a "Respondent".
- a. Response Content: The response shall at a minimum include:
 - i. A rebuttal to the Petitioner's Direct Case setting forth the legal and factual basis supporting the Reviewable Decision, including relevant statutory and regulatory citations and evidentiary support consisting of credible evidence from a competent source;
 - ii. any affirmative defenses and evidentiary support for them, including but not limited to the defense of lack of standing; and
 - iii. if asserting that a matter is Major or Complex, a statement requesting that the Presiding Office make designation of Major or Complex, with specific reasons supporting the request.
5. Intervention and Intervenor's Direct Case.
- a. Pursuant to M.G.L. c. 30A, § 10A, a group of ten citizens may intervene in a proceeding by filing and serving on all parties a Motion to Intervene within 21 days of the filing of the Appeal Notice. The Motion to Intervene shall provide the names, addresses, phone and fax numbers and email address of each of the members of the ten citizens group, and a certification under oath by each member that they consent to the Motion to Intervene, and authorize the group representative to act for the member. The Motion shall also designate a representative who shall represent the group and receive documents on its behalf. Upon filing a Motion in conformance with 310 CMR 10.05(7)(j)5.a., the ten citizen group shall be deemed a party, subject to disqualification if the Presiding Officer determines that the group does not consist of at least ten consenting citizens.
 - b. A person who claims that he or she is substantially and specifically affected by the proceeding, may intervene by filing and serving on all parties a Motion to Intervene within 21 days of the filing of the Appeal Notice. The Motion must include a statement demonstrating that the moving party is substantially and specifically affected, in accordance with 310 CMR 1.01(7)(d): *Intervenors*. Upon filing a Motion in conformance with 310 CMR 10.05(7)(j)5., the moving party shall be deemed a party, subject to disqualification if the Presiding Officer determines that the moving party is not substantially and specifically affected.
 - c. An intervenor that contests the Reviewable Decision shall file a Direct Case that conforms to 310 CMR 10.05(7)(j)3. no later than the due date of Petitioner's Direct Case. An intervenor that supports the Reviewable Decision shall file a Direct Case that conforms to 310 CMR 10.05(7)(j)4. no later than the due date of the Respondent's Direct Case.
 - d. The Presiding Officer may rule on the timeliness, standing and compliance with the requirements of 310 CMR 10.05(7)(j)5., *sua sponte*, and provide a prompt ruling

to the parties, or if in response to a motion within ten days of the filing of such motion.

6. Rebuttal. The Petitioner or an Intervenor aligned with the Petitioner may file and serve on all parties rebuttal evidence no later than seven days after the filing of the Direct Case by the Respondent or any Intervenor aligned with the Respondent. The rebuttal evidence shall be limited to countering evidence submitted in a Respondent's or Intervenor's Direct Case in support of the Reviewable Decision.

10.05: continued

7. Pre-screening and Hearing

a. Upon receipt of the Appeal Notice, the Presiding Officer will schedule a prescreening conference to be conducted pursuant to 310 CMR 1.01(5)(a)15., and will send notice to all parties. Such prescreening conference will presumptively occur not more than 30 days after the Appeal Notice is filed. As used in this regulation, “presumptively” means that the time-line is binding, absent extraordinary circumstances in which case the Presiding Officer has authority to extend the time-line.

b. Upon receipt of the Appeal Notice, the Department will schedule a hearing and will send notice to all parties. A hearing will be presumptively held within 120 days after the Appeal Notice is filed.

c. Intervenors who subsequently intervene shall promptly receive the notice, but intervention shall not change the schedule of the pre-screening conference or the hearing.

d. Parties may file motions regarding jurisdictional defects such as standing or timeliness by a date set by the presiding officer before the prescreening. Motions for directed verdict or summary decision may be filed by a date set by the presiding officer at the prescreening. Motions will not change the schedule of the prescreening conference or the hearing.

e. Upon notice to the parties, the Presiding Officer may provide an opportunity for a simplified hearing conducted pursuant to 310 CMR 1.01(8)(a): *Simplified Hearing*.

f. If the Presiding Officer determines an appeal to be Major or Complex, she will adjust the schedule either by extending it up to 30 days, or by taking the matter ahead of other cases.

g. All parties must attend and be prepared to discuss settlement and the narrowing of issues at the pre-screening conference. At the conclusion of the pre-screening conference or shortly thereafter, the Presiding Officer shall prepare and circulate a prescreening conference report, for any appeal not resolved in prescreening. The prescreening conference report shall contain a list of issues that are in dispute and which are legally relevant, and that are to be addressed in the parties’ direct and rebuttal cases.

h. The Presiding Officer shall conduct a hearing. At the hearing, the parties’ Direct Cases shall consist of, and be limited to, the evidence contained in their respective Direct Cases and rebuttal evidence, subject to evidentiary rulings of the Presiding Officer. The primary function of the hearing shall be cross-examination of witnesses and, at the Presiding Officer’s discretion an oral closing argument. The hearing shall be limited to one day, unless the Presiding Officer finds that there is good cause for a longer hearing.

8. Final Action. The Presiding Officer shall issue a written recommended decision, not more than 30 days after the close of hearing, that shall include findings on the contested issues. The Commissioner shall issue a final written decision consistent with 310 CMR 1.01(14)(b), presumptively within six months of the Reviewable Decision, or in the case of an appeal deemed Major or Complex in which the schedule was extended, within seven months of the Reviewable Decision. Should a party request a tentative decision, the request shall be governed by 310 CMR 1.01(14)(a).

9. Relationship to Other Rules of Adjudicatory Proceedings.

a. To the extent there is conflict between the regulations governing wetland appeals set forth in 310 CMR 10.04 and 10.05(7)(j), on the one hand, and the Rules of Adjudicatory Proceedings set forth in 310 CMR 1.01: *Adjudicatory Proceeding*

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Rules for the Department of Environmental Protection, on the other hand, the former shall prevail.

b. The following regulations shall apply to wetland appeals: 310 CMR 1.01(1) through (5), (6)(c), (f) through (k); (8); (10); (12)(a), (c), (d); (13)(a) through (c), (e) through (h), (j), (l) through (n); (14)(b) through (g) and 1.03: *Miscellaneous Provisions Applicable to All Adjudicatory Proceedings*.

10. Coordination of Appeals. The Department may coordinate adjudicatory hearings under 310 CMR 10.05(7)(j), 310 CMR 9.17: *Appeals*, and 314 CMR 9.10: *Appeals* or other administrative appeals.

10.05: continued

- a. If a 401 Water Quality Certification been issued pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* and/or a permit, license or other written approval has been issued pursuant to 310 CMR 9.00: *Waterways*, the Department may exclude issues solely within the jurisdiction of 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* and/or 310 CMR 9.00: *Waterways* at an adjudicatory hearing held under 310 CMR 10.05(7)(j).
- b. If an adjudicatory hearing has been requested in accordance with 310 CMR 9.17: *Appeals* and/or 314 CMR 9.10: *Simplified Procedures for Small Structures Accessory to Residences*, or another administrative appeal, the Department may consolidate the proceedings.
- c. In the event that the Department has issued a Combined Permit that serves as a Superseding Order of Conditions and/or a 401 Water Quality Certification issued pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* and/or a permit, license or other written approval issued pursuant to 310 CMR 9.00: *Waterways*, the appeal may include issues solely within the jurisdiction of 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* and/or 310 CMR 9.00: *Waterways* only as follows: The appeal may include issues solely within the jurisdiction of 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*, only if the appeal has been requested in accordance with the requirements of 314 CMR 9.10: *Simplified Procedures for Small Structures Accessory to Residences*. The appeal may include issues solely within the jurisdiction of 310 CMR 9.00: *Waterways*, only if the appeal has been requested in accordance with the requirements of 310 CMR 9.17: *Appeals*.
- (k) No work shall be undertaken until all administrative appeal periods from an Order or Notification of Non-significance have elapsed or, if such an appeal has been taken, until all proceedings before the Department have been completed.
- (8) Extensions of Orders of Conditions and Orders of Resource Area Delineations.
- (a) The issuing authority may extend an Order for one or more periods of up to three years each, except as otherwise provided in 310 CMR 10.05(11)(f) (extensions for Test Projects). Any extension granted by the issuing authority shall be made on Form 7. The request for an extension shall be made to the issuing authority at least 30 days prior to expiration of the Order.
- (b) The issuing authority may deny the request for an extension and require the filing of a new Notice of Intent for the remaining work or a new Abbreviated Notice of Resource Area Delineation in the following circumstances:
1. where no work has begun on the project, except where such failure is due to an unavoidable delay, such as appeals, in the obtaining of other necessary permits;
 2. where new information, not available at the time the Order was issued, has become available and indicates that the Order is not adequate to protect the interests identified in M.G.L. c. 131, § 40; or
 3. where incomplete work is causing damage to the interests identified in M.G.L. c. 131, § 40;

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

4. where work has been done in violation of the Order or 310 CMR 10.00; or
 5. where a resource area delineation or certification under 310 CMR 10.02 (2)(b)2. in an Order of Resource Delineation is no longer accurate.
- (c) If issued by the conservation commission, the Extension Permit shall be signed by a majority of the commission. A copy of the Extension Permit shall be sent to the conservation commission or the Department, whichever is appropriate, by the issuing authority.
- (d) The Extension Permit shall be recorded in the Land Court or the Registry of Deeds, whichever is appropriate. Certification of recording shall be sent to the issuing authority on the form at the end of Form 7. If work is undertaken without the applicant so recording the Extension Permit, the issuing authority may issue an Enforcement Order (Form 9) or may itself record the Extension Permit.

10.05: continued

(9) Certificates of Compliance.

(a) Upon completion of the work described in a Final Order of Conditions, but not later than the three year term of an Order of Resource Area Delineation or any extension thereunder, the applicant shall request in writing the issuance of a Certificate of Compliance stating that the work has been satisfactorily completed. Upon written request by the applicant, a Certificate of Compliance shall be issued by the issuing authority within 21 days of receipt thereof, and shall certify on Form 8 that the activity or portions thereof described in the Notice of Intent and plans has been completed in compliance with the Order. If issued by the Conservation Commission, the Certificate of Compliance shall be signed by a majority of the commission. A copy of the Certificate of Compliance shall be sent to the conservation commission or the Department, whichever is appropriate, by the issuing authority.

(b) Prior to the issuance of a Certificate of Compliance, a site inspection shall be made by the issuing authority, in the presence of the applicant or the applicant's agent. If the Department is the issuing authority, it shall notify the conservation commission of the request and the date of the site inspection.

(c) If the issuing authority determines, after review and inspection, that the work has not been done in compliance with the Order, it may refuse to issue a Certificate of Compliance. Such refusal shall be issued within 21 days of receipt of a request for a Certificate of Compliance, shall be in writing and shall specify the reasons for denial.

(d) If a project has been completed in accordance with plans stamped by a registered professional engineer, architect, landscape architect or land surveyor, a written statement by such a professional person certifying substantial compliance with the plans and setting forth what deviation, if any, exists from the plans approved in the Order shall accompany the request for a Certificate of Compliance.

(e) If the final order contains conditions which continue past the completion of the work, such as maintenance or monitoring, the Certificate of Compliance shall specify which, if any, of such conditions shall continue. The Certificate shall also specify to what portions of the work it applies, if it does not apply to all the work regulated by the Order.

(f) The Certificate of Compliance shall be recorded in the Land Court or Registry of Deeds, whichever is appropriate. Certification of recording shall be sent to the issuing authority on the form at the end of Form 8. Upon failure of the applicant to so record, the issuing authority may do so.

(10) Variance.

(a) The Commissioner may waive the application of any regulation(s) in 310 CMR 10.21 through 10.60 when he or she finds that:

1. there are no reasonable conditions or alternatives that would allow the project to proceed in compliance with 310 CMR 10.21 through 10.60;
2. that mitigating measures are proposed that will allow the project to be conditioned so as to contribute to the protection of the interests identified in M.G.L. c. 131, § 40; and
3. that the variance is necessary to accommodate an overriding community, regional, state or national public interest; or that it is necessary to avoid an Order that so restricts the use of property as to constitute an unconstitutional taking without compensation.

(b) Procedure. A request for a variance shall be made in writing and shall include, at a minimum, the following information:

1. a description of alternatives explored that would allow the project to proceed in compliance with 310 CMR 10.21 through 10.60 and an explanation of why each is unreasonable;
2. a description of the mitigating measures to be used to contribute to the protection of

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

the interests identified in M.G.L. c. 131, § 40; and

3. evidence that an overriding public interest is associated with the project which justifies waiver of 310 CMR 10.21 through 10.60, or evidence that the Superseding Order so restricts the use of the land that it constitutes an unconstitutional taking without compensation.

The request for a variance shall be sent to the Department by certified mail or hand delivered and a copy thereof shall at the same time be sent by certified mail or hand delivered to the conservation commission and any other parties.

10.05: continued

The Department will place a notice in the *Environmental Monitor* published by the Massachusetts Environmental Policy Act Office of the Executive Office of Energy and Environmental Affairs to solicit public comments on the request. The Department shall conduct a public hearing on a request for a variance. After reviewing the information submitted with the request for a variance and any other information submitted by any party within the public comment period, the Commissioner shall issue a decision as to whether to grant the variance. Within ten days of the date of issuance of the Commissioner's decision on the variance, any person who submitted comments during the public comment period may, according to the procedures specified in 310 CMR 10.05(7)(j), request an adjudicatory hearing on the decision. On a request for a variance based on overriding public interest, the Commissioner may dismiss the request to hold an adjudicatory hearing if the request repeats matters adequately considered in the variance decision, renews claims or arguments previously raised, or attempts to raise new claims or arguments not raised during the public comment period. On a request for a variance to avoid restrictions that would constitute an unconstitutional taking, the Commissioner shall hold an adjudicatory hearing. If an adjudicatory hearing is held, the applicant has the burden of demonstrating that the project meets the criteria necessary for a variance. Other parties to the adjudicatory hearing may introduce evidence either in favor of or opposing the request for a variance.

For projects in which all of the proposed work will be undertaken on land within the boundaries of one city or town, the request for a variance shall not be filed until the applicant first files a Notice of Intent with the Conservation Commission. The Commission shall review the project in accordance with the procedures set forth in 310 CMR 10.01 through 10.10 and issue an Order of Conditions consistent with 310 CMR 10.21 through 10.60. Within ten days of the issuance of the Order of Conditions, the applicant may request the Department to issue a Superseding Order. The Department staff shall review the project in accordance with the procedures set forth in 310 CMR 10.01 through 10.10 and shall issue a Superseding Order consistent with the provisions of 310 CMR 10.21 through 10.60. Within ten days of the issuance of the Superseding Order, the applicant may request an adjudicatory hearing on that order and/or a variance under 310 CMR 10.05(10) according to the procedure previously described.

For projects in which the proposed work will be undertaken on land within the boundaries of more than one city or town, the applicant may file a request for a variance directly with the Commissioner, with a copy to each affected conservation commission. If, after public notice, the Commissioner finds that a project meets the variance criteria, he shall specify which regulation(s) has been waived and what general requirements or conditions must be met to satisfy the variance criteria listed in 310 CMR 10.05(10)(a). The applicant shall then file a Notice of Intent with the appropriate conservation commissions in accordance with the procedures contained in 310 CMR 10.01 through 10.10. The conservation commissions shall issue Orders of Conditions consistent with all provisions of 310 CMR 10.21 through 10.60 except those waived by the Commissioner and containing any additional conditions or requirements imposed by the Commissioner in the variance. The usual procedures contained in 310 CMR 10.01 through 10.10 for requesting Superseding Orders and adjudicatory hearings remain applicable.

Commentary

310 CMR 10.05(10), which provides that the Commissioner may waive the application of one or more of the regulations on the basis of overriding public benefit is intended to be employed only in rare and unusual cases. The provision authorizing a variance request directly

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

to the Commissioner for projects on land within more than one city or town is intended to apply to projects that involve functionally related work in several contiguous towns (*e.g.*, transportation and energy transmission facilities) and to provide for a single uniform determination concerning alternative locations and the other variance criteria.

10.05: continued

(11) Permitting of Test Projects.

(a) General. The purpose of 310 CMR 10.05(11) is to establish procedures for permitting Test Projects to promote the development of potential new renewable energy technologies and other Innovative Technologies. Innovative Technologies must be proven through field testing before any large scale commercial deployment can occur in order to develop the data and information needed to support siting and full-scale deployment in a cost-effective manner. 310 CMR 10.05(11) will facilitate and encourage the development, testing and demonstration of Innovative Technologies, including water dependent renewable energy technologies, through review procedures for Test Projects. Given their limited scope and duration, these projects are expected to have minimal adverse environmental impacts and, therefore, are permissible under 310 CMR 10.05(11), provided that the applicant provides for adequate post-installation monitoring to identify any unanticipated adverse environmental impacts that occur in the course of the project. The issuing authority may require the alteration or removal of the project if the monitoring study or other information indicates that the project has unexpected or more than minimal adverse environmental impacts. Pre-application consultation with the issuing authority is recommended. Proposed Test Projects that do not meet the eligibility criteria in 310 CMR 10.05(11)(b) may be permitted provided they meet all applicable requirements of 310 CMR 10.24 through 10.35 for projects in coastal resource areas and 310 CMR 10.54 through 10.58 and 10.60 for projects in inland resource areas.

(b) Eligibility Criteria. Notwithstanding the provisions of 310 CMR 10.24 through 10.35, 10.53 through 10.58, and 10.60, the issuing authority may issue an Order of Conditions, and impose such conditions as will contribute to the interests identified in M.G.L. c. 131, § 40, to permit Test Projects (although no such project may be permitted which will have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.37 and 10.59) provided:

1. the applicant documents the readiness of the device or technology for in situ testing with the results of laboratory testing, modeling, technical evaluations, or similar forms of supporting material;
2. the structures associated with the project will not be located in specified habitat sites of Rare Species located within a resource area or Buffer Zone;
3. the structures associated with the project are not located within a salt marsh or seagrass bed; and
4. any structures associated with the project can be easily and quickly removed with minimal disruption to resource areas.

(c) Application Requirements. For the purpose of authorizing eligible Test Projects pursuant to 310 CMR 10.05(11), the following provisions shall apply:

1. In lieu of plans prepared by a Registered Professional Engineer or Registered Land Surveyor a Notice of Intent for a Test Project may include documentation that appropriate laboratory testing and/or modeling has occurred and show the proposed location of the project on a plan designating all project components by coordinates referenced to the Massachusetts State Plane Coordinate System.
2. In addition to the documentation provided in 310 CMR 10.11(c)1., a Notice of Intent for a Test Project shall include the following:
 - a. a description of the device or technology to be tested and the purpose of the project;
 - b. a description of the installation process and schedule for installation, testing, and removal of the devices, technologies and associated equipment;
 - c. a demonstration that the project complies with the eligibility requirements of

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 10.05(11)(b)1. through 4.;

- d. a plan for the restoration of all disturbed resource areas to pre-existing conditions and a schedule for completing the restoration before the Order of Conditions expires;
- e. an environmental monitoring plan sufficiently broad to ensure the project meets all applicable regulatory standards; and
- f. a plan for prompt removal of the components of the project if the Department or conservation commission determines that the project threatens public health, safety or the environment.

10.05: continued

(d) Order of Conditions. At a minimum, the Order of Conditions authorizing a Test Project pursuant to 310 CMR 10.05(11) shall require the applicant to implement the monitoring plan and the restoration plan submitted with the Notice of Intent as approved by the issuing authority. The Order of Conditions shall also provide that if the Department or the conservation commission determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent as approved by the issuing authority, or modify the project as directed by the conservation commission or the Department.

(e) Term. Notwithstanding the provisions of 310 CMR 10.05(6)(b), an Order of Conditions for a Test Project issued under 310 CMR 10.05(11) shall be valid for no more than one year.

(f) Extension Permits. An Order of Conditions for a Test Project issued in accordance with 310 CMR 10.05(11) may be extended for one additional year upon written application by the applicant in accordance with 310 CMR 10.05(8)(a). The issuing authority may deny a request for an extension, if it determines that: the project objectives have not been advanced during the initial term; the continuation of the project would not adequately protect public health, safety, or the environment; or the extension should be denied based on the one or more of the circumstances identified in 310 CMR 10.05(8)(c). An extension permit issued for a Test Project in accordance with 310 CMR 10.05(11) is subject to the provisions of 310 CMR 10.05(8)(d) and (e).

(g) Appeals. The provisions governing Department action and adjudicatory hearings set forth in 310 CMR 10.05(7) shall apply to decisions authorizing Test Projects pursuant to 310 CMR 10.05(11). In the event that the Department issues a Superseding Order of Conditions denying a Test Project on the ground that it does not meet the eligibility criteria set forth in 310 CMR 10.05(11)(b), the applicant may file a Notice of Intent seeking authorization for the Test Project under the applicable provisions of 310 CMR 10.24 through 10.37, 10.53 through 10.58 and 10.60 in lieu of requesting an adjudicatory hearing.

10.06: Emergencies

(1) Unless authorized by a Severe Weather Emergency Declaration issued by the Commissioner pursuant to 310 CMR 10.06(8), any person requesting permission to do an emergency project shall specify why the project is necessary for the protection of the health or safety of the citizens of the Commonwealth and what agency of the Commonwealth or subdivision thereof is to perform the project or has ordered the project to be performed. If the project is certified to be an emergency by the conservation commission or the Commissioner, the certification shall include a description of the work which is to be allowed and shall not include work beyond that necessary to abate the emergency. A site inspection shall be made prior to certification.

(2) An emergency certification shall be issued only for the protection of public health or safety.

(3) The time limitation for performance of emergency work shall not exceed 30 days, or 60 days for Immediate Response Actions approved by the Bureau of Waste Site Cleanup (BWSC) of the Department of Environmental Protection in accordance with the provisions of 310 CMR 40.0410: *Immediate Response Actions*, unless written approval of the Commissioner is obtained.

(4) A copy of an emergency certification shall be sent to the Department when it is issued by a conservation commission, and to the conservation commission when it is issued by the Department.

(5) The Department may, on its own motion or at the request of any person, review: an emergency certification issued by a conservation commission and any work permitted thereunder; a denial by a conservation commission of a request for emergency certification; or

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

the failure by a conservation commission to act within 24 hours of a request for emergency certification. Such review shall not operate to stay the work permitted by the emergency certification unless the Department specifically so orders. The Department's review shall be conducted within seven days of: issuance by a conservation commission of the emergency certification; denial by a conservation commission of the emergency certification; or failure by a conservation commission to act within 24 hours of a request for emergency certification. If certification was improperly granted, or the work allowed thereunder is excessive or not required to protect the health and safety of citizens of the Commonwealth, the Department may revoke the emergency certification, condition the work permitted thereunder, or take such other action as it deems appropriate.

10.06: continued

(6) Agricultural Emergencies

(a) Notwithstanding the provisions of 310 CMR 10.06(1) through (4), any person may undertake work for the emergency agricultural activities described in 310 CMR 10.06(6)(g) when necessary to:

1. eliminate an imminent threat to land in agricultural use;
2. restore land in agricultural use that has been damaged due to a storm or other sudden, unforeseen event; or
3. provide an emergency agricultural water source when the existing agricultural water source suddenly and unforeseeably has been rendered unusable or unavailable.
4. eradicate an infestation of Asian longhorned beetles (*Anoplophora glabripennis*) in response to an order or regulation issued by the United States Department of Agriculture (USDA) pursuant to 7 USC §§ 7701 *et seq.* (the Plant Protection Act), or the Department of Conservation and Recreation (DCR) pursuant to M.G.L. c. 132, § 11.

(b) Written notice of any work undertaken as an emergency activity under 310 CMR 10.06(6) must be received by the conservation commission and mailed to the Department within three days after the work has commenced or within three days after the end of the emergency event, whichever is sooner. Such notice shall state the name of the person performing the work, the name of the property owner (if different), the property and the location on the property where the work is to be performed, the exact nature of the emergency and of the work which is to be performed, and when the work was begun and when it is expected to be completed. The commission may, at its discretion, conduct a site visit to view the work being performed under such notice and to confirm that the information in the notice is correct.

(c) When an emergency is caused by a storm, any work undertaken as an emergency activity under 310 CMR 10.06(6) must commence within 30 days following the storm event which caused the agricultural emergency.

(d) Any work undertaken as an emergency activity under 310 CMR 10.06(6) shall be completed within 30 days from the commencement of such work unless written approval for a later completion date is given by the Commissioner.

(e) No work under 310 CMR 10.06(6) shall be allowed within estimated habitat which is indicated on the most recent Estimated Habitat Maps of State-listed Rare Wetlands Wildlife published by the Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife.

(f) Work under 310 CMR 10.06(6) shall not fill or dredge a Salt Marsh.

(g) Only the following emergency activities are allowed under 310 CMR 10.06(6)(a):

1. The installation of stream bank stabilization measures, provided that:
 - a. such activity is carried out in accordance with Soil Conservation Service best management practices;
 - b. no more than 100 linear feet of bank are altered per storm event, and no more than 200 linear feet of new rip rap or gabions are placed on the bank of a stream under 310 CMR 10.06(6) cumulatively; and
 - c. after the 200 foot threshold has been reached the placement of additional rip rap or gabions following future storm events shall require the filing of a Notice of Intent.
2. The removal of storm debris, including trees, brush, branches, and cobbles, that were deposited in a stream channel during the storm event, provided that:
 - a. after the material is removed it is not placed on a bank or in a Bordering Vegetated Wetland;
 - b. Soil Conservation Service best management practices are followed; and
 - c. removal of material from a stream is limited to 100 linear feet per storm event.

3. The development of an emergency agricultural water source where the existing agricultural water source suddenly has been rendered unusable because of contamination, sudden diversion, or other unforeseen circumstances. Where an emergency agricultural water supply is required:

- a. the work shall be conducted so that impacts to Bordering Vegetated Wetland are minimized and all impacts, including excavation, access, and any other alterations to Bordering Vegetated Wetland, shall not exceed 2,000 square feet;
- b. the size of the water supply shall be limited to that necessary to provide the amount of water required to abate the emergency, but not to exceed 2,000 square feet;

10.06: continued

- c. a Notice of Intent shall be filed if the agricultural water supply is to be used for more than 60 days, in which case the agricultural water supply shall comply with existing performance standards under 310 CMR 10.53(3)(a), (b), and (g); and
 - d. all work shall comply with the Water Management Act, M.G.L. c. 21G.
4. The removal of trees, including stumps, and the application of pesticides to trees and soil within an area defined by USDA or DCR in an order or regulation to eradicate an infestation of Asian longhorned beetles, notwithstanding the provisions of 310 CMR 10.06(6)(d) or (e), provided that the work is conducted as follows:
 - a. The provisions of 310 CMR 10.06(6)(g)4. shall apply to USDA or DCR, if those agencies are performing eradication work, or to other persons if authorized or ordered by DCR to undertake eradication activity, in areas subject to regulation under M.G.L. c. 131, § 40. For the purposes of 310 CMR 10.06(6)(g)4., these agencies or persons shall be defined as authorized persons. At least 14 days prior to beginning work in any municipality, an authorized person shall submit to the conservation commission and MassDEP's regional office a GIS orthographic photo or map showing all resource areas in which work is to be conducted within the municipal boundaries, including wetland or stream crossings to gain access to work areas or Estimated Habitats for State-listed Rare Wetlands Wildlife, along with a proposed schedule or phasing plan for the eradication activities. If work is proposed within an Estimated Habitat, an authorized person shall provide the above described photo or map to the Natural Heritage and Endangered Species Program (NHESP) at the same time it is submitted to the conservation commission and MassDEP.
 - b. At least three days before beginning work at a specific site, an authorized person shall submit to the conservation commission and MassDEP's regional office a plan on a USGS or other map of at least 1=5:000 scale showing the work in the designated area as well as skid roads, stream and wetland crossings, landings and the general location of erosion control measures. An authorized person shall provide the name and contact information of an on-site supervisor responsible for compliance with the wetland related requirements of the harvest, including maintenance of the erosion control measures. MassDEP, a designated representative of the conservation commission and the authorized person shall conduct a site inspection at least 48 hours before beginning the work, to explore access options, proposed activity in resource areas, erosion controls, and final stabilization with the intent to minimize wetland impacts, unless MassDEP and the designated representative of the conservation commission determine, after a review of the plan, that a site visit is not necessary. If work is proposed within an Estimated Habitat, USDA, DCR or any person authorized or ordered by DCR to undertake eradication activity shall provide the above described map to the NHESP and the contact information for an on-site supervisor at the same time the information is provided to the conservation commission and MassDEP and shall also provide the NHESP with reasonable advance notice of any site inspection of the proposed work area.
 - c. Storage of materials and equipment shall be on paved surface or otherwise stable surface, outside resource areas, buffer zones, vernal pools, and the Zone I and Zone A of public water supply sources. Fuels, lubricants or hazardous materials shall not be stored, transferred between containers or mixed, and machinery shall not be refueled, in or within 100 feet of a resource area, vernal pool or the Zone I or Zone A of a public water supply.
 - d. Landings, access roads, and skid roads shall be located carefully to avoid steep slopes, resource areas, vernal pools, and stream crossings whenever possible. Access roads shall be stable and minimize site disturbance including impacts to vegetation,

soil, topography, hydrology and soils.

e. Stream crossings shall be avoided whenever possible. If temporary crossings are unavoidable, the crossing structures shall be removed at the end of the operation, and the site, banks, and approaches shall be stabilized. All crossings shall be made at right angles to the channel, and the approaches to a stream crossing shall be stabilized continuously both during the logging operation and after completion. At least one water bar shall be installed directly uphill from a crossing to prevent water moving down a skid road from reaching a stream. The water bar shall be reinforced as needed during the course of the work. The approaches may be corduroyed with poles to prevent rutting and the churning of soil. Erosion controls shall be placed in the skid road at the approach to a stream crossing at the end of the day.

10.06: continued

- f. When operating in a resource area, harvesters shall concentrate skidding in a few well-defined corridors, use cable and winch as much as possible, and fell trees away from resource areas to facilitate winching them out. Harvesters shall use best efforts to avoid damaging non-targeted trees during eradication efforts. Harvesters shall use brush or corduroy to minimize ground pressure and rutting, shall reduce hitch volumes to minimize rutting, and shall use Best Management Practices (BMPs) to minimize sediment transport. Machinery shall not operate in a resource area unless the ground is dry, frozen, or otherwise stable enough to support it. In some limited situations where work is proposed in less than stable conditions and where, subject to approval by the conservation commission or the Department, tree removal requires heavy equipment operation in wetlands, the equipment shall either have low ground pressure (<3 psi), or shall not be located directly on wetland soils and vegetation. Equipment shall be placed on swamp mats that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation.
- g. Vehicles and heavy equipment shall not be operated on the banks of waterbodies. For all work along a stream bank, minimize disturbance and discharge of soil to the waterway. Stabilization measures shall be implemented including placement of rock, mulch, seed, erosion control fabric, re-plantings, and/or other measures as appropriate based upon the area of disturbance. Rip-rap shall not be used unless MassDEP and the conservation commission determine that other means of stabilization are not practicable. If stump removal results in bank destabilization, then a means to stabilize the bank shall be performed.
- h. Effective erosion controls (BMPs) shall be utilized to prevent discharge of sediments to resource areas, including silt fencing, temporary berms, stone dikes, and rip-rap. Brush or slash shall be placed on skid roads and seed where vulnerable to erosion. Landings shall be smoothed and graded. Exposed soils shall be seeded or mulched to prevent erosion. Tire tracks and ruts shall be smoothed along the access path.
- i. Upon completion of harvesting, temporary skidder bridges shall be removed, and the authorized person shall ensure that fords and other stream crossings are left in a stable and free-flowing condition. All temporary structures (*e.g.*, culverts, bridges) shall be removed from resource areas. All unnatural debris generated by the eradication activity such as cans, papers, discarded tires and metal parts shall be removed. An authorized person shall not be responsible for the removal of any solid waste or trash that was on the site prior to the eradication effort. Incidental, remaining wood debris shall be left in place to promote rapid decay. Restore original grade of disturbed areas.
- j. Bare soil in buffer zones shall be reseeded with a fast-growing non-invasive grass and disturbed wetland soils shall be reseeded with a wetland native seed mix and wetland species saplings to prevent establishment of invasive species. Reseeding shall take place within ten days of grading in spring, summer and fall months, or if grading activity takes place in winter, at the beginning of the following spring. Erosion control barriers shall be removed as soon as possible once the site is stabilized, but stabilization and removal shall occur no later than after the first growing season following completion of the work.
- k. MassDEP and a designated representative of the conservation commission may inspect sites to ensure the effectiveness of erosion control and revegetation and reseeded efforts. Within one year of eradication efforts, individual sites shall be inspected by the authorized person, MassDEP and the conservation commission to

determine the adequacy of erosion control and revegetation and reseeded efforts if a conservation commission and/or MassDEP have reason to believe that erosion control, reseeded and revegetation efforts at that site have been unsuccessful.

1. Pesticides shall be handled and applied in accordance with the provisions of 333 CMR 12.00: *Protection of Groundwater Sources of Public Drinking Water Supplies from Non-point Source Pesticide Contamination* and 13.00: *Standards for Application*.

10.06: continued

(7) Notwithstanding any other requirement of 310 CMR 10.06, Immediate Response Actions receiving oral approval from the Bureau of Waste Site Cleanup (BWSC) of the Department of Environmental Protection pursuant to 310 CMR 40.0420(2), or initiated up to 24 hours prior to notification to and oral approval by BWSC pursuant to 310 CMR 40.0420(7) and (8), may commence before requesting the conservation commission to issue an emergency certification under 310 CMR 10.06, so long as such request is made within 24 hours after BWSC has orally approved commencement of the Immediate Response Action. Once a request for emergency certification has been made pursuant to 310 CMR 10.06(7), work that commenced before such filing may continue pending a decision on the request by the conservation commission. Such work may also continue pending a decision on a request for Departmental review unless the request has not been filed with the Department within one business day of: issuance by the conservation commission of the emergency certification; denial by a conservation commission of the emergency certification; or failure by a conservation commission to act within 24 hours of a request for emergency certification.

(8) In the event of a destructive weather event requiring widespread recovery efforts, debris cleanup or roadway or utility repair, the Commissioner may issue a Severe Weather Emergency Declaration that allows emergency-related work necessary for the protection of the health or safety of the residents of the Commonwealth to occur without filing a Notice of Intent or a request for an emergency certification or authorization pursuant to 310 CMR 10.06(1) through (7). The Severe Weather Emergency Declaration shall describe:

- (a) the types of work allowed without filing a notice of intent;
- (b) any general mitigating measures to condition the work that may be required in performing such work;
- (c) any notification or reporting requirements;
- (d) the geographic area of the Declaration's effect; and
- (e) the period of time the Declaration shall be in effect which shall not be longer than 90 days, unless extended by the Commissioner.

The Declaration may include other conditions or limitations as deemed appropriate by the Commissioner. The Commissioner may revise or revoke the Severe Weather Emergency Declaration as he or she deems appropriate to further recovery efforts and protect public health and safety. If the Commissioner deems it necessary for the completion of recovery efforts, he or she may extend the duration of a Severe Weather Emergency Declaration for a period not to exceed 90 days. An extension may include a revision of the elements listed in 310 CMR 10.06(8)(a) through (d) as deemed appropriate to further recovery efforts. A Severe Weather Emergency Declaration and any extension, revision, or revocation thereof, shall be sent electronically to all conservation commissions in the geographic area of the Declaration's effect, shall be posted on the Department's website at <http://www.mass.gov/eea/agencies/massdep> and shall be made widely available to the general public through appropriate channels for emergency communications. A Declaration shall not affect the Department's ability to enforce any general or special law or regulation that is not altered by a Severe Weather Emergency Declaration, or enforce the terms of such a Declaration.

10.07: Compliance with M.G.L. c. 30, §§ 61 through 62H

(1) The Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61 through 62H, may require an applicant to file an Environmental Notification Form (ENF) and possibly an Environmental Impact Report (EIR) for the proposed work, prior to the Department's issuance of a Superseding Order. See 301 CMR 11.00: *MEPA Regulations*.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

(2) If said filing is required, the Department shall so notify the applicant upon receipt of the request for the Department to act. If within 70 days of the request for the Department to act the applicant has not filed an ENF, the Department may issue a Superseding Order prohibiting the project; provided, however, that such an order shall not issue if the Executive Office of Energy and Environmental Affairs determines that the filing of an ENF is not required.

(3) In determining total surface area for purposes of M.G.L. c. 30, §§ 6 through 62H wetlands threshold set forth in 301 CMR 11.25(2) and 11.26(7)(a), only those portions of the Areas Subject to Protection under M.G.L. c. 131, § 40 specified in 310 CMR 10.02(1), not including the Buffer Zone, which will be removed, filled, dredged or altered shall be considered.

10.08: Enforcement Orders

(1) When the conservation commission, the Department or the Office of Law Enforcement of the Executive Office of Energy and Environmental Affairs determines that an activity is in violation of M.G.L. c. 131, § 40, 310 CMR 10.00 or a Final Order, the conservation commission, Department or the Office of Law Enforcement may issue an Enforcement Order. Violations include:

- (a) failure to comply with a Final Order, Final Determination, Emergency Declaration, or Emergency Certification, such as failure to observe a particular condition or time period specified in the Order, Declaration, or Certification;
- (b) failure to complete work described in a Final Order or Final Determination, Emergency Declaration, or Emergency Certification when such failure causes damage to the interests identified in M.G.L. c. 131, § 40;
- (c) failure to obtain a valid Final Order or Extension Permit prior to conducting an Activity Subject to Regulation under M.G.L. c. 131, § 40 as defined in 310 CMR 10.02(2);
- (d) making any false, inaccurate, or misleading statements in any certification filed under 310 CMR 10.00, including any certification that the requirements of 310 CMR 10.02(2)(b)2. will be met.
- (e) failure to comply with any certification on project plans or eligibility under 310 CMR 10.02(2)(b)2.
- (f) leaving in place unauthorized fill or otherwise fail to restore illegally altered land to its original condition, or the continuation of any other activity in violation of M.G.L. c. 131, § 40.

The conservation commission, its members and agents, and Department employees may enter upon privately owned land for the purpose of performing their duties under M.G.L. c. 131, § 40, subject to constitutional limitations.

(2) A Final Order, Emergency Declaration, or Emergency Certification may be enforced by either the conservation commission or the Department regardless of which is the issuing authority. The members, officers, employees and agents of the conservation commission and the Department may enter upon privately owned land for the purpose of performing their duties under M.G.L. c. 131, § 40, and 310 CMR 10.00.

(3) An Enforcement Order issued by a conservation commission shall be signed by a majority of the commission. In a situation requiring immediate action, an Enforcement Order may be signed by a single member or agent of the commission, if said Order is ratified by a majority of the members at the next scheduled meeting of the commission.

10.09: Severability

If any provision of any part of 310 CMR 10.00 or the application thereof, is held to be invalid, such invalidity shall not affect any other provision of 310 CMR 10.00.

10.10: Effective Date

(1) 310 CMR 10.01 through 10.10 and 10.51 through 10.60 shall take effect on April 1, 1983 and shall apply to all Notices of Intent filed on or after that date and any subsequent procedures related to such filings made on or after that date. 310 CMR 10.01 through 10.10 and 10.51 through 10.60 shall not apply to any Notice of Intent filed prior to the effective date of 310 CMR 10.00, or to any extensions of any Order of Conditions the Notice of Intent for which was filed prior to said effective date, except as otherwise provided in 310 CMR 10.05(4)(g) and (h).

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

(2) The effective date of 310 CMR 10.21 through 10.37 is August 10, 1978. 310 CMR 10.21 through 10.37 shall not apply to any Notice of Intent filed prior to August 10, 1978, or to any extensions to an Order of Conditions when the Notice of Intent upon which such Order was based was filed prior to August 10, 1978.

(3) All proceedings and actions commenced under M.G.L. c. 131, § 40 prior to the effective date of 310 CMR 10.00 shall remain in full force and effect under the prior applicable regulations, except as otherwise provided in 310 CMR 10.05(4)(g) and (6)(h).

10.10: continued

(4) The amendments to 310 CMR 10.00 concerning application of herbicides to rights of way contained in 310 CMR 10.03(6), 10.04: Alter, 10.05(3)(a)2., (b)1. and (d)1. shall be effective on July 10, 1987.

(5) The amendments to 310 CMR 10.00 published in the Massachusetts Register on October 16, 1987, concerning primarily the protection of wildlife habitat, shall take effect on November 1, 1987, and shall apply to all Notices of Intent filed on or after that date and any subsequent procedures related to such filing made on or after that date. The amendments to 310 CMR 10.00, concerning primarily the protection of wildlife habitat, shall not apply to any Notice of Intent filed prior to November 1, 1987, or to any extensions of any Order of Conditions the Notice of Intent for which was filed prior to November 1, 1987, except as otherwise provided in 310 CMR 10.05(4)(g) and (6)(h). All proceedings and actions commenced under M.G.L. c. 131, § 40 prior to November 1, 1987, and shall remain in full force and effect under the prior applicable regulations, except as otherwise provided in 310 CMR 10.05(4)(g) and (6)(h).

(6) The amendment to 310 CMR 10.55 concerning work in Bordering Vegetated Wetlands that are within an Area of Critical Environmental Concern contained in 310 CMR 10.55(4)(e) shall be effective on April 23, 1993, and shall not apply to any Notice of Intent filed prior to the effective date.

(7) The amendments to 310 CMR 10.00 concerning normal maintenance and improvement of land in agricultural use contained in 310 CMR 10.04: Agriculture10.06(6), and 10.53(5) shall be effective on May 21, 1993, and shall not apply to any Notice of Intent filed prior to the effective date.

(8) The provisions of 310 CMR 10.03(7)(c)2.k., 3.e., and 4.j. through l., 10.06(7), 10.24(7)(c)4. through 6., 10.53(3)(m) through (q), and the revisions to 310 CMR 10.03(7)(c)2.e., and 4.b., 10.06(3) and (5), and 10.53(3)(i) promulgated on December 3, 1993, shall take effect on January 1, 1994. They shall not apply to any Notice of Intent filed before January 1, 1994, nor to any extensions to an Order of Conditions when the Notice of Intent upon which such Order was based was filed prior to that date.

(9) The effective date of 310 CMR 10.55(1) and (2) is June 30, 1995.

(10) The revisions to 310 CMR 10.02 through 10.05, 10.21, 10.53, 10.58, and 10.60 to incorporate St. 1996, c. 258 amendments to M.G.L. c. 131, § 40, and the deletion of 310 CMR 10.99, shall be effective on October 6, 1997 and shall apply to Requests for Determination of Applicability and Notices of Intent filed after that date. Applicants who have received an Order of Conditions before August 7, 1996 or filed a Notice of Intent before August 7, 1996 and received a Final Order of Conditions before August 7, 1997, or later pending resolution of an adjudicatory hearing, shall not be subject to the requirements of 310 CMR 10.58 for the work permitted by the Order. A Determination of Applicability issued before August 7, 1996 is valid only for the resource areas specified in the Determination and not for the riverfront area.

(11) The amendments to 310 CMR 10.00 concerning drought (found at 310 CMR 10.04: Pond; 310 CMR 10.58(2)(a)1.f.) and perennial and intermittent streams (found at 310 CMR 10.58(2)(a)) shall take effect on December 20, 2002 and shall not apply to any Request for Determination of Applicability, Abbreviated Notice of Resource Area Delineation, Abbreviated

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Notice of Intent, or Notice of Intent filed prior to the effective date.

(12) The provisions of 310 CMR 10.00 promulgated in 2005 shall take effect on March 1, 2005. They shall not apply to any Notice of Intent or and Notice of Resource Area Delineation filed prior to March 1, 2005.

(13) The revised procedures for wetland appeals set forth 310 CMR 10.05(7)(j) take effect on October 31, 2007 and shall apply to all wetland appeals for which a notice of claim is filed on or after October 31, 2007.

10.10: continued

(14) The amendments to 310 CMR 10.00 concerning Combined Applications, Combined Permits, Restoration Order of Conditions, Ecological Restoration Limited Projects and procedures for filing a Notice of Intent shall apply to Notices of Intent filed on or after October 24, 2014.

10.11: Actions Required Before Submitting a Notice of Intent for an Ecological Restoration Project

An applicant shall take the following actions before filing a Notice of Intent for an Ecological Restoration Project that meets the eligibility criteria for a Restoration Order of Conditions set forth in 310 CMR 10.13 or for approval as an Ecological Restoration Limited Project pursuant to 310 CMR 10.24(8) or 10.53(4).

(1) At least 14 days prior to the filing a Notice of Intent for an Ecological Restoration Project, the applicant shall submit written notification of the proposed filing for publication in the Environmental Monitor. At a minimum, the written notification shall contain a brief description of the proposed project, the anticipated date of submission of the Notice of Intent, the name and address of the conservation commission that will review the Notice of Intent and shall state where copies of the Notice of Intent may be examined or obtained and where information on the date, time, and location of the public hearing may be obtained.

(2) If the project will impact an area located within estimated habitat which is indicated on the most recent *Estimated Habitat Map of State-listed Rare Wetlands Wildlife* published by the Natural Heritage and Endangered Species Program (the Program), the applicant shall obtain a written preliminary determination from the Program as to whether the Rare Species identified on the aforementioned map are likely to continue to be located on or near the project and, if so, whether the Resource Area to be altered by the proposed project is in fact part of the habitat of the Rare Species. If the Program issues a preliminary determination that the Resource Area that would be altered by the proposed project is in fact within the habitat of a Rare Species, the preliminary determination shall identify the Rare Species whose habitat would be altered and recommend any changes or conditions that are necessary to ensure that the project will have no short or long term adverse effect on the habitat of the local population of the Rare Species or the project will be carried out in accordance with a habitat management plan that has been approved in writing by the Natural Heritage and Endangered Species Program and submitted with the Notice of Intent.

(3) If the project will occur within a coastal waterbody with a restricted Time of Year, as identified in Appendix B of the Division of Marine Fisheries Technical Report TR 47 *Marine Fisheries Time of Year Restrictions (TOYs) for Coastal Alteration Projects* dated April 2011, the applicant shall obtain a written determination from the Division of Marine Fisheries as to whether the proposed work requires a TOY restriction, and if so, the written determination shall specify the recommended TOY restriction and any other recommended conditions on the proposed work.

(4) If the project may affect a diadromous fish run as identified in the Division of Marine Fisheries Technical Reports TR 15 through 18, dated 2004, the applicant shall obtain a written determination from the Division of Marine Fisheries as to whether the design specifications and operational plan for the project are compatible with the passage requirements of the fish run.

(5) If the project involves silt-generating, in-water work that will impact a non-tidal perennial

river or stream, the in-water work shall either occur between May 1st and August 30th or the applicant shall obtain a determination from the Division of Fisheries and Wildlife as to whether the proposed work requires a TOY restriction, and if so, the written determination shall specify the recommended TOY restriction and any other recommended conditions on the proposed work.

(6) If the Ecological Restoration Project involves dredging of 100 cubic yards or more in a Resource Area or dredging of any amount in an Outstanding Resource Water, the applicant shall obtain a Water Quality Certification pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* prior to submitting a Notice of Intent.

10.12: Notice of Intent for an Ecological Restoration Project

A Notice of Intent for an Ecological Restoration Project that meets the eligibility criteria for a Restoration Order of Conditions set forth in 310 CMR 10.13, or for approval as an Ecological Restoration Limited Project in accordance with 310 CMR 10.24(8) or 10.53(4), shall comply with the requirements of 310 CMR 10.12(1) and (2).

(1) At a minimum, a Notice of Intent for an Ecological Restoration Project shall include the following:

- (a) the project's ecological restoration goals;
- (b) the location of the Ecological Restoration Project;
- (c) the construction sequence for completing the project;
- (d) a map of the Areas Subject to Protection under M.G.L. c. 131, § 40, that will be temporarily or permanently altered by the project or include habitat for Rare Species, Habitat of Potential Regional and Statewide Importance, eel grass beds, or Shellfish Suitability Areas;
- (e) an evaluation of any flood impacts that may affect the built environment, including without limitation, buildings, wells, septic systems, roads or other man-made structures or infrastructure as well as any proposed flood impact mitigation measures;
- (f) a plan for invasive species prevention and control;
- (g) any preliminary written determinations obtained from the Natural Heritage and Endangered Species Program in accordance with 310 CMR 10.11(2);
- (h) any Time of Year restrictions and/or other conditions recommended by the Division of Marine Fisheries or the Division of Fisheries and Wildlife in accordance with 310 CMR 10.11(3) through (5);
- (i) proof that notice was published in the Environmental Monitor as required by 310 CMR 10.11(1);
- (j) a certification by the applicant under the penalties of perjury that the project meets the eligibility criteria set forth in 310 CMR 10.13, 10.24(8) or 10.53(4), whichever is applicable;
- (k) if the Ecological Restoration Project involves the construction, repair, replacement or expansion of infrastructure, an operation and maintenance plan to ensure that the infrastructure will continue to function as designed;
- (l) If the project involves dredging of 100 cubic yards or more or dredging of any amount in an Outstanding Resource Water, a Water Quality Certification issued by the Department pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*;
- (m) if the Ecological Restoration Project involves work on a stream crossing, information sufficient to make the showing required by 310 CMR 10.24(10) for work in a coastal resource area and 310 CMR 10.53(8) for work in an inland resource area; and
- (n) if the Ecological Restoration Project involves work on a stream crossing, baseline photo-points that capture longitudinal views of the crossing inlet, the crossing outlet and the upstream and downstream channel beds during low flow conditions. The latitude and longitude coordinates of the photo-points shall be included in the baseline data.

(2) If the Notice of Intent for an Ecological Restoration Project is a Combined Application that serves as the application for a license, permit or other written approval for a water-dependent use project pursuant to 310 CMR 9.00: *Waterways*, the Notice of Intent shall also state:

- (a) whether the project has the potential to impact any docks, piers or boat ramps and, if so, describe the nature of those impacts and any necessary mitigation;
- (b) whether the project involves any structures that have been authorized under Chapter 91;

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

and

(c) whether the project has the potential to impact private water supply wells including agricultural or aquacultural wells or surface water withdrawal points.

(3) Notwithstanding the provisions of 310 CMR 10.54(4)(a)5., 10.56(4)(a)4., and 10.60, a person submitting a Notice of Intent for an Ecological Restoration Project that meets the requirements of 310 CMR 10.12(1) and (2) is exempt from the requirement to perform a wildlife habitat evaluation in accordance with 310 CMR 10.60.

10.13: Eligibility Criteria for Restoration Order of Conditions

Notwithstanding the provisions of 310 CMR 10.25 through 10.35, 10.54 through 10.58, and 10.60, an Ecological Restoration Project shall be permitted by a Restoration Order of Conditions provided that the project meets all applicable eligibility criteria in 310 CMR 10.13. Ecological Restoration Projects permitted by a Restoration Order of Conditions may result in the temporary or permanent loss of Resource Areas and/or the conversion of one Resource Area to another when such loss and/or conversion is necessary to the achievement of the project's ecological restoration goals.

(1) An Ecological Restoration Project shall be permitted by a Restoration Order of Conditions if it meets all of the following eligibility criteria:

- (a) The project is an Ecological Restoration Project as defined in 310 CMR 10.04, is a project type listed in 310 CMR 10.13(2) through (7), and the applicant has submitted a Notice of Intent that meets all applicable requirements of 310 CMR 10.12.
- (b) The project will further at least one of the interests identified in M.G.L. c. 131, § 40.
- (c) The project will not have any short-term or long-term adverse effect, as identified by the procedures established by 310 CMR 10.11, on specified habitat sites of Rare Species located within the Resource Areas that may be affected by the project or will be carried out in accordance with a habitat management plan that has been approved in writing by the Natural Heritage and Endangered Species Program and submitted with the Notice of Intent.
- (d) To the maximum extent practicable, the project will:
 1. avoid adverse impacts to Resource Areas and the interests identified in M.G.L. c. 131, § 40, that can be avoided without impeding the achievement of the project's ecological restoration goals;
 2. minimize adverse impacts to Resource Areas and the interests identified in M.G.L. c. 131, § 40, that are necessary to the achievement of the project's ecological restoration goals; and
 3. utilize best management practices such as erosion and siltation controls and proper construction sequencing to prevent and minimize adverse construction impacts to Resource Areas and the interests identified in M.G.L. c. 131, § 40
- (e) The project will not have significant adverse effects on the interests of flood control and storm damage prevention in relation to the built environment (*i.e.*, the project will not result in a significant increase in flooding or storm damage affecting buildings, wells, septic systems, roads or other human-made structures or infrastructure).
- (f) If the project will involve the dredging of 100 cubic yards of sediment or more or dredging of any amount in an Outstanding Resource Water, the Notice of Intent includes a Water Quality Certification issued by the Department in accordance with 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth.*
- (g) The project will not substantially reduce the capacity of a Resource Area to serve the habitat functions identified in 310 CMR 10.60(2). A project will be presumed to meet this eligibility criteria if the project as proposed in the Notice of Intent will be carried out in accordance with any time of year restrictions or other conditions recommended by the Division of Marine Fisheries for coastal waters, and by the Division of Fisheries and Wildlife for inland waters in accordance with 310 CMR 10.11(3) through (5). As set forth in 310 CMR 10.12(3), a person submitting a Notice of Intent for an Ecological Restoration Project that meets the requirements of 310 CMR 10.12(1) and (2) is exempt from the requirement to perform a wildlife habitat evaluation in accordance with 310 CMR 10.60.
- (h) If the Ecological Restoration Project involves work on a stream crossing, the stream crossing has been designed in accordance with 310 CMR 10.24(10) for work in coastal

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

resource areas and 310 CMR 10.53(8) for work in inland resource areas, as applicable.

(i) The Ecological Restoration Project will not result in a discharge of dredged or fill material within 400 feet of the high water mark of a Class A surface water (exclusive of its tributaries) unless the project is conducted by a public water system under 310 CMR 22.00: *Drinking Water* or a public agency or authority for the maintenance or repair of existing public roads or railways in accordance with 314 CMR 4.06(1)(d)1.

(j) The Ecological Restoration Project will not result in a discharge of dredged or fill material to a vernal pool certified by the Division of Fisheries and Wildlife.

(k) The Ecological Restoration Project will not result in a point source discharge to an Outstanding Resource Water.

10.13: continued

(1) The Ecological Restoration Project will not involve the armoring of a Coastal Dune or Barrier Beach.

(2) Additional Eligibility Criteria for Dam Removal Projects. If the Ecological Restoration Project is a dam removal project, the project shall be presumed to meet the eligibility criteria set forth in 310 CMR 10.13(1)(d), if the project is consistent with the Department's guidance entitled *Dam Removal and the Wetlands Regulations*, dated December 2007. If the Ecological Restoration Project is a dam removal project, the Ecological Restoration Project shall be approved by a Restoration Order of Conditions, provided that in addition to the eligibility criteria set forth in 310 CMR 10.13(1), the project meets all of the following eligibility criteria:

(a) The project will not involve the removal of a dam that was constructed or is managed for flood control by a municipal, state or federal agency

(b) The project will not adversely impact public water supply wells or water withdrawals permitted or registered under the Water Management Act, M.G.L. c. 21G, and 310 CMR 36.00: *Massachusetts Water Resources Management Program* within the reach of the stream impacted by the impoundment.

(c) The project will not adversely impact private water supply wells including agricultural or aquacultural wells or surface water withdrawal points.

(d) The project provides for the removal of the full vertical extent of the dam such that no remnant of the dam will remain at or below the streambed as determined prior to commencement of the dam removal project, or if such determination cannot be made at that time, as determined during construction of the project.

(e) The project provides for the removal of enough of the horizontal extent of the dam such that after removal no water will be impounded during the 500 year flood event.

(f) The project will not involve a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license.

(g) The applicant has obtained from the Department of Conservation and Recreation Office of Dam Safety a written determination that the dam is not subject to the jurisdiction of the Office under 302 CMR 10.00: *Dam Safety*, a written determination that the dam removal does not require a permit under 302 CMR 10.00: *Dam Safety* or a permit authorizing the dam removal in accordance with 302 CMR 10.00: *Dam Safety* has been issued.

(h) If the project is exempt from the requirement to obtain a license or permit under 310 CMR 9.05(3)(n), the project will not have an adverse effect on navigation or on any docks, piers or boat ramps authorized under 310 CMR 9.00: *Waterways*.

(3) Additional Eligibility Criteria for Freshwater Stream Crossing Repair and Replacement Projects. If the Ecological Restoration Project is a freshwater stream crossing repair or replacement project, the Ecological Restoration Project shall be approved by a Restoration Order of Conditions, provided that in addition to the eligibility criteria set forth in 310 CMR 10.13(1), the project meets all of the following eligibility criteria:

(a) The width of the structure will be at least 1.2 times bankfull width to facilitate the movement of fish and other aquatic organisms and wildlife species that may utilize riparian corridors.

(b) The structure will be an open-bottom span where practicable or if an open-bottom span is not practicable, the structure bottom will be embedded in a substrate that matches the substrate of the stream channel and that shall be designed to maintain continuity of aquatic and benthic elements of the stream including appropriate substrates and hydraulic characteristics within the culvert (water depths, turbulence, velocities, and flow patterns).

(c) The structure will have an Openness Ratio of at least 0.82 feet, or as close to 0.82 feet

as is practicable.

(4) Additional Eligibility Criteria for Stream Daylighting Projects. If the Ecological Restoration Project is a stream daylighting project, the Ecological Restoration Project shall be approved by a Restoration Order of Conditions, provided that in addition to the eligibility criteria set forth in 310 CMR 10.13(1), the project meets all of the following eligibility criteria:

10.13: continued

(a) The project will meet the applicable performance standards for Bank, 310 CMR 10.54, and Land under Water Bodies and Waterways, 310 CMR 10.56. As set forth in 310 CMR 10.12(3), a person submitting a Notice of Intent that meets the requirements of 310 CMR 10.12 (1) and (2) for a stream daylighting project is exempt from the requirement to perform a wildlife habitat evaluation in accordance with 310 CMR 10.60, notwithstanding the provisions of 310 CMR 10.54(4)(a)5., 10.56(4)(a)4., and 10.60.

(b) To the maximum extent practicable, the project is designed to include the revegetation of all disturbed areas with noninvasive indigenous species appropriate to the site.

(5) Additional Eligibility Criteria for Tidal Restoration Projects. If the Ecological Restoration Project is a Tidal Restoration Project designed to restore tidal flow that has been restricted or blocked by a man-made structure, the Ecological Restoration Project shall be approved by a Restoration Order of Conditions, provided that in addition to the eligibility criteria set forth in 310 CMR 10.13(1), the project meets all of the following eligibility criteria:

(a) If the project will involve work in a Coastal Dune and/or a Coastal Beach, the project meets the applicable performance standard(s) at 310 CMR 10.27 and/or 10.28.

(b) The project will not include a new or relocated tidal inlet/breach through a Barrier Beach or additional armoring of a Barrier Beach, but may include the modification, replacement or enlargement of an existing culvert or inlet through a Barrier Beach.

(c) The project will not involve installation of new water control devices (*i.e.*, tide gates, flash boards and adjustable weirs) or a change in the management of existing water control devices, when the existing or proposed function of said devices is to prevent flooding or storm damage impacts to the built environment, including without limitation, buildings, wells, septic systems, roads or other human-made structures or infrastructure.

(d) The project's physical specifications are compatible with passage requirements for diadromous fish runs identified at the project location by the Division of Marine Fisheries.

(6) Additional Eligibility Criteria for Rare Species Habitat Restoration. If the Ecological Restoration Project is a Rare Species habitat restoration project, the Ecological Restoration Project shall be approved by a Restoration Order of Conditions, provided that in addition to the eligibility criteria set forth in 310 CMR 10.13(1), the project meets all of the following eligibility criteria:

(a) The project is exempt from review under 321 CMR 10.00: *Massachusetts Endangered Species Act Regulations* as a project that involves the active management of Rare Species habitat for the purpose of maintaining or enhancing the habitat for the benefit of Rare Species. A project that involves the active management of Rare Species habitat and is exempt from review under 321 CMR 10.00: *Massachusetts Endangered Species Act Regulations* may include without limitation the mowing, cutting, burning or pruning of vegetation or the removal of exotic or invasive species.

(b) The project is carried out in accordance with a Habitat Management Plan that has been approved in writing by the Natural Heritage and Endangered Species Program and submitted with the Notice of Intent.

(7) Additional Eligibility Criteria for Restoring Fish Passageways. If the Ecological Restoration Project involves the restoration or repair of a fish passageway as identified by the Division of Marine Fisheries in its Marine Fisheries Technical Reports, TR 15 through 18, dated 2004, the Ecological Restoration Project shall be approved by a Restoration Order of Conditions, provided that in addition to the eligibility criteria set forth in 310 CMR 10.13(1), the applicant has submitted a Fishway Permit Application to the Division of Marine Fisheries, pursuant to M.G.L.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

c. 130, §§ 1 and 19, and 322 CMR 7.01(4)(f) and (14)(m), and the fish passageway will be operated and maintained in accordance with an Operation and Maintenance Plan approved by the Division of Marine Fisheries.

10.14: Restoration Order of Conditions

If after reviewing a Notice of Intent for an Ecological Restoration Project, the issuing authority determines that the Ecological Restoration Project meets the eligibility criteria in 310 CMR 10.13(1) and the applicable provisions of 310 CMR 10.13(2) through (7), the issuing authority shall issue a Restoration Order of Conditions that contains the general conditions set forth in 310 CMR 10.14(1), and all applicable special conditions set forth in 310 CMR 10.14(2) through (7). The Restoration Order of Conditions may reference the plans and specifications for the Ecological Restoration Project approved by the issuing authority. If the Restoration Order of Conditions is issued in response to a Combined Application for an Order of Conditions pursuant to 310 CMR 10.00, a 401 Water Quality Certification pursuant to 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*, and/or a Chapter 91 license, permit or other written approval pursuant to 310 CMR 9.00: *Waterways*, the Department may append to the Restoration Order of Conditions any conditions that the Department has authority to impose pursuant to 310 CMR 9.00: *Waterways* and/or 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*. A Restoration Project Order of Conditions is subject to the provisions of 310 CMR 10.05 that apply to any Order of Conditions except as expressly provided otherwise in 310 CMR 10.00.

(1) General Conditions Applicable to all Ecological Restoration Projects. The Restoration Order of Conditions shall contain the following general conditions:

- (a) Failure to comply with all conditions stated herein and with all related statutes and other regulatory measures shall be deemed cause to revoke or modify this Restoration Order of Conditions.
- (b) This Restoration Order of Conditions does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
- (c) This Restoration Order of Conditions does not relieve the permittee or any other person of the necessity of complying with all applicable federal, state or local statutes, ordinances, bylaws or regulations.
- (d) The work authorized under this Restoration Order of Conditions shall be completed within three years from the date of issuance of this General Order unless the General Order is extended in accordance with 310 CMR 10.05(6)(d) or by operation of law.
- (e) This Restoration Order of Conditions may be extended by the issuing authority for one or more periods of up to three years upon application to the issuing authority at least 30 days prior to the expiration date of this Restoration Order.
- (f) Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, trees, ashes, refrigerators, motor vehicles or parts of any of the foregoing.
- (g) This Restoration Order of Conditions is not final until all administrative appeal periods from this Restoration Order have elapsed or if such an appeal has been taken, until all proceedings before the Department have been completed.
- (h) No work shall be undertaken until the Restoration Order of Conditions has become final and has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located within the chain of title to the affected property. In the case of recorded land, the Final Restoration Order of Conditions shall also be noted in the Registry's Grantor index under the name of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Issuing Authority prior to commencement of the work.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

- (i) A sign that is not less than two square feet or more than three square feet shall be displayed at the site. The sign shall bear the words "Massachusetts Department of Environmental Protection" and include the File Number.
- (j) Where the Department is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before the Department.
- (k) Upon completion of the work described herein, the applicant shall submit a Request for a Certificate of Compliance to the issuing authority.
- (l) The work shall conform to the plans and special conditions referenced in this Restoration Order of Conditions.

10.14: continued

(m) Any change to the plans approved in this Restoration Order of Conditions shall require the applicant to inquire of the Issuing Authority in writing whether the change is significant enough to require the filing of a new Notice of Intent.

(n) Representatives of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Restoration Order of Conditions at reasonable hours to evaluate compliance with the conditions set forth in this Restoration Order of Conditions and may require the submittal of any data deemed necessary by the Conservation Commission or the Department for that evaluation.

(o) This Restoration Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Restoration Order of Conditions and to any contractor or other person performing work conditioned by this Order.

(p) Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland or Salt Marsh, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the issuing authority.

(q) All sedimentation barriers shall be maintained in good repair, until all disturbed areas have been fully stabilized with vegetation or other means. During construction, the applicant or his or her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the issuing authority. The Issuing Authority reserves the right to require any additional erosion and/or damage prevention controls it deems necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

(r) The project shall be conducted in accordance with any preliminary written determination obtained from the Natural Heritage and Endangered Species Program as set forth in 310 CMR 10.11(2) and any time of year restrictions or other conditions recommended in writing by the Division of Marine Fisheries (for projects in coastal Resource Areas) and the Division of Fisheries and Wildlife (for projects in inland Resource Areas) as set forth in 310 CMR 10.11(3) through (5).

(s) The applicant shall implement the plan submitted with the Notice of Intent as approved by the Issuing Authority to prevent and control invasive species.

(t) If the project involves the dredging of 100 cubic yards or more in a Resource Area or dredging of any amount in an Outstanding Resource Water, the dredging and Dredged Material management shall be performed in accordance with the Water Quality Certification submitted with the Notice of Intent.

(u) If the project involves infrastructure, the owner shall operate and maintain the infrastructure in accordance with the operation and maintenance plan submitted with the Notice of Intent as approved by the Issuing Authority. Implementation of the operation and maintenance plan as approved by the Issuing Authority shall be a continuing condition that shall be set forth in the Certificate of Compliance.

(2) Special Conditions for Dam Removal Projects. If the Ecological Restoration Project involves dam removal, the Restoration Order of Conditions shall contain the following special conditions in addition to the general conditions set forth in 310 CMR 10.14(1):

(a) An as-built plan and a written statement from a registered professional engineer or other environmental professional expert in ecological restoration certifying substantial compliance with the design plan and construction specifications approved in the Restoration Order of Conditions shall be submitted to the Issuing Authority within 90 days of completion of the dam removal.

(b) The applicant shall monitor the dam removal site during the first two years following completion of the dam removal. Said monitoring shall include a topographic survey of the longitudinal profile and stream cross-sections from downstream of the former dam through the upstream end of the former impoundment. The survey reference point shall comprise a permanent marker or recoverable survey point with known coordinates, such as a fixed point shown on the as-built plan, an existing bench mark, or a new benchmark. That marker should be identified or referenced on the plans and on the as-built plans. The applicant shall establish at least two photo-points for pre- and post-restoration monitoring at the dam removal site. At least one photo-point location shall be chosen to document a view of the dam pre-restoration and to document the same site after the dam is removed. A second location shall be chosen to document a view of the impoundment pre- and post-restoration. Photos shall be taken for two years after the dam removal is completed.

10.14: continued

(c) The applicant shall submit a report detailing the results of this monitoring within six months of the completion of the two year post-construction monitoring period, or within 30 months after the dam removal is complete whichever is sooner. The report shall include a comparison of post-restoration survey data with pre-restoration survey data as illustrated by the photos taken during the monitoring period.

(3) Special Conditions for Freshwater Stream Crossing Repair and Replacement Projects. If the Ecological Restoration Project involves freshwater crossing repair or replacement, the Restoration Order of Conditions shall contain the following special conditions in addition to the general conditions set forth in 310 CMR 10.14(1):

(a) An as-built plan and/or a written statement from a registered professional engineer or other environmental professional expert in ecological restoration certifying substantial compliance with the design plans and construction specifications approved in the Restoration Order of Conditions shall be completed within 90 days of completion of construction. The as-built plan shall include the dimensions of the structure, the invert elevation of the upstream and downstream ends of the structure and the road or other surface elevation above the structure.

(b) The applicant shall monitor the site by collecting sufficient data within 12 months after construction is complete to evaluate the effect of the structure. At a minimum, when a Certificate of Compliance is requested, the applicant shall provide post-construction photo-points that capture longitudinal views of the crossing inlet, the crossing outlet and the upstream and downstream channel beds during low flow conditions. The photo-points shall be located at the same geographic photo-point latitude and longitude coordinates as required in the Notice of Intent per 310 CMR 10.12(1)(n). The applicant shall submit a report to the Issuing Authority detailing the results of this monitoring within 18 months after construction is complete. The report shall include a comparison of the post-restoration data with pre-restoration data.

(4) Special Conditions for Stream Daylighting Projects. If the Ecological Restoration Project involves stream daylighting, the Restoration Order of Conditions shall include the following special conditions in addition to the general conditions set forth in 310 CMR 10.14(1):

(a) An as-built plan and a written statement from a registered professional engineer or other environmental professional expert in ecological restoration certifying substantial compliance with the design plan and construction specifications approved in the Restoration Order of Conditions shall be submitted to the Issuing Authority within 90 days of completion of the project. At a minimum, when a Certificate of Compliance is requested, the applicant shall provide post-construction photo-points that capture longitudinal views of the upstream and downstream channel beds of the daylighted reach during low flow conditions.

(b) The applicant shall conduct photo-point monitoring by establishing at least three photo-points for pre- and post-restoration monitoring at the stream daylighting site. One photo-point location shall be chosen to document the upstream end of the site and one photo-point location shall be chosen to document the downstream end of the site. A third photo-point shall be chosen to document conditions in the restored channel. Photos shall be taken during high flow and low (summer) flow of each year during the two years following completion of the project.

(c) Within 30 months after the completion of the project, the applicant shall submit a report describing the ecological changes observed at the project site during the two years following completion of the project, as illustrated by the photos.

(5) Special Conditions for Tidal Restoration Projects. If the Ecological Restoration Project involves restoration of tidal influence, the Restoration Order of Conditions shall contain the following special conditions in addition to the general conditions set forth in 310 CMR 10.14(1):

(a) If the project is a culvert or bridge replacement or repair project, an as-built plan and a written statement from a registered professional engineer or other environmental professional expert in ecological restoration certifying substantial compliance with the design plans and construction specifications approved in the Restoration Order of Conditions shall be submitted to the Issuing Authority within 90 days of completion of construction. The as-built plan shall include the dimensions of the structure, the invert elevation of the upstream and downstream ends of the structure and the road or other surface elevation above the structure.

10.14: continued

(b) The applicant shall monitor pre- and post-construction tidal conditions upstream and downstream of the tidal restriction with water level readings measured at an interval no greater than every ten minutes over a minimum of a one-week period that includes a spring tide. Pre- and post-construction water level readings shall be taken at approximately the same locations and shall be referenced to the same vertical elevation datum. The applicant shall prepare a report detailing the results of this monitoring within 12 months after construction is complete. The report shall include and compare pre- and post-construction tidal elevation monitoring data to assess attainment of the project's predicted post-restoration tidal conditions.

(6) Special Conditions for Rare Species Habitat Restoration. If the Ecological Restoration Project is a Rare Species Habitat Restoration Project, the Restoration Order of Conditions shall in addition to the general conditions set forth in 310 CMR 10.14(1) include the following special conditions:

(a) An as-built plan and a written statement from a registered professional engineer or other environmental professional expert in ecological restoration certifying substantial compliance with the design plan, construction specifications, and the Habitat Management Plan submitted with the Notice of Intent as approved in the Restoration Order of Conditions shall be submitted to the Issuing Authority within 90 days of completion of the project.

(b) The applicant shall establish at least two photo-points for pre- and post-restoration monitoring at the project site. Photos shall be taken for two years after construction is complete. Within 30 months of completion of the project, the applicant shall submit to the Issuing Authority a report describing the ecological changes observed at the project site as illustrated by the photos.

(7) Special Conditions for Fish Passageway Restoration Projects. If the Ecological Restoration Project involves the repair or replacement of a fish passageway, the Restoration Order of Conditions shall in addition to the general conditions set forth in 310 CMR 10.14(1) contain the following special conditions:

(a) The property owner is responsible for maintaining and repairing the fishway in good condition so that it will support safe and efficient fish passage in accordance with an operation and maintenance plan approved by the Division of Marine Fisheries. This requirement is a continuing condition that shall be set forth in the Certificate of Compliance.

(b) A post-construction project summary using surveys, a narrative and photographs as needed, that confirm the fishway slope and entrance and exit elevations shall be submitted to and approved by the Division of Marine Fisheries, prior to submittal of a request for a Certificate of Compliance.

10.21: Introduction

310 CMR 10.21 through 10.37 apply to all work subject to M.G.L. c. 131, § 40, M.G.L. c. 131, § 40, which will alter, dredge, fill, or remove any coastal beach, coastal dune, tidal flat, coastal wetland, land subject to coastal storm flowage, coastal bank, land subject to tidal action, or land under an estuary, under a salt pond, under the ocean or under certain streams, ponds, rivers, lakes or creeks within the coastal zone that are anadromous/catadromous fish runs. This Part is in addition to and does not change the provisions set forth in 310 CMR 10.01 through 10.10. 310 CMR 10.21 through 10.37 are intended to ensure that development along the coastline is located, designed, built and maintained in a manner that protects the public interests in the coastal resources listed in M.G.L. c. 131, § 40. The proponent of the work must

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

submit sufficient information to enable the issuing authority to determine whether the proposed work will comply with 310 CMR 10.21 through 10.37. Any proposed work may be subject to the requirements of sections concerning coastal beaches, coastal dunes and land containing shellfish. Thus, in order to determine which provisions apply to a proposed project, 310 CMR 10.00 must be read in its entirety. 310 CMR 10.21 through 10.37 are divided into 16 sections, 44 of which deal with specific coastal resources. Each coastal resource section begins with a preamble. In addition, the requirements for protection of the riverfront area in 310 CMR 10.58 apply within the coastal resource areas. The riverfront area may overlap other coastal resource areas and the performance standards for each resource area must be met. 310 CMR 10.24(7) applies to riverfront areas within coastal resource areas. The Preamble identifies the interests

10.21: continued

of M.G.L. c. 131, § 40 to which that resource is or is likely to be significant and describes the characteristics or factors of the resource which are critical to the protection of the interest to which the resource is significant. 310 CMR 10.21 through 10.37 are in the form of performance standards and shall be interpreted to protect those characteristics and resources to the maximum extent permissible under M.G.L. c. 131, § 40.

The performance standards are intended to identify the level of protection the issuing authority must impose in order to contribute to the protection of the interests of M.G.L. c. 131, § 40. It is the responsibility of the issuing authority to order specific measures and requirements for each proposed project which will ensure that the project is designed and carried out consistent with the required level of protection. Such authority must then issue an Order of Conditions which is understandable and enforceable.

10.22: Purpose

310 CMR 10.21 through 10.37 are promulgated pursuant to M.G.L. c. 131, § 40 and are intended to implement it. They are further intended to establish criteria and standards for the uniform and coordinated administration of the provisions of M.G.L. c. 131, § 40; to ensure coordination between the Department and other Executive Office of Energy and Environmental Affairs agencies; and to ensure consideration by the Department of relevant policies, laws or programs of other Executive Office of Energy and Environmental Affairs agencies. 310 CMR 10.21 through 10.37 is, in addition, intended to be consistent with and form a part of the Commonwealth's Coastal Zone Management Program as it has been promulgated and defined by 301 CMR 21.00: *Coastal Zone Management Program Federal Consistency Review Procedures*. 310 CMR 10.21 through 10.37, however, are adopted independently under M.G.L. c. 131, § 40 and would remain in full force and effect in the absence of 301 CMR 20.00: *Coastal Zone Management Program*.

The interpretation and application of 310 CMR 10.21 through 10.37 shall be consistent with the policies of 301 CMR 20.00: *Coastal Zone Management Program* to the maximum extent permissible under M.G.L. c. 131, § 40. M.G.L. c. 21A, § 2 establishes the CZM policies as part of 301 CMR 20.00, and the Department recognizes these policies as state environmental policy, which it will carry out in accordance with M.G.L. c. 21A, § 2. Specifically, 301 CMR 20.99: *Severability*, Coastal Hazards Policy #1, and #2, Energy Policy #1, Habitat Policy #1, Ocean Resources Policy #1, Ports and Harbors Policy #1, #2 and #3, Protected Areas Policy #1 and Water Quality Policy #1 and #2 are applicable to the administration of M.G.L. c. 21A, § 2, but the provisions of the more specific regulations contained in the following sections shall govern, unless the Secretary, pursuant to the conflict resolution procedures of M.G.L. c. 21A, 301 CMR 20.00 of the CZM Regulations, has resolved any conflict and has determined that the CZM policies should or should not apply.

10.23: Additional Definitions for 310 CMR 10.21 through 10.37

The definitions contained in 310 CMR 10.23 apply to and are valid for 310 CMR 10.21 through 10.37. The following definitions are for terms used throughout 310 CMR 10.21 through 10.37. Other terms that are used only in specific sections of 310 CMR 10.21 through 10.37 are defined in those sections.

Act means the Wetlands Protection Act, M.G.L. c. 131, § 40.

Adverse Effect means a greater than negligible change in the resource area or one of its

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

characteristics or factors that diminishes the value of the resource area to one or more of the specific interests of M.G.L. c. 131, § 40, as determined by the issuing authority. Negligible means small enough to be disregarded.

Applicant means any person giving notice of intention to remove, fill, dredge or alter under M.G.L. c. 131, § 40.

Area of Critical Environmental Concern (ACEC) means an area which has been so designated by the Secretary in accordance with 301 CMR 12.00: *Areas of Critical Environmental Concern*. The term Area for Preservation or Restoration (APR) shall be synonymous with ACEC, as provided in the CZM Regulations.

10.23: continued

Building means any residential, commercial, industrial, recreational or other similar structure. For the purposes of 310 CMR 10.00, building may be interpreted to include a large, substantial structure such as a utility tower.

Coastal Engineering Structure means, but is not limited to, any breakwater, bulkhead, groin, jetty, revetment, seawall, weir, riprap or any other structure that is designed to alter wave, tidal or sediment transport processes in order to protect inland or upland structures from the effects of such processes.

Coastal Zone means that area defined in 301 CMR 20.02: *Definitions*.

DMF means the Division of Marine Fisheries.

Grain Size means a measure of the size of a material or rock particle that makes up sediment.

Improvement Dredging means any dredging under a license in an area which has not previously been dredged or which extends the original dredged width, depth, length or otherwise alters the original boundaries of a previously dredged area.

Interests of the Act means the following eight interests specified in M.G.L. c. 131, § 40: public or private water supply, ground water supply, flood control, storm damage prevention, prevention of pollution, protection of land containing shellfish and protection of fisheries and wildlife habitat.

Issuing Authority means either a conservation commission or the Department, as appropriate.

Littoral Processes means the movement of sediment, including gravel, sand or cobbles, along the coast caused by waves or currents.

Maintenance Dredging means dredging under a license in any previously dredged area which does not extend the originally-dredged depth, width, or length but does not mean improvement dredging or backfilling.

Marine Fisheries means any animal life inhabiting the ocean or its adjacent tidal waters or the land thereunder that is utilized by man in a recreational and/or commercial manner or that is part of the food chain for such animal life.

Mean High Water Line means the line where the arithmetic mean of the high water heights observed over a specific 19-year metonic cycle (the National Tidal Datum Epoch) meets the shore and shall be determined using hydrographic survey data of the National Ocean Survey of the U.S. Department of Commerce.

Mean Low Water Line means the line where the arithmetic mean of the low water heights observed over a specific 19-year metonic cycle (the National Tidal Datum Epoch) meets the shore and shall be determined using hydrographic survey data of the National Ocean Survey of the U.S. Department of Commerce.

Minimize means to achieve the least amount of adverse effect that can be attained using best available measures or best practical measures, whichever is referred to in the pertinent section.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

"Best available measures" means the most up-to-date technology or the best designs, measures or engineering practices that have been developed and that are commercially available. "Best Practical Measures" means technologies, designs, measures or engineering practices that are in general use to protect similar interests.

NPDES (National Pollutant Discharge Elimination System) Permit means the permit issued jointly by the federal and state governments, in accordance with 33 U.S.C. 1342 and M.G.L. c. 21, § 43, regulating liquid discharges from a point source.

Productivity means the rate of biomass production over a period of time.

10.23: continued

Resource Area means any coastal bank; coastal wetland; coastal beach; coastal dune; tidal flat; or any land under the ocean or under an estuary or under a salt pond; land subject to tidal action or coastal 100 year storm flowage; or land under certain streams, ponds, rivers, lakes, or creeks within the coastal zone that are anadromous/catadromous fish runs.

Secretary means the Secretary of Energy and Environmental Affairs.

Significant. A resource area shall be found to be significant to an interest of M.G.L. c. 131, § 40 when such resource area plays a role in the provision or protection, as appropriate, of public or private water supply, ground water supply, flood control, storm damage prevention, prevention of pollution, land containing shellfish, fisheries, and/or wildlife habitat.

Turbidity means the amount of particulate matter suspended in water.

Water Circulation means the pattern of water movement in coastal waters.

10.24: General Provisions

(1) If the issuing authority determines that a resource area is significant to an interest identified in M.G.L. c. 131, § 40 for which no presumption is stated in the Preamble to the applicable section, the issuing authority shall impose such conditions as are necessary to contribute to the protection of such interests. For work in the buffer zone subject to review under 310 CMR 10.02(2)(b)3., the issuing authority shall impose conditions to protect the interests of the Act identified for the adjacent resource area. The potential for adverse impacts to resource areas from work in the buffer zone may increase with the extent of the work and the proximity to the resource area. The issuing authority may consider the characteristics of the buffer zone, such as the presence of steep slopes, that may increase the potential for adverse impacts on resource areas. Conditions may include limitations on the scope and location of work in the buffer zone as necessary to avoid alteration of resource areas. The issuing authority may require erosion and sedimentation controls during construction, a clear limit of work, and the preservation of natural vegetation adjacent to the resource area and/or other measures commensurate with the scope and location of the work within the buffer zone to protect the interests of M.G.L. c. 131, § 40. Where a buffer zone has already been developed, the issuing authority may consider the extent of existing development in its review of subsequent proposed work and, where prior development is extensive, may consider measures such as the restoration of natural vegetation adjacent to the resource area to protect the interests of M.G.L. c. 131, § 40. The purpose of preconstruction review of work in the buffer zone is to ensure that adjacent resource areas are not adversely affected during or after completion of the work.

(2) When the issuing authority determines that a project in one resource area would adversely affect another resource area, the issuing authority shall impose such conditions as will protect the interest to which each resource area is significant to the same degree as required in 310 CMR 10.00 concerning each resource area.

(3) A determination which finds that a resource area is not significant to an interest to which it is presumed in 310 CMR 10.21 through 10.37 to be significant, or is significant to an interest to which it is presumed to be not significant, shall be made on Form 7. No such determination shall be effective unless a copy of this form and the accompanying written explanation for the determination required by 310 CMR 10.00 is sent on the day of issuance to the appropriate regional office of the Department.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

- (4) (a) 310 CMR 10.21 through 10.37 do not change the requirement of any other Massachusetts statute or by-law. A proposed project must comply with all applicable requirements of other federal, state and local statutes and by-laws, in addition to meeting the requirements of 310 CMR 10.00. Examples of such laws which may be applicable are the Coastal Restrictions Act (M.G.L. c. 130, § 105), the Ocean Sanctuaries Act (M.G.L. c. 132A, §§ 13 through 16 and 18), the Mineral Resources Act (M.G.L. c. 21, §§ 54 through 58), the Massachusetts Clean Water Act (M.G.L. c. 21, §§ 26 through 53), the Waterways laws (M.G.L. c. 91), the Massachusetts Environmental Policy Act (M.G.L. c. 30, §§ 61 through 62H), the act establishing the Martha's Vineyard Commission (St. 1974, c. 637) and the Scenic Rivers Act (M.G.L. c. 21, § 2. 17B).

10.24: continued

(b) When the site of a proposed project is subject to a Restriction Order which has been duly recorded under the provisions of M.G.L. c. 130, § 105, such a project shall conform to 310 CMR 10.21 through 10.37.

(c) If an NPDES permit for any new point-source discharge has or will be obtained prior to the commencement of the discharge, the effluent limitations established in such permit shall be deemed to satisfy the water quality standards established in any section of 310 CMR 10.21 through 10.37 relative to the effects of the new point-source discharge on water quality. Such effluent limitations shall be incorporated or shall be deemed to be incorporated into the Order of Conditions.

(5) (a) When any area subject to 310 CMR 10.21 through 10.37 has been designated an Area of Critical Environmental Concern by the Secretary of Energy and Environmental Affairs pursuant to 301 CMR 20.00: *Coastal Zone Management Program*, and when the Secretary has made a finding of the significance of the area to one or more interests of M.G.L. c. 131, § 40, the issuing authority shall presume that such area is significant to those interests.

(b) When any portion of a designated Area of Critical Environmental Concern is determined by the Issuing Authority to be significant to any of the interests of M.G.L. c. 131, § 40, any proposed project in or impacting that portion of the Area of Critical Environmental Concern shall have no adverse effect upon those interests, except as provided under 310 CMR 10.25(4) for maintenance dredging, under 310 CMR 10.11 through 10.14, 10.24(8) and 10.53(4) for Ecological Restoration Projects, and under 310 CMR 10.25(3) for improvement dredging conducted by a public entity for the sole purpose of the maintenance or restoration of historic, safe navigation channels or turnaround basins of a minimum length, width, and depth consistent with a Resource Management Plan adopted by the municipality(ies) and approved by the Secretary of the Executive Office of Energy and Environmental Affairs.

(6) Where any section of 310 CMR 10.00 provides that a proposed project "may be permitted" in certain circumstances, no such project shall be undertaken until all of the usual procedures required by M.G.L. c. 131, § 40 and 310 CMR 10.21 through 10.37 have been followed and a Final Order has been issued approving the work. The Issuing Authority shall impose such conditions on such projects as may be necessary to contribute to the protection of the interests of M.G.L. c. 131, § 40. Notwithstanding the foregoing, when the Issuing Authority determines that a project meets the eligibility criteria for a Restoration Order of Conditions, the Issuing Authority shall impose only the conditions set forth in the applicable provisions of 310 CMR 10.00. As set forth in 310 CMR 10.05(6)(b)., a Restoration Order of Conditions may reference the plans and specifications approved by the Issuing Authority. If the Department is the Issuing Authority for a project that is the subject of a Combined Application, the Department may attach to the Restoration Order of Conditions any conditions that the Department has authority to impose pursuant to 310 CMR 9.00: *Waterways* and 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* to the extent they are applicable.

(7) Notwithstanding the provisions of 310 CMR 10.25 through 10.35, the Issuing Authority may issue an Order of Conditions and impose such conditions as will contribute to the interests identified in M.G.L. c. 131, § 40, permitting the limited projects listed in 310 CMR 10.24(7)(a) through (c), although no such project may be permitted which will have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.37. In determining whether to exercise its discretion to approve the limited projects listed in 310 CMR 10.24(7)(a) through (c), the Issuing Authority shall consider the following factors: the

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

magnitude of the alteration and the significance of the project to the interests identified in M.G.L. c. 131, § 40, the availability of reasonable alternatives to the proposed activity, and the extent to which adverse impacts are minimized and the extent to which mitigation measures including replication or restoration are provided to contribute to the protection of the interests identified in M.G.L. c. 131, § 40. Adverse effects to be minimized include without limitation any adverse impacts on the relevant interests of M.G.L. c. 131, § 40, due to changes in wave action or sediment transport or adjacent coastal banks, coastal beaches, coastal dunes, salt marshes or barrier beaches. The provisions of 310 CMR 10.24(7)(a) through (c) are not intended to prohibit the Issuing Authority from imposing such additional conditions as are necessary to contribute to the interests of M.G.L. c. 131, § 40 where the indicated minimizing measures are not sufficient.

10.24: continued

- (a) The construction, reconstruction, operation and maintenance of the following structures associated with and essential to an electric generating facility may be permitted as a limited project pursuant to 310 CMR 10.24(7) provided the project is proposed to be constructed and operated in accordance with all applicable provisions of 310 CMR 10.24(1) through (6), (7)(a)1. through 6., and (9) and (10):
1. Conduits for cooling water intake or discharge, which may be emplaced by trenching with a minimum depth of four feet of cover below original grade, except where they traverse salt ponds, salt marshes and barrier beaches, in which cases they may be emplaced only by tunneling;
 2. Headwalls and other essential structures appurtenant to 310 CMR 10.24(7)(a)1., except that these structures may not be constructed in salt marshes, salt ponds or barrier beaches;
 3. Pipelines or other conduits for the transmission of utilities essential to the facility (water, fuel, sewage, and power), which may be emplaced by trenching with a minimum depth of four feet of cover below original grade, or which may be carried above grade on pilings or similar supports, but only if the applicant demonstrates that there will be no adverse effect on the resource area by the construction, operation, and maintenance of such pipelines or other conduits. If such pipelines or conduits are emplaced through a resource area which adverse effects are required to be minimized by 310 CMR 10.25 through 10.35, then that standard shall be applied, except that in no case shall fuel or sewage lines be operated or be designed to be operated so that they will have an adverse effect on the resource area.
 4. Structures necessary for navigation, berthing and protection of such vessels and vessel movements as may be necessary to the operation of the facility, but only on coastal banks, coastal beaches, rocky intertidal shores or land under the ocean;
 5. Structures for maritime dependent accessory activities essential to the facility, but only on coastal banks, coastal beaches, rocky intertidal shores or land under the ocean;
 6. Coastal engineering structures necessary to the protection of such other structures as may be permitted under 310 CMR 10.24, but only on coastal banks, coastal beaches, rocky intertidal shores, or land under the ocean;
- (b) The construction, reconstruction, operation and maintenance of underground and overhead public utilities, limited to electrical distribution or transmission lines, or communication, sewer, water and natural gas lines, may be permitted as a limited project pursuant to 310 CMR 10.24(7) provided that the project complies with all applicable provisions of 310 CMR 10.24(1) through (6), (9) and (10), and (7)(b)1. through 9.:
1. For local distribution or connecting lines not reviewed by the Energy Facilities Siting Council, the Issuing Authority determines that alternative routes with fewer adverse effects are not physically or legally feasible;
 2. Adverse effects during construction are minimized using the best available measures, which may include such equipment as Bailey bridges and helicopters;
 3. The surface vegetation and contours of the area are substantially restored;
 4. When a trench is made in a Salt Marsh, all spoil is removed from the Salt Marsh upon excavation. Clean sand or other appropriate material shall be used to restore the level of the trench to that of the surrounding undisturbed Salt Marsh. The surface vegetation shall be restored substantially to its original condition by immediately transplanting appropriate marsh plant nursery stock once construction is completed. Baffles of concrete, clay or other non porous material shall be placed in the trench, if necessary, to prevent groundwater excursion. During the first growing season, periodic maintenance of the marsh restoration area shall be required and shall include at least the replacement of non surviving transplants and the removal of all deposits of debris and organic litter.

During construction, equipment such as Bailey bridges and helicopters shall be used to minimize, using best available measures, the adverse effects of construction on the Salt Marsh. All vehicles shall be used only on swamp mats or in such a way as to prevent tire marks, trenches, or ruts;

5. No utility shall traverse a Salt Marsh unless the applicant has shown that any thermal influence on the Salt Marsh of such line subsequent to the project being completed will not alter the natural freezing and thawing patterns of the top 24 inches of the Salt Marsh surface. Thermal sand, concrete or other suitable material may be used to backfill the trench to a point no less than 24 inches below grade. Above this level, clean sand shall be used to restore the level of the trench to that of the surrounding undisturbed Salt Marsh;

10.24: continued

6. No permanent access roads shall be permitted except in Designated Port Areas; and
 7. All sewer lines shall be constructed so as to be watertight so as to prevent inflow and leakage.
 8. All fuel lines shall be double cased and watertight so as to prevent inflow and leakage.
 9. The conduits or structures shall be designed to minimize, using the best available measures, adverse effects on the relevant interests of M.G.L. c. 131, § 40 due to changes in wave action or sediment transport or adjacent coastal banks, coastal beaches, coastal dunes, salt marshes or barrier beaches.
- (c) The following projects may be permitted as a limited project pursuant to 310 CMR 10.24(7) provided the project complies with all applicable provisions of 310 CMR 10.24(1) through (6) and (9) and (10):
1. Maintenance and improvement of existing public roadways, but limited to widening less than a single lane, adding shoulders, correcting substandard intersections, and improving drainage systems.
 2. The maintenance, repair and improvement (but not substantial enlargement except when necessary to reduce or eliminate a tidal restriction) of structures, including buildings, piers, towers, headwalls, bridges and culverts which existed on November 1, 1987.
 3. The routine maintenance and repair of road drainage structures including culverts and catch basins, drainage easements, ditches, watercourses and artificial water conveyances to insure flow capacities which existed on November 1, 1987.
 4. The closure of landfills when undertaken to comply with the requirements of 310 CMR 19.000: *Solid Waste Management*; provided, however, that:
 - a. a project design alternative analysis shall be prepared in accordance with 310 CMR 19.150: *Landfill Assessment Requirements*; and
 - b. such projects shall be designed, constructed, implemented, operated, and maintained to avoid or, where avoidance is not practicable, to minimize impacts to resource areas, and to meet the following standards to the maximum extent practicable:
 - i. hydrological changes to resource areas shall be minimized;
 - ii. best management practices shall be used to minimize adverse impacts during construction, including prevention of erosion and siltation of adjacent water bodies and wetlands in accordance with standard U.S.D.A. Soil Conservation Service methods;
 - iii. mitigating measures shall be implemented that contribute to the protection of the interests identified in M.G.L. c. 131, § 40;
 - iv. no access road, assessment or monitoring device, or other structure or activity shall restrict flows so as to cause an increase in flood stage or velocity;
 - v. temporary structures and work areas in resource areas, such as access roads and assessment and monitoring devices, shall be removed within 30 days of the Department's written determination that the closure of the facility has been completed in accordance with the closure permit. Temporary alterations to resource areas shall be substantially restored to preexisting hydrology and topography. At least 75% of the surface of any area of disturbed vegetation shall be reestablished with indigenous wetland plant species within two growing seasons and prior to said vegetative reestablishment any exposed soil in the area of disturbed vegetation shall be temporarily stabilized to prevent erosion in accordance with standard U.S.D.A. Soil Conservation Service methods.

Temporary structures, work areas, and alterations to resource areas are those that no longer are necessary to fulfill the requirements of 310 CMR 19.000: *Solid Waste Management*;

vi. except for direct impacts to resource areas caused by the final cap and cover on the landfill, no changes in the existing topography or the existing soil and surface water levels shall be permitted, except for those resulting from temporary access roads;

vii. work in resource areas shall occur only when the ground is sufficiently frozen, dry, or otherwise stable to support the equipment used; and

viii. such projects shall not include the construction of new landfills or the expansion or modification of existing landfills.

10.24: continued

5. Airport vegetation removal projects; provided, however, that:
 - a. such projects must be undertaken in order to comply with Federal Aviation Administration (FAA) Regulation Part 77 (14 CFR Part 77), FAA Advisory Circular 150/5300-13 (Navigational Aids and Approach Light Systems), and FAA Order 6480.4 (Air Traffic Control Tower Siting Criteria), all as amended, or to comply with the airport approach regulations set forth in M.G.L. c. 90, §§ 40A through 40I;
 - b. such projects must be undertaken at airports that are managed by the Massachusetts Port Authority (Massport) or that are subject to certification by the Massachusetts Aeronautics Commission (MAC);
 - c. the requirement outlined in 310 CMR 10.24(7)(c)5.a. must be certified in writing by the FAA or by the MAC;
 - d. such projects shall not include the construction of new airport facilities or the expansion or relocation of existing airport uses;
 - e. notices of Intent filed for such projects shall:
 - i. delineate the vegetation requiring removal;
 - ii. delineate the affected resource areas;
 - iii. identify the proposed method for removal of vegetation and analyze alternatives. At a minimum, the alternatives analysis shall include: an alternative (based on a Federal Aviation Administration waiver or airport operation changes) that does not alter resource areas, which will provide baseline data for evaluating other alternatives; an assessment of impacts to resource areas resulting from mechanical methods of vegetation removal, including the use of both large and small equipment; and an assessment of impacts to resource areas resulting from chemical methods of vegetation removal;
 - iv. quantify the likely impacts to wildlife habitat and water quality;
 - v. evaluate possible mitigation measures, including but not limited to an assessment of erosion and sedimentation controls, wetland restoration, wetland replication, on-site and off-site wetland enhancement, herbicide application guidelines, spill containment plans, development restrictions and monitoring; and
 - vi. propose a five-year airport vegetation management plan. The vegetation management plan shall, at minimum, contain a purpose and goals statement, identify all airport protective zones, identify proposed vegetation management areas within the protective zones, and identify and prioritize future vegetation removal projects. Updated vegetation management plans shall be provided for each Notice of Intent filed after the expiration of the most recent five-year vegetation management plan period;
 - f. where such projects require the filing of a Notice of Intent in more than one municipality, the Notice of Intent filed in each municipality shall describe the total impacts to resource areas proposed for the entire project;
 - g. in addition to existing notice requirements contained in 310 CMR 10.00, for projects pursuant to 310 CMR 10.24(7)(c)5. copies of each Notice of Intent shall be filed simultaneously with the Massachusetts Department of Food and Agriculture, the Massachusetts Historical Commission, the Massachusetts Department of Environmental Management (Areas of Critical Environmental Concern Program), and the Division of Water Supply in the Department of Environmental Protection; and
 - h. such projects shall be designed, constructed, implemented, operated, and maintained to avoid or, where avoidance is not practicable, to minimize impacts to resource areas, and to meet the following standards to the maximum extent

practicable:

- i. hydrological changes to resource areas shall be minimized;
- ii. best management practices shall be used to minimize adverse impacts during construction, including prevention of erosion and siltation of adjacent water bodies and wetlands in accordance with standard U.S.D.A. Soil Conservation Service methods;
- iii. mitigating measures shall be implemented that contribute to the protection of the interests identified in M.G.L. c. 131, § 40;
- iv. no access road or other structure or activity shall restrict flows so as to cause an increase in flood stage or velocity;

10.24: continued

- v. no change in the existing surface topography or the existing soil and surface water levels shall occur except for temporary access roads;
 - vi. temporary structures and work areas in resource areas, such as access roads, shall be removed within 30 days of completion of the work. Temporary alterations to resource areas shall be substantially restored to preexisting hydrology and topography. At least 75% of the surface of any area of disturbed vegetation shall be reestablished with indigenous wetland plant species within two growing seasons and prior to said vegetative reestablishment any exposed soil in the area of disturbed vegetation shall be temporarily stabilized to prevent erosion in accordance with standard U.S.D.A. Soil Conservation Service methods;
 - vii. work in resource areas shall occur only during those periods when the ground is sufficiently frozen, dry, or otherwise stable to support the equipment being used; and
 - viii. slash, branches, and limbs resulting from cutting and removal operations shall not be placed within 25 feet of the bank of any water body.
6. Assessment, monitoring, containment, mitigation, and remediation of, or other response to, a release or threat of release of oil and/or hazardous material in accordance with the provisions of 310 CMR 40.0000: *Massachusetts Contingency Plan* and the following general conditions (although no such measure may be permitted which is designed in accordance with the provisions of 310 CMR 40.1020: *Background Levels of Oil and Hazardous Material* solely to reduce contamination to a level lower than that which is needed to achieve "No Significant Risk" as defined in 310 CMR 40.0006(12)):
- a. There are no practicable alternatives to the response action being proposed that are consistent with the provisions of 310 CMR 40.0000: *Massachusetts Contingency Plan* and that would be less damaging to resource areas. The alternatives analysis shall include the following:
 - i. an alternative that does not alter resource areas, which will provide baseline data for evaluating other alternatives; and
 - ii. an assessment of alternatives to both temporary and permanent impacts to resource areas.
- A "Comprehensive Remedial Action Alternative" that is selected in accordance with the provisions of 310 CMR 40.0851 through 40.0869 shall be deemed to have met the requirements of 310 CMR 10.24(7)(c)6.a.; and
- b. Such projects shall be designed, constructed, implemented, operated, and maintained to avoid or, where avoidance is not practicable, to minimize impacts to resource areas, and to meet the following standards to the maximum extent practicable:
 - i. hydrological changes to resource areas shall be minimized;
 - ii. best management practices shall be used to minimize adverse impacts during construction, including prevention of erosion and siltation of resource areas in accordance with standard U.S.D.A. Soil Conservation Service methods;
 - iii. mitigating measures shall be implemented that contribute to the protection of the interests identified in M.G.L. c. 131, §40;
 - iv. no access road, assessment or monitoring device, or other structure or activity shall restrict flows so as to cause an increase in flood stage or velocity;
 - v. temporary structures and work areas in resource areas, such as access roads and assessment and monitoring devices, shall be removed within 30 days of completion of the work. Temporary alterations to resource areas shall be

substantially restored to preexisting hydrology and topography. At least 75% of the surface of any area of disturbed vegetation shall be reestablished with indigenous wetland plant species within two growing seasons and prior to said vegetative reestablishment any exposed soil in the area of disturbed vegetation shall be temporarily stabilized to prevent erosion in accordance with standard U.S.D.A. Soil Conservation Service methods. Temporary structures, work areas, and alterations to resource areas are those that no longer are necessary to fulfill the requirements of 310 CMR 40.0000: *Massachusetts Contingency Plan*; and vi. work in resource areas shall occur only when the ground is sufficiently frozen, dry, or otherwise stable to support the equipment being used.

10.24: continued

7. The construction of a new access roadway, or the improvement, repair and/or replacement of an existing access roadway, needed to transport equipment to a renewable energy project site, provided that it is carried out in accordance with the following general conditions and any additional conditions deemed necessary by the issuing authority. Such projects shall be designed, constructed, implemented, operated, and maintained to meet all of the following standards to the maximum extent practicable:

- a. The work is limited to the following coastal resource areas or portions thereof: the portion of Land Subject to Coastal Storm Flowage that is outside the Velocity Zone, Designated Port Areas, and Banks of or Land under the Ocean, Ponds, Streams, Rivers, Lakes or Creeks that Underlie an Anadromous/Catadromous Fish Run.
- b. Hydrological changes to resource areas shall be minimized.
- c. Best management practices shall be used to minimize adverse impacts during construction. An applicant shall be presumed to use best management practices to minimize adverse impacts during construction if he or she implements erosion and sediment controls in accordance with the *Massachusetts Erosion and Sediment Control Guidelines*. This presumption may be rebutted by credible evidence from a competent source.
- d. No access road or other structure or activity shall restrict flows so as to cause an increase in flood stage or velocity.
- e. No change in the existing surface topography or the existing soil and surface water levels shall occur except for temporary access roads.
- f. Temporary structures and work areas in resource areas shall be removed within 30 days of completion of the work. Temporary alterations to resource areas shall be substantially restored to preexisting hydrology and topography. At least 75% of the surface of any area of disturbed vegetation shall be reestablished with indigenous wetland plant species within two growing seasons and prior to said vegetative reestablishment any exposed soil in the area of disturbed vegetation shall be temporarily stabilized to prevent erosion. Surface areas shall be presumed to be stabilized to prevent erosion if the applicant implements the procedures set forth in the *Massachusetts Erosion and Sediment Control Guidelines*. This presumption may be rebutted by credible evidence from a competent source.
- g. Work in resource areas shall occur only during those periods when the ground is sufficiently frozen, dry, or otherwise stable to support the equipment being used.
- h. Slash, branches, and limbs resulting from cutting and removal operations shall not be placed within 25 feet of the bank of any water body.

(8) Ecological Restoration Limited Project.

(a) Notwithstanding the requirements of 310 CMR 10.25 through 10.35, 10.54 through 10.58, and 10.60, the Issuing Authority may issue an Order of Conditions permitting an Ecological Restoration Project listed in 310 CMR 10.24(8)(e) as an Ecological Restoration Limited Project and impose such conditions as will contribute to the interests identified in M.G.L. c. 131, § 40, provided that:

1. The Issuing Authority determines that the project is an Ecological Restoration Project as defined in 310 CMR 10.04;
2. If the project will impact an area located within estimated habitat which is indicated on the most recent Estimated Habitat Map of State-listed Rare Wetlands Wildlife published by the Natural Heritage and Endangered Species Program (Program), the applicant has obtained a preliminary written determination from the Program in

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

accordance with 310 CMR 10.11(2) that the project will not have any adverse long-term and short-term effects on specified habitat sites of Rare Species or the project will be carried out in accordance with a habitat management plan that has been approved in writing by the Natural Heritage and Endangered Species Program and submitted with the Notice of Intent;

3. The applicant demonstrates that the project will be carried out in accordance with any time of year restrictions or other conditions recommended by the Division of Marine Fisheries for coastal waters and the Division of Fisheries and Wildlife in accordance with 310 CMR 10.11(3);

10.24: continued

4. If the project is located in a Coastal Dune or Barrier Beach, the applicant has demonstrated that s/he has avoided and minimized armoring of the Coastal Dune or Barrier Beach to the maximum extent practicable; and
 5. The applicant demonstrates that the project complies with all applicable provisions of 310 CMR 10.24(1) through (6) and (9) and (10).
- (b) An Ecological Restoration Project permitted as an Ecological Restoration Limited Project in accordance with 310 CMR 10.24(8) may result in the temporary or permanent loss of Resource Areas and/or the conversion of one Resource Area to another when such loss is necessary to the achievement of the project's ecological restoration goals.
- (c) As set forth in 310 CMR 10.12(3), a person submitting a Notice of Intent for an Ecological Restoration Limited Project in accordance with 310 CMR 10.12(1) and (2) is exempt from the requirement to perform a wildlife habitat evaluation in accordance with the requirements of 310 CMR 10.60, notwithstanding the provisions of 310 CMR 10.54(4)(a)5., 10.56(4)(a)4., and 10.60.
- (d) In determining whether to approve a project as an Ecological Restoration Limited Project, the issuing authority shall consider the following:
1. the condition of existing and historic Resource Areas proposed for restoration including evidence of the extent and severity of the impairment(s) that reduce the capacity of said Resource Areas to protect and sustain the interests identified in M.G.L. c. 131, § 40;
 2. the magnitude and significance of the benefits of the Ecological Restoration Project in improving the capacity of the affected Resource Areas to protect and sustain the other interests identified in M.G.L. c. 131, § 40; and
 3. the magnitude and significance of the impacts of the Ecological Restoration Project on existing Resource Areas that may be modified, converted and/or lost and the interests for which said Resource Areas are presumed significant in 310 CMR 10.00, and the extent to which the applicant will:
 - a. avoid adverse impacts to Resource Areas and the interests identified in M.G.L. c. 131, § 40, that can be avoided without impeding the achievement of the project's ecological restoration goals;
 - b. minimize adverse impacts to Resource Areas and the interests identified in M.G.L. c. 131, § 40, that are necessary to the achievement of the project's ecological restoration goals; and
 - c. utilize best management practices such as erosion and siltation controls and proper construction sequencing to avoid and minimize adverse construction impacts to resource areas and the interests identified in M.G.L. c. 131, § 40.
- (e) Types of Ecological Restoration Limited Projects. The following projects may be permitted as Ecological Restoration Limited Projects in accordance with 310 CMR 10.24(8)(a) through (d):
1. Tidal Restoration Project. A project that will restore tidal flow and that does not meet all the eligibility criteria set forth in 310 CMR 10.13 may be permitted as an Ecological Restoration Limited Project provided that in addition to the criteria set forth in 310 CMR 10.24(8)(a) through (d), the project including any proposed flood mitigation measures will not significantly increase flooding or storm damage impacts to the built environment, including without limitation, buildings, wells, septic systems, roads or other human-made structures or infrastructure.
 2. Shellfish Habitat Restoration Project. A project to emplace cultch or other substrate for the purpose of restoring shellfish habitat may be permitted as an Ecological Restoration Limited Project provided that in addition to the criteria set forth in 310 CMR

10.24(8)(a) through (d) the following criteria are met:

- a. The applicant has received a Special Projects Permit from the Division of Marine Fisheries or, if a municipality, has received a shellfish propagation permit; and
- b. The project is made of cultch (*e.g.*, shellfish shells from oyster, surf or ocean clam) or is a structure manufactured specifically for shellfish enhancement (*e.g.*, reef blocks, reef balls, racks, floats, rafts, suspended gear).

10.24: continued

3. Other Ecological Restoration Projects. An Ecological Restoration Project that is not listed in 310 CMR 10.24(8)(e)1. and 2. may be permitted as an Ecological Restoration Limited Project provided the project meets the criteria set forth in 310 CMR 10.24(8)(a) through (d). Such projects include but are not limited to the restoration, enhancement, or management of Rare Species habitat, the restoration of hydrologic and habitat connectivity, the removal of aquatic nuisance vegetation to impede eutrophication, the thinning or planting of vegetation to improve habitat value, fill removal and regrading, riparian corridor re-naturalization, river floodplain re-connection, in-stream habitat enhancement, remediation of historic tidal wetland ditching, eel grass restoration, invasive species management, and the installation of fish passage structures.

(9) The Notice of Intent for any projects involving the construction, repair, replacement or expansion of public or private infrastructure shall include an operation and maintenance plan to ensure that the infrastructure will continue to function as designed. Implementation of the operation and maintenance plan as approved by the issuing authority shall be a continuing condition that shall be set forth in the Order of Conditions and the Certificate of Compliance.

(10) Any person proposing replacement of an existing stream crossing shall demonstrate to the issuing authority that the impacts of the crossing have been avoided where possible, and when not possible, have been minimized and that mitigation measures have been provided to contribute to the protection of the interests identified in M.G.L. c. 131, § 40. An applicant will be presumed to have made this showing if the project is designed as follows:

(a) If the project includes replacement of an existing non-tidal crossing that is part of an Anadromous/Catadromous Fish Run, pursuant to 310 CMR 10.35, the applicant demonstrates to the satisfaction of the issuing authority that the crossing complies with the Massachusetts Stream Crossing Standards to the maximum extent practicable.

(b) If the project includes replacement of an existing tidal crossing that restricts tidal flow, the applicant demonstrates to the satisfaction of the issuing authority that tidal restriction will be eliminated to the maximum extent practicable.

This presumption may be rebutted by credible evidence from a competent source that the impacts of the project have not been avoided, minimized or mitigated to the maximum extent practicable.

At a minimum, in evaluating the potential to comply with the standards to the maximum extent practicable the applicant shall consider site constraints in meeting the standard, undesirable effects or risk in meeting the standard, and the environmental benefit of meeting the standard compared to the cost, by evaluating the following:

- The potential for downstream flooding;
- Upstream and downstream habitat (in-stream habitat, wetlands);
- Potential for erosion and head-cutting;
- Stream stability;
- Habitat fragmentation caused by the crossing;
- The amount of stream mileage made accessible by the improvements;
- Storm flow conveyance;
- Engineering design constraints specific to the crossing;
- Hydrologic constraints specific to the crossing;
- Impacts to wetlands that would occur by improving the crossing;
- Potential to affect property and infrastructure; and
- Cost of replacement.

10.25: Land under the Ocean

(1) Preamble. Land under the ocean is likely to be significant to the protection of marine fisheries and, where there are shellfish, to protection of land containing shellfish.¹ Nearshore areas of land under the ocean are likely to be significant to storm damage prevention, flood control, and protection of wildlife habitat.

Land under the ocean provides feeding areas, spawning and nursery grounds and shelter for many coastal organisms related to marine fisheries. Nearshore areas of land under the ocean help reduce storm damage and flooding by diminishing and buffering the high energy effects of storms. Submerged bars dissipate storm wave energy. Such areas provide a source of sediment for seasonal rebuilding of coastal beaches and dunes. Nearshore areas of land under the ocean also provide important food for birds. For example, waterfowl feed heavily on vegetation (such as eel grass, widgeon grass, and macrophytic algae) and invertebrates (such as polychaetes and mollusks) found in estuaries and other shallow submerged land under the ocean.

When a proposed project involves the dredging, removing, filling or altering of a nearshore area of land under the ocean, the issuing authority shall presume that the area is significant to the interests specified above.

When a proposed project involves the dredging, removing, filling or altering of land under the ocean beyond the nearshore area, the issuing authority shall presume that such land is significant to the protection of marine fisheries and, where there are shellfish, to the protection of land containing shellfish and that it is not significant to storm damage prevention, flood control or protection of wildlife habitat.

These presumptions may be overcome only upon a clear showing that the area or land does not play a role in the protection of marine fisheries or wildlife habitat, land containing shellfish, storm damage prevention or flood control, as appropriate, and if the issuing authority makes a written determination to such effect.

When land under the ocean underlies an anadromous/catadromous fish run, 310 CMR 10.35(1) through (4) shall apply. When land under the ocean is in a designated port area, 310 CMR 10.26(1) through (4) shall apply. When land under the ocean is land containing shellfish, 310 CMR 10.34(1) through (7) shall apply.

When nearshore areas of land under the ocean are significant to storm damage prevention or flood control, the bottom topography of such land is critical to the protection of those interests.

When nearshore areas or other land under the ocean is significant to the protection of marine fisheries or wildlife habitat, the following factors are critical to the protection of such interests:

- (a) water circulation;
- (b) distribution of sediment grain size;
- (c) water quality;
- (d) finfish habitat; and
- (e) important food for wildlife.

(2) Definitions.

Land under the Ocean means land extending from the mean low water line seaward to the boundary of the municipality's jurisdiction and includes land under estuaries.

Nearshore Areas of land under the ocean means that land extending from the mean low water line to the seaward limit of a municipality's jurisdiction, but in no case beyond the point where the land is 80 feet below the level of the ocean at mean low water. However, the nearshore area

¹ For regulations concerning land containing shellfish, see 310 CMR 10.34.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

shall extend seaward only to that point where the land is 30 feet below the level of the ocean at mean low water for municipalities bordering Buzzard's Bay and Vineyard Sound (west of a line between West Chop, Martha's Vineyard and Nobska Point, Falmouth), 40 feet below the level of the ocean at mean low water for Provincetown's land in Cape Cod Bay, and 50 feet below the level of the ocean at mean low water for Truro's and Wellfleet's land in Cape Cod Bay.

WHEN LAND UNDER THE OCEAN OR NEARSHORE AREAS OF LAND UNDER THE OCEAN ARE FOUND TO BE SIGNIFICANT TO THE PROTECTION OF MARINE FISHERIES, PROTECTION OF WILDLIFE HABITAT, STORM DAMAGE PREVENTION OR FLOOD CONTROL, 310 CMR 10.25(3) THROUGH (7) SHALL APPLY:

10.25: continued

(3) Improvement dredging for navigational purposes affecting land under the ocean shall be designed and carried out using the best available measures so as to minimize adverse effects on such interests caused by changes in:

- (a) bottom topography which will result in increased flooding or erosion caused by an increase in the height or velocity of waves impacting the shore;
- (b) sediment transport processes which will increase flood or erosion hazards by affecting the natural replenishment of beaches;
- (c) water circulation which will result in an adverse change in flushing rate, temperature, or turbidity levels; or
- (d) marine productivity which will result from the suspension or transport of pollutants, the smothering of bottom organisms, the accumulation of pollutants by organisms, or the destruction of marine fisheries habitat or wildlife habitat.

(4) Maintenance dredging for navigational purposes affecting land under the ocean shall be designed and carried out using the best available measures so as to minimize adverse effects on such interests caused by changes in marine productivity which will result from the suspension or transport of pollutants, increases in turbidity, the smothering of bottom organisms, the accumulation of pollutants by organisms, or the destruction of marine fisheries habitat or wildlife habitat.

(5) Projects not included in 310 CMR 10.25(3) or (4) which affect nearshore areas of land under the ocean shall not cause adverse effects by altering the bottom topography so as to increase storm damage or erosion of coastal beaches, coastal banks, coastal dunes, or salt marshes.

(6) Projects not included in 310 CMR 10.25(3) which affect land under the ocean shall if water-dependent be designed and constructed, using best available measures, so as to minimize adverse effects, and if non-water-dependent, have no adverse effects, on marine fisheries habitat or wildlife habitat caused by:

- (a) alterations in water circulation;
- (b) destruction of eelgrass (*Zostera marina*) or widgeon grass (*Ruppia maritima*) beds;
- (c) alterations in the distribution of sediment grain size;
- (d) changes in water quality, including, but not limited to, other than natural fluctuations in the level of dissolved oxygen, temperature or turbidity, or the addition of pollutants; or
- (e) alterations of shallow submerged lands with high densities of polychaetes, mollusks or macrophytic algae.

(7) Notwithstanding the provisions of 310 CMR 10.25(3) through (6), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

10.26: Designated Port Areas

(1) Preamble. Land under the ocean in designated port areas is likely to be significant to marine fisheries, storm damage prevention and flood control. In designated port areas, salt marshes, coastal dunes, land under salt ponds, coastal beaches, tidal flats, barrier beaches, rocky intertidal shores and land containing shellfish are not likely to be significant to marine fisheries, storm damage prevention or flood control.

Many species of marine fisheries, including anadromous fish, may inhabit port areas. Anadromous fish may need to be able to pass through port areas to inland spawning areas or to

the sea. Other species frequently feed in designated port areas due to high nutrient concentrations in the waters and the tidelands.

Designated port areas, which are portions of developed harbors, are usually located in estuaries. Relatively high concentrations of contaminants, from vessel discharges and point and non-point source discharges, are likely to occur in port areas. Water circulation patterns tend to distribute pollution throughout the estuary, and to other areas which are likely to be significant to other interests of M.G.L. c. 131, § 40. Land forms in designated port areas have been greatly altered from their natural shape, and coastal engineering structures often have replaced natural protection for upland areas from storm damage and flooding.

10.26: continued

Land under the ocean often provides support for such structures. Some proposed activities may alter wave and current patterns so as to affect the stability of such structures or the depths or configurations of navigation channels.

Where a proposed project involves dredging, filling, removing, or altering land under the ocean in designated port areas, the issuing authority shall presume that the area is significant to marine fisheries, storm damage prevention and flood control. These presumptions may be overcome only upon a clear showing that land under the ocean in designated port areas does not play a role in the protection of marine fisheries, storm damage prevention or flood control, or that a salt marsh, coastal dune, land under a salt pond, coastal beach, tidal flat, barrier beach, rocky intertidal shore or land containing shellfish, in designated port areas, does play a role in marine fisheries, storm damage prevention or flood control, and if the issuing authority makes a written determination to such effect.

When a proposed project in a designated port area is on land under the ocean which is determined to be significant to marine fisheries, the following factors are critical to the protection of such interests:

- (a) water circulation; and
- (b) water quality.

When a proposed project in a designated port area is on land under the ocean which is determined to be significant to storm damage prevention or flood control, the ability of such land to provide support for adjacent coastal or human-made structures is critical to the protection of such interests.

(2) Definition.

Designation of Port Areas means those areas designated in 301 CMR 25.00: *Designation of Port Areas*.

WHEN LAND UNDER THE OCEAN IN DESIGNATED PORT AREAS IS FOUND TO BE SIGNIFICANT TO THE PROTECTION OF MARINE FISHERIES, STORM DAMAGE PREVENTION OR FLOOD CONTROL, 310 CMR 10.26(3) AND (4) SHALL APPLY:

(3) Projects shall be designed and constructed, using best practical measures, so as to minimize adverse effects on marine fisheries caused by changes in:

- (a) water circulation;
- (b) water quality, including, but not limited to, other than natural fluctuations in the level of dissolved oxygen, temperature or turbidity, or the addition of pollutants.

(4) Projects shall be designed and constructed, using the best practical measures, so as to minimize, adverse effects on storm damage prevention or flood control caused by changes in such land's ability to provide support for adjacent coastal banks or adjacent coastal engineering structures.

10.27: Coastal Beaches

(1) Preamble. Coastal beaches, which are defined to include tidal flats, are significant to storm damage prevention, flood control and the protection of wildlife habitat. In addition, tidal flats are likely to be significant to the protection of marine fisheries and where there are shellfish, to

land containing shellfish.²

Coastal beaches dissipate wave energy by their gentle slope, their permeability and their granular nature, which permit changes in beach form in response to changes in wave conditions.

Coastal beaches serve as a sediment source for dunes and subtidal areas. Steep storm waves cause beach sediment to move offshore, resulting in a gentler beach slope and greater energy dissipation. Less steep waves cause an onshore return of beach sediment, where it will be available to provide protection against future storm waves.

A coastal beach at any point serves as a sediment source for coastal areas downdrift from that point. The oblique approach of waves moves beach sediment alongshore in the general direction of wave action. Thus, the coastal beach is a body of sediment which is moving along the shore.

² For regulations concerning land containing shellfish *see* 310 CMR 10.34.

10.27: continued

Coastal beaches serve the purposes of storm damage prevention and flood control by dissipating wave energy, by reducing the height of storm waves, and by providing sediment to supply other coastal features, including coastal dunes, land under the ocean and other coastal beaches. Interruptions of these natural processes by human-made structures reduce the ability of the coastal beach to perform these functions.

A number of birds also nest in the coastal berm, between the toe of a dune and the high tide line. In addition, isolated coastal beaches on small islands are important as haul out areas for harbor seals.

Tidal flats are likely to be significant to the protection of marine fisheries and wildlife habitat because they provide habitats for marine organisms such as polychaete worms and mollusks, which in turn are food sources for fisheries and migratory and wintering birds. Coastal beaches are extremely important in recycling of nutrients derived from storm drift and tidal action. Vegetative debris along the drift line is vital for resident and migratory shorebirds, which feed largely on invertebrates which eat the vegetation. Below the drift line in the lower intertidal zone are infauna (invertebrates such as mollusks and crustacea) which are also eaten by shore birds.

Tidal flats are also sites where organic and inorganic materials may become entrapped and then returned to the photosynthetic zone of the water column to support algae and other primary producers of the marine food web.

When a proposed project involves the dredging, filling, removing, or altering of a coastal beach, the issuing authority shall presume that the coastal beach is significant to the interests specified above. This presumption may be overcome only upon a clear showing that a coastal beach does not play a role in storm damage prevention, flood control, or protection of wildlife habitat, or that tidal flats do not play a role in the protection of marine fisheries or land containing shellfish, and if the issuing authority makes a written determination to such effect.

When coastal beaches are determined to be significant to storm damage prevention or flood control, the following characteristics are critical to the protection of those interests:

- (a) volume (quantity of sediments) and form; and
- (b) the ability to respond to wave action.

When coastal beaches are significant to the protection of marine fisheries or wildlife habitat, the following characteristics are critical to the protection of those interests:

- (a) distribution of sediment grain size;
- (b) water circulation;
- (c) water quality; and
- (d) relief and elevation.

When tidal flats are in a designated port area, 310 CMR 10.26(1) through (4) shall apply. When tidal flats are significant to land containing shellfish, 310 CMR 10.34(1) through (8) shall apply.

(2) Definitions.

Coastal Beach means unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats. Coastal beaches extend from the mean low water line landward to the dune line, coastal bankline or the seaward edge of existing human-made structures, when these structures replace one of the above lines, whichever is closest to the ocean.

Tidal Flat means any nearly level part of a coastal beach which usually extends from the mean low water line landward to the more steeply sloping face of the coastal beach or which may be separated from the beach by land under the ocean.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

WHEN A COASTAL BEACH IS DETERMINED TO BE SIGNIFICANT TO STORM DAMAGE PREVENTION, FLOOD CONTROL, OR PROTECTION OF WILDLIFE HABITAT, 310 CMR 10.27(3) THROUGH (7) SHALL APPLY:

(3) Any project on a coastal beach, except any project permitted under 310 CMR 10.30(3)(a), shall not have an adverse effect by increasing erosion, decreasing the volume or changing the form of any such coastal beach or an adjacent or downdrift coastal beach.

10.27: continued

- (4) Any groin, jetty, solid pier, or other such solid fill structure which will interfere with littoral drift, in addition to complying with 310 CMR 10.27(3), shall be constructed as follows:
- (a) It shall be the minimum length and height demonstrated to be necessary to maintain beach form and volume. In evaluating necessity, coastal engineering, physical oceanographic and/or coastal geologic information shall be considered.
 - (b) Immediately after construction any groin shall be filled to entrapment capacity in height and length with sediment of grain size compatible with that of the adjacent beach.
 - (c) Jetties trapping littoral drift material shall contain a sand by-pass system to transfer sediments to the downdrift side of the inlet or shall be periodically redredged to provide beach nourishment to ensure that downdrift or adjacent beaches are not starved of sediments.
- (5) Notwithstanding 310 CMR 10.27(3), beach nourishment with clean sediment of a grain size compatible with that on the existing beach may be permitted.

WHEN A TIDAL FLAT IS DETERMINED TO BE SIGNIFICANT TO MARINE FISHERIES OR THE PROTECTION OF WILDLIFE HABITAT, 310 CMR 10.27(6) SHALL APPLY:

- (6) In addition to complying with the requirements of 310 CMR 10.27(3) and (4), a project on a tidal flat shall if water-dependent be designed and constructed, using best available measures, so as to minimize adverse effects, and if non-water-dependent, have no adverse effects, on marine fisheries and wildlife habitat caused by:
- (a) alterations in water circulation;
 - (b) alterations in the distribution of sediment grain size; and
 - (c) changes in water quality, including, but not limited to, other than natural fluctuations in the levels of dissolved oxygen, temperature or turbidity, or the addition of pollutants.
- (7) Notwithstanding the provisions of 310 CMR 10.27(3) through (6), no project may be permitted which will have any adverse effect on specified habitat sites or rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

10.28: Coastal Dunes

(1) Preamble. All coastal dunes are likely to be significant to storm damage prevention and flood control, and all coastal dunes on barrier beaches and the coastal dune closest to the coastal beach, also known as the Primary Frontal Dune as defined in 310 CMR 10.04, in any area are per se significant to storm damage prevention and flood control. The Coastal High Hazard Area or Velocity Zone extends at a minimum to the inland limit of the Primary Frontal Dune along the open coast. Coastal dunes are also often significant to the protection of wildlife habitat.

Coastal dunes aid in storm damage prevention and flood control by supplying sand to coastal beaches. Coastal dunes protect inland coastal areas from storm damage and flooding by storm waves and storm elevated sea levels because such dunes are higher than the coastal beaches which they border. In order to protect this function, coastal dune volume must be maintained while allowing the coastal dune shape to conform to natural wind and water flow patterns.

Vegetation cover contributes to the growth and stability of coastal dunes by providing conditions favorable to sand deposition.

On retreating shorelines, the ability of the coastal dunes bordering the coastal beach to move landward at the rate of shoreline retreat allows these dunes to maintain their form and volume, which in turn promotes their function of protecting against storm damage or flooding.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

A number of birds, most commonly terns and gulls, nest at the base or sides of dunes. In some dune systems other birds also nest in the interdunal area, the species being determined by the plant community structure, topography, and hydrologic regime of the area. In a few dune systems, wet meadows or vernal pool habitats occur, which serve as important feeding areas for a wide variety of bird species.

When a proposed project involves the dredging, filling, removal or alteration of a coastal dune, the issuing authority shall presume that the area is significant to the interests of storm damage prevention, flood control and the protection of wildlife habitat. This presumption may be overcome only upon a clear showing that a coastal dune does not play a role in storm damage prevention, flood control or the protection of wildlife habitat, and if the issuing authority makes a written determination to that effect.

10.28: continued

When a coastal dune is significant to storm damage prevention, flood control or the protection of wildlife habitat, the following characteristics are critical to the protection of those interest(s):

- (a) the ability of the dune to erode in response to coastal beach conditions;
- (b) dune volume;
- (c) dune form, which must be allowed to be changed by wind and natural water flow;
- (d) vegetative cover;
- (e) the ability of the dune to move landward or laterally; or
- (f) the ability of the dune to continue serving as bird nesting habitat.

(2) Definition.

Coastal Dune means any natural hill, mound or ridge of sediment landward of a coastal beach deposited by wind action or storm overwash. Coastal dune also means sediment deposited by artificial means and serving the purpose of storm damage prevention or flood control.

WHEN A COASTAL DUNE IS DETERMINED TO BE SIGNIFICANT TO STORM DAMAGE PREVENTION, FLOOD CONTROL OR THE PROTECTION OF WILDLIFE HABITAT, 310 10.28(3) THROUGH (6) SHALL APPLY:

(3) Any alteration of, or structure on, a coastal dune or within 100 feet of a coastal dune shall not have an adverse effect on the coastal dune by:

- (a) affecting the ability of waves to remove sand from the dune;
- (b) disturbing the vegetative cover so as to destabilize the dune;
- (c) causing any modification of the dune form that would increase the potential for storm or flood damage;
- (d) interfering with the landward or lateral movement of the dune;
- (e) causing removal of sand from the dune artificially; or
- (f) interfering with mapped or otherwise identified bird nesting habitat.

(4) Notwithstanding the provisions of 310 CMR 10.28(3), when a building already exists upon a coastal dune, a project accessory to the existing building may be permitted, provided that such work, using the best commercially available measures, minimizes the adverse effect on the coastal dune caused by the impacts listed in 310 CMR 10.28(3)(b) through (e). Such an accessory project may include, but is not limited to, a small shed or a small parking area for residences. It shall not include coastal engineering structures.

(5) The following projects may be permitted, provided that they adhere to the provisions of 310 CMR 10.28(3):

- (a) pedestrian walkways, designed to minimize the disturbance to the vegetative cover and traditional bird nesting habitat;
- (b) fencing and other devices designed to increase dune development; and
- (c) plantings compatible with the natural vegetative cover.

(6) Notwithstanding the provisions of 310 CMR 10.28(3) through (5), no project may be permitted which will have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.37.

10.29: Barrier Beaches

(1) Preamble. Barrier beaches are significant to storm damage prevention and flood control and are likely to be significant to the protection of marine fisheries and wildlife habitat and, where there are shellfish, the protection of land containing shellfish.³

³ For regulations concerning land containing shellfish *see* 310 CMR 10.34.

10.28: continued

Barrier beaches protect landward areas because they provide a buffer to storm waves and to sea levels elevated by storms. Barrier beaches protect from wave action such highly productive wetlands as salt marshes, estuaries, lagoons, salt ponds and fresh water marshes and ponds, which are in turn important to marine fisheries and protection of wildlife habitat. Barrier beaches and the dunes thereon are also important to the protection of wildlife habitat in the ways described in 310 CMR 10.27(1) (Coastal Beaches) and 10.28(1) (Coastal Dunes).

Barrier beaches are maintained by the alongshore movement of beach sediment caused by wave action. The coastal dunes and tidal flats on a barrier beach consist of sediment supplied by wind action, storm wave overwash and tidal inlet deposition. Barrier beaches in Massachusetts undergo a landward migration caused by the landward movement of sediment by wind, storm wave overwash and tidal current processes. The continuation of these processes maintains the volume of the landform which is necessary to carry out the storm and flood buffer function.

When a proposed project involves removal, filling, dredging or altering of a barrier beach, the issuing authority shall presume that the barrier beach, including all of its coastal dunes, is significant to the interest(s) specified above. This presumption may be overcome only upon a clear showing that a barrier beach, including all of its coastal dunes, does not play a role in storm damage prevention, flood control, or the protection of marine fisheries, wildlife habitat, or land containing shellfish, and if the issuing authority makes a written determination to such effect.

When a barrier beach is significant to storm damage prevention and flood control, the characteristics of coastal beaches, tidal flats and coastal dunes listed in 310 CMR 10.27(1) and 10.28(1) and their ability to respond to wave action, including storm overwash sediment transport, are critical to the protection of the interests specified in 310 CMR 10.29.

(2) Definition.

Barrier Beach means a narrow low-lying strip of land generally consisting of coastal beaches and coastal dunes extending roughly parallel to the trend of the coast. It is separated from the mainland by a narrow body of fresh, brackish or saline water or a marsh system. A barrier beach may be joined to the mainland at one or both ends.

(3) When a Barrier Beach Is Determined to Be Significant to Storm Damage Prevention, Flood Control, Marine Fisheries or Protection of Wildlife Habitat. 310 CMR 10.27(3) through (6) (coastal beaches) and 10.28(3) through (5) (coastal dunes) shall apply to the coastal beaches and to all coastal dunes which make up a barrier beach.

(4) Notwithstanding the provisions of 310 CMR 10.29(3), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

10.30: Coastal Banks

(1) Preamble. Coastal banks are likely to be significant to storm damage prevention and flood control. Coastal banks that supply sediment to coastal beaches, coastal dunes and barrier beaches are per se significant to storm damage prevention and flood control. Coastal banks that, because of their height, provide a buffer to upland areas from storm waters are significant to storm damage prevention and flood control.

Coastal banks composed of unconsolidated sediment and exposed to vigorous wave action serve as a major continuous source of sediment for beaches, dunes, and barrier beaches (as well as other land forms caused by coastal processes). The supply of sediment is removed from banks

by wave action, and this removal takes place in response to beach and sea conditions. It is a naturally occurring process necessary to the continued existence of coastal beaches, coastal dunes and barrier beaches which, in turn, dissipate storm wave energy, thus protecting structures of coastal wetlands landward of them from storm damage and flooding.

Coastal banks, because of their height and stability, may act as a buffer or natural wall, which protects upland areas from storm damage and flooding. While erosion caused by wave action is an integral part of shoreline processes and furnishes important sediment to downdrift landforms, erosion of a coastal bank by wind and rain runoff, which plays only a minor role in beach nourishment, should not be increased unnecessarily. Therefore, disturbances to a coastal bank which reduce its natural resistance to wind and rain erosion cause cuts and gullies in the bank, increase the risk of its collapse, increase the danger to structures at the top of the bank and decrease its value as a buffer.

10.30: continued

Bank vegetation tends to stabilize the bank and reduce the rate of erosion due to wind and rain runoff. Pedestrian and vehicular traffic damages the protective vegetation and frequently leads to gully erosion or deep "blowouts" on unconsolidated banks. Therefore, any project permitted by 310 CMR 10.30 should incorporate, when appropriate, elevated walkways.

A particular coastal bank may serve both as a sediment source and as a buffer, or it may serve only one role.

When a proposed project involves dredging, removing, filling, or altering a coastal bank, the issuing authority shall presume that the area is significant to storm damage prevention and flood control. This presumption may be overcome only upon a clear showing that a coastal bank does not play a role in storm damage prevention or flood control, and if the issuing authority makes a written determination to that effect.

When issuing authority determines that a coastal bank is significant to storm damage prevention or flood control because it supplies sediment to coastal beaches, coastal dunes or barrier beaches, the ability of the coastal bank to erode in response to wave action is critical to the protection of that interest(s).

When the issuing authority determines that a coastal bank is significant to storm damage prevention or flood control because it is a vertical buffer to storm waters, the stability of the bank, *i.e.*, the natural resistance of the bank to erosion caused by wind and rain runoff, is critical to the protection of that interest(s).

(2) Definition.

Coastal Bank means the seaward face or side of any elevated landform, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland.

WHEN A COASTAL BANK IS DETERMINED TO BE SIGNIFICANT TO STORM DAMAGE PREVENTION OR FLOOD CONTROL BECAUSE IT SUPPLIES SEDIMENT TO COASTAL BEACHES, COASTAL DUNES OR BARRIER BEACHES, 310 CMR 10.30(3) THROUGH (5) SHALL APPLY:

(3) No new bulkhead, revetment, seawall, groin or other coastal engineering structure shall be permitted on such a coastal bank except that such a coastal engineering structure shall be permitted when required to prevent storm damage to buildings constructed prior to the effective date of 310 CMR 10.21 through 10.37 or constructed pursuant to a Notice of Intent filed prior to the effective date of 310 CMR 10.21 through 10.37 (August 10, 1978), including reconstructions of such buildings subsequent to the effective date of 310 CMR 10.21 through 10.37, provided that the following requirements are met:

- (a) a coastal engineering structure or a modification thereto shall be designed and constructed so as to minimize, using best available measures, adverse effects on adjacent or nearby coastal beaches due to changes in wave action, and
- (b) the applicant demonstrates that no method of protecting the building other than the proposed coastal engineering structure is feasible.
- (c) protective planting designed to reduce erosion may be permitted.

(4) Any project on a coastal bank or within 100 feet landward of the top of a coastal bank, other than a structure permitted by 310 CMR 10.30(3), shall not have an adverse effect due to wave action on the movement of sediment from the coastal bank to coastal beaches or land subject to tidal action.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

(5) The Order of Conditions and the Certificate of Compliance for any new building within 100 feet landward of the top of a coastal bank permitted by the issuing authority under M.G.L. c. 131, § 40 shall contain the specific condition: 310 CMR 10.30(3), promulgated under M.G.L. c. 131, § 40, requires that no coastal engineering structure, such as a bulkhead, revetment, or seawall shall be permitted on an eroding bank at any time in the future to protect the project allowed by this Order of Conditions.

WHEN A COASTAL BANK IS DETERMINED TO BE SIGNIFICANT TO STORM DAMAGE PREVENTION OR FLOOD CONTROL BECAUSE IT IS A VERTICAL BUFFER TO STORM WATERS, 310 CMR 10.30(6) THROUGH (8) SHALL APPLY:

10.30: continued

- (6) Any project on such a coastal bank or within 100 feet landward of the top of such coastal bank shall have no adverse effects on the stability of the coastal bank.
- (7) Bulkheads, revetments, seawalls, groins or other coastal engineering structures may be permitted on such a coastal bank except when such bank is significant to storm damage prevention or flood control because it supplies sediment to coastal beaches, coastal dunes, and barrier beaches.
- (8) Notwithstanding the provisions of 310 CMR 10.30(3) through (7), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

10.31: Rocky Intertidal Shores

(1) Preamble. Rocky intertidal shores are likely to be significant to storm damage prevention, flood control, protection of marine fisheries and wildlife habitat and where there are shellfish, protection of land containing shellfish.⁴

Rocky shore environments are habitats for macroalgae and marine invertebrates and provide protection to and food for, larger marine organisms such as crabs, lobsters, and such fish species as winter flounder, as well as a number of birds. Most marine plants and animals found in rocky shore environments are uniquely adapted to survive there and cannot survive elsewhere. Harbor seals also use rocky intertidal shores, such as rock outcroppings or isolated shores of small islands, as haul out areas.

When a proposed project involves the filling, removing or altering of a rocky intertidal shore, the issuing authority shall presume that such shore is significant to the interests specified above. This presumption may be overcome only upon a clear showing that a rocky intertidal shore does not play a role in storm damage prevention, flood control, protection of marine fisheries or wildlife habitat, and where there are shellfish, protection of land containing shellfish and if the issuing authority makes a written determination to such effect.⁴

When a rocky intertidal shore is determined to be significant to storm damage prevention, flood control, or protection of wildlife habitat the form and volume of exposed intertidal bedrock and boulders are critical to the protection of those interests.

When a rocky intertidal shore is significant to the protection of marine fisheries or wildlife habitat, water circulation and water quality are critical to the protection of those interests.

(2) Definition.

Rocky Intertidal Shores means naturally occurring rocky areas, such as bedrock or boulder-strewn areas between the mean high water line and the mean low water line.

(3) When a Rocky Intertidal Shore Is Determined to Be Significant to Storm Damage Prevention, Flood Control, or Protection of Wildlife Habitat, any proposed project shall be designed and constructed, using the best practical measures, so as to minimize adverse effects on the form and volume of exposed intertidal bedrock and boulders.

⁴ For regulations concerning land containing shellfish, *see* 310 CMR 10.34.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

(4) When a Rocky Intertidal Shore is Determined to Be Significant to the Protection of Marine Fisheries or Wildlife Habitat, any proposed project shall if water-dependent be designed and constructed, using best available measures, so as to minimize adverse effects, and if non-water-dependent, have no adverse effects, on water circulation and water quality. Water quality impacts include, but are not limited to, other than natural fluctuations in the levels of dissolved oxygen, temperature or turbidity, or the addition of pollutants.

(5) Notwithstanding the provisions of 310 CMR 10.31(3) and (4), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

10.32: Salt Marshes

(1) Preamble. Salt marshes are significant to protection of marine fisheries, wildlife habitat, and where there are shellfish, to protection of land containing shellfish, and prevention of pollution and are likely to be significant to storm damage prevention and ground water supply.

A salt marsh produces large amounts of organic matter. A significant portion of this material is exported as detritus and dissolved organics to estuarine and coastal waters, where it provides the basis for a large food web that supports many marine organisms, including finfish and shellfish as well as many bird species. Salt marshes also provide a spawning and nursery habitat for several important estuarine forage finfish as well as important food, shelter, breeding areas, and migratory and overwintering areas for many wildlife species.

Salt marsh plants and substrate remove pollutants from surrounding waters. The network of salt marsh vegetation roots and rhizomes binds sediments together.

The sediments absorb chlorinated hydrocarbons and heavy metals such as lead, copper, and iron. The marsh also retains nitrogen and phosphorous compounds, which in large amounts can lead to algal blooms in coastal waters.

The underlying peat also serves as a barrier between fresh ground water landward of the salt marsh and the ocean, thus helping to maintain the level of such ground water.

Salt marsh cord grass and underlying peat are resistant to erosion and dissipate wave energy, thereby providing a buffer that reduces wave damage.

When a proposed project involves the dredging, filling, removing or altering of a salt marsh, the issuing authority shall presume that such area is significant to the interests specified above. This presumption may be overcome only upon a clear showing that a salt marsh does not play a role in the protection of marine fisheries or wildlife habitat, prevention of pollution, ground water supply, or storm damage prevention, and if the issuing authority makes a written determination to such effect.

When a salt marsh is significant to one or more of the interests specified above, the following characteristics are critical to the protection of such interest(s):

- (a) the growth, composition and distribution of salt marsh vegetation, (protection of marine fisheries and wildlife habitat, prevention of pollution, storm damage prevention);
- (b) the flow and level of tidal and fresh water (protection of marine fisheries and wildlife habitat, prevention of pollution); and
- (c) the presence and depth of peat (ground water supply, prevention of pollution, storm damage prevention).

(2) Definitions.

Salt Marsh means a coastal wetland that extends landward up to the highest high tide line, that is, the highest spring tide of the year, and is characterized by plants that are well adapted to or prefer living in, saline soils. Dominant plants within salt marshes typically include salt meadow cord grass (*Spartina patens*) and/or salt marsh cord grass (*Spartina alterniflora*), but may also include, without limitation, spike grass (*Distichlis spicata*), high-tide bush (*Iva frutescens*), black grass (*Juncus gerardii*), and common reedgrass (*Phragmites*). A salt marsh may contain tidal creeks, ditches and pools.

Spring Tide means the tide of the greatest amplitude during the approximately 14-day tidal cycle. It occurs at or near the time when the gravitational forces of the sun and the moon are in phase (new and full moons).

WHEN A SALT MARSH IS DETERMINED TO BE SIGNIFICANT TO THE PROTECTION OF MARINE FISHERIES, THE PREVENTION OF POLLUTION, STORM

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

DAMAGE PREVENTION OR GROUND WATER SUPPLY, 310 CMR 10.32(3) THROUGH (6) SHALL APPLY:

(3) A proposed project in a salt marsh, on lands within 100 feet of a salt marsh, or in a body of water adjacent to a salt marsh shall not destroy any portion of the salt marsh and shall not have an adverse effect on the productivity of the salt marsh. Alterations in growth, distribution and composition of salt marsh vegetation shall be considered in evaluating adverse effects on productivity. 310 CMR 10.32(3) shall not be construed to prohibit the harvesting of salt hay.

10.32: continued

(4) Notwithstanding the provisions of 310 CMR 10.32(3), a small project within a salt marsh, such as an elevated walkway or other structure which has no adverse effects other than blocking sunlight from the underlying vegetation for a portion of each day, may be permitted if such a project complies with all other applicable requirements of 310 CMR 10.21 through 10.37.

(5) Notwithstanding the provisions of 310 CMR 10.32(3), a project which will restore or rehabilitate a salt marsh, or create a salt marsh, may be permitted in accordance with 310 CMR 10.11 through 10.14, 10.24(8), and/or 10.53(4).

(6) Notwithstanding the provisions of 310 CMR 10.32(3) through (5), no project may be permitted which will have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.37.

10.33: Land under Salt Ponds

(1) Preamble. Land under salt ponds is significant to the protection of marine fisheries and wildlife habitat and, where there are shellfish, to the protection of land containing shellfish.⁵

Land under salt ponds provides an excellent habitat for marine fisheries. The high productivity of plants in salt ponds provides food for shellfish, crustaceans and larval and juvenile fish. Salt ponds also provide spawning areas for shellfish and are nursery areas for crabs and fish. In addition to the many birds which feed on fish found in salt ponds, waterfowl also eat invertebrates such as mollusks and crustaceans, which in turn depend on bottom sediment and vegetation. Some bird species also eat *rupia* and eel grass which may be rooted in land under salt ponds.

When a proposed project involves the dredging, filling, removing or altering of land under a salt pond, the issuing authority shall presume that such land is significant to the protection of marine fisheries and wildlife habitat and, where there are shellfish, to the protection of land containing shellfish. This presumption may be overcome only upon a clear showing that land under a salt pond does not play a role in the protection of marine fisheries or wildlife habitat or land containing shellfish, and if the issuing authority makes a written determination to such effect.

When land under a salt pond is significant to the protection of marine fisheries or wildlife habitat, the following factors are critical to the protection of that interest:

- (a) water circulation;
- (b) distribution of sediment grain size;
- (c) freshwater inflow;
- (d) productivity of plants; and
- (e) water quality.

(2) Definition.

Salt Pond means a shallow enclosed or semi-enclosed body of saline water that may be partially or totally restricted by barrier beach formation. Salt ponds may receive freshwater from small streams emptying into their upper reaches and/or springs in the salt pond itself.

WHEN LAND UNDER A SALT POND IS DETERMINED TO BE SIGNIFICANT TO THE

⁵ For regulations concerning land containing shellfish, see 310 CMR 10.34.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

PROTECTION OF MARINE FISHERIES OR WILDLIFE HABITAT, 310 CMR 10.33(3) THROUGH (5) SHALL APPLY:

(3) Any project on land under a salt pond, on lands within 100 feet of the mean high water line of a salt pond, or on land under a body of water adjacent to a salt pond shall not have an adverse effect on the marine fisheries or wildlife habitat of such a salt pond caused by:

- (a) alterations of water circulation;
- (b) alterations in the distribution of sediment grain size and the relief or elevation of the bottom topography;
- (c) modifications in the flow of fresh and/or salt water;
- (d) alterations in the productivity of plants, or

10.33: continued

(e) alterations in water quality, including, but not limited to, other than normal fluctuations in the level of dissolved oxygen, nutrients, temperature or turbidity, or the addition of pollutants.

(4) Notwithstanding the provisions of 310 CMR 10.33(3), activities specifically required and intended to maintain the depth and the opening of the salt pond to the ocean in order to maintain or enhance the marine fisheries or for the specific purpose of fisheries management, may be permitted.

(5) Notwithstanding the provisions of 310 CMR 10.33(3) and (4), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

10.34: Land Containing Shellfish

(1) Preamble. Land containing shellfish is found within certain of the resource areas under the jurisdiction of M.G.L. c. 131, § 40. "Land containing shellfish" is also specifically one of the interests of M.G.L. c. 131, § 40. The purpose of 310 CMR 10.34 is to identify those resource areas likely to contain shellfish, to provide criteria for determining the significance of land containing shellfish, and to establish regulations for projects which will affect such land.

Land containing shellfish is, under 310 CMR 10.34(3), significant to the protection of marine fisheries as well as to the protection of the interest of land containing shellfish.

Shellfish are a valuable renewable resource. The maintenance of productive shellfish beds not only assures the continuance of shellfish themselves, but also plays a direct role in supporting fish stocks by providing a major food source. The young shellfish in the planktonic larval stage that are produced in large quantities during spring and summer are an important source of food for the young stages of marine fishes and many crustaceans.

When a resource area is found to be significant to the protection of land containing shellfish under 310 CMR 10.34(3), and is, therefore, also significant to marine fisheries the following factors are critical to the protection of those interests:

- (a) shellfish;
- (b) water quality;
- (c) water circulation; and
- (d) the natural relief, evaluation or distribution of sediment grain size of such land.

(2) Definitions.

Land Containing Shellfish means land under the ocean, tidal flats, rocky intertidal shores, salt marshes and land under salt ponds when any such land contains shellfish.

Shellfish means the following species: Bay scallop (*Argopecten irradians*); Blue mussel (*Mytilus edulis*); Ocean quahog (*Arctica islandica*); Oyster (*Crassostrea virginica*); Quahog (*Mercenaria merceneria*); Razor clam (*Ensis directus*); Sea clam (*Spisula solidissima*); Sea scallop (*Placopecten magellanicus*); Soft shell clam (*Mya arenaria*).

Shellfish Constable means the official in a city or town, whether designated a constable, warden, natural resources officer, or by some other name, in charge of enforcing the laws regulating the harvest of shellfish.

(3) Significance. Land containing shellfish shall be found significant to the protection of land containing shellfish and to the protection of marine fisheries when it has been identified and mapped as follows:

(a) by the conservation commission or the Department in consultation with the Division of Marine Fisheries and based upon maps and designations of the Division of Marine Fisheries;
or

(b) by the conservation commission or the Department, based upon maps and written documentation of the shellfish constable or the Department. In making such identification and maps the following factors shall be taken into account and documented: the density of shellfish, the size of the area and the historical and current importance of the area to recreational or commercial shellfishing.

10.34: continued

WHEN A RESOURCE AREA, INCLUDING LAND UNDER THE OCEAN, TIDAL FLATS, ROCKY INTERTIDAL SHORES, SALT MARSHES, OR LAND UNDER SALT PONDS IS DETERMINED TO BE SIGNIFICANT TO THE PROTECTION OF LAND CONTAINING SHELLFISH AND THEREFORE TO THE PROTECTION OF MARINE FISHERIES, 310 CMR 10.34(4) THROUGH (8) SHALL APPLY:

(4) Except as provided in 310 CMR 10.34(5), any project on land containing shellfish shall not adversely affect such land or marine fisheries by a change in the productivity of such land caused by:

- (a) alterations of water circulation;
- (b) alterations in relief elevation;
- (c) the compacting of sediment by vehicular traffic;
- (d) alterations in the distribution of sediment grain size;
- (e) alterations in natural drainage from adjacent land; or
- (f) changes in water quality, including, but not limited to, other than natural fluctuations in the levels of salinity, dissolved oxygen, nutrients, temperature or turbidity, or the addition of pollutants.

(5) Notwithstanding the provisions of 310 CMR 10.34(4), projects which temporarily have an adverse effect on shellfish productivity but which do not permanently destroy the habitat may be permitted if the land containing shellfish can and will be returned substantially to its former productivity in less than one year from the commencement of work, unless an extension of the Order of Conditions is granted, in which case such restoration shall be completed within one year of such extension.

(6) In the case of land containing shellfish defined as significant in 310 CMR 10.34(3)(b) (*i.e.*, those areas identified on the basis of maps and designations of the Shellfish Constable), except in Areas of Critical Environmental Concern, the issuing authority may, after consultation with the Shellfish Constable, permit the shellfish to be moved from such area under the guidelines of, and to a suitable location approved by, the Division of Marine Fisheries, in order to permit a proposed project on such land. Any such project shall not be commenced until after the moving and replanting of the shellfish have been commenced.

(7) Notwithstanding 310 CMR 10.34(4) through (6), projects approved by the Division of Marine Fisheries that are specifically intended to increase the productivity of land containing shellfish may be permitted. Aquaculture projects approved by the appropriate local and state authority may also be permitted.

(8) Notwithstanding the provisions of 310 CMR 10.34(4) through (7), no project may be permitted which will have any adverse effect on specified habitat of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

10.35: Banks of or Land under the Ocean, Ponds, Streams, Rivers, Lakes, or Creeks that Underlie an Anadromous/Catadromous Fish Run ("Fish Run")

(1) Preamble. The banks of and land under the ocean, ponds, streams, rivers, lakes or creeks that underlie an anadromous/catadromous fish run are significant to protection of marine fisheries.

Anadromous and catadromous fish ("the fish") are renewable protein resources that provide

recreational, aesthetic and commercial benefits. In addition, throughout their life cycle such fish are important components of freshwater, estuarine, and marine environments and are food sources for other organisms.

The spawning migrations of such fish also provide a direct link between marine and freshwater ecosystems. This link plays a role in maintaining the productivity of fisheries.

When a proposed project involves the dredging, filling, removing or altering of a bank of a fish run, or land under the ocean, or under a pond, stream, river, lake or creek which is a fish run, the issuing authority shall presume that such bank or land is significant to the protection of marine fisheries. This presumption is rebuttable and may be overcome only upon a clear showing that such bank or land does not play a role in the protection of marine fisheries, and if the issuing authority makes a written determination to that effect.

10.35: continued

When such a bank of a fish run, or land under the ocean or under a pond, stream, river, lake or creek which is a fish run is significant to the protection of marine fisheries, the following factors are critical to the protection of such interest:

- (a) the fish;
- (b) accessibility of spawning areas;
- (c) the volume or rate of the flow of water within spawning areas and migratory routes; and
- (d) spawning and nursery grounds.

(2) Definitions.

Anadromous Fish means fish that enter fresh water from the ocean to spawn, such as alewives, shad and salmon.

Anadromous/Catadromous Fish Run means that area within estuaries, ponds, streams, creeks, rivers, lakes or coastal waters, which is a spawning or feeding ground or passageway for anadromous or catadromous fish and which is identified by the Division of Marine Fisheries or has been mapped on the Coastal Atlas of the Coastal Zone Management Program. Such fish runs shall include those areas which have historically served as fish runs and are either being restored or are planned to be restored at the time the Notice of Intent is filed. For the purposes of 310 CMR 10.21 through 10.37, such fish runs shall extend inland no further than the inland boundary of the coastal zone.

Catadromous Fish means fish that enter salt water from fresh water to spawn, such as eels.

WHEN SUCH LAND OR BANK IS DETERMINED TO BE SIGNIFICANT TO THE PROTECTION OF MARINE FISHERIES, 310 CMR 10.35(3) THROUGH (5) SHALL APPLY:

(3) Any project on such land or bank shall not have an adverse effect on the anadromous or catadromous fish run by:

- (a) impeding or obstructing the migration of the fish, unless DMF has determined that such impeding or obstructing is acceptable, pursuant to its authority under M.G.L. c. 130, § 19;
- (b) changing the volume or rate of flow of water within the fish run; or
- (c) impairing the capacity of spawning or nursery habitats necessary to sustain the various life stages of the fish.

(4) Unless otherwise allowed by DMF pursuant to M.G.L. c. 130, § 19, dredging, disposal of Dredged Material or filling in a fish run shall be prohibited between March 15th and June 15th in any year.

(5) Notwithstanding the provisions of 310 CMR 10.35(3), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

(6) Any person proposing a new stream crossing of a Fish Run shall demonstrate to the issuing authority that there are no practicable alternatives to the crossing, that the impacts of the crossing have been minimized and that mitigation measures have been provided to contribute to the protection of the interests identified in M.G.L. c. 131, § 40. An applicant will be presumed to have made this showing if the project is designed as follows:

- (a) If the project includes the construction of a new non-tidal crossing, the applicant

demonstrates to the satisfaction of the issuing authority that the crossing complies with the Massachusetts Stream Crossing Standards by consisting of a span or embedded culvert in which, at a minimum, the top of the structure is above the elevation of the top of the bank and the structure spans the channel width by a minimum of 1.2 times the bankfull width.

(b) If the project includes the construction of a new tidal crossing, the applicant demonstrates to the satisfaction of the issuing authority that the project is designed in a manner that does not restrict tidal flow over the full natural tidal range by consisting of a span or embedded culvert in which, at a minimum, the top of the structure is above the elevation of the top of the bank and the structure spans the channel width by a minimum of 1.2 times the bankfull width.

10.35: continued

This presumption that the impacts of the crossing have been avoided, minimized and that mitigation measures have been provided to contribute to the protection of the interests identified in M.G.L. c. 131, § 40 may be rebutted by credible evidence from a competent source.

(10.36: Reserved. Variance Provision is Found at 310 CMR 10.05(10))

10.37: Estimated Habitats of Rare Wildlife (for Coastal Wetlands)

If a project is within estimated habitat which is indicated on the most recent Estimated Habitat Map of State-listed Rare Wetlands Wildlife (if any) published by the Natural Heritage and Endangered Species Program (hereinafter referred to as the Program), a fully completed copy of the Notice of Intent (including all plans, reports, and other materials required under 310 CMR 10.05(4)(a) and (b)) for such project shall be sent to the Program via the U.S. Postal Service by express or priority mail (or otherwise sent in a manner that guarantees delivery within two days). Such copy shall be sent no later than the date of the filing of the Notice of Intent with the issuing authority. Proof of timely mailing or other delivery to the Program of the copy of such Notice of Intent shall be included in the Notice of Intent which is submitted to the issuing authority and sent to the Department's regional office.

Estimated Habitat Maps shall be based on the estimated geographical extent of the habitats of all state-listed vertebrate and invertebrate animal species for which a reported occurrence within the last 25 years has been accepted by the Program and incorporated into its official data base.

Within 30 days of the filing of such a Notice of Intent with the issuing authority, the Program shall determine whether any state-listed species identified on the aforementioned map are likely to continue to be located on or near the site of the original occurrence and, if so, whether the area to be altered by the proposed project is in fact part of such species' habitat. Such determination shall be presumed by the issuing authority to be correct. Any proposed project which would alter a resource area that is not located on the most recent Estimated Habitat Map (if any) provided to the conservation commission, shall be presumed not to be within a rare species' habitat. Both of these presumptions are rebuttable and may be overcome upon a clear showing to the contrary. If the issuing authority fails to receive a response from the Program within 30 days of the filing of such a Notice of Intent, a copy of which was received by the Program in a timely manner, it shall issue its Order of Conditions based on available information; however, the fact that a proposed project would alter a resource area that is located on an Estimated Habitat Map shall not be considered sufficient evidence in itself that such project is in fact within the habitat of a rare species.

If the Program determines that a resource area which would be altered by a proposed project is in fact within the habitat of a state-listed species, it shall provide in writing to the applicant and to the Conservation Commission and the Department, the identification of the species whose habitat would be altered by the proposed project, and all other relevant information which the Program has regarding the species' location and habitat requirements, insofar as such information may assist the applicant and the issuing authority to determine whether the project is or can be designed so as to meet the performance standard set in 310 CMR 10.37.

Notwithstanding 310 CMR 10.24(7) and 10.25 and 10.27 through 10.35, if a proposed project is found by the issuing authority to alter a resource area which is part of the habitat of a state-listed species, such project shall not be permitted to have any short or long term adverse effects on the habitat of the local population of that species. A determination of whether or not a proposed project will have such an adverse effect shall be made by the issuing authority. However, a written opinion of the Program on whether or not a proposed project will have such

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

an adverse effect shall be presumed by the issuing authority to be correct. This presumption is rebuttable and may be overcome upon a clear showing to the contrary.

The conservation commission shall not issue an Order of Conditions under 310 CMR 10.05(6) regarding any such project for at least 30 days after the filing of the Notice of Intent, unless the Program before such time period has elapsed has either determined that the resource area(s) which would be altered by the project is not in fact within the habitat of a state-listed species or, if it has determined that such resource area(s) is in fact within rare species habitat, rendered a written opinion as to whether the project will have an adverse effect on that habitat.

10.37: continued

Notwithstanding any other provision of 310 CMR 10.37, should an Environmental Impact Report be required for a proposed project under the M.G.L. c. 60, §§ 6 through 62H, as determined by 301 CMR 11.00: *MEPA Regulations* the performance standard established under 310 CMR 10.37 shall only apply to proposed projects which would alter the habitat of a rare species for which an occurrence has been entered into the official data base of the Massachusetts Natural Heritage and Endangered Species Program prior to the time that the Secretary of the Executive Office of Energy and Environmental Affairs has determined, in accordance with the provisions of 301 CMR 11.09(4), that a final Environmental Impact Report for that project adequately and properly complies with the M.G.L. c. 30, §§ 6 through 62H (unless, subsequent to that determination, the Secretary requires supplemental information concerning state-listed species, in accordance with the provisions of 301 CMR 11.17: *Transition Rules*).

10.51: Introduction

310 CMR 10.51 through 10.60 applies to all work which will remove, fill, dredge or alter any bank, bordering vegetated wetland, land under water bodies and waterways, land subject to flooding or riverfront area. 310 CMR 10.51 through 10.60 pertains to inland (as opposed to coastal) wetlands, and is promulgated in addition to 310 CMR 10.01 through 10.10 and 10.21 through 10.37. A project may be subject to regulation under both 310 CMR 10.01 through 10.10 and 10.21 through 10.37, in which case compliance with all applicable regulations is required.

310 CMR 10.51 through 10.60 is grouped into five resource areas. Each section begins with a Preamble which specifies the interests identified in M.G.L. c. 131, § 40 to which that resource area is or is likely to be significant. The next subsection defines the resource area and describes the characteristics of that area which are critical to the protection of the interests so identified. The next subsection sets forth the presumptions concerning the significance of the resource area. The last subsection contains the general performance standards to be applied to any work that will remove, fill, dredge or alter the resource area.

10.52: Purpose

310 CMR 10.51 through 10.60 is intended to establish criteria and standards for the uniform and coordinated administration of the provisions of M.G.L. c. 131, § 40. It is intended to ensure that development in and near inland wetlands is sited, designed, constructed and maintained in a manner that protects the public interests identified in M.G.L. c. 131, § 40 and served by these resource areas.

310 CMR 10.51 through 10.60 is intended to ensure coordination between the divisions of the Department and between the Department and other Executive Office of Energy and Environmental Affairs agencies; and to ensure consideration by the Department of relevant policies, laws or programs of other Executive Office of Energy and Environmental Affairs agencies. 310 CMR 10.51 through 10.60 is, in addition, intended to be consistent with and form a part of the Commonwealth's Coastal Zone Management Program as it has been promulgated and defined by 301 CMR 20:00: *Coastal Zone Management Program* issued pursuant to M.G.L. c. 21A. 310 CMR 10.51 through 10.60, however, is adopted independently under M.G.L. c. 131, § 40 and would remain in full force and effect in the absence of 301 CMR 20.00.

310 CMR 10.51 through 10.60 is intended to notify both persons proposing work in Areas Subject to Protection Under M.G.L. c. 131, § 40 and those regulating that work as to the performance standards that should be applied. These standards are intended to identify the level of protection that the issuing authority must impose in order to contribute to the protection of the interests identified in M.G.L. c. 131, § 40. It is the responsibility of the person proposing work

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

to design and complete his project in conformance with these performance standards. It is the responsibility of the issuing authority to impose such conditions on a proposed project as to ensure that the project is designed and completed in a manner consistent with these standards.

10.53: General Provisions

(1) If the Issuing Authority determines that a Resource Area is significant to an interest identified in M.G.L. c. 131, § 40 for which no presumption is stated in the Preamble to the applicable section, the Issuing Authority shall impose such conditions as are necessary to contribute to the protection of such interests. For work in the Buffer Zone subject to review under 310 CMR 10.02(2)(b)3., the Issuing Authority shall impose conditions to protect the interests of the Act identified for the adjacent Resource Area. The potential for adverse impacts to Resource Areas from work in the Buffer Zone may increase with the extent of the work and the proximity to the Resource Area. The Issuing Authority may consider the characteristics of the Buffer Zone, such as the presence of steep slopes, that may increase the potential for adverse impacts on Resource Areas. Conditions may include limitations on the scope and location of work in the Buffer Zone as necessary to avoid alteration of Resource Areas. The Issuing Authority may require erosion and sedimentation controls during construction, a clear limit of work, and the preservation of natural vegetation adjacent to the Resource Area and/or other measures commensurate with the scope and location of the work within the Buffer Zone to protect the interests of M.G.L. c. 131, § 40. Where a Buffer Zone has already been developed, the Issuing Authority may consider the extent of existing development in its review of subsequent proposed work and, where prior development is extensive, may consider measures such as the restoration of natural vegetation adjacent to a Resource Area to protect the interest of M.G.L. c. 131, § 40. The purpose of preconstruction review of work in the Buffer Zone is to ensure that adjacent Resource Areas are not adversely affected during or after completion of the work.

(2) When the site of a proposed project is subject to a Restriction Order which has been duly recorded under the provisions of M.G.L. c. 131, § 40A, such a project shall conform to both the provisions contained in that Order and 310 CMR 10.51 through 10.60.

(3) Notwithstanding the provisions of 310 CMR 10.54 through 10.58 and 10.60, the Issuing Authority may issue an Order of Conditions and impose such conditions as will contribute to the interests identified in M.G.L. c. 131, § 40 permitting the following limited projects (although no such project may be permitted which will have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.59). In determining whether to exercise its discretion to approve the limited projects listed in 310 CMR 10.53(3), the Issuing Authority shall consider the following factors: the magnitude of the alteration and the significance of the project site to the interests identified in M.G.L. c. 131, § 40, the availability of reasonable alternatives to the proposed activity, the extent to which adverse impacts are minimized, and the extent to which mitigation measures, including replication or restoration, are provided to contribute to the protection of the interests identified in M.G.L. c. 131, § 40.

(a) Work on land to be used primarily and directly in the raising of animals, including but not limited to dairy cattle, beef cattle, poultry, sheep, swine, horses, ponies, mules, goats, bees and fur-bearing animals or on land to be used in a related manner which is incidental thereto and represents a customary and necessary use in raising such animals; and work on land to be used primarily and directly in the raising of fruits, vegetables, berries, nuts and other foods for human consumption, feed for animals, tobacco, flowers, sod, trees, nursery or greenhouse products, and ornamental plants and shrubs; or on land to be used in a related manner which is incidental thereto and represents a customary and necessary use in raising such products, provided they are carried out in accordance with the following general conditions and any additional conditions deemed necessary by the issuing authority:

1. there shall occur no change in the existing topography or the existing soil and surface water levels of the area;

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

2. all fertilizers, pesticides, herbicides and other such materials shall be used in accordance with all applicable state and federal laws and regulations governing their use; and
3. all activities shall be undertaken in such a manner as to prevent erosion and siltation of adjacent water bodies and wetlands as specified by the U.S.D.A. Soil Conservation Service, *Guidelines for Soil and Water Conservation*. A plan prepared by the U.S.D.A. Soil Conservation Service through a county conservation district for the improvement of land for agriculture shall be deemed adequate to prevent erosion and siltation.

10.53: continued

(b) Work on land to be used primarily and directly in the raising of cranberries or on land to be used in a related manner which is incidental thereto and represents a customary and necessary use in raising such products, provided it is carried out in accordance with the following general conditions and any additional conditions deemed necessary by the issuing authority:

1. all fertilizers, pesticides, herbicides and other such materials shall be used in accordance with all applicable state and federal laws and regulations governing their use; and
2. all activities shall be undertaken in such a manner as to prevent erosion and siltation of adjacent water bodies and wetlands as specified by the U.S.D.A. Soil Conservation Service, *Guidelines for Soil and Water Conservation*.

(c) Work on land to be used primarily and directly in the raising of forest products under a planned program to improve the quantity and quality of a continuous crop or on land to be used in a related manner which is incidental thereto and represents a customary and necessary use in raising such products, provided it is carried out in accordance with the following general conditions and any additional conditions deemed necessary by the issuing authority:

1. there shall occur no change in the existing topography or the existing soil and surface water levels of the area except for temporary access roads;
2. the removal of trees shall occur only during those periods when the ground is sufficiently frozen, dry or otherwise stable to support the equipment used; and
3. all activities shall be undertaken in such a manner as to prevent erosion and siltation of adjacent water bodies and wetlands as specified by the U.S.D.A. Soil Conservation Service, *Guidelines for Soil and Water Conservation*.
4. the placement of slash, branches and limbs resulting from the cutting and removal operations shall not occur within 25 feet of the bank of a water body.

(d) The construction, reconstruction, operation and maintenance of underground and overhead public utilities, such as electrical distribution or transmission lines, or communication, sewer, water and natural gas lines, may be permitted, in accordance with the following general conditions and any additional conditions deemed necessary by the issuing authority:

1. the issuing authority may require a reasonable alternative route with fewer adverse effects for a local distribution or connecting line not reviewed by the Energy Facilities Siting Council;
2. best available measures shall be used to minimize adverse effects during construction;
3. the surface vegetation and contours of the area shall be substantially restored; and
4. all sewer lines shall be constructed to minimize inflow and leakage.

(e) The construction and maintenance of a new roadway or driveway of minimum legal and practical width acceptable to the planning board, where reasonable alternative means of access from a public way to an upland area of the same owner is unavailable. Such roadway or driveway shall be constructed in a manner which does not restrict the flow of water. Reasonable alternative means of access may include any previously or currently available alternatives such as realignment or reconfiguration of the project to conform to 310 CMR 10.54 through 10.58 or to otherwise minimize adverse impacts on resource areas. The issuing authority may require the applicant to utilize access over an adjacent parcel of land currently or formerly owned by the applicant, or in which the applicant has, or can obtain, an ownership interest. The applicant shall design the roadway or driveway according to the minimum length and width acceptable to the Planning Board, and shall present reasonable alternative means of access to the Board. The applicant shall provide replication of

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

bordering vegetated wetlands and compensatory flood storage to the extent practicable. In the Certificate of Compliance, the issuing authority may continue a condition imposed in the Order of Conditions to prohibit further activities under 310 CMR 10.53(3)(e).

(f) Maintenance and improvement of existing public roadways, but limited to widening less than a single lane, adding shoulders, correcting substandard intersections, and improving inadequate drainage systems.

(g) The excavation of wildlife impoundments, farm ponds and ponds for fire protection. The above uses are allowed provided that no fill or other material is placed upon the wetland except as may be necessary to construct said impoundments or ponds, to provide access thereto, and to provide bank stabilization.

10.53: continued

(h) The maintenance of beaches and boat launching ramps which existed on the effective date of 310 CMR 10.51 through 10.60 (April 1, 1983).

(i) The maintenance, repair and improvement (but not substantial enlargement except when necessary to meet the Massachusetts Stream Crossing Standards) of structures, including dams and reservoirs and appurtenant works to such dams and reservoirs, buildings, piers, towers, headwalls, bridges, and culverts which existed on the effective date of 310 CMR 10.51 through 10.60 (April 1, 1983). When water levels are drawn down for the maintenance, repair, or improvement of dams or reservoirs or appurtenant works to such dams or reservoirs under 310 CMR 10.53(3)(i), water levels that existed immediately prior to such projects being undertaken shall be restored upon completion of the work, and a new Notice of Intent need not be filed for such restoration. If the Department of Conservation and Recreation Office of Dam Safety determines that it would not be safe to restore the water level existing prior to the project being undertaken, the applicant shall submit a new Notice of Intent within ninety days of the date of the determination describing the measures necessary with a schedule for repairing or replacing the dam and returning water levels to the previous condition, or removing the dam and restoring the riparian habitat.

(j) The construction and maintenance of catwalks, footbridges, wharves, docks, piers, boathouses, boat shelters, duck blinds, skeet and trap shooting decks and observation decks; provided, however, that such structures are constructed on pilings or posts so as to permit the reasonably unobstructed flowage of water and adequate light to maintain vegetation.

(k) The routine maintenance and repair of road drainage structures including culverts and catch basins, drainage easements, ditches, watercourses and artificial water conveyances to insure flow capacities which existed on the effective date of 310 CMR 10.51 through 10.60 (April 1, 1983).

(l) The construction, reconstruction, operation or maintenance of water dependent uses; provided, however that:

1. any portion of such work which alters a bordering vegetated wetland shall remain subject to the provisions of 310 CMR 10.55,
2. such work in any other resource area(s) found to be significant to flood control or prevention of storm damage shall meet the performance standards for that interest(s), and
3. adverse impacts from such work in any other resource area(s) shall be minimized regarding the other statutory interests for which that resource area(s) is found to be significant.

(m) Lake drawdown projects (except those related to the breaching of a dam or a reservoir or an appurtenant work to such dam or reservoir) undertaken in response to written Orders or Recommendation Letters issued by the Department of Conservation and Recreation Office of Dam Safety (DCR). The issuing authority shall, in the Order of Conditions, limit the duration of the drawdown based on information contained in the written finding or superseding finding by DCR pursuant to M.G.L. c. 253, §§ 44 through 50, concerning the time required to repair the dam and the economic practicability of repairing the dam. In no event shall the drawdown continue longer than three years without a new or extended Order of Conditions being obtained permitting the drawdown. Water levels that existed immediately prior to such drawdowns shall be restored no later than the expiration date of the Order of Conditions or any new or extended Order of Conditions, and a new Notice of Intent need not be filed for such restoration.

(n) Airport vegetation removal projects; provided, however, that:

1. such projects must be undertaken in order to comply with Federal Aviation Administration (FAA) Regulation Part 77 (14 CFR Part 77), FAA Advisory Circular 150/5300-13 (Navigational Aids and Approach Light Systems), and FAA Order 6480.4

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

(Air Traffic Control Tower Siting Criteria), all as amended, or to comply with the airport approach regulations set forth in M.G.L. c. 90, §§ 40A through 40I;

2. such projects must be undertaken at airports that are managed by the Massachusetts Port Authority (Massport) or that are subject to certification by the Massachusetts Aeronautics Commission (MAC);
3. the requirement outlined in 310 CMR 10.53(3)(n)1. must be certified in writing by the FAA or by the MAC;
4. such projects shall not include the construction of new airport facilities or the expansion or relocation of existing airport uses;
5. Notices of Intent filed for such projects shall:
 - a. delineate the vegetation requiring removal;

10.53: continued

- b. delineate the affected resource areas;
 - c. identify the proposed method for removal of vegetation and analyze alternatives. At a minimum, the alternatives analysis shall include:
 - i. an alternative (based on a Federal Aviation Administration waiver or airport operation changes) that does not alter resource areas, which will provide baseline data for evaluating other alternatives;
 - ii. an assessment of impacts to resource areas resulting from mechanical methods of vegetation removal, including the use of both large and small equipment; and
 - iii. an assessment of impacts to resource areas resulting from chemical methods of vegetation removal;
 - d. quantify the likely impacts to wildlife habitat and water quality;
 - e. evaluate possible mitigation measures, including but not limited to an assessment of erosion and sedimentation controls, wetland restoration, wetland replication, on-site and off-site wetland enhancement, herbicide application guidelines, spill containment plans, development restrictions, monitoring, and compensatory flood storage; and
 - f. propose a five-year airport vegetation management plan. The vegetation management plan shall, at minimum, contain a purpose and goals statement, identify all airport protective zones, identify proposed vegetation management areas within the protective zones, and identify and prioritize future vegetation removal projects. Updated vegetation management plans shall be provided for each Notice of Intent filed after the expiration of the most recent five-year vegetation management plan period;
6. where such projects require the filing of a Notice of Intent in more than one municipality, the Notice of Intent filed in each municipality shall describe the total impacts to resource areas proposed for the entire project;
 7. in addition to existing notice requirements contained in 310 CMR 10.00, for projects pursuant to 310 CMR 10.53(3)(n) copies of each Notice of Intent shall be filed simultaneously with the Massachusetts Department of Food and Agriculture, the Massachusetts Historical Commission, the Massachusetts Department of Conservation and Recreation (Areas of Critical Environmental Concern Program), and the Division of Water Supply in the Department of Environmental Protection; and
 8. such projects shall be designed, constructed, implemented, operated, and maintained to avoid or, where avoidance is not practicable, to minimize impacts to resource areas, and to meet the following standards to the maximum extent practicable:
 - a. hydrological changes to resource areas shall be minimized;
 - b. best management practices shall be used to minimize adverse impacts during construction, including prevention of erosion and siltation of adjacent water bodies and wetlands in accordance with standard U.S.D.A. Soil Conservation Service methods;
 - c. mitigating measures shall be implemented that contribute to the protection of the interests identified in M.G.L. c. 131, § 40;
 - d. compensatory storage shall be provided in accordance with the standards of 310 CMR 10.57(4)(a)1. for all flood storage volume that will be lost;
 - e. no access road or other structure or activity shall restrict flows so as to cause an increase in flood stage or velocity;
 - f. no change in the existing surface topography or the existing soil and surface water levels shall occur except for temporary access roads;
 - g. temporary structures and work areas in resource areas, such as access roads, shall

be removed within 30 days of completion of the work. Temporary alterations to resource areas shall be substantially restored to preexisting hydrology and topography. At least 75% of the surface of any area of disturbed vegetation shall be reestablished with indigenous wetland plant species within two growing seasons and prior to said vegetative reestablishment any exposed soil in the area of disturbed vegetation shall be temporarily stabilized to prevent erosion in accordance with standard U.S.D.A. Soil Conservation Service methods;

- h. work in resource areas shall occur only during those periods when the ground is sufficiently frozen, dry, or otherwise stable to support the equipment being used; and
- i. slash, branches, and limbs resulting from cutting and removal operations shall not be placed within 25 feet of the bank of any water body.

10.53: continued

- (o) The exploration, development, construction, expansion, maintenance, operation, and replacement of public water supply wells or wellfields (including necessary associated roads, ways, structures, and underground and overhead utility lines) derived from groundwater, provided, however, that:
1. approval for the water supply has been granted under the Public Water Supply Source Approval Process pursuant to 310 CMR 22.21: *Ground Water Supply Protection* and/or the Water Management Act, M.G.L. c. 21G. This general condition shall not apply to exploration; and
 2. such projects shall be designed, constructed, implemented, operated, and maintained to avoid or, where avoidance is not practicable, to minimize impacts to resource areas, and to meet the following standards to the maximum extent practicable:
 - a. hydrological changes to resource areas shall be minimized;
 - b. best management practices shall be used to minimize adverse impacts during construction, including prevention of erosion and siltation of adjacent water bodies and wetlands in accordance with standard U.S.D.A. Soil Conservation Service methods;
 - c. mitigating measures shall be implemented that contribute to the protection of the interests identified in M.G.L. c. 131, § 40;
 - d. compensatory storage shall be provided in accordance with the standards of 310 CMR 10.57(4)(a)1. for all flood storage volume that will be lost;
 - e. no access road or other structure or activity shall restrict flows so as to cause an increase in flood stage or velocity;
 - f. temporary structures and work areas in resource areas, including access roads, shall be removed within 30 days of completion of the work. Temporary alterations to resource areas shall be substantially restored to preexisting hydrology and topography. At least 75% of the surface of any area of disturbed vegetation shall be reestablished with indigenous wetland plant species within two growing seasons and prior to said vegetative reestablishment any exposed soil in the area of disturbed vegetation shall be temporarily stabilized to prevent erosion in accordance with standard U.S.D.A. Soil Conservation Service methods; and
 - g. work in resource areas shall occur only when the ground is sufficiently frozen, dry, or otherwise stable to support the equipment being used.
- (p) The closure of landfills when undertaken to comply with the requirements of 310 CMR 19.000: *Solid Waste Management*; provided, however, that:
1. a project design alternative analysis shall be prepared in accordance with 310 CMR 19.150: *Landfill Assessment Requirements*; and
 2. such projects shall be designed, constructed, implemented, operated, and maintained to avoid or, where avoidance is not practicable, to minimize impacts to resource areas, and to meet the following standards to the maximum extent practicable:
 - a. hydrological changes to resource areas shall be minimized;
 - b. best management practices shall be used to minimize adverse impacts during construction, including prevention of erosion and siltation of adjacent water bodies and wetlands in accordance with standard U.S.D.A. Soil Conservation Service methods;
 - c. mitigating measures shall be implemented that contribute to the protection of the interests identified in M.G.L. c. 131, § 40;
 - d. compensatory storage shall be provided in accordance with the standards of 310 CMR 10.57(4)(a)1. for all flood storage volume that will be lost;
 - e. no access road, assessment or monitoring device, or other structure or activity shall restrict flows so as to cause an increase in flood stage or velocity;

f. temporary structures and work areas in resource areas, such as access roads and assessment and monitoring devices, shall be removed within 30 days of the Department's written determination that the closure of the facility has been completed in accordance with the closure permit. Temporary alterations to resource areas shall be substantially restored to preexisting hydrology and topography. At least 75% of the surface of any area of disturbed vegetation shall be reestablished with indigenous wetland plant species within two growing seasons and prior to said vegetative reestablishment any exposed soil in the area of disturbed vegetation shall be temporarily stabilized to prevent erosion in accordance with standard U.S.D.A. Soil Conservation Service methods. Temporary structures, work areas, and alterations to resource areas are those that no longer are necessary to fulfill the requirements of 310 CMR 19.000: *Solid Waste Management*;

10.53: continued

g. except for direct impacts to resource areas caused by the final cap and cover on the landfill, no changes in the existing topography or the existing soil and surface water levels shall be permitted, except for those resulting from temporary access roads;

h. work in resource areas shall occur only when the ground is sufficiently frozen, dry, or otherwise stable to support the equipment used; and

i. such projects shall not include the construction of new landfills or the expansion or modification of existing landfills.

(q) Assessment, monitoring, containment, mitigation, and remediation of, or other response to, a release or threat of release of oil and/or hazardous material in accordance with the provisions of 310 CMR 40.0000: *Massachusetts Contingency Plan* and the following general conditions (although no such measure may be permitted which is designed in accordance with the provisions of 310 CMR 40.1020: *Background Levels of Oil and Hazardous Material* solely to reduce contamination to a level lower than that which is needed to achieve "No Significant Risk" as defined in 310 CMR 40.0006(12)):

1. there are no practicable alternatives to the response action being proposed that are consistent with the provisions of 310 CMR 40.0000: *Massachusetts Contingency Plan* and that would be less damaging to resource areas. The alternatives analysis shall include, at a minimum, the following:

a. an alternative that does not alter resource areas, which will provide baseline data for evaluating other alternatives; and

b. an assessment of alternatives to both temporary and permanent impacts to resource areas.

A "Comprehensive Remedial Action Alternative" that is selected in accordance with the provisions of 310 CMR 40.0851 through 40.0869 shall be deemed to have met the requirements of 310 CMR 10.53(3)(q)1.; and

2. such projects shall be designed, constructed, implemented, operated, and maintained to avoid or, where avoidance is not practicable, to minimize impacts to resource areas, and shall meet the following standards to the maximum extent practicable:

a. hydrological changes to resource areas shall be minimized;

b. best management practices shall be used to minimize adverse impacts during construction, including prevention of erosion and siltation of adjacent water bodies and wetlands in accordance with standard U.S.D.A. Soil Conservation Service methods;

c. mitigating measures shall be implemented that contribute to the protection of the interests identified in M.G.L. c. 131, § 40;

d. compensatory storage shall be provided in accordance with the standards of 310 CMR 10.57(4)(a)1. for all flood storage volume that will be lost;

e. no access road, assessment or monitoring device, or other structure or activity shall restrict flows so as to cause an increase in flood stage or velocity;

f. temporary structures and work areas in resource areas, such as access roads and assessment and monitoring devices, shall be removed within 30 days of completion of the work. Temporary alterations to resource areas shall be substantially restored to preexisting hydrology and topography. At least 75% of the surface of any area of disturbed vegetation shall be reestablished with indigenous wetland plant species within two growing seasons and prior to said vegetative reestablishment any exposed soil in the area of disturbed vegetation shall be temporarily stabilized to prevent erosion in accordance with standard U.S.D.A. Soil Conservation Service methods. Temporary structures, work areas, and alterations to resource areas are those that no

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

longer are necessary to fulfill the requirements of 310 CMR 40.0000: *Massachusetts Contingency Plan*; and

g. work in resource areas shall occur only when the ground is sufficiently frozen, dry, or otherwise stable to support the equipment being used.

(r) The construction of a new access for forestry, including leaving in place an access constructed in accordance with 310 CMR 10.04(Agriculture)(b)14.d., or the enlargement of an existing access for forestry, provided that:

1. the access is constructed:

a. in accordance with a Forest Cutting Plan approved by the Department of Environmental Management (DEM) under the provisions of M.G.L. c. 132, §§ 40 through 46; or

10.53: continued

- b. on land subject to a permanent, recorded conservation restriction that has been created in accordance with M.G.L. c. 184, §§ 31 through 33 and maintains the land in perpetual forest use;
 2. the access is of the minimum practicable width that is required for the cutting and removal of trees;
 3. practicable alternative access across upland is not available;
 4. the number of access ways located within resource areas is minimized;
 5. activities shall be conducted when the soil is frozen, dry, or otherwise stable to support the equipment used;
 6. the access does not increase flood stage or velocity;
 7. the design and installation of the access complies with the Massachusetts Forestry Best Management Practices Manual. When the access involves fill, culverts or other structures that will obstruct flow, it shall be designed, constructed, and maintained in accordance with the Massachusetts Forestry Best Management Practices Manual. When crossings involve fill, culverts or other structures that will obstruct flow, they shall be designed, constructed, and maintained in accordance with the Massachusetts Forestry Best Management Practices Manual to allow the unobstructed passage of existing flows for at least the 25 year storm; and
- (s) The cutting of trees by owners for their own use of more than 10,000 board feet or 20 cords but less than 25,000 board feet or 50 cords during any 12 month period, provided that:
1. after the cutting, the remaining trees in the resource area shall be evenly distributed throughout the area where cutting occurred and the crown cover shall not be less than 50%. Crown cover is determined as the percent of the ground's surface that would be covered by a vertical projection of foliage from trees with a diameter at breast height of five inches or greater, where minor gaps between branches are disregarded and areas of overlapping foliage are counted only once;
 2. the cutting and removal of trees shall occur only during those periods when the ground is sufficiently frozen, dry, or otherwise stable to support the equipment used;
 3. the cutting, removal, or other destruction of trees and understory vegetation shall be minimized within 25 feet of the bank of a water body, except for the purpose of providing access for the activities described in 310 CMR 10.04(Agriculture)(b)15.;
 4. the placement of slash, branches, and limbs resulting from cutting and removal operations shall not occur within 25 feet of the bank of a water body;
 5. no filling, excavation, or other change shall occur in the existing topography or hydrology of a resource area; and
 6. landings for forest products shall not be located in Bordering Vegetated Wetland or Bank.
- (t) The construction of a new access roadway, or the improvement, repair and/or replacement of an existing access roadway, needed to transport equipment to a renewable energy project site, where reasonable alternative means of access to an upland area is unavailable, provided that it is carried out in accordance with the following general conditions and any additional conditions deemed necessary by the issuing authority. Reasonable alternative means of access may include any previously or currently available alternatives such as realignment or reconfiguration of the project to conform to 310 CMR 10.54 through 10.58 or to otherwise minimize adverse impacts on resource areas. The issuing authority may require the applicant to utilize access over an adjacent parcel of land currently or formerly owned by the applicant, or in which the applicant has, or can obtain, an ownership interest. Such projects shall be designed, constructed, implemented, operated, and maintained to meet all of the following standards to the maximum extent practicable:

1. Hydrological changes to resource areas shall be minimized.
2. Best management practices shall be used to minimize adverse impacts during construction. An applicant shall be presumed to use best management practices to minimize adverse impacts during construction if s/he implements erosion and sediment controls in accordance with the *Massachusetts Erosion and Sediment Control Guidelines*. This presumption may be rebutted by credible evidence from a competent source.
3. No access road or other structure or activity shall restrict flows so as to cause an increase in flood stage or velocity.
4. No change in the existing surface topography or the existing soil and surface water levels shall occur except for temporary access roads.

10.53: continued

5. Temporary structures and work areas in resource areas shall be removed within 30 days of completion of the work. Temporary alterations to resource areas shall be substantially restored to preexisting hydrology and topography. At least 75% of the surface of any area of disturbed vegetation shall be reestablished with indigenous wetland plant species within two growing seasons and prior to said vegetative reestablishment any exposed soil in the area of disturbed vegetation shall be temporarily stabilized to prevent erosion. Surface area shall be presumed to be stabilized to prevent erosion if the applicant implements the procedures set forth in the *Massachusetts Erosion and Sediment Control Guidelines*. This presumption may be rebutted by credible evidence from a competent source.
6. Work in resource areas shall occur only during those periods when the ground is sufficiently frozen, dry, or otherwise stable to support the equipment being used.
7. Slash, branches, and limbs resulting from cutting and removal operations shall not be placed within 25 feet of the bank of any water body.
8. The applicant shall provide replication of bordering vegetated wetlands and compensatory flood storage to the extent practicable.
9. The applicant demonstrates to the satisfaction of the Issuing Authority that any stream crossings meet the general performance standards in 310 CMR 10.54(4)a. and 10.56(4)a.

(4) Ecological Restoration Limited Projects.

(a) Notwithstanding the requirements of any other provision of 310 CMR 10.25 through 10.35, 10.54 through 10.58, and 10.60, the Issuing Authority may issue an Order of Conditions permitting an Ecological Restoration Project listed in 310 CMR 10.53(4)(e) as an Ecological Restoration Limited Project and impose such conditions as will contribute to the interests identified in M.G.L. c. 131, § 40, provided that:

1. the Issuing Authority determines that the project is an Ecological Restoration Project as defined in 310 CMR 10.04;
2. if the project will impact an area located within estimated habitat which is indicated on the most recent *Estimated Habitat Map of State-listed Rare Wetlands Wildlife* published by the Natural Heritage and Endangered Species Program (Program), the applicant has obtained a preliminary written determination from the Program in accordance with 310 CMR 10.11(2) that the project will not have any adverse long-term and short-term effects on specified habitat sites of Rare Species, or the project will be carried out in accordance with a habitat management plan that has been approved in writing by the Natural Heritage and Endangered Species Program and submitted with the Notice of Intent;
3. the applicant demonstrates that the project will be carried out in accordance with any time of year restrictions or other conditions recommended by the Division of Marine Fisheries for coastal waters and the Division of Fisheries and Wildlife in accordance with 310 CMR 10.11(3);
4. if the project involves the dredging of 100 cubic yards of sediment or more or dredging of any amount in an Outstanding Resource Water, the applicant has applied for or obtained a Water Quality Certification by the Department; and
5. the project complies with all applicable provisions of 310 CMR 10.53(1), (2), (7), and (8).

(b) An Ecological Restoration Project permitted as an Ecological Restoration Limited Project in accordance with 310 CMR 10.53(4) may result in the temporary or permanent loss of Resource Areas and/or the conversion of one Resource Area to another when such loss is

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

necessary to the achievement of the project's ecological restoration goals.

(c) As set forth in 310 CMR 10.12(3), a person submitting a Notice of Intent for an Ecological Restoration Limited Project in accordance with 310 CMR 10.12(1) and (2) is exempt from the requirement to perform a wildlife habitat evaluation in accordance with the requirements of 310 CMR 10.60, notwithstanding the provisions of 310 CMR 10.54(4)(a)5., 10.56(4)(a)4., and 10.60.

(d) In determining whether to approve a project as an Ecological Restoration Limited Project, the issuing authority shall consider the following:

10.53: continued

1. the condition of existing and historic coastal Resource Areas proposed for restoration including evidence of the extent and severity of the impairment(s) that reduce the capacity of said Resource Areas to protect and sustain the interests identified in M.G.L. c. 131, § 40;
 2. the magnitude and significance of the benefits of the Ecological Restoration Project in improving the capacity of the affected Resource Areas to protect and sustain the other interests identified in M.G.L. c. 131, § 40; and
 3. the magnitude and significance of the impacts of the Ecological Restoration Project on existing Resource Areas that may be modified, converted and/or lost and the interests for which said Resource Areas are presumed significant in 310 CMR 10.00, and the extent to which the applicant will:
 - a. void adverse impacts to Resource Areas and the interests identified in M.G.L. c. 131, § 40, that can be avoided without impeding the achievement of the project's ecological restoration goals;
 - b. minimize adverse impacts to Resource Areas and the interests identified in M.G.L. c. 131, § 40, that are necessary to the achievement of the project's ecological restoration goals; and
 - c. utilize best management practices such as erosion and siltation controls and proper construction sequencing to avoid and minimize adverse construction impacts to Resource Areas and the interests identified in M.G.L. c. 131, § 40.
- (e) Types of Ecological Restoration Limited Projects. The issuing authority may permit the following projects as Ecological Restoration Limited Projects in accordance with 310 CMR 10.53(4)(a) through (d).
1. Dam Removal Projects. A dam removal project, that does not meet all of the eligibility criteria set forth in 310 CMR 10.13, may be permitted as an Ecological Restoration Limited Project provided that in addition to meeting the eligibility criteria set forth in 310 CMR 10.53(4)(a) through (d), the project as proposed furthers at least one of the interests identified in M.G.L. c. 131, § 40. In considering the factors set forth in 310 CMR 10.53(4)(d)3., the Issuing Authority shall consider whether the project as proposed is consistent with the Department's 2007 Guidance entitled *Dam Removal and the Wetlands Regulations*.
 2. Freshwater Stream Crossing Repair and Replacement Projects. A freshwater stream crossing repair or replacement project that does not meet all of the eligibility criteria set forth in 310 CMR 10.13 may be permitted as an Ecological Restoration Limited Project provided that in addition to meeting the eligibility criteria set forth in 310 CMR 10.53(4)(a) through (d), the project meets all of the following eligibility criteria:
 - a. the applicant demonstrates to the satisfaction of the Issuing Authority that meeting the eligibility criteria set forth in 310 CMR 10.13 would result in significant stream instability or flooding hazard that cannot otherwise be mitigated, and site constraints make it impossible to meet said criteria;
 - b. the project is designed to ensure that the project will not impair the stability of the Bank;
 - c. to the maximum extent practicable, the project provides for the restoration of the stream upstream and downstream of the structure as needed to restore stream continuity and eliminate barriers to aquatic organism movement; and the project complies with the requirements of 310 CMR 10.53(7) and (8).
 3. Stream Daylighting Projects. A stream daylighting project that does not meet all the eligibility criteria set forth in 310 CMR 10.13 may be permitted as an Ecological Restoration Limited Project provided that in addition to the eligibility criteria set forth

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

in 10.53(4)(a) through (d), the proposed project meets to the maximum extent practicable, consistent with the project's ecological restoration goals, all the performance standards for Bank and Land under Water Bodies and Waterways. As set forth in 310 CMR 10.12(3), a person submitting a Notice of Intent for a Stream Daylighting Project that meets the requirements of 310 CMR 10.12(1) and (2) is exempt from the requirement to perform a wildlife habitat evaluation in accordance with the requirements of 310 CMR 10.60, notwithstanding the provisions of 310 CMR 10.54(4)(a)5., 10.56(4)(a)4., and 10.60.

10.53: continued

4. Tidal Restoration Projects. A project that will restore tidal flow and that does not meet all the eligibility criteria set forth in 310 CMR 10.13 may be permitted as an Ecological Restoration Limited Project provided that in addition to the eligibility criteria set forth in 310 CMR 10.53(4)(a) through (d), the project, including any proposed flood mitigation measures, will not significantly increase flooding or storm damage to the built environment, including without limitation, buildings, wells, septic systems, roads or other man-made structures or infrastructure,

5. Other Restoration Projects. An Ecological Restoration Project that is not listed in 310 CMR 10.54(4)(e)2. through 4., that will improve the natural capacity of a Resource Area(s) to protect the interests identified in M.G.L. c. 131, § 40, may be permitted as an Ecological Restoration Limited Project provided that the project meets the eligibility criteria set forth in 310 CMR 10.54(4)(a) through (d). Such projects include, but are not limited to, the restoration, enhancement or management of Rare Species habitat, the restoration of hydrologic and habitat connectivity, the removal of aquatic nuisance vegetation to retard pond and lake eutrophication, the thinning or planting of vegetation to improve habitat value, riparian corridor re-naturalization, river floodplain reconnection, in-stream habitat enhancement, fill removal and regrading, flow restoration, and the installation of fish passage structures.

(5) Notwithstanding the provisions of 310 CMR 10.53(1), 10.54 through 10.58, and 10.60, the issuing authority shall issue an Order of Conditions permitting as a limited project for the support of existing agricultural production the reconstruction of existing dikes, the construction of new ponds or reservoirs, the expansion of existing ponds or reservoirs, and the construction of tailwater recovery systems and by pass canals/channels, provided that the following criteria are met:

(a) The Notice of Intent shall include all relevant portions of the farm Conservation Plan (CP) covering the work which has been prepared for the property and the applicant in cooperation with the United States Soil Conservation Service (SCS) pursuant to the January 20, 1993, Memorandum of Understanding (MOU) between the Department and SCS concerning CPs. At a minimum, the Notice of Intent shall include a description of the project, the number of square feet of each type of resource area that will be altered, and the alternatives that were considered in order to avoid alterations of wetland resource areas.

(b) There shall be a rebuttable presumption, which may be overcome upon a clear showing to the contrary, that:

1. work described in the CP avoids impacts to wetland resource areas or minimizes impacts where they are unavoidable; and
2. construction specifications and mitigation measures contained in the CP minimize impacts where impacts are unavoidable and adequately protect the interests of M.G.L. c. 131, § 40.

(c) If any presumption set forth in 310 CMR 10.53(5)(b) is overcome upon a clear showing to the contrary, the issuing authority shall impose such conditions on the work as are necessary to restore the presumption.

(d) The project will not have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.59.

(e) The maximum amount of Bordering Vegetated Wetland which may be altered by the above activities is:

1. 20,000 square feet for the construction or expansion of a pond or reservoir;
2. 20,000 square feet for the construction of a tailwater recovery system;
3. 20,000 square feet for the construction of a by-pass canal/channel; and
4. 10,000 square feet for the reconstruction of an existing dike.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

(f) There shall not be any filling or dredging of a Salt Marsh.

(6) Notwithstanding the provisions of 310 CMR 10.58, the Issuing Authority may issue an Order of Conditions permitting as a limited project the construction, rehabilitation, and maintenance of footpaths, bikepaths, and other pedestrian or nonmotorized vehicle access to or along riverfront areas but outside other resource areas, provided that adverse impacts from the work are minimized and that the design specifications are commensurate with the projected use and are compatible with the character of the riverfront area. Generally, the width of the access shall not exceed ten feet of pavement, except within an area that is already altered (*e.g.*, railroad beds within rights of way). Access shall not be located in vernal pools or fenced in a manner which would impede the movement of wildlife.

10.54: continued

(7) The Notice of Intent for any projects involving the construction, repair, replacement or expansion of public or private infrastructure shall include an operation and maintenance plan to ensure that the infrastructure will continue to function as designed. Implementation of the operation and maintenance plan as approved by the Issuing Authority shall be a continuing condition that shall be set forth in the Order of Conditions and the Certificate of Compliance.

(8) Any person proposing the replacement of an existing stream crossing shall demonstrate to the Issuing Authority that the impacts of the crossing have been avoided where possible, and when not possible have been minimized and that mitigation measures have been provided to contribute to the protection of the interests identified in M.G.L. c. 131, § 40. An applicant will be presumed to have made this showing if the project is designed as follows:

(a) If the project includes replacement of an existing non-tidal crossing, the applicant demonstrates to the satisfaction of the Issuing Authority that the crossing complies with the Massachusetts Stream Crossing Standards to the maximum extent practicable.

(b) If the project includes replacement of an existing tidal crossing that restricts tidal flow, the applicant demonstrates to the satisfaction of the Issuing Authority that tidal restriction will be eliminated to the maximum extent practicable.

This presumption may be rebutted by credible evidence from a competent source that the impacts of the project have not been avoided, minimized or mitigated to the maximum extent practicable.

At a minimum, in evaluating the potential to comply with the standards to the maximum extent practicable the applicant shall consider site constraints in meeting the standard, undesirable effects of risk in meeting the standard and the environmental benefit of meeting the standard compared to the cost by evaluating the following:

- The potential for downstream flooding;
- Upstream and downstream habitat (in-stream habitat, wetlands);
- Potential for erosion and head-cutting;
- Stream stability;
- Habitat fragmentation caused by the crossing;
- The amount of stream mileage made accessible by the improvements;
- Storm flow conveyance;
- Engineering design constraints specific to the crossing;
- Hydrologic constraints specific to the crossing;
- Impacts to wetlands that would occur by improving the crossing;
- Potential to affect property and infrastructure; and
- Cost of replacement.

10.54: Bank (Naturally Occurring Banks and Beaches)

(1) Preamble. Banks are likely to be significant to public or private water supply, to ground water supply, to flood control, to storm damage prevention, to the prevention of pollution and to the protection of fisheries and wildlife habitat. Where Banks are composed of concrete, asphalt or other artificial impervious material, said Banks are likely to be significant to flood control and storm damage prevention.

Banks are areas where ground water discharges to the surface and where, under some circumstances, surface water recharges the ground water.

Where Banks are partially or totally vegetated, the vegetation serves to maintain the Banks' stability, which in turn protects water quality by reducing erosion and siltation.

Banks may also provide shade that moderates water temperatures, as well as providing

breeding habitat, escape cover and food, all of which are significant to the protection of fisheries. Banks which drop off quickly or overhang the water's edge often contain numerous undercuts which are favorite hiding spots for important game species such as largemouth bass (*Micropterus salmoides*).

10.54: continued

The topography, plant community composition and structure, and soil structure of banks together provide important food, shelter, migratory and overwintering areas, and breeding areas for wildlife. Topography plays a role in determining the suitability of banks to serve as burrowing or feeding habitat. Soil structure also plays a role in determining the suitability for burrowing, hibernation and other cover. Bank topography and soil structure impact the bank's vegetative structure, as well. Bushes and other undergrowth, trees, vegetation extending from the bank into the water, and vegetation growing along the water's edge are also important to a wide variety of wildlife. A number of tubers and berry bushes also grow in banks and serve as important food for wildlife. Finally, banks may provide important shelter for wildlife which needs to move between wetland areas.

Banks act to confine floodwaters during the most frequent storms, preventing the spread of water to adjacent land. Because Banks confine water during such storms to an established channel they maintain water temperatures and depths necessary for the protection of fisheries. The maintenance of cool water temperatures during warm weather is critical to the survival of important game species such as brook trout (*Salvelinus fontinalis*), rainbow trout (*Oncorhynchus Mykiss*) and brown trout (*Salmo trutta*). An alteration of a Bank that permits water to frequently and consistently spread over a large and more shallow area increases the amount of property which is routinely flooded, as well as elevating water temperature and reducing fish habitat within the main channel, particularly during warm weather.

(2) Definition, Critical Characteristics and Boundary.

(a) A Bank is the portion of the land surface which normally abuts and confines a water body. It occurs between a water body and a vegetated bordering wetland and adjacent flood plain, or, in the absence of these, it occurs between a water body and an upland.

A Bank may be partially or totally vegetated, or it may be comprised of exposed soil, gravel or stone.

(b) The physical characteristics of a Bank, as well as its location, as described in 310 CMR 10.54(2)(a), are critical to the protection of the interests specified in 310 CMR 10.54(1).

(c) The upper boundary of a Bank is the first observable break in the slope or the mean annual flood level, whichever is lower. The lower boundary of a Bank is the mean annual low flow level.

(3) Presumption. Where a proposed activity involves the removing, filling, dredging or altering of a Bank, the issuing authority shall presume that such area is significant to the interests specified in 310 CMR 10.54(1). This presumption is rebuttable and may be overcome upon a clear showing that the Bank does not play a role in the protection of said interests. In the event that the presumption is deemed to have been overcome, the issuing authority shall make a written determination to this effect, setting forth its grounds (Form 6).

(4) General Performance Standard.

(a) Where the presumption set forth in 310 CMR 10.54(3) is not overcome, any proposed work on a Bank shall not impair the following:

1. the physical stability of the Bank;
2. the water carrying capacity of the existing channel within the Bank;
3. ground water and surface water quality;
4. the capacity of the Bank to provide breeding habitat, escape cover and food for fisheries;
5. the capacity of the Bank to provide important wildlife habitat functions. A project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1,

1987, that (cumulatively) alter(s) up to 10% or 50 feet (whichever is less) of the length of the bank found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. In the case of a bank of a river or an intermittent stream, the impact shall be measured on each side of the stream or river. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60.

10.54: continued

6. Work on a stream crossing shall be presumed to meet the performance standard set forth in 310 CMR 10.54(4)(a) provided the work is performed in compliance with the Massachusetts Stream Crossing Standards by consisting of a span or embedded culvert in which, at a minimum, the bottom of a span structure or the upper surface of an embedded culvert is above the elevation of the top of the bank, and the structure spans the channel width by a minimum of 1.2 times the bankfull width. This presumption is rebuttable and may be overcome by the submittal of credible evidence from a competent source. Notwithstanding the requirement of 310 CMR 10.54(4)(a)5., the impact on bank caused by the installation of a stream crossing is exempt from the requirement to perform a habitat evaluation in accordance with the procedures contained in 310 CMR 10.60.

(b) Notwithstanding the provisions of 310 CMR 10.54(4)(a), structures may be permitted in or on a Bank when required to prevent flood damage to facilities, buildings and roads constructed prior to the effective date of 310 CMR 10.51 through 10.60 or constructed pursuant to a Notice of Intent filed prior to the effective date of 310 CMR 10.51 through 10.60 (April 1, 1983), including the renovation or reconstruction (but not substantial enlargement) of such facilities, buildings and roads, provided that the following requirements are met:

1. The proposed protective structure, renovation or reconstruction is designed and constructed using best practical measures so as to minimize adverse effects on the characteristics and functions of the resource area;
2. The applicant demonstrates that there is no reasonable method of protecting, renovating or rebuilding the facility in question other than the one proposed.

(c) Notwithstanding the provisions of 310 CMR 10.54(4)(a) or (b), no project may be permitted which will have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.59.

10.55: Bordering Vegetated Wetlands (Wet Meadows, Marshes, Swamps and Bogs)

(1) Preamble. Bordering Vegetated Wetlands are likely to be significant to public or private water supply, to ground water supply, to flood control, to storm damage prevention, to prevention of pollution, to the protection of fisheries and to wildlife habitat.

The plants and soils of Bordering Vegetated Wetlands remove or detain sediments, nutrients (such as nitrogen and phosphorous) and toxic substances (such as heavy metal compounds) that occur in run-off and flood waters.

Some nutrients and toxic substances are detained for years in plant root systems or in the soils. Others are held by plants during the growing season and released as the plants decay in the fall and winter. This latter phenomenon delays the impacts of nutrients and toxins until the cold weather period, when such impacts are less likely to reduce water quality.

Bordering Vegetated Wetlands are areas where ground water discharges to the surface and where, under some circumstances, surface water discharges to the ground water.

The profusion of vegetation in Bordering Vegetated Wetlands acts to slow down and reduce the passage of flood waters during periods of peak flows by providing temporary flood water storage and by facilitating water removal through evaporation and transpiration. This process reduces downstream flood crests and resulting damage to private and public property. During dry periods the water retained in Bordering Vegetated Wetlands is essential to the maintenance of base flow levels in rivers and streams, which in turn is important to the protection of water quality and water supplies.

The Act defines freshwater wetlands by hydrology and vegetation. Hydrology is the driving force which creates wetlands, but it is a transient, temporal parameter. The presence of water

at or near the ground surface during a significant portion of the year supports, and in fact promotes, the growth of wetland indicator plants. Prolonged or frequent saturation or inundation also produces hydric soils, and creates anaerobic conditions that favor the growth of wetland indicator plants. Hydric soils are direct indicators of long-term hydrologic conditions and are present throughout the year.

Wetland vegetation supports a wide variety of insects, reptiles, amphibians, small mammals and birds which are a source of food for important game fish. Bluegills (*Lepomis macrochirus*), pumpkinseeds (*Lepomis gibbosus*), yellow perch (*Perca flavescens*), rock bass (*Ambloplites rupestris*) and all trout species feed upon nonaquatic insects. Large-mouth bass (*Micropterus salmoides*), chain pickerel (*Esox niger*) and northern pike (*Esox lucius*) feed upon small mammals, snakes, nonaquatic insects, birds and amphibians.

10.55: continued

Wetland vegetation provides shade which moderates water temperatures important to fish life. Wetlands flooded by adjacent water bodies and waterways provide food, breeding habitat and cover for fish. Fish populations in the larval stage are particularly dependent upon food provided by over-bank flooding which occurs during peak flow periods (extreme storms) because most river and stream channels do not provide sufficient quantities of the microscopic plant and animal life required for food.

Bordering vegetated wetlands are probably the Commonwealth's most important inland habitat for wildlife. The hydrologic regime, plant community composition and structure, soil composition and structure, topography, and water chemistry of bordering vegetated wetlands provide important food, shelter, migratory and overwintering areas, and breeding areas for many birds, mammals, amphibians and reptiles. A wide variety of vegetated wetland plants, the nature of which are determined in large part by the depth and duration of water, as well as soil and water composition, are utilized by varied species as important areas for mating, nesting, brood rearing, shelter and food (directly and indirectly). The diversity and interspersion of the vegetative structure is also important in determining the nature of its wildlife habitat. Different habitat characteristics are used by different wildlife species during summer, winter and migratory seasons.

Although the vegetational community can often be analyzed to establish an accurate wetland boundary, sole reliance on the presence of wetland indicator plants can be misleading because some species thrive in both uplands and wetlands. Gently sloping areas often produce large transitional zones where the vegetational boundary is difficult to delineate. Hydrology can supplement vegetative criteria to enhance the technical accuracy, consistency, and credibility of wetland boundary delineations, and are especially useful for analyzing disturbed sites.

(2) Definition, Critical Characteristics and Boundary.

(a) Bordering Vegetated Wetlands are freshwater wetlands which border on creeks, rivers, streams, ponds and lakes. The types of freshwater wetlands are wet meadows, marshes, swamps and bogs. Bordering Vegetated Wetlands are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants. The ground and surface water regime and the vegetational community which occur in each type of freshwater wetland are specified in M.G.L. c. 131, § 40.

(b) The physical characteristics of Bordering Vegetated Wetlands, as described in 310 CMR 10.55(2)(a), are critical to the protection of the interests specified in 310 CMR 10.55(1).

(c) The boundary of Bordering Vegetated Wetlands is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist. Wetland indicator plants shall include but not necessarily be limited to those plant species identified in the Act. Wetland indicator plants are also those classified in the indicator categories of Facultative, Facultative+, Facultative Wetland-, Facultative Wetland, Facultative Wetland+, or Obligate Wetland in the *National List of Plant Species That Occur in Wetlands: Massachusetts* (Fish & Wildlife Service, U.S. Department of the Interior, 1988) or plants exhibiting physiological or morphological adaptations to life in saturated or inundated conditions.

1. Areas containing a predominance of wetland indicator plants are presumed to indicate the presence of saturated or inundated conditions. Therefore, the boundary as determined by 50% or more wetland indicator plants shall be presumed accurate when:

- a. all dominant species have an indicator status of obligate, facultative wetland+, facultative wetland, or facultative wetland- and the slope is distinct or abrupt between the upland plant community and the wetland plant community;
- b. the area where the work will occur is clearly limited to the buffer zone; or
- c. the issuing authority determines that sole reliance on wetland indicator plants will

yield an accurate delineation.

2. When the boundary is not presumed accurate as described in 310 CMR 10.55(2)(c)1.a. through c. or to overcome the presumption, credible evidence shall be submitted by a competent source demonstrating that the boundary of Bordering Vegetated Wetlands is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist. The issuing authority must evaluate vegetation and indicators of saturated or inundated conditions if submitted by a credible source, or may require credible evidence of saturated or inundated conditions when determining the boundary. Indicators of saturated or inundated conditions sufficient to support wetland indicator plants shall include one or more of the following:

10.55: continued

- a. groundwater, including the capillary fringe, within a major portion of the root zone;
- b. observation of prolonged or frequent flowing or standing surface water;
- c. characteristics of hydric soils.

3. Where an area has been disturbed (*e.g.* by cutting, filling, or cultivation), the boundary is the line within which there are indicators of saturated or inundated conditions sufficient to support a predominance of wetland indicator plants, a predominance of wetland indicator plants, or credible evidence from a competent source that the area supported or would support under undisturbed conditions a predominance of wetland indicator plants prior to the disturbance.

(3) Presumption. Where a proposed activity involves the removing, filling, dredging or altering of a Bordering Vegetated Wetland, the issuing authority shall presume that such area is significant to the interests specified in 310 CMR 10.55(1). This presumption is rebuttable and may be overcome upon a clear showing that the Bordering Vegetated Wetland does not play a role in the protection of said interests. In the event that the presumption is deemed to have been overcome, the issuing authority shall make a written determination to this effect, setting forth its grounds (Form 6).

(4) General Performance Standards.

(a) Where the presumption set forth in 310 CMR 10.55(3) is not overcome, any proposed work in a Bordering Vegetated Wetland shall not destroy or otherwise impair any portion of said area.

(b) Notwithstanding the provisions of 310 CMR 10.55(4)(a), the issuing authority may issue an Order of Conditions permitting work which results in the loss of up to 5000 square feet of Bordering Vegetated Wetland when said area is replaced in accordance with the following general conditions and any additional, specific conditions the issuing authority deems necessary to ensure that the replacement area will function in a manner similar to the area that will be lost:

1. the surface of the replacement area to be created ("the replacement area") shall be equal to that of the area that will be lost ("the lost area");
2. the ground water and surface elevation of the replacement area shall be approximately equal to that of the lost area;
3. The overall horizontal configuration and location of the replacement area with respect to the bank shall be similar to that of the lost area;
4. the replacement area shall have an unrestricted hydraulic connection to the same water body or waterway associated with the lost area;
5. the replacement area shall be located within the same general area of the water body or reach of the waterway as the lost area;
6. at least 75% of the surface of the replacement area shall be reestablished with indigenous wetland plant species within two growing seasons, and prior to said vegetative reestablishment any exposed soil in the replacement area shall be temporarily stabilized to prevent erosion in accordance with standard U.S. Soil Conservation Service methods; and
7. the replacement area shall be provided in a manner which is consistent with all other General Performance Standards for each resource area in Part III of 310 CMR 10.00.

In the exercise of this discretion, the issuing authority shall consider the magnitude of the alteration and the significance of the project site to the interests identified in M.G.L. c. 131, § 40, the extent to which adverse impacts can be avoided, the extent to which adverse

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

impacts are minimized, and the extent to which mitigation measures, including replication or restoration, are provided to contribute to the protection of the interests identified in M.G.L. c. 131, § 40.

(c) Notwithstanding the provisions of 310 CMR 10.55(4)(a), the issuing authority may issue an Order of Conditions permitting work which results in the loss of a portion of Bordering Vegetated Wetland when;

1. said portion has a surface area less than 500 square feet;
2. said portion extends in a distinct linear configuration ("finger-like") into adjacent uplands; and

10.55: continued

3. in the judgment of the issuing authority it is not reasonable to scale down, redesign or otherwise change the proposed work so that it could be completed without loss of said wetland.
- (d) Notwithstanding the provisions of 310 CMR 10.55(4)(a),(b) and (c), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59.
- (e) Any proposed work shall not destroy or otherwise impair any portion of a Bordering Vegetated Wetland that is within an Area of Critical Environmental Concern designated by the Secretary of Energy and Environmental Affairs under M.G.L. c. 21A, § 2(7) and 301 CMR 12.00: *Areas of Critical Environmental Concern*. 310 CMR 10.55(4)(e):
 1. supersedes the provisions of 310 CMR 10.55(4)(b) and (c);
 2. shall not apply if the presumption set forth at 310 CMR 10.55(3) is overcome;
 3. shall not apply to work proposed under 310 CMR 10.53(3)(l); and
 4. shall not apply to maintenance of stormwater detention, retention, or sedimentation ponds, or to maintenance of stormwater energy dissipating structures, that have been constructed in accordance with a valid order of conditions.

10.56: Land under Water Bodies and Waterways (under any Creek, River, Stream, Pond or Lake)

(1) Preamble. Land under Water Bodies and Waterways is likely to be significant to public and private water supply, to ground water supply, to flood control, to storm damage prevention, to prevention of pollution and to protection of fisheries and wildlife habitat. Where such land is composed of concrete, asphalt or other artificial impervious material, said land is likely to be significant to flood control and storm damage prevention.

Where Land under Water Bodies and Waterways is composed of pervious material, such land represents a point of exchange between surface and ground water.

The physical nature of Land under Water Bodies and Waterways is highly variable, ranging from deep organic and fine sedimentary deposits to rocks and bedrock. The organic soils and sediments play an important role in the process of detaining and removing dissolved and particulate nutrients (such as nitrogen and phosphorous) from the surface water above. They also serve as traps for toxic substances (such as heavy metal compounds).

Land under Water Bodies and Waterways, in conjunction with banks, serves to confine floodwater within a definite channel during the most frequent storms. Filling within this channel blocks flows which in turn causes backwater and overbank flooding during such storms. An alteration of Land under Water Bodies and Waterways that causes water to frequently spread out over a larger area at a lower depth increases the amount of property which is routinely flooded. Additionally, it results in an elevation of water temperature and a decrease in habitat in the main channel, both of which are detrimental to fisheries, particularly during periods of warm weather and low flows.

Land under rivers, streams and creeks that is composed of gravel allows the circulation of cold, well oxygenated water necessary for the survival of important game fish species such as brook trout (*Salvelinus fontinalis*), rainbow trout (*Oncorhynchus mykiss*), brown trout (*Salmo trutta*) and atlantic salmon (*Salmon salar*). River, stream and creek bottoms with a diverse structure composed of gravel, large and small boulders and rock outcrops provides escape cover and resting areas for the above mentioned game fish species (*salmonids*). Such bottom type also provides areas for the production of aquatic insects essential to fisheries.

Land under ponds and lakes is vital to a large assortment of warm water fish during spawning periods. Species such as large mouth bass (*Micropterus salmoides*), smallmouth bass (*Micropterus dolomieu*), blue gills (*Lepomis macrochirus*), pumpkinseeds (*Lepomis gibbosus*), black crappie (*Pomoxis nigromaculatus*) and rock bass (*Ambloplites rupestris*) build nests on the

lake and bottom substrates within which they shed fertilize their eggs.

The plant community composition and structure, hydrologic regime, topography, soil composition and water quality of land under water bodies and waterways provide important food, shelter, migratory and overwintering areas, and breeding areas for wildlife. Certain submerged, rooted vegetation is eaten by water fowl and some mammals. Some amphibians (as well as some invertebrate species eaten by vertebrate wildlife) attach their eggs to such vegetation. Some aquatic vegetation protruding out of the water is also used for nesting, and many species use dead vegetation resting on land under water but protruding above the surface for feeding and basking. Soil composition is also important for hibernation and for animals which begin to burrow their tunnels under water. Hydrologic regime, topography, and water quality not only affect vegetation, but also determine which species feed in an area.

10.56: continued

(2) Definition, Critical Characteristics and Boundaries.

(a) Land under Water Bodies and Waterways is the land beneath any creek, river, stream, pond or lake. Said land may be composed of organic muck or peat, fine sediments, rocks or bedrock.

(b) The physical characteristics and location of Land under Water Bodies and Waterways specified in 310 CMR 10.56(2)(a) are critical to the protection of the interests specified in 310 CMR 10.56(1).

(c) The boundary of Land under Water Bodies and Waterways is the mean annual low water level.

(3) Presumption. Where a project involves removing, filling, dredging or altering of Land under Water Bodies and Waterways, the issuing authority shall presume that such area is significant to the interests specified in 310 CMR 10.56(1). This presumption is rebuttable and may be overcome upon a clear showing that said land does not play a role in the protection of said interests. In the event that the presumption is deemed to have been overcome, the issuing authority shall make a written determination to this effect, setting forth the grounds (Form 6).

(4) General Performance Standards.

(a) Where the presumption set forth in 310 CMR 10.56(3) is not overcome, any proposed work within Land under Water Bodies and Waterways shall not impair the following:

1. The water carrying capacity within the defined channel, which is provided by said land in conjunction with the banks;

2. Ground and surface water quality;

3. The capacity of said land to provide breeding habitat, escape cover and food for fisheries; and

4. The capacity of said land to provide important wildlife habitat functions. A project or projects on a single lot, for which Notice(s) of intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures established under 310 CMR 10.60.

5. Work on a stream crossing shall be presumed to meet the performance standard set forth in 310 CMR 10.56(4)(a) provided the work is performed in compliance with the Massachusetts Stream Crossing Standards by consisting of a span or embedded culvert in which, at a minimum, the bottom of a span structure or the upper surface of an embedded culvert is above the elevation of the top of the bank, and the structure spans the channel width by a minimum of 1.2 times the bankfull width. This presumption is rebuttable and may be overcome by the submittal of credible evidence from a competent source. Notwithstanding the requirements of 310 CMR 10.56(4)(a)4., the impact on Land under Water Bodies and Waterways caused by the installation of a stream crossing is exempt from the requirement to perform a habitat evaluation in accordance with the procedures established under 310 CMR 10.60.

(b) Notwithstanding the provisions of 310 CMR 10.56(4)(a), the issuing authority may issue an Order in accordance with M.G.L. c. 131, § 40 to maintain or improve boat channels within Land under Water Bodies and Waterways when said work is designed and carried out using the best practical measures so as to minimize adverse effects such as the suspension or transport of pollutants, increases in turbidity, the smothering of bottom organisms, the

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

accumulation of pollutants by organisms or the destruction of fisheries habitat or nutrient source areas.

(c) Notwithstanding the provisions of 310 CMR 10.56(4)(a) or (b), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59.

10.57: Land Subject to Flooding (Bordering and Isolated Areas)(1) Preamble.(a) Bordering Land Subject to Flooding:

1. Bordering Land Subject to Flooding is an area which floods from a rise in a bordering waterway or water body. Such areas are likely to be significant to flood control and storm damage prevention.

2. Bordering Land Subject to Flooding provides a temporary storage area for flood water which has overtopped the bank of the main channel of a creek, river or stream or the basin of a pond or lake. During periods of peak run-off, flood waters are both retained (*i.e.*, slowly released through evaporation and percolation) and detained (slowly released through surface discharge) by Bordering Land Subject to Flooding. Over time, incremental filling of these areas causes increases in the extent and level of flooding by eliminating flood storage volume or by restricting flows, thereby causing increases in damage to public and private properties.

3. Certain portions of Bordering Land Subject to Flooding are also likely to be significant to the protection of wildlife habitat. These include all areas on the ten year floodplain or within 100 feet of the bank or bordering vegetated wetland (whichever is further from the water body or waterway, so long as such area is contained within the 100 year floodplain), and all vernal pool habitat on the 100 year floodplain, except for those portions of which have been so extensively altered by human activity that their important wildlife habitat functions have been effectively eliminated (such "altered" areas include paved and gravelled areas, golf courses, cemeteries, playgrounds, landfills, fairgrounds, quarries, gravel pits, buildings, lawns, gardens, roadways (including median strips, areas enclosed within highway interchanges, shoulders, and embankments), railroad tracks (including ballast and embankments), and similar areas lawfully existing on November 1, 1987 and maintained as such since that time).

The hydrologic regime, plant community composition and structure, topography, soil composition and proximity to water bodies and bordering vegetated wetlands of these portions of bordering land subject to flooding provide important food, shelter, migratory and overwintering areas, and breeding areas for wildlife. Nutrients from flood waters, as well as the inundation of floodplain soil, create important wildlife habitat characteristics, such as richness and diversity of soil and vegetation. A great many species require or prefer habitat which is as close as possible to water and/or has moist conditions, characteristics generally present on lower floodplains. Similarly, lower floodplains, because of their proximity to water and vegetated wetlands, can provide important shelter for wildlife which needs to migrate between such areas, or between such areas and uplands. The "edge" where floodplain habitat borders vegetated wetlands or water bodies is frequently very high in wildlife richness and diversity. Similar "edges" may be found elsewhere the lower floodplain, where differences in topography and frequency of flooding have created varied soil and plant community composition and structure.

Finally, vernal pool habitat is found at various locations throughout the 100 year floodplain, the pool itself generally formed by meander scars, or sloughs left after the main water channel has changed course. These pools are essential breeding sites for certain amphibians which require isolated areas that are generally flooded for at least two continuous months in the spring and/or summer and are free from fish predators. Most of these amphibians remain near the breeding pool during the remainder of their lifecycle. Many reptiles, birds and mammals also feed here.

(b) Isolated Land Subject to Flooding:

1. Isolated Land Subject to Flooding is an isolated depression or a closed basin which

serves as a ponding area for run-off or high ground water which has risen above the ground surface. Such areas are likely to be locally significant to flood control and storm damage prevention. In addition, where such areas are underlain by pervious material they are likely to be significant to public or private water supply and to ground water supply. Where such areas are underlain by pervious material covered by a mat of organic peat and muck, they are also likely to be significant to the prevention of pollution. Finally, where such areas are vernal pool habitat, they are significant to the protection of wildlife habitat.

10.57: continued

2. Isolated Land Subject to Flooding provides a temporary storage area where run-off and high ground water pond and slowly evaporate or percolate into the substrate. Flooding causes lateral displacement of the ponded water onto contiguous properties, which may in turn result in damage to said properties.

3. Isolated Land Subject to Flooding, where it is underlain by pervious material, provides a point of exchange between ground and surface waters. Contaminants introduced into said area, such as septic system discharges and road salts, find easy access into the ground water and neighboring wells. Where these conditions occur and a mat of organic peat or muck covers the substrate of the area, said mat serves to detain and remove contaminants which might otherwise enter the ground water and neighboring wells.

4. Isolated Land Subject to Flooding, where it is vernal pool habitat, is an essential breeding site for certain amphibians which require isolated areas that are generally flooded for at least two continuous months in the spring and/or summer and are free from fish predators. Most of these amphibians remain near the breeding pool during the remainder of their lifecycle. Many reptiles, birds and mammals also feed here.

(2) Definitions, Critical Characteristics and Boundaries.

(a) Bordering Land Subject to Flooding.

1. Bordering Land Subject to Flooding is an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds or lakes. It extends from the banks of these waterways and water bodies; where a bordering vegetated wetland occurs, it extends from said wetland.

2. The topography and location of Bordering Land Subject to Flooding specified in the foregoing 310 CMR 10.57(2)(a)1. are critical to the protection of the interests specified in 310 CMR 10.57(1)(a). Where Bordering Land Subject to Flooding is significant to the protection of wildlife habitat, the physical characteristics as described in the foregoing 310 CMR 10.57(1)(a)(3) are critical to the protection of that interest.

3. The boundary of Bordering Land Subject to Flooding is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm. Said boundary shall be that determined by reference to the most recently available flood profile data prepared for the community within which the work is proposed under the National Flood Insurance Program (NFIP, currently administered by the Federal Emergency Management Agency, successor to the U.S. Department of Housing and Urban Development). Said boundary, so determined, shall be presumed accurate. This presumption is rebuttable and may be overcome only by credible evidence from a registered professional engineer or other professional competent in such matters.

Where NFIP Profile data is unavailable, the boundary of Bordering Land Subject to Flooding shall be the maximum lateral extent of flood water which has been observed or recorded. In the event of a conflict, the issuing authority may require the applicant to determine the boundary of Bordering Land Subject to Flooding by engineering calculations which shall be:

- a. based upon a design storm of seven inches of precipitation in 24 hours (*i.e.*, a Type III Rainfall, as defined by the U.S. Soil Conservation Service);
- b. based upon the standard methodologies set forth in U.S. Soil Conservation Service Technical Release No. 55, *Urban Hydrology for Small Watersheds* and Section 4 of the U.S. Soil Conservation Service, *National Engineering Hydrology Handbook*; and
- c. prepared by a registered professional engineer or other professional competent in

such matters.

4. The boundary of the ten year floodplain is the estimated maximum lateral extent of the flood water which will theoretically result from the statistical ten-year frequency storm. Said boundary shall be determined as specified under 310 CMR 10.57(2)(a)3., except that where NFIP Profile data is unavailable, the boundary shall be the maximum lateral extent of flood water which has been observed or recorded during a ten year frequency storm and, in the event of conflict, engineering calculations under 310 CMR 10.57(2)(a)3.a. shall be based on a design storm of $4^{8/10}$ (4.8) inches of precipitation in 24 hours.

10.57: continued

5. The only portions of this resource area which shall be presumed to be vernal pool habitat are those that have been certified as such by the Massachusetts Division of Fisheries and Wildlife, where said Division has forwarded maps and other information needed to identify the location of such habitat to the Conservation Commission and DEP prior to the filing of each Notice of Intent or Abbreviated Notice of Intent regarding that portion. Such presumption is rebuttable, and may be overcome upon a clear showing to the contrary. However, notwithstanding any other provision of 310 CMR 10.57, should an Environmental Impact Report be required for a proposed project as determined by 301 CMR 11.00: *MEPA Regulations* the performance standard established under this Section regarding vernal pool habitat shall only apply to proposed projects which would alter such habitats as have been identified prior to the time that the Secretary of the Executive Office of Energy and Environmental Affairs has determined, in accordance with the provisions of 301 CMR 11.09(4): *Eligible Projects*, that a final Environmental Impact Report for that project adequately and properly complies with the M.G.L. c. 30, § 6 through 62H (unless, subsequent to that determination, the Secretary requires supplemental information concerning vernal pool habitat, in accordance with the provisions of 301 CMR 11.17: *Transition Rules*).
 6. The boundary of vernal pool habitat is that certified by the Massachusetts Division of Fisheries and Wildlife. In the event of a conflict of opinion, or the lack of a clear boundary delineation certified by the Division of Fisheries and Wildlife, the applicant may submit an opinion certified by a registered professional engineer, supported by engineering calculations, as to the probable extent of said habitat. Said calculations shall be prepared in accordance with the general requirements set forth in 310 CMR 10.57(2)(a)3.a. through c., except that the maximum extent of said water shall be based upon the total volume (rather than peak rate) of run-off from the drainage area contributing to the vernal pool and shall be further based upon a design storm of $2^{6/10}$ (2.6) inches (rather than seven inches) of precipitation in 24 hours. Vernal pool habitat shall include the area within 100 feet of the boundary of the vernal pool itself, insofar as such area is contained within the boundaries of this resource area.
- (b) Isolated Land Subject to Flooding.
1. Isolated Land Subject to Flooding is an isolated depression or closed basin without an inlet or an outlet. It is an area which at least once a year confines standing water to a volume of at least $\frac{1}{4}$ acre-feet and to an average depth of at least six inches.
Isolated Land Subject to Flooding may be underlain by pervious material, which in turn may be covered by a mat of organic peat or muck.
 2. The characteristics specified in the foregoing 310 CMR 10.57(2)(b)1. are critical to the protection of the interests specified in 310 CMR 10.57(1)(b).
 3. The boundary of Isolated Land Subject to Flooding is the perimeter of the largest observed or recorded volume of water confined in said area.
In the event of a conflict of opinion regarding the extent of water confined in an Isolated Land Subject to Flooding, the applicant may submit an opinion certified by a registered professional engineer, supported by engineering calculations, as to the probable extent of said water. Said calculations shall be prepared in accordance with the general requirements set forth in 310 CMR 10.57(2)(a)3.a. through c., except that the maximum extent of said water shall be based upon the total volume (rather than peak rate) of run-off from the drainage area contributing to the Isolated Land Subject to Flooding and shall be further based upon the assumption that there is no infiltration of said run-off into the soil within the Isolated Land Subject to Flooding.
 4. The only portions of this resource area which shall be presumed to be vernal pool

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

habitat are those determined under procedures established in 310 CMR 10.57(2)(a)5.

5. The boundary of vernal pool habitat is that determined under procedures established in 310 CMR 10.57(2)(a)6.

(3) Presumption. Where a project involves removing, filling, dredging or altering of Land Subject to Flooding (both Bordering and Isolated Areas) the issuing authority shall presume that such an area is significant to, and only to, the respective interests specified in 310 CMR 10.57(1)(a) and (b). This presumption is rebuttable and may be overcome only upon a clear showing that said land does not play a role in the protection of said interests. In the event that the presumption is deemed to have been overcome, the issuing authority shall make a written determination to this effect, setting forth its grounds (Form 6).

10.57: continued

(4) General Performance Standards.(a) Bordering Land Subject to Flooding.

1. Compensatory storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows.

Compensatory storage shall mean a volume not previously used for flood storage and shall be incrementally equal to the theoretical volume of flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Further, with respect to waterways, such compensatory volume shall be provided within the same reach of the river, stream or creek.

2. Work within Bordering Land Subject to Flooding, including that work required to provide the above-specified compensatory storage, shall not restrict flows so as to cause an increase in flood stage or velocity.

3. Work in those portions of bordering land subject to flooding found to be significant to the protection of wildlife habitat shall not impair its capacity to provide important wildlife habitat functions. Except for work which would adversely affect vernal pool habitat, a project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold, or altering vernal pool habitat, may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60.

(b) Isolated Land Subject to Flooding. A proposed project in Isolated Land Subject to Flooding shall not result in the following:

1. Flood damage due to filling which causes lateral displacement of water that would otherwise be confined within said area.

2. An adverse effect on public and private water supply or ground water supply, where said area is underlain by pervious material.

3. An adverse effect on the capacity of said area to prevent pollution of the ground water, where the area is underlain by pervious material which in turn is covered by a mat of organic peat and muck.

4. An impairment of its capacity to provide wildlife habitat where said area is vernal pool habitat, as determined by procedures contained in 310 CMR 10.60.

(c) Protection of Rare Wildlife Species. Notwithstanding the provisions of 310 CMR 10.57(4)(a) or (b), no project may be permitted which will have any adverse effect on specified wildlife habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59.10.58 Riverfront Area

(1) Preamble. Riverfront areas are likely to be significant to protect the private or public water supply; to protect groundwater; to provide flood control; to prevent storm damage; to prevent pollution; to protect land containing shellfish; to protect wildlife habitat; and to protect the fisheries. Land adjacent to rivers and streams can protect the natural integrity of these water

bodies. The presence of natural vegetation within riverfront areas is critical to sustaining rivers as ecosystems and providing these public values. The riverfront area can prevent degradation of water quality by filtering sediments, toxic substances (such as heavy metals), and nutrients (such as phosphorus and nitrogen) from stormwater, nonpoint pollution sources, and the river itself. Sediments are trapped by vegetation before reaching the river. Nutrients and toxic substances may be detained in plant root systems or broken down by soil bacteria. Riverfront areas can trap and remove disease-causing bacteria that otherwise would reach rivers and coastal estuaries where they can contaminate shellfish beds and prohibit safe human consumption. Natural vegetation within the riverfront area also maintains water quality for fish and wildlife.

10.58: continued

Where rivers serve as water supplies or provide induced recharge to wells, the riverfront area can be important to the maintenance of drinking water quality and quantity. Land along rivers in its natural state with a high infiltration capacity increases the yield of a water supply well. When riverfront areas lack the capacity to filter pollutants, contaminants can reach human populations served by wells near rivers or by direct river intakes. The capacity of riverfront areas to filter pollutants is equally critical to surface water supplies, reducing or eliminating the need for additional treatment. In the watershed, mature vegetation within riverfront areas provides shade to moderate water temperatures and slow algal growth, which can produce odors and taste problems in drinking water.

Within riverfront areas, surface water interaction with groundwater significantly influences the stream ecosystem. The dynamic relationship between surface and groundwater within the "hyporheic zone" sustains communities of aquatic organisms which regulate the flux of nutrients, biomass and the productivity of organisms including fish within the stream itself. The hyporheic zone extends to greater distances horizontally from the channel in large, higher order streams with alluvial floodplains, but the interaction within this zone is important in smaller streams as well.

By providing recharge and retaining natural flood storage, as well as by slowing surface water runoff, riverfront areas can mitigate flooding and damage from storms. The root systems of riverfront vegetation keep soil porous, increasing infiltration capacity. Vegetation also removes excess water through evaporation and transpiration. This removal of water from the soil allows for more infiltration when flooding occurs. Increases in storage of floodwaters can decrease peak discharges and reduce storm damage. Vegetated riverfronts also dissipate the energy of storm flows, reducing damage to public and private property.

Riverfront areas are critical to maintaining thriving fisheries. Maintaining vegetation along rivers promotes fish cover, increases food and oxygen availability, decreases sedimentation, and provides spawning habitat. Maintenance of water temperatures and depths is critical to many important fish species. Where groundwater recharges surface water flows, loss of recharge as a result of impervious surfaces within the riverfront area may aggravate low flow conditions and increase water temperatures. In some cases, summer stream flows are maintained almost exclusively from groundwater recharge. Small streams are most readily impacted by removal of trees and other vegetation along the shore.

Riverfront areas are important wildlife habitat, providing food, shelter, breeding, migratory, and overwintering areas. Even some predominantly upland species use and may be seasonally dependent on riverfront areas. Riverfront areas promote biological diversity by providing habitats for an unusually wide variety of upland and wetland species, including bald eagles, osprey, and kingfishers. Large dead trees provide nesting sites for bird species that typically use the same nest from year to year. Sandy areas along rivers may serve as nesting sites for turtles and water snakes. Riverfront areas provide food for species such as wood turtles which feed and nest in uplands but use rivers as resting and overwintering areas. Riverfront areas provide corridors for the migration of wildlife for feeding or breeding. Loss of this connective function, from activities that create barriers to wildlife movement within riverfront areas, results in habitat fragmentation and causes declines in wildlife populations. Wildlife must also be able to move across riverfront areas, between uplands and the river.

Vernal pools are frequently found within depressions in riverfront areas. These pools are essential breeding sites for certain amphibians which require isolated, seasonally wet areas without predator fish. Most of these amphibians require areas of undisturbed woodlands as habitat during the non-breeding seasons. Some species require continuous woody vegetation between woodland habitat and the breeding pools. Depending on the species, during non-breeding seasons these amphibians may remain near the pools or travel $\frac{1}{4}$ mile or more from the

pools. Reptiles, especially turtles, often require areas along rivers to lay their eggs. Since amphibians and reptiles are less mobile than mammals and birds, maintaining integrity of their habitat is critical.

In those portions so extensively altered by human activity that their important wildlife habitat functions have been effectively eliminated, riverfront areas are not significant to the protection of important wildlife habitat and vernal pool habitat.

(2) Definitions, Critical Characteristics and Boundaries.

(a) A Riverfront Area is the area of land between a river's mean annual high water line and a parallel line measured horizontally. The riverfront area may include or overlap other resource areas or their buffer zones. The riverfront area does not have a buffer zone.

10.58: continued

1. A river is any natural flowing body of water that empties to any ocean, lake, pond, or other river and which flows throughout the year. Rivers include streams (see 310 CMR 10.04: Stream) that are perennial because surface water flows within them throughout the year. Intermittent streams are not rivers as defined herein because surface water does not flow within them throughout the year. When surface water is not flowing within an intermittent stream, it may remain in isolated pools or it may be absent. When surface water is present in contiguous and connected pool/riffle systems, it shall be determined to be flowing. Rivers begin at the point an intermittent stream becomes perennial or at the point a perennial stream flows from a spring, pond, or lake. Downstream of the first point of perennial flow, a stream normally remains a river except where interrupted by a lake or pond. Upstream of the first point of perennial flow, a stream is normally intermittent.

a. A river or stream shown as perennial on the current United States Geological Survey (USGS) or more recent map provided by the Department is perennial.

b. A river or stream shown as intermittent or not shown on the current USGS map or more recent map provided by the Department, that has a watershed size greater than or equal to one square mile, is perennial.

c. A stream shown as intermittent or not shown on the current USGS map or more recent map provided by the Department, that has a watershed size less than one square mile, is intermittent unless:

i. The stream has a watershed size of at least $\frac{1}{2}$ (0.50) square mile and has a predicted flow rate greater than or equal to 0.01 cubic feet per second at the 99% flow duration using the USGS Stream Stats method. The issuing authority shall find such streams to be perennial; or

ii. When the USGS StreamStats method cannot be used because the stream does not have a mapped and digitized centerline (including but not limited to streams located in the following basins: North Coastal Basin, Taunton Basin, Buzzards Bay Basin, Cape Cod and Islands Basin, and that portion of the South Coastal Basin that is south of the Jones River sub-basin), and the stream has a watershed size of at least $\frac{1}{2}$ (0.50) square mile, and the surficial geology of the contributing drainage area to the stream at the project site contains 75% or more stratified drift, the issuing authority shall find such streams to be perennial. Stratified drift shall mean sand and gravel deposits that have been layered and sorted by glacial meltwater streams. Areal percentages of stratified drift may be determined using USGS surficial geologic maps, USGS Hydrological Atlases, Massachusetts Geographical Information System (MassGIS) surficial geology data layer, or other published or electronic surficial geological information from a credible source.

d. Notwithstanding 310 CMR 10.58(2)(a)1.a. through c., the issuing authority shall find that any stream is intermittent based upon a documented field observation that the stream is not flowing. A documented field observation shall be made by a competent source and shall be based upon an observation made at least once per day, over four days in any consecutive 12 month period, during a non-drought period on a stream not significantly affected by drawdown from withdrawals of water supply wells, direct withdrawals, impoundments, or other human-made flow reductions or diversions. Field observations made after December 20, 2002 shall be documented by field notes and by dated photographs or video. Field observations made prior to December 20, 2002 shall be documented by credible evidence. All field observations shall be submitted to the issuing authority with a statement signed under the penalties

of perjury attesting to the authenticity and veracity of the field notes, photographs or video and other credible evidence. Department staff, conservation commissioners, and conservation commission staff are competent sources; issuing authorities may consider evidence from other sources that are determined to be competent.

e. Rivers include the entire length and width to the mean annual high-water line of the major rivers (Assabet, Blackstone, Charles, Chicopee, Concord, Connecticut, Deerfield, Farmington, French, Hoosic, Housatonic, Ipswich, Merrimack, Millers, Nashua, Neponset, Parker (Essex County), Quinebaug, Shawsheen, Sudbury, Taunton, Ten Mile, and Westfield).

10.58: continued

- f. Rivers include perennial streams that cease to flow during periods of extended drought. Periods of extended drought for purposes of 310 CMR 10.00 shall be those periods, in those specifically identified geographic locations, determined to be at the "Advisory" or more severe drought level by the Massachusetts Drought Management Task Force, as established by the Executive Office of Energy and Environmental Affairs and the Massachusetts Emergency Management Agency in 2001, in accordance with the Massachusetts Drought Management Plan (MDMP). Rivers and streams that are perennial under natural conditions but are significantly affected by drawdown from withdrawals of water supply wells, direct withdrawals, impoundments, or other human-made flow reductions or diversions shall be considered perennial.
- g. Human-made canals (*e.g.*, the Cape Cod Canal and canals diverted from rivers in Lowell and Holyoke) and mosquito ditches associated with coastal rivers do not have riverfront areas.
- h. Where rivers flow through lakes or ponds, the Riverfront Area stops at the inlet and begins again at the outlet. A water body identified as a lake, pond, or reservoir on the current USGS map or more recent map provided by the Department, is a lake or pond, unless the issuing authority determines that the water body has primarily riverine characteristics. When a water body is not identified as a lake, pond, or reservoir on the current USGS map or more recent map provided by the Department, the water body is a river if it has primarily riverine characteristics. Riverine characteristics may include, but are not limited to, unidirectional flow that can be visually observed or measured in the field. In addition, rivers are characterized by horizontal zonation as opposed to the vertical stratification that is typically associated with lakes and ponds. Great Ponds (*i.e.*, any pond which contained more than ten acres in its natural state, as calculated based on the surface area of lands lying below the natural high water mark; a list is available from the Department) are never rivers.
2. Mean Annual High-water Line of a river is the line that is apparent from visible markings or changes in the character of soils or vegetation due to the prolonged presence of water and that distinguishes between predominantly aquatic and predominantly terrestrial land. Field indicators of bankfull conditions shall be used to determine the mean annual high-water line. Bankfull field indicators include but are not limited to: changes in slope, changes in vegetation, stain lines, top of pointbars, changes in bank materials, or bank undercuts.
- a. In most rivers, the first observable break in slope is coincident with bankfull conditions and the mean annual high-water line.
- b. In some river reaches, the mean annual high-water line is represented by bankfull field indicators that occur above the first observable break in slope, or if no observable break in slope exists, by other bankfull field indicators. These river reaches are characterized by at least two of the following features: low gradient, meanders, oxbows, histosols, a low-flow channel, or poorly-defined or nonexistent banks.
- c. In tidal rivers, the mean annual high-water line is coincident with the mean high water line determined under 310 CMR 10.23.
3. The Riverfront Area is the area of land between a river's mean annual high-water line measured horizontally outward from the river and a parallel line located 200 feet away, except that the parallel line is located:
- a. 25 feet away in Boston, Brockton, Cambridge, Chelsea, Everett, Fall River, Lawrence, Lowell, Malden, New Bedford, Somerville, Springfield, Winthrop, and

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Worcester;

b. 25 feet away in densely developed areas, as designated by the Secretary of the Executive Office of Energy and Environmental Affairs pursuant to 301 CMR 10.00: *Densely Developed Areas*; and

c. 100 feet away for new agricultural and aquacultural activities.

Measured horizontally means that the riverfront area extends at a right angle to the mean annual high-water line rather than along the surface of the land.

10.58: continued

Where a river runs through a culvert more than 200 feet in length, the riverfront area stops at a perpendicular line at the upstream end of the culvert and resumes at the downstream end. When a river contains islands, the riverfront area extends landward into the island from and parallel to the mean annual high-water line.

(b) The physical characteristics of a Riverfront Area as described in 310 CMR 10.58(2)(a) are critical to the protection of the interests specified in 310 CMR 10.58(1).

(c) The boundary of the Riverfront Area is a line parallel to the mean annual high-water line, located at the outside edge of the riverfront area. At the point where a stream becomes perennial, the riverfront area begins at a line drawn as a semicircle with a 200 foot (25 foot in densely developed areas; 100 foot for new agriculture) radius around the point and connects to the parallel line perpendicular to the mean annual high-water line which forms the outer boundary. When a river flows into coastal waters or an embayment, the river shall end at the mouth of coastal river line as delineated on the current mouth of coastal river map series maintained by the Department, subject to revisions after public notice and referred to as the Massachusetts Mouth of Coastal River Maps. If a mouth of coastal river line is not delineated on the current map series, the issuing authority shall determine the mouth of coastal river line in accordance with the Department's most current Mouth of Coastal River Policy. A mouth of coastal river line shown on the Department's mouth of coastal river map series is not evidence that a stream is perennial; such a determination shall only be made pursuant to 310 CMR 10.58(2)(a)1.

(3) Presumption. Where a proposed activity involves work within the riverfront area, the issuing authority shall presume that the area is significant to protect the private or public water supply; to protect the groundwater; to provide flood control; to prevent storm damage; to prevent pollution; to protect land containing shellfish; to protect wildlife habitat; and to protect fisheries.

The presumption is rebuttable and may be overcome by a clear showing that the riverfront area does not play a role in the protection of one or more of these interests. In the event that the presumption is deemed to have been overcome as to the protection of all the interests, the issuing authority shall make a written determination to this effect, setting forth its grounds on Form 6. Where the applicant provides information that the riverfront area at the site of the activity does not play a role in the protection of an interest, the issuing authority may determine that the presumption for that interest has been rebutted and the presumption of significance is partially overcome.

(4) General Performance Standard. Where the presumption set forth in 310 CMR 10.58(3) is not overcome, the applicant shall prove by a preponderance of the evidence that there are no practicable and substantially equivalent economic alternatives to the proposed project with less adverse effects on the interests identified in M.G.L. c.131 § 40 and that the work, including proposed mitigation, will have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131 § 40. In the event that the presumption is partially overcome, the issuing authority shall make a written determination setting forth its grounds in the Order of Conditions and the partial rebuttal shall be taken into account in the application of 310 CMR 10.58 (4)(d)1.a. and c.; the issuing authority shall impose conditions in the Order that contribute to the protection of interests for which the riverfront area is significant.

(a) Protection of Other Resource Areas. The work shall meet the performance standards for all other resource areas within the riverfront area, as identified in 310 CMR 10.30 (Coastal Bank), 10.32 (Salt Marsh), 10.55 (Bordering Vegetated Wetland), and 10.57 (Land Subject to Flooding). When work in the riverfront area is also within the buffer zone to another resource area, the performance standards for the riverfront area shall contribute to

the protection of the interests of M.G.L. c. 131, § 40 in *lieu* of any additional requirements that might otherwise be imposed on work in the buffer zone within the riverfront area.

(b) Protection of Rare Species. No project may be permitted within the riverfront area which will have any adverse effect on specified habitat sites of rare wetland or upland, vertebrate or invertebrate species, as identified by the procedures established under 310 CMR 10.59 or 10.37, or which will have any adverse effect on vernal pool habitat certified prior to the filing of the Notice of Intent.

(c) Practicable and Substantially Equivalent Economic Alternatives. There must be no practicable and substantially equivalent economic alternative to the proposed project with less adverse effects on the interests identified in M.G.L. c. 131 § 40.

10.58: continued

1. Definition of Practicable. As set forth in 310 CMR 10.04, an alternative is practicable and substantially equivalent economically if it is available and capable of being done after taking into consideration costs, existing technology, proposed use, and logistics, in light of overall project purposes. Available and capable of being done means the alternative is obtainable and feasible. Project purposes shall be defined generally (*e.g.*, single family home, residential subdivision, expansion of a commercial development). The alternatives analysis may reduce the scale of the activity or the number of lots available for development, consistent with the project purpose and proposed use. The alternatives analysis shall not include interior design specifications (*i.e.*, neither the proposed use or project purpose in the Notice of Intent nor the Order of Conditions should specify the number of rooms, bedrooms, *etc.* within a building). Transactions shall not be arranged to circumvent the intent of alternatives analysis review. The four factors to be considered are:

a. Costs, and whether such costs are reasonable or prohibitive to the owner. The owner means the individual or entity which owns the area where the activity will occur or which will implement the project purpose. Cost includes expenditures for a project within the riverfront area, such as land acquisition, site preparation, design, construction, landscaping, and transaction expenses. Cost does not include anticipated profits after the project purpose is achieved or expenditures to achieve the project purpose prior to receiving an Order with the exception of land acquisition costs incurred prior to August 7, 1996. In taking costs into account, the issuing authority shall be guided by these principles:

i. The cost of an alternative must be reasonable for the project purpose, and cannot be prohibitive.

ii. Higher or lower costs taken alone will not determine whether an alternative is practicable. An alternative for proposed work in the riverfront area must be a practicable and substantially equivalent economic alternative (*i.e.*, will achieve the proposed use and project purpose from an economic perspective).

iii. In considering the costs to the owner, the evaluation should focus on the financial capability reasonably expected from the type of owner (*e.g.*, individual homeowner, residential developer, small business owner, large commercial or industrial developer) rather than the personal or corporate financial status of that particular owner. Applicants should not submit, nor should issuing authorities request, financial information of a confidential nature, such as income tax records or bank statements.

iv. Issuing authorities may require documentation of costs, but may also base their determinations on descriptions of alternatives, knowledge of alternative sites, information provided by qualified professionals, comparisons to costs normally associated with similar projects, or other evidence. Any documentation of costs should be limited to that required for a determination of whether the costs are reasonable or prohibitive.

b. Existing technology, which includes best available measures (*i.e.*, the most up-to-date technology or the best designs, measures, or engineering practices that have been developed and are commercially available);

c. The Proposed Use. This term is related to the concept of project purpose. In the context of typical single family homes, the project purpose (construction of a single family house) and proposed use (family home) are virtually identical. In the context of projects where the purpose implies a business component, such as residential subdivision, commercial, and industrial projects, the proposed use typically requires

economic viability. Practicable and substantially equivalent economic alternatives include alternatives which are economically viable for the proposed use from the perspective of site location, project configuration within a site, and the scope of the project. In the context of publically financed projects, the proposed use includes consideration of legitimate governmental purposes (*e.g.*, protection of health and safety, providing economic development opportunities, or similar public purposes); and

10.58: continued

d. Logistics. Logistics refers to the presence or absence of physical or legal constraints. Physical characteristics of a site may influence its development. Legal barriers include circumstances where a project cannot meet other applicable requirements to obtain the necessary permits at an alternative site. An alternative site is not practicable if special legislation or changes to municipal zoning would be required to achieve the proposed use or project purpose. An alternative is not practicable if the applicant is unable to obtain the consent of the owner of an alternative site for access for the purpose of obtaining the information required by the Notice of Intent or of allowing the issuing authority to conduct a site visit.

2. Scope of Alternatives. The scope of alternatives under consideration shall be commensurate with the type and size of the project. The issuing authority shall presume that alternatives beyond the scope described below are not practicable and therefore need not be considered. The issuing authority or another party may overcome the presumption by demonstrating the practicability of a wider range of alternatives, based on cost, and whether the cost is reasonable or prohibitive to the owner; existing technology; proposed use; and logistics in light of the overall project purpose.

a. The area under consideration for practicable alternatives is limited to the lot for activities associated with the construction or expansion of a single family house on a lot recorded on or before August 1, 1996.

b. The area under consideration for practicable alternatives is limited to the lot, the subdivided lots and any adjacent lots formerly or presently owned by the same owner for:

i. activities associated with the construction or expansion of a single family house on a lot recorded after August 1, 1996;

ii. any expansion of an existing structure, including enlargement of the footprint of any structure or the addition of associated structures for single family homes (*e.g.*, a garage) on lots recorded after August 1, 1996;

iii. any activity other than the construction or expansion of a single family house where the applicant owned the lot before August 7, 1996, including the creation of a real estate subdivision but excluding public projects, and the applicant will implement the project purpose;

iv. new agriculture or aquaculture projects;

v. any activity by a public entity when funds for the purchase of the site for the project purpose have been appropriated through action of the appropriate municipal board or state agency prior to the August 7, 1996; or

vi. any lot shown on a definitive subdivision plan approved under M.G.L. c. 41, §§ 81K to 81GG, provided there is a recorded deed restriction limiting the total alteration to 5000 square feet or 10%, whichever is greater, of the riverfront area allocated to the lots within the entire subdivision.

c. Except as allowed under 310 CMR 10.58(4)(c)2.b., the area under consideration for practicable alternatives extends to the original parcel and the subdivided parcels, any adjacent parcels, and any other land which can reasonably be obtained within the municipality for:

i. activities associated with residential subdivision or housing complexes, institutional, industrial, or commercial projects; or

ii. activities conducted by municipal government.

For adjacent lots, reasonably be obtained means to purchase at market prices if otherwise practicable, as documented by offers (and any responses). For other land, reasonably be obtained means adequate in size to accommodate the project purpose and listed for sale within appropriately zoned areas, at the time of filing a Request for

Determination or Notice of Intent, within the municipality.

d. Alternatives extend to any sites which can reasonably be obtained within the appropriate region of the state for:

i. residential, institutional, commercial, or industrial activities required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under M.G.L. c. 30, §§ 61 through 62H, or an alternatives analysis conducted by the Corps of Engineers for a Section 404 permit under the federal Clean Water Act, 33 U.S.C. 1251 *et seq.*, and used for 401 Water Quality Certification under 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*; or

10.58: continued

ii. activities conducted by district, county, state or federal government entities.

The area to be considered is the service area within the governmental unit boundary or jurisdictional authority, or the municipality if there is no defined service area, consistent with the project purpose.

3. Evaluation of Alternatives. The applicant shall demonstrate that there are no practicable and substantially equivalent economic alternatives as defined in 310 CMR 10.58(4)(c)1., within the scope of alternatives as set forth in 310 CMR 10.58(4)(c)2., with less adverse effects on the interests identified in M.G.L. c. 131 § 40. The applicant shall submit information to describe sites and the work both for the proposed location and alternative site locations and configurations sufficient for a determination by the issuing authority under 310 CMR 10.58(4)(d). The level of detail of information shall be commensurate with the scope of the project and the practicability of alternatives. Where an applicant identifies an alternative which can be summarily demonstrated to be not practicable, an evaluation is not required.

The purpose of evaluating project alternatives is to locate activities so that impacts to the riverfront area are avoided to the extent practicable. Projects within the scope of alternatives must be evaluated to determine whether any are practicable. As much of a project as feasible shall be sited outside the riverfront area. If siting of a project entirely outside the riverfront area is not practicable, the alternatives shall be evaluated to locate the project as far as possible from the river.

The issuing authority shall not require alternatives which result in greater or substantially equivalent adverse impacts. If an alternative would result in no identifiable difference in impact, the issuing authority shall eliminate the alternative. If there would be no less adverse effects on the interests identified in M.G.L. c. 131, § 40, the proposed project rather than a practicable alternative shall be allowed, but the criteria in 310 CMR 10.58(4)(d) for determining no significant adverse impact must still be met. If there is a practicable and substantially equivalent economic alternative with less adverse effects, the proposed work shall be denied and the applicant may either withdraw the Notice of Intent or receive an Order of Conditions for the alternative, provided the applicant submitted sufficient information on the alternative in the Notice of Intent.

(d) No Significant Adverse Impact. The work, including proposed mitigation measures, must have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131, § 40.

1. Within 200 foot riverfront areas, the issuing authority may allow the alteration of up to 5000 square feet or 10% of the riverfront area within the lot, whichever is greater, on a lot recorded on or before October 6, 1997 or lots recorded after October 6, 1997 subject to the restrictions of 310 CMR 10.58(4)(c)2.b.vi., or up to 10% of the riverfront area within a lot recorded after October 6, 1997, provided that:

a. At a minimum, a 100 foot wide area of undisturbed vegetation is provided. This area shall extend from mean annual high-water along the river unless another location would better protect the interests identified in M.G.L. c. 131 § 40. If there is not a 100 foot wide area of undisturbed vegetation within the riverfront area, existing vegetative cover shall be preserved or extended to the maximum extent feasible to approximate a 100 foot wide corridor of natural vegetation. Replication and compensatory storage required to meet other resource area performance standards are allowed within this area; structural stormwater management measures may be allowed only when there is no practicable alternative. Temporary impacts where necessary for installation of linear site-related utilities are allowed, provided the area is restored to its natural conditions. Proposed work which does not meet the

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

requirement of 310 CMR 10.58(4)(d)1.a. may be allowed only if an applicant demonstrates by a preponderance of evidence from a competent source that an area of undisturbed vegetation with an overall average width of 100 feet will provide equivalent protection of the riverfront area, or that a partial rebuttal of the presumptions of significance is sufficient to justify a lesser area of undisturbed vegetation;

b. Stormwater is managed according to standards established by the Department in its Stormwater Policy.

10.58: continued

c. Proposed work does not impair the capacity of the riverfront area to provide important wildlife habitat functions. Work shall not result in an impairment of the capacity to provide vernal pool habitat identified by evidence from a competent source, but not yet certified. For work within an undeveloped riverfront area which exceeds 5,000 square feet, the issuing authority may require a wildlife habitat evaluation study under 310 CMR 10.60.

d. Proposed work shall not impair groundwater or surface water quality by incorporating erosion and sedimentation controls and other measures to attenuate nonpoint source pollution.

The calculation of square footage of alteration shall exclude areas of replication or compensatory flood storage required to meet performance standards for other resource areas, or any area of restoration within the riverfront area. The calculation also shall exclude areas used for structural stormwater management measures, provided there is no practicable alternative to siting these structures within the riverfront area and provided a wildlife corridor is maintained (*e.g.* detention basins shall not be fenced).

2. Within 25 foot riverfront areas, any proposed work shall cause no significant adverse impact by:

a. Limiting alteration to the maximum extent feasible, and at a minimum, preserving or establishing a corridor of undisturbed vegetation of a maximum feasible width. Replication and compensatory storage required to meet other resource area performance standards are allowed within this area; structural stormwater management measures shall be allowed only when there is no practicable alternative;

b. Providing stormwater management according to standards established by the Department;

c. Preserving the capacity of the riverfront area to provide important wildlife habitat functions. Work shall not result in an impairment of the capacity to provide vernal pool habitat when identified by evidence from a competent source but not yet certified; and

d. Proposed work shall not impair groundwater or surface water quality by incorporating erosion and sedimentation controls and other measures to attenuate nonpoint source pollution.

3. Notwithstanding the provisions of 310 CMR 10.58(4)(d)1. or 2., the issuing authority shall allow the construction of a single family house, a septic system if no sewer is available, and a driveway, on a lot recorded before August 7, 1996 where the size or shape of the lot within the riverfront area prevents the construction from meeting the requirements of 310 CMR 10.58(4)(d)1. or 2., provided that:

a. The lot can be developed for such purposes under the applicable provisions of other municipal and state law; and

b. The performance standards of 310 CMR 10.58(4)(d) are met to the maximum extent feasible. In difficult siting situations, the maximum extent of yards around houses should be limited to the area necessary for construction. Except where the lot contains vernal pool habitat or specified habitat sites of rare species, a wildlife habitat evaluation study shall not be required.

4. Notwithstanding the provisions of 310 CMR 10.58(4)(d)1. or 2., the issuing authority may allow the construction of a commercial structure of minimum feasible dimension, on a lot recorded before August 7, 1996 where the size or shape of the lot within the riverfront area prevents the construction from meeting the requirements of 310 CMR 10.58(4)(d)1. or 2., only if:

a. The lot can be developed for such purposes and cannot be developed for any other

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

purposes under the applicable provisions of other municipal and state law;

b. The work is not eligible for 310 CMR 10.58(5); and

c. The performance standards of 310 CMR 10.58(4)(d)1. or 2. are met to the maximum extent feasible.

10.58: continued

(5) Redevelopment Within Previously Developed Riverfront Areas; Restoration and Mitigation. Notwithstanding the provisions of 310 CMR 10.58(4)(c) and (d), the issuing authority may allow work to redevelop a previously developed riverfront area, provided the proposed work improves existing conditions. Redevelopment means replacement, rehabilitation or expansion of existing structures, improvement of existing roads, or reuse of degraded or previously developed areas. A previously developed riverfront area contains areas degraded prior to August 7, 1996 by impervious surfaces from existing structures or pavement, absence of topsoil, junkyards, or abandoned dumping grounds. Work to redevelop previously developed riverfront areas shall conform to the following criteria:

(a) At a minimum, proposed work shall result in an improvement over existing conditions of the capacity of the riverfront area to protect the interests identified in M.G.L. c. 131 § 40. When a lot is previously developed but no portion of the riverfront area is degraded, the requirements of 310 CMR 10.58(4) shall be met.

(b) Stormwater management is provided according to standards established by the Department.

(c) Within 200 foot riverfront areas, proposed work shall not be located closer to the river than existing conditions or 100 feet, whichever is less, or not closer than existing conditions within 25 foot riverfront areas, except in accordance with 310 CMR 10.58(5)(f) or (g).

(d) Proposed work, including expansion of existing structures, shall be located outside the riverfront area or toward the riverfront area boundary and away from the river, except in accordance with 310 CMR 10.58(5)(f) or (g).

(e) The area of proposed work shall not exceed the amount of degraded area, provided that the proposed work may alter up to 10% if the degraded area is less than 10% of the riverfront area, except in accordance with 310 CMR 10.58(5)(f) or (g).

(f) When an applicant proposes restoration on-site of degraded riverfront area, alteration may be allowed notwithstanding the criteria of 310 CMR 10.58(5)(c), (d), and (e) at a ratio in square feet of at least 1:1 of restored area to area of alteration not conforming to the criteria. Areas immediately along the river shall be selected for restoration. Alteration not conforming to the criteria shall begin at the riverfront area boundary. Restoration shall include:

1. removal of all debris, but retaining any trees or other mature vegetation;
2. grading to a topography which reduces runoff and increases infiltration;
3. coverage by topsoil at a depth consistent with natural conditions at the site; and
4. seeding and planting with an erosion control seed mixture, followed by plantings of herbaceous and woody species appropriate to the site;

(g) When an applicant proposes mitigation either on-site or in the riverfront area within the same general area of the river basin, alteration may be allowed notwithstanding the criteria of 310 CMR 10.58(5)(c), (d), or (e) at a ratio in square feet of at least 2:1 of mitigation area to area of alteration not conforming to the criteria or an equivalent level of environmental protection where square footage is not a relevant measure. Alteration not conforming to the criteria shall begin at the riverfront area boundary. Mitigation may include off-site restoration of riverfront areas, conservation restrictions under M.G.L. c. 184, §§ 31 through 33 to preserve undisturbed riverfront areas that could be otherwise altered under 310 CMR 10.00, the purchase of development rights within the riverfront area, the restoration of bordering vegetated wetland, projects to remedy an existing adverse impact on the interests identified in M.G.L. c. 131, § 40 for which the applicant is not legally responsible, or similar activities undertaken voluntarily by the applicant which will support a determination by the issuing authority of no significant adverse impact. Preference shall be given to potential mitigation projects, if any, identified in a River Basin Plan approved by the Secretary of the

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Executive Office of Energy and Environmental Affairs.

(h) The issuing authority shall include a continuing condition in the Certificate of Compliance for projects under 310 CMR 10.58(5)(f) or (g) prohibiting further alteration within the restoration or mitigation area, except as may be required to maintain the area in its restored or mitigated condition. Prior to requesting the issuance of the Certificate of Compliance, the applicant shall demonstrate the restoration or mitigation has been successfully completed for at least two growing seasons.

10.58: continued

(6) Notwithstanding the Provisions of 310 CMR 10.58(1) through (5), Certain Activities or Areas Are Grandfathered or Exempted from Requirements for the Riverfront Area:

- (a) Any excavation, structure, road, clearing, driveway, landscaping, utility line, rail line, airport owned by a political subdivision, marine cargo terminal owned by a political subdivision, bridge over two miles long, septic system, or parking lot within the riverfront area in existence on August 7, 1996. Maintenance of such structures or areas is allowed (including any activity which maintains a structure, roads (limited to repairs, resurfacing, repaving, but not enlargement), clearing, landscaping, *etc.* in its existing condition) without the filing of a Notice of Intent for work within the riverfront area, but not when such work is within other resource areas or their buffer zones except as provided in 310 CMR 10.58(6)(b). Changes in existing conditions which will remove, fill, dredge or alter the riverfront area are subject to 310 CMR 10.58, except that the replacement within the same footprint of structures destroyed by fire or other casualty is not subject to 310 CMR 10.58.
- (b) Certain minor activities as identified in 310 CMR 10.02(2)(b)1.
- (c) On-site sewage disposal systems in existence on August 7, 1996 and the repair or upgrade of existing systems in compliance with 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*. New construction of a system under 310 CMR 15.000 must comply with 310 CMR 10.58, subject to the presumption for the siting of systems in 310 CMR 10.03.
- (d) The expansion of structures, airports, and marine cargo terminals, provided they are owned by a political subdivision and the expansion activity was physically begun on or before November 1, 1996.
- (e) Projects for which a draft environmental impact report was prepared and submitted pursuant to M.G.L. c. 30, § 62B, on or before November 1, 1996, or as extended by the Department for just cause but no later than December 31, 1996.
- (f) Projects for which a building permit conforming to local requirements was filed on or before October 1, 1996 and granted on or before April 1, 1997, or as extended by the conservation commission for just cause by no more than 60 days.
- (g) The road and infrastructure shown on a definitive subdivision plan approved or endorsed under M.G.L. c. 41, § 81U, on or before August 1, 1996. Activities on the subdivided lots are subject to 310 CMR 10.58 unless they received a building permit under 310 CMR 10.58(6)(f).
- (h) Construction, expansion, repair, restoration, alteration, replacement, operation and maintenance of public or private local or regional wastewater treatment plants and their related structures, conveyance systems, and facilities, including utility lines.
- (i) Structures and activities subject to a M.G.L. c. 91 waterways license or permit, or authorized prior to 1973 by a special act, are exempt, provided the structure or activity is subject to jurisdiction and obtains a license, permit, or authorization under 310 CMR 9.00: *Waterways*.
- (j) Activities within riverfront areas subject to a protective order under M.G.L. c. 21, § 17B, the Scenic Rivers Act.
- (k) Activities within an Historic Mill Complex.

10.59: Estimated Habitats of Rare Wildlife (for Inland Wetlands)

If a project is within estimated habitat which is indicated on the most recent Estimated Habitat Map of State-listed Rare Wetlands Wildlife (if any) published by the Natural Heritage and Endangered Species Program (hereinafter referred to as the Program), a fully completed copy of the Notice of Intent (including all plans, reports, and other materials required under 310 CMR

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

10.05(4)(a) and (b)) for such project shall be sent to the Program via the U.S. Postal Service by express or priority mail (or otherwise sent in a manner that guarantees delivery within two days). Such copy shall be sent no later than the date of the filing of the Notice of Intent with the issuing authority. Proof of timely mailing or other delivery to the Program of the copy of such Notice of Intent shall be included in the Notice of Intent which is submitted to the issuing authority and sent to the Department's regional office.

Estimated Habitat Maps shall be based on the estimated geographical extent of the habitats of all state-listed vertebrate and invertebrate animal species for which a reported occurrence within the last 25 years has been accepted by the Program and incorporated into its official data base.

10.59: continued

Within 30 days of the filing of such a Notice of Intent with the issuing authority the Program shall determine whether any state-listed species identified on the aforementioned map are likely to continue to be located on or near the site of the original occurrence and, if so, whether the area to be altered by the proposed project is in fact part of such species' habitat. Such determination shall be presumed by the issuing authority to be correct. Any proposed project which would alter a resource area that is not located on the most recent Estimated Habitat Map (if any) provided to the conservation commission, shall be presumed not to be within a rare species' habitat. Both of these presumptions are rebuttable and may be overcome upon a clear showing to the contrary. If the issuing authority fails to receive a response from the Program within 30 days of the filing of such a Notice of Intent, a copy of which was received by the Program in a timely manner, it shall issue its Order of Conditions based on available information; however, the fact that a proposed project would alter a resource area that is located on an Estimated Habitat Map shall not be considered sufficient evidence in itself that such project is in fact within the habitat of a rare species.

If the Program determines that a resource area which would be altered by a proposed project is in fact within the habitat of a state-listed species, it shall provide in writing to the applicant and to the Conservation Commission and the Department, the identification of the species whose habitat would be altered by the proposed project, and all other relevant information which the Program has regarding the species' location and habitat requirements, insofar as such information may assist the applicant and the issuing authority to determine whether the project is or can be designed so as to meet the performance standard set in 310 CMR 10.59.

Notwithstanding 310 CMR 10.53 through 10.58 and 10.60, if a proposed project is found by the issuing authority to alter a resource area which is part of the habitat of a state-listed species, such project shall not be permitted to have any short or long term adverse effects on the habitat of the local population of that species. A determination of whether or not a proposed project will have such an adverse effect shall be made by the issuing authority. However, a written opinion of the Program on whether or not a proposed project will have such an adverse effect shall be presumed by the issuing authority to be correct. This presumption is rebuttable and may be overcome upon a clear showing to the contrary.

The conservation commission shall not issue an Order of Conditions under 310 CMR 10.05(6) regarding any such project for at least 30 days after the filing of the Notice of Intent unless the Program before such time period has elapsed has either determined that the resource area(s) which would be altered by the project is not in fact within the habitat of a state-listed species or, if it has determined that such resource area(s) is in fact within rare species habitat, rendered a written opinion as to whether the project will have an adverse effect on that habitat.

Notwithstanding any other provision of 310 CMR 10.58, should an Environmental Impact Report be required for a proposed project under the M.G.L. c. 30, §§ 6 through 62H, as determined by 301 CMR 11.00: *MEPA Regulations* the performance standard established under 310 CMR 10.58 shall only apply to proposed projects which would alter the habitat of a rare species for which an occurrence has been entered into the official data base of the Massachusetts Natural Heritage and Endangered Species Program prior to the time that the Secretary of the Executive Office of Energy and Environmental Affairs has determined, in accordance with the provisions of 301 CMR 11.09(4): *Eligible Projects*, that a final Environmental Impact Report for that project adequately and properly complies with the M.G.L. c. 30, §§ 6 through 62H (unless, subsequent to that determination, the Secretary requires supplemental information concerning state-listed species, in accordance with the provisions of 301 CMR 11.17: *Transition Rules*).

10.60: Wildlife Habitat Evaluations

(1) Measuring Adverse Effects on Wildlife Habitat.

(a) To the extent that a proposed project on inland Banks, Land under Water, Riverfront Area, or Land Subject to Flooding will alter vernal pool habitat or will alter other wildlife habitat beyond the thresholds permitted under 310 CMR 10.54(4)(a)5., 10.56(4)(a)4., 10.57(4)(a)3. and 10.58(4)(d)1., such alterations may be permitted only if they will have no adverse effects on wildlife habitat. Adverse effects on wildlife habitat mean the alteration of any habitat characteristic listed in 310 CMR 10.60(2), insofar as such alteration will, following two growing seasons of project completion and thereafter (or, if a project would eliminate trees, upon the maturity of replanted saplings) substantially reduce its capacity to provide the important wildlife habitat functions listed in 310 CMR 10.60(2). Such performance standard, however, shall not apply to the habitat of rare species, which are covered by the performance standards established under 310 CMR 10.59.

10.60: continued

(b) An evaluation by the applicant of whether a proposed project will have an adverse effect on wildlife habitat beyond permissible thresholds shall be performed by an individual with at least a masters degree in wildlife biology or ecological science from an accredited college or university, or other competent professional with at least two years experience in wildlife habitat evaluation.

(c) Any wildlife habitat management practices conducted by the Division of Fisheries and Wildlife, and any wildlife management practices of any individual or organization if reviewed and approved in writing by said Division, shall be presumed to have no adverse effect on wildlife habitat. Such presumption is rebuttable, and may be overcome by a clear showing to the contrary.

(2) Wildlife Habitat Characteristics of Inland Resource Areas.

(a) Banks. The topography, soil structure, and plant community composition and structure of banks can provide the following important wildlife habitat functions:

1. Food, shelter and migratory and breeding areas for wildlife
2. Overwintering areas for mammals and reptiles.

(b) Land under Water Bodies or Waterways. The plant community and soil composition and structure, hydrologic regime, topography and water quality of land under water bodies or waterways can provide the following important wildlife habitat functions:

1. Food, shelter and breeding areas for wildlife;
2. Overwintering areas for mammals, reptiles and amphibians.

(c) Vernal Pool Habitat. The topography, soil structure, plant community composition and structure, and hydrologic regime of vernal pool habitat can provide the following important wildlife habitat functions:

1. Food, shelter, migratory and breeding areas, and overwintering areas for amphibians;
2. Food for other wildlife.

(d) Lower Floodplains. The hydrologic regime, plant community and soil composition and structure, topography, and proximity to water bodies and waterways of lower floodplains can provide the following important wildlife habitat functions:

1. Food, shelter, migratory and overwintering areas for wildlife;
2. Breeding areas for birds, mammals and reptiles.

(e) Riverfront Area. The topography, soil structure, plant community composition and structure, and hydrologic regime can provide the following important wildlife habitat functions:

1. Food, shelter, overwintering and breeding areas for wildlife, including turtle nesting areas, nesting sites for birds which typically reuse specific nesting sites, cavity trees, and isolated depressions that function as vernal pools.
2. Migratory areas along the riparian corridor including the movement of wildlife unimpeded by barriers within the riverfront area.

(3) Restoration and Replication of Altered Habitat. Alterations of wildlife habitat characteristics beyond permissible thresholds may be restored onsite or replicated offsite in accordance with the following general conditions, and any additional conditions the issuing authority deems necessary to insure that the standard in 310 CMR 10.60(1)(a) is satisfied:

- (a) the surface of the replacement area to be created ("the replacement area") shall be equal to that of the area that will be lost ("the lost area");
- (b) the elevation of groundwater relative to the surface of the replacement area shall be approximately equal to that of the lost area;
- (c) the replacement area shall be located within the same general area as the lost area. In

the case of banks and land under water, the replacement area shall be located on the same water body or waterway if the latter has not been rechanneled or otherwise relocated. In the case of bordering land subject to flooding, the replacement area shall be located approximately the same distance from the water body or waterway as the lost area. In the case of vernal pool habitat, the replacement area shall be located in close proximity to the lost area;

(d) interspersion and diversity of vegetation, water and other wildlife habitat characteristics of the replacement area, as well as its location relative to neighboring wildlife habitats, shall be similar to that of the lost areas, insofar as necessary to maintain the wildlife habitat functions of the lost area;

10.60: continued

(e) the project shall not alter ten or more acres of Land Subject to Flooding or Land under Water found to be significant to the protection of wildlife habitat, or 2,000 feet or more of Bank found to be significant to the protection of wildlife habitat (in the case of a bank of a stream or river, this shall be measured on each side of said stream or river).

(f) if the replacement area is located in an area subject to M.G.L. c. 131, § 40, there shall be no adverse effect on the existing important wildlife habitat functions of said area as measured by the standards of 310 CMR 10.60;

(g) the "thresholds" established in 310 CMR 10.54(4)(a)5., 10.56(4)(a)4., 10.57(4)(a)3. and 10.58(4)(d)1.c. (below which alterations of resource areas are not deemed to impair capacity to provide important wildlife habitat functions) shall not apply to any replacement area; and

(h) the replacement area shall be provided in a manner which is consistent with all other General Performance Standards for each resource area in 310 CMR 10.51 through 10.60.

REGULATORY AUTHORITY

310 CMR 10.00: M.G.L. c. 131, § 40.

NON-TEXT PAGE

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 11.00: GENERAL APPLICATION AND ADMINISTRATION ENVIRONMENTAL CODE,
TITLE 1

Section

- 11.01: Scope of Application; Effective Date
- 11.02: Local Rules and Regulations
- 11.03: Inspection -- Interference
- 11.04: Methods of Enforcement by Local Boards of Health
- 11.05: Emergency
- 11.06: Enforcement by the Department of Environmental Quality Engineering of Commonwealth
- 11.07: Service of Orders
- 11.08: Hearing
- 11.09: Appeal
- 11.10: Penalties
- 11.11: Variance
- 11.12: Variance, Grant of Special Permission: Expiration, Modification, Suspension of
- 11.13: Partial Invalidity

11.01: Scope of Application; Effective Date

(1) Application. The State Environmental Code shall apply throughout the Commonwealth unless and to the extent that the provisions of any title are expressly limited.

(2) Effective Date. 310 CMR 11.00 shall be effective and have the force of law upon filing with the Secretary of State. Every other title shall be effective and have the force of law in accordance with the provisions of each. If a title fails to state a date from when it is to be effective, it shall become effective from the day following the date it is filed with the Secretary of State.

11.02: Local Rules and Regulations

Unless otherwise expressly provided in any other title, the legally designated health authority of any city, town, county or other legally constituted governmental unit within the Commonwealth having the usual powers and duties of the board of health may, as it considers necessary to promote and protect the health and well being of the particular locality under its jurisdiction, adopt under its own legal power as exists in the General Laws any rules or regulations containing requirements stricter than those contained in this code. Nor should the existence of this code limit or otherwise affect the power of any health authority with respect to any matter for which this code makes no provision.

11.03: Inspection -- Interference

(1) Inspection. In order properly to carry out their respective responsibilities under 310 CMR and properly to protect the health, environment and well-being of the people of the Commonwealth, the board of health and the Department of Environmental Quality Engineering or the authorized agent or representative of either are authorized to enter, examine, or survey at any reasonable time such places as they consider necessary, and otherwise to conduct such examination or survey as is expressly provided in any other title.

(2) Interference. If any owner, occupant, or other person refuses, impedes, inhibits, interferes with, restricts, or obstructs entry and free access to every part of the structure, operation or premise where inspection authorized by 310 CMR is sought, the board of health or the Commissioner of the Department of Environmental Quality Engineering or the authorized agency or representative of either may:

- (a) seek in a court of competent jurisdiction a search warrant so as to apprise the owner, occupant or other person concerning the nature of the inspection and justification for it and may seek the assistance of police authorities in presenting said warrant and/or
- (b) revoke or suspend any license, permit or other permission regulated under this code where inspection of the structure, operation or premises is sought to determine compliance with 310 CMR 11.00.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

11.04: Methods of Enforcement by Local Boards of Health

Unless otherwise expressly provided in any title 310 CMR , code, each board of health may enforce 310 CMR by fine in accordance with 310 CMR 11.10, or otherwise at law or in equity in the same manner that local rules and regulations are enforced.

11.05: Emergency

(1) General. Whenever an emergency exists in which the interest of protecting the public health or the environment requires that ordinary procedures be dispensed with, the board of health or its authorized agent, acting in accordance with the provisions of M.G.L. c. 111, § 30, may, without notice or hearing, issue an order reciting the existence of the emergency and requiring that such action be taken as the board of health deems necessary to meet the emergency. Notwithstanding any other provision of 310 CMR, any person to whom such order is directed shall comply therewith within the time specified in the order. Each day's failure to comply with the order shall constitute a separate offense. Upon compliance with the order and within seven days after the day the order has been served, he may file a written petition in the office of the board of health requesting a hearing. He shall be granted a hearing as soon as possible. The procedures for such hearing shall otherwise conform with the hearing requirements which would have existed had the order been issued under non-emergency circumstances.

(2) Emergency Powers of the Department. No provision of 310 CMR 11.00 shall be construed as a limitation on the emergency powers of the Department of Environmental Quality Engineering of the Commonwealth.

11.06: Enforcement by Department of Environmental Quality Engineering of the Commonwealth

(1) General. If as a result of any study, inspection, or survey made under 310 CMR 11.03 or under the provisions of any other title of 310 CMR, the Commissioner of Environmental Quality Engineering or his authorized representative determines that compliance with this code has not been effected, he shall, in writing, notify the appropriate board of health of such determination, allotting a reasonable time in which compliance shall be effected, and requesting that the board of health, in writing, notify the Commissioner of Environmental Quality Engineering of what action it has taken, and what other action has been taken to effect compliance with 310 CMR 11.00. If the Commissioner is not so notified, or if after notification he determines that action sufficient to effect compliance with the provisions of this code has not been taken, the local board of health shall be deemed to have failed to effect compliance with 310 CMR 11.00.

(2) Failure to Enforce Code by Board of Health. Whenever any local board of health has failed after a reasonable length of time to enforce 310 CMR 11.00, the Commissioner of Environmental Quality Engineering of the Commonwealth or his designated representative may act for the Commonwealth in any way that the local board of health is authorized to act to effect compliance.

11.07: Service of Orders

Unless otherwise stated in any title of this code, orders issued under the provisions of 310 CMR 11.00 shall be served on all persons responsible for the violation of regulations. These orders shall be served in the following manner:

- (a) personally, by any person authorized to serve civil process, or
- (b) by any person authorized to serve civil process by leaving a copy of the order at his last and usual place of abode, or
- (c) by sending him a copy of the order by registered or certified mail, return receipt requested, if he is within the Commonwealth, or
- (d) if his last and usual place of abode is unknown or outside the Commonwealth, by posting a copy of the order in a conspicuous place on or about the premises and by advertising it for at least three out of five consecutive days in one or more newspapers of general circulation within the municipality wherein the building or premises affected is situated.

11.08: Hearing

- (1) Procedure for Requesting and Holding Hearing. Unless otherwise specified in 310 CMR 11.00, the person or persons to whom any order has been served pursuant to any regulation of 310 CMR may request a hearing before the board of health by filing with the board of health within seven days after the day the order was served, a written petition requesting a hearing on the matter. Upon receipt of such petition, the board of health shall set a time and place for such hearing and shall inform the petitioner thereof in writing. The hearing shall be commenced not later than 30 days after the day on which the order was served. The board of health, upon application of the petitioner, may postpone the date of hearing for a reasonable time beyond such 30-day period if in the judgment of the board of health the petitioner has submitted a good and sufficient reason for such postponement.
- (2) Hearing of Petitioner. At the hearing the petitioner shall be given an opportunity to be heard and to show why the order should be modified or withdrawn.
- (3) Procedure by the Board After Hearing. After the hearing the board of health shall sustain, modify, or withdraw the order and shall inform the petitioner in writing of its decision. If the board of health sustains or modifies the order, it shall be carried out within the time period allotted in the original order or in the modification.
- (4) Public Record. Every notice, order, or other record prepared by the board of health in connection with the hearing shall be entered as a matter of public record in the office of the clerk of the city or town, or in the office of the board of health.
- (5) Hearing Petition Not Submitted, or Sustaining of Order. If a written petition for a hearing is not filed with the board of health within seven days after the day an order has been served or if after a hearing the order has been sustained in any part, each day's failure to comply with the order as issued or modified shall constitute an additional offense.

11.09: Appeal

Any person aggrieved by the final decision of the board of health with respect to the denial of plan approval, the denial of revocation or failure to renew a license, or with respect to any order issued under the provisions of 310 CMR 11.00 may seek relief therefrom in any court of competent jurisdiction, as provided by the laws of this Commonwealth.

11.10: Penalties

- (1) Interference After Search Warrant Presented. Any owner, occupant, or other person who refuses, impedes, inhibits, interferes with, restricts or obstructs entry and free access to every part of the structure, operation or premises where inspection authorized by 310 CMR 11.00 is sought after a search warrant has been obtained and presented in accordance with 310 CMR 11.03(2) shall be fined not less than \$10 nor more than \$500.
- (2) Failure to Comply With an Order. Any person who shall fail to comply with any order issued pursuant to the provisions of 310 CMR 11.00 shall upon conviction be fined not less than \$10 nor more than \$500. Each day's failure to comply with an order shall constitute a separate violation.
- (3) Penalties Not Otherwise Provided. Any person who shall violate any provision of 310 CMR 11.00 for which penalty is not otherwise provided in any of the General Laws or in any other provision of this code shall upon conviction be fined not less than \$10 nor more than \$500.

11.11: Variance

The board of health may vary the application of any provision of 310 CMR 11.00 with respect to any particular case when, in its opinion, the enforcement thereof would do manifest injustice; provided, that the decision of the board of health shall not conflict with the spirit of these minimum standards. Any variance granted by the board of health shall be in writing. A copy of any such variance shall, while it is in effect, be available to the public at all reasonable hours in the office of the clerk of the city or town, or in the office of the board of health, and notice of the grant of variance shall be filed with the Commissioner of Environmental Quality Engineering of the Commonwealth.

11.12: Variance, Grant of Special Permission: Expiration, Modification, Suspension of

Any variance or other modification authorized to be made by 310 CMR 11.00 may be subject to such qualification, revocation, suspension, or expiration as the board of health or Commissioner of Environmental Quality Engineering expresses in its grant. A variance or other modification authorized to be made by 310 CMR 11.00 may otherwise be revoked, modified, or suspended, in whole or in part, only after the holder thereof has been notified in writing and has been given an opportunity to be heard, in conformity with the requirements for an order and hearing of 310 CMR 11.07 and 11.08.

11.13: Partial Invalidity

If any Title, regulation, paragraph, sentence, clause, phrase, or word of 310 CMR 11.00 shall be declared invalid for any reason whatsoever, that decision shall not affect any other portion of 310 CMR 11.00, which shall remain in full force and effect; and to this end the provisions of 310 CMR 11.00 are hereby declared severable.

REGULATORY AUTHORITY

310 CMR 11.00: M.G.L. c. 21A, § 13.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 12.00: ADOPTING COASTAL WETLANDS ORDERS

Section

- 12.01: Introduction
- 12.02: Definitions
- 12.03: Notice
- 12.04: Preliminary Informational Meetings
- 12.05: Public Hearings
- 12.06: Wetland Boundary Delineation Procedures
- 12.07: Adoption of Orders
- 12.08: Recording of Order
- 12.09: Notice of Orders
- 12.10: Recording in the Public Restriction Tract Index
- 12.11: Amending or Modifying Orders
- 12.12: Repeal of Orders
- 12.13: Correcting Orders
- 12.14: Monitoring Procedures
- 12.15: Departmental Review of Orders
- 12.16: Judicial Review of Orders
- 12.17: Public Meetings
- 12.18: Effect on Other Orders
- 12.19: Severability

12.01: Introduction

(1) Authority. 310 CMR 12.00 is issued by the Department of Environmental Protection pursuant to the authority granted under M.G.L. c. 21A, § 2 (28).

(2) Purpose. 310 CMR 12.00 is promulgated in order to: (a) define and explain the language of M.G.L. c. 130, § 105, and (b) establish the general procedures under which the Department of Environmental Protection will exercise its responsibilities under M.G.L. c. 130, § 105.

It is the intent of the Department that 310 CMR 12.00 is to be used to preserve the public safety, health and welfare, private property, wildlife and marine fisheries. It is further intended that these goals shall be accomplished through the adoption of Orders imposing restrictions on the coastal wetlands of the Commonwealth. The Orders shall regulate, restrict, prohibit, control or abate certain specified activities or uses, including dredging, filling, removing, otherwise altering or polluting coastal wetlands. The Orders shall allow other specified activities and uses within these areas, subject to the applicable requirements of M.G.L. c. 131, § 40. Each Order as adopted shall apply to a specific city or town within which coastal wetlands are located.

It is also the intent of the Department that 310 CMR 12.00 be consistent with and form a part of the Commonwealth's Coastal Zone Management Program (hereinafter "CZM Program") as it has been promulgated and defined in 301 CMR 20.00 issued pursuant to M.G.L. c. 21A entitled "Establishment of the Coastal Zone Management Program by the Executive Office of Environmental Affairs". 310 CMR 12.00, however, is adopted independently under M.G.L. c. 130, § 105 and would remain in full force and effect in the absence of the CZM Program or 301 CMR 20.00.

The interpretation and application of 310 CMR 12.00 shall be consistent with the policies of the CZM Program to the maximum extent permissible under M.G.L. c. 130, § 105. 301 CMR 20.00 establish the CZM policies as part of the CZM Program, and the Department recognizes these policies as state environmental policy, which it will carry out in accordance with M.G.L. c. 21A. Specifically 301 CMR 20.99 Appendix, policies 1, 2, 3, 4, 5, 7, 9, and 10 are applicable to the administration of M.G.L. c. 130, § 105, but the provisions of the more specific regulations contained in 310 CMR 12.00 shall govern, unless the Secretary of Environmental Affairs (hereinafter "The Secretary") pursuant to the conflict resolution procedures of M.G.L. c. 21A, § 4, and 301 CMR 20.06(20) through 20.06(28), has resolved any conflict and has determined that the CZM policies should or should not apply.

(3) Coordination with the CZM Office and Local Governments: In accordance with 301 CMR 20.06, the Department shall notify the CZM Office at least 60 days beforehand of the adoption of any proposed Order and shall provide local government agencies with notice of the proposed Order at

least 30 days prior to its adoption.

12.01: continued

(4) Restriction of Areas of Critical Environmental Concern. Whenever the Secretary notifies the Commissioner that he has accepted the nomination of a coastal wetland for designation as an Area of Critical Environmental Concern (hereinafter "ACEC") in accordance with 301 CMR 20.06, the Commissioner shall, within 30 days of such acceptance, submit the following to the Secretary and to the Director of the Coastal Zone Management Office:

- (a) a narrative description of the current status of mapping activity and of any past or current wetlands restriction activity within the suggested boundaries of the nominated ACEC and within related contiguous upland areas within the coastal zone, as defined in 301 CMR 20.03;
- (b) a schedule for restricting the coastal wetlands in the nominated ACEC within 15 months of the Secretary's designation of the ACEC pursuant to 301 CMR 20.06.

In carrying out the restriction of the coastal wetlands of an ACEC within 15 months of its designation, the Department shall review the adequacy and consistency of all previously recorded restrictions within the ACEC and shall, as necessary, amend or modify and rerecord such restrictions to ensure full compliance with the management goals of the Secretary's designation of the ACEC.

If the Commissioner determines that the process of restricting all of the coastal wetlands in an ACEC cannot be completed within 15 months of designation, the Commissioner may request that the Secretary grant a one-time extension of up to 90 days.

12.02: Definitions

Act means M.G.L. c. 130, § 105.

Altering means causing change, directly or indirectly within any coastal wetland and includes, but is not limited to, one or more of the following actions:

- (a) changing pre-existing drainage characteristics, flushing characteristics, salinity distribution, sedimentation patterns, flow patterns and flood storage retention areas;
- (b) draining or otherwise disturbing surface or groundwater levels;
- (c) degrading water quality;
- (d) driving pilings or erecting buildings or structures of any kind;
- (e) placing any obstruction to water flow;
- (f) destroying plant life, including the cutting of trees;
- (g) discharging, releasing, or causing to be released, any contaminating materials, including sediments, from any source into a coastal wetland whether by overland flow or through a new or existing pipe or other conduit;
- (h) causing adverse effects to wildlife, shellfish or other marine fisheries, or to their habitat;
- (i) lowering, polluting, or otherwise changing the level, quantity, or quality of ground water by doing any work in a coastal wetland.

Amendment means any change in the allowed or prohibited activities or uses contained in any Order adopted under the Act; any addition to or deletion of, including any change in the definition of, the types of coastal wetlands defined in any Order; any addition to or deletion of any wetland areas; or any addition to any list of assessed owners adopted as part of the Order. An amendment shall not include a correction as defined in 310 CMR 12.02 Correction.

Assessed owner means the person to whom land within a coastal wetland affected by an Order was assessed in the last preceding annual tax levy.

Bank means the seaward face or side of any elevated landform which lies at the landward edge of a coastal beach, land subject to tidal action or coastal storm flowage, or any other coastal wetland.

Contiguous land means any area landward of and adjacent to any coastal wetland or low land subject to tidal action or coastal storm flowage, which the Commissioner deems necessary to include in any Order to protect any interest of M.G.L. c. 130, § 105.

Coastal wetland means any bank, marsh, swamp, meadow, flat or other low land subject to tidal action or coastal storm flowage and such contiguous land as the Commissioner deems necessary to

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

include in any Order pursuant to M.G.L. c. 130, § 105.

12.02: continued

Commissioner means the Commissioner of the Department of Environmental Protection.

Correction means any minor change in the location of the wetland boundary line on a plan, for the purpose of describing the correct wetland boundary, the substitution or deletion of any name or names from the list of assessed owners adopted as part of any order as long as this does not include the deletion of any wetland area, or any typographical, grammatical or other change which does not alter the sense or meaning of any Order.

Department means the Department of Environmental Protection.

Dredging means the removal of materials including, but not limited to, rocks, bottom sediments, debris, sand, refuse, plant or animal matter, in any excavating, grading, cleaning, deepening, widening or lengthening, either permanently or temporarily, of any coastal wetland. Dredging shall include improvement dredging and backfilling or other dredging and subsequent refilling.

Filling means the placing of any material that raises, either temporarily or permanently, the existing elevation of any coastal wetland.

Flat means any nearly level area which typically extends from the mean low water line landward to the more steeply sloping seaward face of the coastal marsh or other landform or which may be separated from the coastal marsh or other landform by tidal waters.

Improvement Dredging means any dredging under a license in an area which has not previously been dredged or which extends the original dredged width, depth, length, or otherwise alters the boundaries of a previously dredged area.

Land affected by an Order means any land that is subject to any restriction under an Order.

Low land subject to tidal action or coastal storm flowage means any land between mean low water or any other seaward boundary of the Commonwealth, and the landward boundary of the 100 year flood, as determined by the Department of Housing and Urban Development pursuant to the National Flood Insurance Program or by any other scientifically reliable determination. Such areas shall include, but not be limited to, land under salt ponds, land containing shellfish, rocky intertidal shores, coastal beaches, barrier beaches, coastal dunes, banks, marshes and flats.

Maintenance Dredging means dredging under a license in any previously dredged area which does not extend the originally dredged width, depth, or length, but does not mean improvement dredging or backfilling.

Marsh means a salt marsh or coastal wetland that extends landward up to the highest tide line, that is, the highest spring tide of the year, and is characterized by plants that are well adapted to or prefer living in saline soils. Dominant plants within salt marshes are salt meadow cord grass (*Spartina patens*) and/or salt marsh cord grass (*Spartina alterniflora*). A salt marsh may contain tidal creeks, ditches, and pools.

Meadow means any marsh as defined in 310 CMR 12.02 Marsh.

Mean low water line means the arithmetic mean of the low water heights observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch) and shall be determined using the nautical charts, harbor charts series (1:50,000 and larger), prepared by the National Ocean Survey, U.S. Department of Commerce. For those coastal areas not covered by such published harbor charts, the mean low water line shall be determined using hydrographic survey data obtainable from the National Ocean Survey.

Modification means any amendment as defined in 310 CMR 12.02 Amendment.

Order means any instrument issued by the Commissioner that imposes restrictions on any coastal

wetland in accordance with M.G.L. c. 130, § 105.

12.02: continued

Person means any individual, group of individuals, association, partnership, corporation, company, business organization, trust, estate, the Commonwealth or political subdivision thereof, any administrative agency, public or quasi-public corporation or body, or any other legal entity or its legal representative, agents or assigns.

Person having an interest means any assessed owner or any holder of record of an easement, covenant, restriction or any other property interest or any other holder of any such property interest known to the Commissioner.

Plan means a map made by surveying techniques, a line and symbol photogrammetric map or an orthophoto map, which meets National Map Accuracy Standards, upon which coastal wetlands are delineated.

Polluting means, but is not limited to, the discharge, release or flow of any product, by-product, material or waste resulting from sewage, sewage processing, or from any agricultural, industrial, commercial, or other man-made process, any man-made thermal discharge, run-off, leachate, or any other substance in any form, which is or can be drained, discharged or infiltrated, or otherwise introduced into any coastal wetland.

Removing means to take away any type of material that alters the elevation of any coastal wetland.

Repeal means the rescinding of any Order, including the plan or plans and list of assessed owners incorporated with the Order.

Restriction means any provision in any Order limiting activities or uses in or on coastal wetlands. A restriction shall be unlimited in time unless repealed.

Shellfish means, but is not limited to, the following species: Bay scallop (*Argopecten irradians*); Blue Mussel (*Mytilus edulis*); Ocean Quahaug (*Arctica islandica*); Oyster (*Crassostrea virginica*); Quahaug (*Mercenaria mercenaria*); Razor Clam (*Ensis directus*); Sea Clam (*Spisula solidissima*); Sea Scallop (*Placopecten magellanicus*); and Soft Shell Clam (*Mya arenaria*).

Swamp means any marsh as defined in 310 CMR 12.00.

Wetland area means any coastal wetland delineated by a continuous boundary line which encloses that wetland, or any coastal wetland for which the aquatic or seaward boundary is mean low water, and which may include lands held by more than one assessed owner.

12.03: Notice

Prior to adopting any Order under M.G.L. c. 30, § 105, the Commissioner shall first give notice, as provided below, of a preliminary informational meeting and a public hearing.

(1) Persons To Be Given Notice. The Department shall mail notice of the meeting and the hearing to the following persons by certified mail at their last known address, at least 14 days prior to the date of the preliminary informational meeting and at least 21 days prior to the date of the public hearing:

- (a) any assessed owner;
- (b) any person other than an assessed owner having an interest in any coastal wetland to be affected and whose name appears on an assessor's map;
- (c) any other person having a recorded interest in any coastal wetland to be affected and whose name and/or address is known to the Commissioner;
- (d) any person having an unrecorded interest in any coastal wetland to be affected and whose name and/or address is known to the Commissioner;
- (e) any person who has acquired, subsequent to the last annual tax levy, a fee simple interest in any coastal wetlands to be affected and whose name has been entered in the records of the assessor's office and is available to the Department at least 60 days prior to the date of the public hearing;

12.03: continued

(f) the State Reclamation Board, the Department of Public Works, the Department of Environmental Management, the Metropolitan District Commission, the Coastal Zone Management Office, other appropriate agencies of the Commonwealth, federal and local government, appropriate regional planning agencies, and to the Selectmen or Mayor, Conservation Commission, Planning Board and Assessors of the city or town in which the coastal wetlands to be affected are located.

The Commissioner shall give notice by regular mail to any person who has filed a written request to receive notice of public hearing to be held pursuant to the Act, and to any other person he may deem appropriate, at least 14 days prior to the date of the preliminary informational meeting and at least 21 days prior to the date of the public hearing.

Any of the notices required to be given pursuant to 310 CMR 12.03(1) shall be deemed to have been given upon mailing a copy of the notice. The number of days between the giving of notice and the date of the preliminary informational meeting and public hearing shall include Saturdays, Sundays and legal holidays.

(2) Publication of Notice. The Commissioner shall publish notice of the preliminary informational meeting and public hearing at least 14 days prior to the date of the preliminary informational meeting and at least 21 days prior to the date of the public hearing in a newspaper or newspapers of general circulation in the city or town in which the coastal wetlands to be affected are located, and, where appropriate, in such trade, industry or professional publications as the Commissioner may select.

(3) Posting of Notice. The Commissioner shall post notice of the preliminary informational meeting and public hearing at least 14 days prior to the date of the preliminary informational meeting and at least 21 days prior to the date of the public hearing in the city or town hall of the city or town in which coastal wetlands to be affected are located, and in any other location as determined by the Commissioner.

(4) Filing Notice With the Secretary of the Commonwealth. The Commissioner shall file notice of the public hearing with the Secretary of State at least 21 days prior to the date of the public hearing.

(5) Content of Notice. Notice, other than notice by publication, shall include, but shall not be limited to, the following information and materials:

- (a) A description of the Department's statutory authority to adopt Orders, a copy of the statute, M.G.L. c. 130, § 105, and a copy of the proposed Order.
- (b) A copy of an index map or portion of the proposed plan with the coastal wetland area or areas to be affected identified thereon.
- (c) Notice that the Department's wetland boundary delineation services are available to persons having an interest in land to be affected by the Order.
- (d) The time, place and location of the preliminary informational meeting and public hearing.
- (e) The name of the Commissioner or his agent or agents designated to receive inquiries or requests prior to the public hearing.
- (f) Notice that any person may submit written comments concerning the proposed Order to the Department, and/or request to speak at the hearing.

Notice published in newspapers or posted in the city or town hall or other public place pursuant to 310 CMR 12.03(15) shall include the items listed at 310 CMR 12.03(5)(c), (d), and (f), and may also contain a list of parcels within which coastal wetlands are located, and for which no assessed owner is known.

12.04: Preliminary Informational Meetings

The Commissioner shall, at least seven days prior to the date of the public hearing, hold a preliminary informational meeting in the city or town in which the coastal wetlands to be affected are located.

(1) Materials for Display and Inspection. The following information and materials shall be available for display and inspection:

12.04: continued

- (a) photogrammetric, line and symbol, or orthophoto maps depicting coastal wetland boundaries, or any other maps intended for use as plans;
- (b) aerial photographs of the coastal wetlands to be affected;
- (c) assessor's maps depicting the area to be affected;
- (d) a list of all persons who have been given notice of the preliminary informational meeting and the public hearing.

(2) Materials for Distribution. The following information and materials shall be available for distribution:

- (a) copies of M.G.L. c. 130, § 105 and 310 CMR 12.00;
- (b) copies of the proposed Order;
- (c) on-site inspection request forms as shown in Appendix A.

(3) Conduct of the Preliminary Informational Meeting. A representative of the Department shall be present at the preliminary informational meeting to distribute materials upon request, to answer questions concerning the location of proposed coastal wetland boundary lines, and if time permits, to answer other questions concerning the program.

12.05: Public Hearings

Prior to adopting any Order under M.G.L. c. 130, § 105, the Commissioner shall first hold a public hearing in the city or town in which the coastal wetlands to be affected are located.

The Commissioner or his agent designated as the Presiding Officer shall conduct the public hearing. Copies of all information and materials available at the preliminary informational meeting shall be available at the public hearing.

The Presiding Officer shall convene the public hearing. He or she or a representative of the Department shall first state the statutory authority under which the program operates, and shall explain the purpose of the program, effect of the proposed Order, and the Department's mapping, designating and recording procedures. The Presiding Officer shall inform persons having an interest in any affected coastal wetland of their right to request an on-site inspection and other procedures pursuant to 310 CMR 12.06.

The Presiding Officer shall specify the order of participation. Representatives of the Department shall speak first, followed by elected officials. Persons or groups representing agencies of the Commonwealth, federal agencies or local governments who have requested permission to speak shall proceed next, followed by those persons who have submitted requests to comment. Other persons who wish to speak may then proceed at the discretion of the Presiding Officer. The Presiding Officer shall have the right to limit the length of time of each presentation.

The Presiding Officer may entertain questions from the audience. The Presiding Officer shall have the authority to adjourn the public hearing and to continue it to another date.

A record of the public hearing shall be compiled by having the proceedings recorded by a stenographer or on tape.

12.06: Wetland Boundary Delineation Procedures

Any person having an interest in any affected coastal wetland (hereinafter referred to in 310 CMR 12.06 as the "requesting person") shall have the right to request a wetland boundary delineation in accordance with the procedures set forth below. Such a request may be made at any time subsequent to the Department's giving notice pursuant to 310 CMR 12.03 but not later than 14 days after the close of the public hearing record, unless good cause for the delay in making such a request can be shown to the Department.

(1) On-Site Inspections. The Department shall make available, for the purpose of requesting on-site inspections pursuant to 310CMR 12.06 request forms as shown in 310 CMR 12.22 Appendix A. These forms shall be available at the preliminary informational meeting and public hearing held pursuant to 310 CMR 12.00, and at the Wetlands Restriction Program Section of the Department's offices, during normal business hours, at 1 Winter Street, Boston, Massachusetts 02108.

12.06: continued

Completed request forms shall be sent to the Department at the above address. No form shall be deemed to be received unless properly completed, and improperly completed forms shall be returned.

The requesting person shall also contact the Department to arrange a time, date and meeting place for the on-site inspection. The location of the inspection shall be at the place or places specified on the request form.

The Department's representative shall meet with the requesting person at the agreed upon time, date and place.

The Department's representative shall indicate the location of the coastal wetland boundary on the site. The Department may, through its representative, conduct the on-site inspection without the requesting person, if the Department, prior thereto, has secured permission to do so from the requesting person.

The Department may answer any questions posed by the requesting person concerning the designation of the site inspected as land affected by an Order.

(2) Delineation of Coastal Wetlands on Assessor's Maps. The Department, if requested, shall send the requesting person a tracing or copy of the applicable portion of the assessor's map or maps indicating the location of the boundary of the affected coastal wetland in relation to the requesting person's land.

(3) Delineation of Coastal Wetlands on Plot Plans. The Department, if requested, shall indicate the location of the affected coastal wetland on an individual plot plan submitted by the requesting person to the Department.

12.07: Adoption of Orders

The Commissioner shall adopt Orders, including Amending, Modifying and Repealing Orders. No order shall be adopted until the close of the public hearing record.

12.08: Recording of Orders

The Commissioner, upon the adoption of any Order, including the adoption of any Amending, Modifying or Repealing Order shall record a copy of the Order, together with the plan and list of the assessed owners of land affected by the Order, in the registry of deeds or, if such coastal wetlands are registered, in the registry of the land court. The list of assessed owners shall include a reference to the book and page number in the registry where the deed for the affected parcel is recorded.

12.09: Notice of Orders

The Commissioner shall, following completion of the recording procedures pursuant to 310 CMR 12.08 send by certified mail a copy of the Order and plan to each person having an interest in coastal wetlands who was given notice and to the clerk and board of assessors of each city or town in which the affected coastal wetlands are located.

12.10: Recording in the Public Restriction Tract Index

If any county or district having coastal wetlands affected by an Order has established a Public Restriction Tract Index pursuant to M.G.L. c. 184, § 33, the Commissioner shall request that the Order, or any Amending, Modifying or Repealing Order, be indexed in the Public Restriction Tract Index for that county or district and that reference be made to the Order, list and plan. The Order shall be indexed pursuant to the statutory procedures established under M.G.L. c. 184, § 33 as most recently amended, and pursuant to the rules established by the Register of Deeds for the county or district.

12.11: Amending or Modifying Orders

Prior to adopting any Amending or Modifying Order under M.G.L. c. 130, § 105, the Commissioner shall first give notice as required by, and shall hold a public hearing pursuant to, 310 CMR 12.03 and 12.05. The Commissioner shall also conduct any boundary delineation procedures as required by 310 CMR 12.06.

Any Amending or Modifying Order shall be adopted and recorded in the manner required by 310 CMR 12.07 and 12.08 and a copy of the Amending or Modifying Order and plan shall be sent by certified mail to those assessed owners affected by the Amending or Modifying Order.

12.12: Repeal of Orders

Prior to adopting any Repealing Order under M.G.L. c. 130, § 105, the Commissioner shall first give notice in the manner required by 310 CMR 12.03 and shall hold a public hearing in the manner required by 310 CMR 12.05.

Any Repealing Order shall be adopted and recorded in the manner required by 310 CMR 12.07 and 12.08 and a copy of the Repealing Order and plan shall be sent by certified mail to those persons whose names appear on the list of assessed owners recorded with the Order being repealed.

12.13: Correcting Orders

Any person having an interest in coastal wetlands affected by any Order adopted pursuant to M.G.L. c. 130, § 105, and who has reason to believe that the wetland boundary line of his or her wetland has been incorrectly delineated on the plan which has been included with an Order, may request the Department to have the location of his or her boundary line redrawn on a corrected plan.

Upon receipt of the request, a representative of the Department shall, within 15 days, arrange to conduct an on-site field inspection. If the Department finds that the boundary line is incorrectly delineated, the Commissioner shall record, pursuant to the procedures provided in 310 CMR 12.08 and send to the person requesting the correction, a corrected plan with the new boundary delineated thereon. The Commissioner may also correct any typographical, grammatical or other errors contained in any Order by recording a copy of the corrected Order pursuant to the procedures provided in 310 CMR 12.08 and by sending a copy of the corrected Order to the assessed owner or person having an interest in coastal wetlands affected by the Order.

12.14: Monitoring Procedures

The Commissioner shall periodically examine the coastal wetlands affected by Orders.

In addition, any person who has an interest in any coastal wetland affected by an Order may request the Department of Environmental Protection to conduct a review. Upon receipt of the request, the Department shall conduct on-site inspection. If the Commissioner determines, following examination, that significant change has occurred in any such coastal wetland, the Department shall adopt an Amending, Modifying or Repealing Order or shall correct the Order pursuant to the procedures provided in 310 CMR 12.00.

12.15: Departmental Review of Orders

Any Conservation Commission, Mayor or Board of Selectmen may petition the Department to conduct a review to determine if an Order has been violated. Upon receipt of such a petition, the Department shall conduct an on-site inspection of the area and shall take such corrective measures as are warranted.

12.16: Judicial Review of Orders

Any person having an interest in land affected by any such Order, may within 90 days after receiving notice thereof, petition the Superior Court to determine whether such Order so restricts the use of his property as to deprive him of the practical uses thereof and is therefore an unreasonable exercise of the police power because the Order constitutes the equivalent of a taking without compensation.

If the court finds the Order to be an unreasonable exercise of the police power, and enters a finding that such Order shall not apply to the land of the petitioner, the Commissioner shall cause a copy of such finding to be recorded in the proper registry of deeds or, if the land is registered, in the registry district of the land court.

The Department may, after a finding has been entered that such Order shall not apply to certain land as provided in the preceding paragraph, take the fee or any lesser interest in such land in the name of the Commonwealth by eminent domain under the provisions of M.G.L. c. 79 and hold the same for the purposes set forth in 310 CMR 12.16.

12.17: Public Meetings

The Commissioner may, from time to time, hold public meetings in any municipality in which coastal wetlands are located, for the purpose of describing or explaining the status of the Coastal Wetlands Restriction Program or any other aspect of the Program.

12.18: Effect on Other Orders

All Orders adopted under M.G.L. c. 130, § 105 prior to the effective date of 310 CMR 12.00 shall remain in full force and effect.

12.19: Severability

If any provision of 310 CMR 12.00 is held to be invalid, such invalidity shall not affect any provision of 310 CMR 12.00 not specifically held to be invalid.

12.20: (Coastal): Storm Emergency Provisions in the Aftermath of TROPICAL STORM SANDY (ON OR ABOUT OCTOBER 28, 2012)

The terms of any restriction order adopted pursuant to M.G.L. c. 130, § 105, that are inconsistent with the provisions of 310 CMR 10.61: *Storm Emergency Regulations in the Aftermath of TROPICAL STORM SANDY (ON OR ABOUT OCTOBER 28, 2012)* shall not prohibit work undertaken in accordance with 310 CMR 10.61. Work initiated in accordance with 310 CMR 10.61 may continue until FEBRUARY 23, 2013 if an Emergency Certification pursuant to 310 CMR 10.06: *Emergencies* or 10.61 is granted not later than DECEMBER 26, 2012.

REGULATORY AUTHORITY

310 CMR 12.00: M.G.L. c. 21A, §§ 2(2), (5), (7), (9), (10), (11), (13), (15), (20) and (28).

NON-TEXT PAGE

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 13.00: ADOPTING INLAND WETLAND ORDERS

Section

- 13.01: Introduction
- 13.02: Definitions
- 13.03: Notice
- 13.04: Preliminary Informational Meetings
- 13.05: Public Hearings
- 13.06: Combined Inland and Coastal Wetlands Preliminary Informational Meetings and Public Hearings
- 13.07: Wetland or Flood Plain Boundary or Encroachment Line Delineation Procedures
- 13.08: Adoption of Orders
- 13.09: Recording of Orders
- 13.10: Notice of Orders
- 13.11: Recording in the Public Restriction Tract Index
- 13.12: Amending or Modifying Orders
- 13.13: Repeal of Orders
- 13.14: Correcting Orders
- 13.15: Monitoring Procedures
- 13.16: Department Review of Orders
- 13.17: Judicial Review of Orders
- 13.18: Public Meetings
- 13.19: Effect on Other Orders
- 13.20: Existing Structures
- 13.21: Severability
- 13.22: Appendix A - Request for On-Site Inspection

13.01: Introduction

(1) Authority. 310 CMR 13.00 is issued by the Department of Environmental Protection pursuant to the authority granted under M.G.L. c. 21A, § 2(28).

(2) Purpose. 310 CMR 13.00 is promulgated in order to:

- (a) define and explain the language of M.G.L. c. 131, § 40A, and
- (b) establish the procedures under which the Department will exercise its responsibilities under M.G.L. c. 131, § 40A.

It is the intent of the Department that these definitions and procedures are to be used to preserve and promote the public safety, private property, wildlife, fisheries, water resources, flood plain areas and agriculture, and to prevent damage to the environment.

It is further intended that these goals shall be accomplished through the adoption of Orders imposing restrictions on the inland wetlands and flood plain areas of the Commonwealth. The Orders shall regulate, restrict, or prohibit certain specified activities or uses, including dredging, filling, removing or otherwise altering or polluting inland wetlands and shall establish encroachment lines along waterways or flood-prone areas beyond which in the direction of the waterway or flood-prone area, no obstruction or encroachment shall be placed unless authorized by the Commissioner of the Department of Environmental Protection.

It is also the intent of the Department that, where inland wetlands and flood plain areas occur within the boundary of the Massachusetts coastal zone as defined in the Commonwealth's Coastal Zone Management Program (hereinafter "CZM Program"), 310 CMR 13.00 be consistent with and form a part of the CZM Program as it has been promulgated and defined in 301 CMR 20.00 issued pursuant to M.G.L. c. 21A entitled "Establishment of the Coastal Zone Management Program by the Executive Office of Environmental Affairs". 310 CMR 13.00, however, is adopted independently under M.G.L. c. 131, § 40A and would remain in full force and effect in the absence of the CZM Program or 301 CMR 20.00.

The interpretation and application of 310 CMR 13.00 to inland wetlands and flood plain areas within the boundary of the coastal zone shall be consistent with the policies of the CZM Program to the maximum extent permissible under M.G.L. c. 131, § 40A; except when to do so would require an act impermissible at law, or where the Secretary of Environmental Affairs, pursuant to the conflict resolution procedures of M.G.L. c. 21A, § 4 and 301 CMR 20.06, has resolved any conflict and has

determined that the CZM policies should or should not apply.

13.01: continued

(3) Coordination with the CZM Office and Local Governments. If inland wetlands and flood plain areas proposed for restriction occur within the Coastal Zone, as defined in 301 CMR 20.03 the Department, in accordance with 301 CMR 20.06, shall notify the CZM Office at least 60 days beforehand of the adoption of any proposed Order and shall provide local government agencies with notice of the proposed Order at least 30 days prior to its adoption.

(4) Restriction of Areas of Critical Environmental Concern. Whenever the Secretary notifies the Commissioner that he has accepted the nomination of an inland wetland or flood plain area for designation as an Area of Critical Environmental Concern (hereinafter "ACEC"), the Commissioner shall, within 30 days of such acceptance, submit the following to the Secretary, and to the Director of the Coastal Zone Management Office if the nominated inland wetland or flood plain area lies within the coastal zone as defined in 301 CMR 20.03:

(a) a narrative description of the current status of mapping activity and of any past or current wetlands restrictions activity within the suggested boundaries of the nominated ACEC.

(b) a schedule for restricting the inland wetlands and flood plain areas in the nominated ACEC within 15 months of the Secretary's designation of the ACEC. In carrying out the restriction of the inland wetlands and flood plain areas of an ACEC within 15 months of its designation, the Department shall review the adequacy and consistency of all previously recorded restrictions within the ACEC and shall, as necessary, amend or modify and rerecord such restrictions to ensure full compliance with the management goals of the Secretary's designation of the ACEC.

If the Commissioner determines that the process of restricting all of the inland wetlands and flood plain areas in an ACEC cannot be completed within 15 months of designation, the Commissioner may request that the Secretary grant a one-time extension of up to 90 days.

13.02: Definitions

Act means M.G.L. c. 131, § 40A.

Agriculture purposes means one or more of the following activities or uses: raising, breeding or producing a specified type of animal or vegetable life, including, but not limited to, dairy cattle, beef cattle, poultry, sheep, swine, horses, ponies, mules, goats, bees, fur-bearing animals, and fruits, vegetables, berries, nuts and other foods for human consumption, feed for animals, tobacco, flowers, sod, trees, nursery or green house products, forest products, and ornamental plants, shrubs, fish and shellfish, provided that such activity or use results in or is or was clearly intended to result in a product of demonstrable market value.

Altering means causing change, directly or indirectly within any inland wetland or flood plain area and includes, but is not limited to, one or more of the following actions:

(a) changing pre-existing drainage characteristics, flushing characteristics, salinity distribution, sedimentation patterns, flow patterns and flood storage retention areas;

(b) draining or otherwise disturbing surface or groundwater levels;

(c) degrading water quality;

(d) driving pilings or erecting buildings or structures of any kind;

(e) placing any obstruction to water flow;

(f) destroying plant life, but not including the limbing of trees;

(g) discharging, releasing, or causing to be released, any contaminating materials, including sediments, from any source directly into any inland wetland or flood plain area whether by overland flow or through a new or existing pipe or other conduit;

(h) causing adverse effects to wildlife, inland fisheries, or to their habitat;

(i) lowering, polluting, or otherwise changing the level, quantity, or quality of ground water by doing any work in an inland wetland or flood plain area.

13.02: continued

Amendment means any change in the allowed or prohibited activities or uses contained in any Order adopted under M.G.L. c. 131, § 40A; any addition to or deletion of, including any change in the definition of, the types of inland wetlands defined in any Order; any addition to or deletion of any wetland or flood plain area; any change in the location of any wetland boundary or encroachment line which does not constitute a correction; or any addition to any list of assessed owners adopted as part of the Order. An amendment shall not include a correction as defined in 310 CMR 13.02.

Assessed owner means the person to whom land within an inland wetland or flood plain area affected by an Order was assessed in the last preceding annual tax levy.

Bank means the contiguous upland slope landward of any inland water or freshwater wetland up to and including the crest of the slope, which may or may not include vegetation characteristic of transitional zones (ecotones) or plant communities immediately adjacent to any inland water or freshwater wetland.

Commissioner means the Commissioner of the Department of Environmental Protection.

Correction means any minor change in the location of the inland wetland or flood plain area boundary or encroachment line on a plan, the substitution or deletion of any name or names from the list of assessed owners adopted as part of any Order, or any typographical, grammatical or other correction which does not change the sense or meaning of any Order.

Department means the Department of Environmental Protection.

Dredging means the removal of materials including, but not limited to, rock, bottom sediment, debris, loam, peat, soil, sand, refuse, plant or animal matter, in any excavating, grading, cleaning, deepening, widening or lengthening, either permanently or temporarily, of any inland wetland or flood plain area. Dredging shall include improvement dredging, maintenance dredging, back-filling or other dredging and subsequent refilling.

Encroachment Line means any boundary line which is based upon an inland wetland boundary line beyond which no structures or other encroachments may be established in the direction of the waterway or flood-prone area.

Filling means the placing of any material that raises, either temporarily or permanently, the existing elevation of any inland wetland or flood plain area.

Flood Plains, means for the purposes of M.G.L. c. 131, § 40A, inland wetlands that are subject to flooding, and normally dry land areas which are subject to a general and temporary condition of partial or complete inundation by runoff from surface water or by overflow of inland waters. Flood plains or flood plain areas may further include those areas of land which have been designated as being within the 100-year flood as determined by the Office of Federal Insurance and Hazard Mitigation within the Federal Emergency Management Agency.

Flood Plain Area means any inland wetland or flood plain delineated by a continuous boundary line which encloses that area.

Flooding means a local and temporary inundation or rise in the surface water level of any inland water such that it inundates or overflows land not usually under water.

Inland Wetlands means "freshwater wetlands" as defined in M.G.L. c. 131, § 40 and that portion of any bank which touches any inland waters or any freshwater wetland, and any freshwater wetland subject to flooding.

Improvement Dredging means any dredging in an area which has not previously been dredged or which extends the original dredged width, depth, length, or otherwise alters the original boundaries of a previously dredged area.

13.02: continued

Inland Wetland affected by an Order means any inland wetland or flood plain area that is subject to any restriction under an Order.

Modification means any amendment as defined in 310 CMR 13.02 Amendment.

Obstruction or Encroachment shall be defined as including, but not limited to, any structure, building, fence, wall, fixture, or other barrier.

Maintenance Dredging means any dredging under a License in any previously dredged area which does not extend the originally dredged width, depth, or length, but does not mean improvement dredging or backfilling.

National Map Accuracy Standards means meeting or exceeding the map accuracy standards established by the U.S. Bureau of the Budget on June 10, 1941, as revised April 26, 1943 and June 17, 1947, and as amended from time to time. For maps on publication scales larger than 1:20,000, not more than 10% of the points tested may be in error by more than 1/30 inch (0.846mm) measured on the publication scale; for maps on publication scales of 1:20,000 or smaller, 1/50 inch (0.508mm). These limits of accuracy shall apply in all cases to positions of well-defined points only. Well-defined points are those that are easily visible or recoverable on the ground. In general, what is well-defined will also be determined by what is plottable on the scale of the map within 1/100 inch (0.254mm).

Order means any instrument issued by the Commissioner that imposes restrictions on any inland wetland or flood plain area in accordance with M.G.L. c. 131, § 40A.

Person means any individual, group of individuals, association, partnership, corporation, company, business organization, trust, estate, the Commonwealth or political subdivision thereof, any administrative agency, public or quasi-public corporation or body or any other legal entity or its legal representative, agents or assigns.

Person having an ownership interest means any assessed owner or any record holder of an easement, covenant, restriction or any other ownership interest, any lessee holding a lease of 25 years length or more and any mortgagor.

Plan means a map made by surveying techniques, a line and symbol photogrammetric map or an orthophoto map, which meets National Map Accuracy Standards, upon which inland wetlands and flood plain areas are delineated.

Polluting means, but is not limited to, the discharge, release or flow of any product, by-product, material or waste resulting from sewage, sewage processing, or from any industrial, commercial, or other man-made process, any man-made thermal discharge, run-off, leachate, or any other substance in any form, which is or can be drained, discharged or infiltrated, or otherwise introduced into any inland wetland or flood plain area, or any discharge or release of agricultural waste or chemicals for non-agricultural purposes.

Removing means to take away any type of material that alters the elevation of any inland wetland or flood plain area.

Repeal means the rescinding of any Order, including the plan or plans and list of assessed owners incorporated with the Order.

Restriction means any provision in any Order limiting activities or uses in or on inland wetlands or flood plain areas.

Wetland area means any inland wetland or flood plain delineated by a continuous boundary line which encloses that area.

13.03: Notice

Prior to adopting any Order under M.G.L. c. 131, § 40A, the Commissioner shall first give notice, as provided below, of a preliminary informational meeting and a public hearing.

(1) Persons To Be Given Notice. The Department shall mail notice of the meeting and the hearing to the following persons by certified mail at their address as listed in the assessor's records, at least 14 days prior to the date of the preliminary informational meeting and at least 21 days prior to the date of the public hearing:

- (a) any assessed owner, unless a different owner or different address is known to the Commissioner to be the correct one, in which case the notice shall be so addressed;
- (b) any person, other than an assessed owner, having an ownership interest in any inland wetland or flood plain area to be affected and whose name appears in the assessor's records; (c) any person who has acquired, subsequent to the last annual tax levy, an ownership interest in any inland wetland or flood plain area to be affected and whose name has been entered in the records of the assessor's office and is available to the Department at least 60 days prior to the date of the public hearing;

(d) the State Reclamation Board, the Department of Public Works, the Department of Environmental Management, the Metropolitan District Commission, the Coastal Zone Management Office, other agencies of the Commonwealth, federal and local government as the Commissioner deems appropriate regional planning agencies within the area to be affected, and to the Selectmen or Mayor, Conservation Commission, Planning Board and Assessors of the city, town or watershed region in which the inland wetlands or flood plain areas to be affected are located.

The Commissioner shall give notice by regular mail to any person who has filed a written request to receive notice of public hearings to be held pursuant to M.G.L. c. 131, § 40A, and to any other person he may deem appropriate, at least 14 days prior to the date of the preliminary informational meeting and at least 21 days prior to the date of the public hearing.

Any of the notices required to be given pursuant to 310 CMR 13.03(1) shall be deemed to have been given upon mailing a copy of the notice. The number of days between the giving of notice and the date of the preliminary informational meeting and public hearing shall include Saturdays, Sundays and legal holidays.

(2) Publication of Notice. The Commissioner shall publish notice of the preliminary informational meeting and public hearing at least 14 days prior to the date of the preliminary informational meeting and at least 21 days prior to the date of the public hearing in a newspaper or newspapers of general circulation in the city, town or watershed region in which the inland wetlands or flood plain areas to be affected are located, and where appropriate, in such trade, industry or professional publications as the Commissioner may select.

(3) Posting of Notice. The Commissioner shall post notice of the preliminary informational meeting and public hearing at least 14 days prior to the date of the preliminary informational meeting and at least 21 days prior to the date of the public hearing in the city or town hall of the city or town in which inland wetlands or flood plain areas to be affected are located, and in any other location as determined by the Commissioner.

(4) Filing Notice With the Secretary of the Commonwealth. The Commissioner shall file notice of the public hearing with the Secretary of State at least 21 days prior to the date of the public hearing.

(5) Content of Notice. Notice, other than notice by publication, shall include, but need not be limited to, the following information and materials:

- (a) A description of the Department's statutory authority to adopt Orders, a copy of the statute,

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

M.G.L. c. 131, § 40A, and a copy of the proposed Order.

(b) A copy of an index map or portion of the proposed plan with the inland wetland or flood plain area or areas to be affected identified thereon.

(c) Notice that the Department's wetland boundary delineation services are available to persons having an ownership interest in land to be affected by the Order.

(d) The time, place and location of the preliminary informational meeting and public hearing.

13.03: continued

(e) The name of the Commissioner or his agent or agents designated to receive inquiries or requests prior to the public hearing.

(f) Notice that any person may submit written comments concerning the proposed Order to the Department, and/or request to speak at the hearing.

Notice published in newspapers or posted in the city or town hall or other public place pursuant to 310 CMR 13.03(5) shall include the items listed in 310 CMR 13.03(5)(c), (d), and (f), and may also contain a list of parcels within which inland wetlands or flood plain areas are located, and for which no assessed owner is known.

13.04: Preliminary Informational Meetings

The Commissioner shall, at least seven days prior to the date of the public hearing, hold a preliminary informational meeting in a city or town in which the inland wetlands or flood plain areas to be affected are located.

(1) Materials for Display and Inspection. The following information and materials shall be available for display and inspection:

- (a) photogrammetric, line and symbol, or orthophoto maps depicting inland wetland or flood plain area boundaries or encroachment lines, or any other maps intended for use as plans;
- (b) aerial photographs of the inland wetlands or flood plain areas to be affected;
- (c) assessor's maps depicting the area to be affected;
- (d) a list of all persons who have been given notice of the preliminary informational meeting and the public hearing.

(2) Materials for Distribution. The following information and materials shall be available for distribution:

- (a) copies of M.G.L. c. 131, § 40A and 310 CMR 13.00;
- (b) copies of the proposed Order;
- (c) on-site inspection request forms as shown in Appendix A.

(3) Conduct of the Preliminary Informational Meeting. A representative of the Department shall be present at the preliminary informational meeting to distribute materials upon request, to answer questions concerning the location of proposed inland wetland or flood plain area boundary lines or encroachment lines, and if time permits, to answer other questions concerning the program.

13.05: Public Hearings

Prior to adopting any Order under M.G.L. c. 131, § 40A, the Commissioner shall first hold a public hearing in a city or town in which the inland wetlands or flood plain areas to be affected are located.

The Commissioner or his agent designated as the Presiding Officer shall conduct the public hearing. Copies of all information and materials available at the preliminary informational meeting shall be available at the public hearing.

The Presiding Officer shall convene the public hearing. He or she or a representative of the Department shall first state the statutory authority under which the program operates, and shall explain the purpose of the program, effect of the proposed Order, and the Department's mapping, designating and recording procedures. The Presiding Officer shall inform persons having an ownership interest in any affected inland wetland or flood plain area of their right to request an onsite inspection and other procedures pursuant to 310 CMR 13.07.

The Presiding Officer shall specify the order of participation. Representatives of the Department shall speak first, followed by elected officials. Persons or groups representing agencies of the Commonwealth, federal agencies or local governments who have requested permission to speak shall proceed next, followed by those persons who have submitted requests to comment. Other persons who wish to speak may then proceed at the discretion of the Presiding Officer. The Presiding Officer shall have the right to limit the length of time for each presentation.

13.05: continued

The Presiding Officer may entertain questions from the audience. The Presiding Officer shall have the authority to adjourn the public hearing and to continue it to another date.

A record of the public hearing shall be compiled by having the proceedings recorded by a stenographer or on tape.

Findings will be made by the Presiding Officer and recommendations based on said findings submitted to the Commissioner within four weeks following the public hearing.

13.06: Combined Inland and Coastal Wetlands Preliminary Informational Meetings and Public Hearings

Where coastal wetlands within a city or town are also concurrently proposed for restriction under M.G.L. c. 130, § 105, the preliminary informational meeting and public hearing required under that statute shall also serve as the preliminary informational meeting and public hearing required under M.G.L. c. 131, § 40A.

13.07: Wetland or Flood Plain Boundary or Encroachment Line Delineation Procedures

Any person having an ownership interest in any affected inland wetland or flood plain area, (hereinafter referred to in 310 CMR 13.07 as the "requesting person") shall have the right to request a wetland, flood plain boundary or encroachment line delineation in accordance with the procedures set forth below.

Prior to the adoption of any Order, such a request may be made at any time subsequent to the Department's giving notice pursuant to 310 CMR 13.03, but not later than 14 days after the close of the public hearing record, unless good cause for the delay in making such a request can be shown to the Department.

Subsequent to the adoption of any Order, such a request may be made only for good cause shown.

(1) On-Site Inspections. The Department shall make available, for the purpose of requesting on-site inspections pursuant to 310 CMR 13.07, request forms as shown in Appendix A of 310 CMR 13.00. These forms shall be available at the preliminary informational meeting and public hearing held pursuant to 310 CMR 13.00, and at the Wetlands Restriction Program of the Department's offices, during normal business hours, at 1 Winter Street, Boston, Massachusetts 02108.

Completed request forms shall be sent to the Department at the above address. No form shall be deemed to be received unless properly completed, and improperly completed forms shall be returned.

The requesting person shall also contact the Department to arrange a time, date and meeting place for the on-site inspection. The location of the inspection shall be at the place or places specified on the request form.

The Department's representative shall meet with the requesting person at the agreed upon time, date and place.

The Department's representative shall indicate the location of the inland wetland and flood plain boundary or encroachment line on the site. The Department may, through its representative, conduct the on-site inspection without the requesting person, if the Department, prior thereto, has secured permission to do so from the requesting person.

The Department may answer any questions posed by the requesting person concerning the designation of the site inspected as land affected by an Order.

(2) Delineation of Inland Wetlands, Flood Plain Areas or Encroachment Lines on Assessor's Maps. The Department, if requested, shall send the requesting person a tracing or copy of the applicable portion of the assessor's map or maps indicating the location of the inland wetland or flood plain boundary or encroachment line of the affected land in relation to the requesting person's land. The Department does not accept responsibility for the accuracy of any assessor's map or maps.

(3) Delineation of Inland Wetlands, Flood Plain Areas or Encroachment Lines on Plot Plans. The Department, if requested, shall indicate the location of the boundary of the inland wetland or flood plain area, or encroachment line on an individual plot plan submitted by the requesting person to the Department. The Department does not accept responsibility for the accuracy of any plot plan submitted.

13.08 Adoption of Orders

The Commissioner shall adopt Orders, including Amending, Modifying and Repealing Orders. No Order shall be adopted for any city or town until it is approved by the Selectmen or City Council of the city or town in which the inland wetlands or flood plains are located; provided, that if the Selectmen or the City Council fail to approve or disapprove in writing, stating reasons for the disapproval of the proposed Order within 30 days after receipt of a written request from the Commissioner, such Order shall be deemed to have been approved, and provided, further, if such Order is so disapproved the Commissioner may, after expiration of six months from the date of such disapproval and after due consideration of the reasons for such disapproval, adopt such order.

No order shall be adopted until the close of the public hearing record.

13.09: Recording of Orders

The Commissioner, upon the adoption of any Order, including the adoption of any Amending, Modifying or Repealing Order shall record a copy of the Order, together with the plan and list of the assessed owners of land affected by the Order, in the registry of deeds or, if such inland wetlands or flood plain areas are registered, in the registry of the land court. The list of assessed owners shall include a reference to the book and page number in the registry where the deed for the affected parcel is recorded.

The Commissioner shall also cause the Order to be marginally referenced to the deeds of the list of assessed owners of land affected by the Order.

13.10: Notice of Orders

The Commissioner shall, following completion of the recording procedures pursuant to 310 CMR 13.09, send by certified mail a copy of the Order and plan to each person having an interest in wetlands who was given notice and to the clerk and board of assessors of each city or town in which the affected wetlands are located.

13.11: Recording in the Public Restriction Tract Index

If any county or district having inland wetlands or flood plain areas affected by an Order has established a Public Restriction Tract Index pursuant to M.G.L. c. 184, § 33, the Commissioner shall request that the Order or any Amending, Modifying or Repealing Order, be indexed in the Public Restriction Tract Index for that county or district and that reference be made to the Order, list and plan. The Order shall be indexed pursuant to the statutory procedures established under M.G.L. c. 184, § 33 as most recently amended, and pursuant to the rules established by the Register of Deeds for the county or district.

13.12: Amending or Modifying Orders

Prior to adopting any Amending or Modifying Order under M.G.L. c. 131, § 40A, the Commissioner shall first give notice as required by, and shall hold a public hearing pursuant to, 310 CMR 13.03 and 13.05. The Commissioner shall also conduct any boundary delineation procedures as required by 310 CMR 13.07.

Any Amending or Modifying Order shall be adopted and recorded in the manner required by 310 CMR 13.08 and 13.09, and a copy of the Amending or Modifying Order and plan shall be sent by certified mail to those assessed owners affected by the Amending or Modifying Order.

13.13: Repeal of Orders

Prior to adopting any Repealing Order under M.G.L. c. 131, § 40A, the Commissioner shall first give notice in the manner required by 310 CMR 13.05.

Any Repealing Order shall be adopted and recorded in the manner required by 310 CMR 13.08 and 13.09 and a copy of the Repealing Order and plan shall be sent by certified mail to those persons whose names appear on the list of assessed owners recorded with the Order being repealed.

13.14: Correcting Orders

Any person having an ownership interest in inland wetlands or flood plain areas affected by any Order adopted pursuant to M.G.L. c. 131, § 40A, and who has reason to believe that the wetland or flood plain boundary or encroachment line of his or her wetland or flood plain areas has been incorrectly delineated on the plan which has been included with an Order, may request the Department to have the location of his or her boundary or encroachment line redrawn on a corrected plan.

Upon receipt of the request, a representative of the Department shall, within 15 days, arrange to conduct an on-site field inspection. If the Department finds that the boundary or encroachment line is incorrectly delineated, the Commissioner shall record, pursuant to the procedures provided in 310 CMR 13.09 and send to the person requesting the correction, a corrected plan with the new boundary or encroachment line delineated thereon. The Commissioner may also correct any typographical, grammatical or other errors contained in any Order by recording a copy of the corrected Order pursuant to the procedures provided in 310 CMR 13.09 and by sending a copy of the corrected Order to the assessed owner or person having an ownership interest in inland wetlands or flood plain areas affected by the Order.

13.15: Monitoring Procedures

The Commissioner shall periodically review and examine the inland wetlands affected by Orders.

In addition, any person who has an interest in any inland wetland or flood plain area affected by an Order may request the Department of Environmental Protection to conduct a review. Upon receipt of the request, the Department shall conduct an on-site inspection. If the Commissioner determines, following examination, that significant change has occurred in any such inland wetland or flood plain area, the Department shall adopt an Amending, Modifying or Repealing Order or shall correct the Order pursuant to the procedures provided in 310 CMR 13.00.

13.16: Department Review of Orders

Any Conservation Commission, Mayor or Board of Selectmen may petition the Department to conduct a review to determine if an Order has been violated. Upon receipt of such a petition, the Department shall conduct an on-site inspection of the area and shall take corrective measures as are warranted. Any abutter or other person having an interest in any inland wetland affected by an Order may request a review to determine if an Order has been violated, to be granted at the discretion of the Department.

13.17: Judicial Review of Orders

Any person having an ownership interest, any lessee holding lease of 25 years length or more, and any mortgagor having an interest in land affected by any such Order, may within 90 days after receiving notice thereof, petition the Superior Court to determine whether such Order so restricts the use of his property as to deprive him of the practical uses thereof and is therefore an unreasonable exercise of the police power because the Order constitutes the equivalent of a taking without compensation.

If the court finds the Order to be an unreasonable exercise of the police power, and enters a finding that such Order shall not apply to the land of the petitioner, the Commissioner shall cause a copy of such finding to be recorded in the proper registry of deeds or, if the land is registered, in the registry district of the land court.

The Department may, after a finding has been entered that such Order shall not apply to certain land as provided in the preceding paragraph, take the fee or any lesser interest in such land in the name of the Commonwealth by eminent domain under the provisions of M.G.L. c. 79 and hold the same for the purposes set forth in 310 CMR 13.17.

13.18: Public Meetings

The Commissioner may, from time to time, hold public meetings in any municipality in which inland wetlands or flood plain areas are located, for the purpose of describing or explaining the status of the Inland Wetlands Restriction Program or any other aspect of the Program.

13.19: Effect on Other Orders

All Orders adopted under M.G.L. c. 131, § 40A prior to the effective date of 310 CMR 13.00 shall remain in full force and effect.

13.20: Existing Structures

Any existing buildings or structure within an area subject to an Order of Restriction may continue to exist and may be repaired and maintained.

Any existing building or structure which is accidentally destroyed, may be rebuilt on the same location but no larger than the original overall dimensions.

13.21: Severability

If any provision of 310 CMR 13.00 is held to be invalid, such invalidity shall not affect any provision of 310 CMR 13.00 not specifically held to be invalid.

13.23: (Inland): Storm Emergency Provisions in the Aftermath of TROPICAL STORM SANDY (ON OR ABOUT OCTOBER 28, 2012)

The terms of any restriction order adopted pursuant to M.G.L. c. 131, § 40A, that are inconsistent with the provisions of 310 CMR 10.61: *Storm Emergency Regulations in the Aftermath of TROPICAL STORM SANDY (ON OR ABOUT OCTOBER 28, 2012)* shall not prohibit work undertaken in accordance with 310 CMR 10.61. Work initiated in accordance with 310 CMR 10.61 may continue until FEBRUARY 23, 2013 if an Emergency Certification pursuant to 310 CMR 10.06: *Emergencies* or 10.61 is granted not later than DECEMBER 26, 2012.

REGULATORY AUTHORITY

310 CMR 13.00: M.G.L. c. 21A, §§ 2(2), (3), (5), (7), (9), (10), (11), (13), (15), (20) and (28).

13.22: Appendix A

TOWN _____
LOT # _____
DATE INSPECTED _____

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WETLANDS RESTRICTION PROGRAM
1 WINTER STREET, BOSTON, MA 02108

REQUEST FOR ON-SITE INSPECTION

The Department will conduct on-site inspections in the town of _____
from _____ to _____. Please fill out and send in the following information to the above address.
In addition, please telephone the Department, by _____ a time and place for the inspection.

1. Name of owners: _____

Name of person requesting on-site inspection (if different from owner)

2. Address of person requesting on-site inspection _____

3. Address of property _____

4. Telephone # of person requesting on-site inspection home: _____
work: _____

5. Reason for on-site inspection _____

NON-TEXT PAGE

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 15.000: THE STATE ENVIRONMENTAL CODE, TITLE 5: STANDARD REQUIREMENTS FOR THE SITING, CONSTRUCTION, INSPECTION, UPGRADE AND EXPANSION OF ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS AND FOR THE TRANSPORT AND DISPOSAL OF SEPTAGE

SUBPART A: GENERAL PROVISIONS AND ENFORCEMENT

- 15.001: Purpose, Authority and Related Provisions
- 15.002: Definitions
- 15.003: Coordination with Local Approving Authorities
- 15.004: Applicability
- 15.006: Facilities with a Design Flow of 10,000 gpd or Greater but Less than 15,000 gpd
- 15.007: Campgrounds
- 15.010: Division and Aggregation of Facilities
- 15.011: Criteria to Assess Whether Facilities are in Separate Ownership or Control
- 15.017: Approval of Soil Evaluators
- 15.018: Function of Soil Evaluators
- 15.019: Disposal System Installer's Permit
- 15.020: Disposal System Construction Permits
- 15.021: Certificates of Compliance
- 15.022: Duty of Compliance
- 15.023: Approving Authority Access
- 15.024: Violations of 310 CMR 15.000
- 15.025: Enforcement by Approving Authorities
- 15.026: Orders
- 15.027: Prohibition of Septic System Additives
- 15.028: Soil Absorption System Restoration
- 15.029: Construction of Wells Near Existing Systems
- 15.030: Records
- 15.040: Advisory Committee
- 15.050: Severability

SUBPART B: SITING OF SYSTEMS

- 15.100: General Provisions
- 15.101: Site Evaluation Criteria
- 15.102: Deep Observation Hole Test
- 15.103: Soil Profile
- 15.104: Percolation Testing
- 15.105: Procedure for Performing a Percolation Test
- 15.106: Landscape Position
- 15.107: Hydrogeologic Properties

SUBPART C: DESIGN, CONSTRUCTION, REPAIR, AND REPLACEMENT OF ON-SITE SEWAGE DISPOSAL SYSTEMS

- 15.201: Type of System
- 15.202: Use of Recirculating Sand Filters
- 15.203: System Sewage Flow Design Criteria
- 15.204: Increases in Design Flow to System
- 15.211: Minimum Setback Distances
- 15.212: Depth to Groundwater
- 15.213: Construction in Velocity Zones and Floodways
- 15.214: Designation of Nitrogen Sensitive Areas
- 15.215: Nitrogen Loading Limitations
- 15.216: Aggregate Determinations of Flows and Nitrogen Loadings
- 15.217: Systems with Enhanced Nitrogen Removal
- 15.220: Preparation of Plans and Specifications

Section: continued

- 15.221: General Construction Requirements for All System Components
- 15.222: Building Sewers
- 15.223: Septic Tanks
- 15.224: Multiple Compartment Tanks
- 15.225: Tanks in Series
- 15.226: Construction of Septic Tanks
- 15.227: Placement and Construction of Tees
- 15.228: Placement and Accessibility of Septic Tank
- 15.229: Pumping to Septic Tanks
- 15.230: Pretreatment Units - Grease Traps
- 15.231: Dosing Chambers and Pumps
- 15.232: Distribution Boxes
- 15.233: Siphons
- 15.240: Soil Absorption Systems
- 15.241: System Venting
- 15.242: LTAR - Effluent Loading Rates
- 15.243: Types of Soil Textural Classes
- 15.244: Types of Soils
- 15.245: Soil Absorption System Siting Requirements
- 15.246: Excavation and Flagging of Soil Absorption System
- 15.247: Aggregate
- 15.248: Reserve Area
- 15.249: Design Criteria for Soil Absorption Systems
- 15.251: Trenches
- 15.252: Beds or Fields
- 15.253: Pits, Galleries, or Chambers
- 15.254: Pressure Dosing and Pressure Distribution
- 15.255: Construction in Fill
- 15.260: Tight Tanks
- 15.262: Greywater Systems
- 15.280: Approval of Alternative Systems
- 15.281: Purpose
- 15.282: Types of Alternative Systems
- 15.283: Process for Review of Alternative System Proposals
- 15.284: Approval for Remedial Use
- 15.285: Approval for Piloting
- 15.286: Provisional Approval of Alternative System
- 15.287: General Conditions for Use of Alternative Systems Pursuant to 310 CMR 15.284 through 15.286
- 15.288: Certification of Alternative Systems for General Use
- 15.289: Humus/Composting Toilets
- 15.290: Shared Systems
- 15.291: Division of a Facility and Upgrades Using Shared Systems
- 15.292: New Construction or Increased Flow to Existing Systems and Division of a Facility Using Shared Systems

SUBPART D: INSPECTION AND MAINTENANCE OF SYSTEMS

- 15.300: Purpose and General Provisions
- 15.301: System Inspection
- 15.302: Criteria for Inspection
- 15.303: Systems Failing to Protect Public Health and Safety and the Environment
- 15.304: Large Systems which Fail to Protect or which Threaten Public Health and Safety and the Environment
- 15.305: Deadlines for Completion of Upgrades
- 15.340: Approval of System Inspectors
- 15.351: System Pumping and Routine Maintenance
- 15.353: Emergency Repair
- 15.354: Abandonment of Systems

Section: continued

SUBPART E: PROCEDURES FOR SEEKING AND RECEIVING
LOCAL UPGRADE APPROVALS AND VARIANCES FROM
THE PROVISIONS OF SUBPARTS B AND C OF 310 CMR 15.000

- 15.401: General Provisions
- 15.402: Use of Local Upgrade Approvals or Variances
- 15.403: Local Upgrade Approvals
- 15.404: Maximum Feasible Compliance - Approvals for Upgrades
- 15.405: Contents of Local Upgrade Approval
- 15.410: Variances - Standard of Review
- 15.411: Process for Seeking a Variance from Local Approving Authorities
- 15.413: Conditioning of Variances
- 15.414: Variances for Increased Flow to Existing System
- 15.415: Provisions from Which No Variance May be Granted
- 15.416: Variances for Schools
- 15.421: Appeals from Determinations by Local Approving Authority
- 15.422: Appeals of Departmental Determinations

SUBPART F: TRANSPORTATION AND DISPOSAL OF SEPTAGE

- 15.500: Purpose
- 15.501: Regional Abatement Districts
- 15.502: Transportation
- 15.503: Transfer Locations
- 15.504: Disposal
- 15.505: Equipment

Appendix 1: Model Grant of Title 5, Covenant and Easement

SUBPART A: GENERAL PROVISIONS AND ENFORCEMENT

15.001: Purpose, Authority and Related Provisions

- (1) The purpose of Title 5, 310 CMR 15.000, of the State Environmental Code is to provide for the protection of public health, safety, welfare and the environment by requiring the proper siting, construction, upgrade, and maintenance of on-site sewage disposal systems and appropriate means for the transport and disposal of septage.
- (2) 310 CMR 15.000 is promulgated pursuant to the authority of M.G.L. c. 21A, § 13.
- (3) The provisions of 310 CMR 15.000 should be read together with 314 CMR 5.00: *Ground Water Discharge Permit Program* which applies to all discharges to ground of sanitary sewage.
- (4) Title 5, 310 CMR 15.000, should be read together with M.G.L. c. 21A, §§ 13 and 13A, M.G.L. c. 21 §§ 26 through 53, M.G.L. c. 111, §§ 17, 27, 27A, 27B, 27C, 30, 31, 31A, 31B, 31C, 31D, 31E, 122, 124, 125, 125A, 127, 127A, 127P, 127B and 129; M.G.L. c. 83, § 11; M.G.L. c. 131, § 40; St. 1996, c. 204, § 148; and St. 2002, c.176; St. 2004, c. 149, § 39.

15.002: Definitions

For the purposes of 310 CMR 15.000, the following terms shall have the following meanings, unless the context clearly requires otherwise. Terms expressed in the singular shall be construed to incorporate the plural, and vice versa, unless the context otherwise requires.

1978 Code - Title 5 of the State Environmental Code, 310 CMR 15.000, as revised and in effect as of 1978.

15.002: continued

Acre - a unit of land measure equal to 40,000 square feet which is considered a building acre in accordance with standard real estate practices.

Agency - an agency, department, board, commission or authority of the Commonwealth or of the federal government and any authority of any political subdivision, which is specifically created as an authority under special or general law. The term shall not include housing authorities permitted pursuant to M.G.L. c. 40A.

Alternative Systems - Systems designed to provide or enhance on site sewage disposal which either do not contain all of the components of an on site disposal system constructed in accordance with 310 CMR 15.100 through 15.255 or which contain components in addition to those specified in 310 CMR 15.100 through 15.255 and which are proposed to the Local Approving Authority and/or the Department, or an agent authorized by the Department, for remedial, pilot, provisional, or general use approval pursuant to 310 CMR 15.280 through 15.289.

Approved Capacity - The capacity of a 1978 Code system reflected by the sewage flow as shown on the Disposal Works Construction Permit Application or as shown on the Certificate of Compliance, whichever is less for that system and not the calculated capacity based on 1978 Code loading rates which may account for overdesign or safety factors. For a system designed in accordance with 310 CMR 15.000, the approved calculated capacity is based on the loading rates found at 310 CMR 15.242.

Approving Authority - A Local Approving Authority as defined in 310 CMR 15.002; or the Department, with regard to systems owned or operated by an agency of the Commonwealth or of the federal government, systems serving a facility with a design flow of 10,000 gallons per day or greater, systems subject to a variance granted under 310 CMR 15.416, or on a case by case basis as determined by the Department to be necessary to carry out the purposes of 310 CMR 15.000; or the Department with regard to alternative systems proposed in compliance with 310 CMR 15.280 through 15.289.

ASTM - The American Society of Testing and Materials.

Authorized Agent - A person or entity authorized in writing by the Department to act on its behalf in the implementation and oversight of responsibilities, as identified in 310 CMR 15.000.

Bank (Coastal) - Any land or surface area so defined by the Massachusetts Wetlands Protection Act, M.G.L. c. 131, § 40 and 310 CMR 10.30(2). Generally, the seaward face or side of any elevated landform, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland.

Bank (Inland) - Any land or surface area so defined by the Massachusetts Wetlands Protection Act, M.G.L. c. 131, § 40 and 310 CMR 10.54(2). Generally, a portion of the land surface which normally abuts and confines a water body.

Barrier Beach - Any land or surface area so defined by the Massachusetts Wetlands Protection Act, M.G.L. c. 131, § 40 and 310 CMR 10.29(2). Generally, a narrow low-lying strip of land generally consisting of coastal beaches and coastal dunes extending roughly parallel to the trend of the coast, separated from the mainland by a narrow body of fresh, brackish, or saline water or a marsh system.

Bedrock - Solid rock exposed at the surface or overlain by unconsolidated gravel, sand, silt and/or clay. Bedrock includes weathered or saprolitic components thereof. Bedrock types are defined and most of their areal extent are described in the "Bedrock Geologic Map of Massachusetts" published by the Massachusetts Department of Public Works (1983).

Bedroom - A room providing privacy, intended primarily for sleeping and consisting of all of the following:

- (a) floor space of no less than 70 square feet;
- (b) for new construction, a ceiling height of no less than seven feet three inches;

15.002: continued

- (c) for existing houses and for mobile homes, a ceiling height of no less than seven feet zero inches;
- (d) an electrical service and ventilation; and
- (e) at least one window.

Living rooms, dining rooms, kitchens, halls, bathrooms, unfinished cellars and unheated storage areas over garages are not considered bedrooms. Single family dwellings shall be presumed to have at least three bedrooms. Where the total number of rooms for single family dwellings exceeds eight, not including bathrooms, hallways, unfinished cellars and unheated storage areas, the number of bedrooms presumed shall be calculated by dividing the total number of rooms by two then rounding down to the next lowest whole number. The applicant may design a system using design flows for a smaller number of bedrooms than are presumed in this definition by granting to the Approving Authority a deed restriction limiting the number of bedrooms to the smaller number.

Best Available Nitrogen Reducing Technology:

- (a) An alternative system(s) which has a Total Nitrogen effluent performance value of 10 mg/L or less and is certified by the Department for general use pursuant to 310 CMR 15.288 when the Disposal System Construction Permit application is filed and has been approved for the type and design flow of the facility where it is to be used; or
- (b) If no such alternative system(s) meeting 10 mg/L or less has received general use approval at the time the Disposal System Construction Permit application is filed, then an alternative system(s) with the lowest Total Nitrogen effluent performance value certified by the Department for general use when the Disposal System Construction Permit application is filed and has been approved for the type and design flow of the facility where it is to be used; or
- (c) An alternative system(s) granted provisional approval by the Department pursuant to 310 CMR 15.286 or an alternative system(s) approved by the Department for piloting pursuant to 310 CMR 15.285; provided that for an alternative system(s) granted provisional approval or an alternative system(s) approved for piloting such system(s) is approved for the type and design flow of the facility and has a Total Nitrogen performance value less than or equal to 10 mg/L; or, if no system(s) with a Total Nitrogen performance value less than or equal to 10 mg/L has received general use approval, then a system(s) with a Total Nitrogen effluent performance value less than or equal to the lowest alternative system(s) certified by the Department for general use pursuant to 310 CMR 15.288 when the Disposal System Construction Permit application is filed.

Biological Mat - A layer composed of microorganisms and organic material located below a soil absorption system which forms on the infiltrative surface of soil and which provides biological treatment of septic tank effluent.

Blackwater - Wastewater from toilets, urinals, and any drains equipped with garbage grinders.

Bordering Vegetated Wetland - Any land or surface area so defined by the Massachusetts Wetlands Protection Act, M.G.L. c. 131, § 40 and 310 CMR 10.55(2).

Building - A structure enclosed within exterior walls or firewalls, built, erected, or framed of any materials, whether portable or fixed, having a roof, to form a structure for the shelter of persons, animals or property.

Building Sewer - A pipe which begins outside the inner face of a building wall and extends to an on-site system or municipal or private sewer.

Campground - A facility regulated pursuant to 105 CMR 430.00: *Minimum Standards for Recreational Camps for Children (State Sanitary Code: Chapter IV)* or 105 CMR 440.00: *Minimum Standards for Developed Family Type Campgrounds (State Sanitary Code: Chapter VI)* and any campground operated by the Department of Conservation and Recreation in a State Park.

Cellar Wall - That portion of the outside surface of the foundation wall enclosing a full basement which is above the cellar floor and below the ground surface.

15.002: continued

Certificate of Compliance or Certificate - A certificate issued by the Approving Authority to the owner or operator of a system in accordance with 310 CMR 15.021 indicating that an on-site system has been constructed or upgraded, and inspected, as necessary in compliance with 310 CMR 15.000.

Certified System - An alternative system which has been approved by the Department for specified uses or site conditions pursuant to 310 CMR 15.288. Systems which have been certified may be approved for use by approving authorities without further Departmental review but subject to any limitations on their use imposed by the Department pursuant to 310 CMR 15.000.

Certified Vernal Pool - A surface water body that has been certified by the Massachusetts Division of Fisheries and Wildlife as a vernal pool in accordance with the "Vernal Pool Certification Guidelines" pursuant to the Massachusetts Natural Heritage and Endangered Species Program administered by the Massachusetts Department of Fish and Game at the time a permit application is submitted to the Approving Authority.

Cesspool - A pit with open-jointed linings or holes in the bottom and/or sidewalls into which raw sewage is discharged, the liquid portion of the sewage being disposed of by seeping or leaching into the surrounding soils, and the solids or sludge being retained in the pit. Cesspools are nonconforming systems.

Cluster Development - A cluster development as allowed by local zoning ordinances or by-laws in accordance with M.G.L. c. 40 A § 9. Where no local cluster development zoning ordinances or by-laws have been enacted in accordance with M.G.L. c. 40 A, § 9, a cluster development means a residential development design that preserves a minimum of 50% open space which may include wetlands. For these latter developments, the percentage of open space that can be wetland shall not exceed the percentage of wetland for the entire site under existing conditions as shown on a plan, but in no case may the wetland portion of the required open space exceed 50% of the open space. The open space shall be subject to a deed restriction that provides for a common area and limits its use to passive recreation.

Coastal Beach - Shall mean any land or surface area so defined by the Massachusetts Wetlands Protection Act, M.G.L. c. 131, § 40 and 310 CMR 10.27(2): *Definitions*. Generally, unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats.

Commercial Sewage Waste - Non-toxic, non-hazardous wastewater from commercial facilities, including but not limited to institutional and commercial food operations, and animal holding facilities.

Cover Material - The soils placed on top of a soil absorption system to bring the area to finish grade.

Crown - The top of the internal cross section of a pipe or fitting.

Deep Observation Hole - An open pit dug to permit examination of the soils and to obtain data relative to the mean annual high groundwater elevation.

Department - The Massachusetts Department of Environmental Protection.

Design Flow - The quantity of sanitary sewage, expressed in gallons per day (gpd), for which a system must be designed in accordance with 310 CMR 15.203.

Designer - A registered sanitarian or a professional engineer registered in the Commonwealth of Massachusetts who has either designed the system and/or has witnessed all phases of the system installation for the purpose of making the certification required of the Designer under 310 CMR 15.021(3).

15.002: continued

Disposal Area - The subsurface environment in which a soil absorption system or reserve area is located.

Disposal System - *see* On-site System.

Disposal System Construction Permit or Permit - Written approval issued by the Approving Authority in accordance with 310 CMR 15.020 authorizing the construction, upgrade or expansion of an on-site system.

Disposal System Installer - A person, licensed in accordance with 310 CMR 15.019, who constructs, repairs, or replaces an on-site subsurface sewage disposal system.

Disposal System Installer Permit - A permit issued in accordance with 310 CMR 15.019.

Distribution Box - A level, watertight structure which receives septic tank effluent and distributes it in substantially equal portions to distribution lines in a soil absorption system.

Distribution Line - A pipe which provides dispersion of septic tank effluent within a soil absorption system.

Dosing - the pumping of septic tank effluent at a prescribed rate to a distribution box for gravity distribution to a soil absorption system.

Dosing Chamber - A watertight structure placed between a septic tank and either a distribution box or soil absorption system which is equipped with a pump designed to discharge septic tank effluent at a predetermined rate to a soil absorption system.

Dry Well - A pit with open-jointed lining or holes through which storm-water drainage from roofs, basement floors, foundations or other areas seeps into the surrounding soil.

Dune - A coastal dune, as defined in M.G.L. c. 131, § 40 and 310 CMR 10.28(2): *Definition*.

Dwelling - A building which is used, intended, or designed for human habitation, including but not limited, to houses, hotels, motels, apartments, mobile and modular homes and condominiums and cooperatives.

Effective Capacity - The volume of a tank below the design discharge point, liquid level line.

Effluent - Sanitary sewage discharged into the environment, whether or not treated.

Emergency Repair - The repair of a system which is necessary to prevent sewage backup into a building, surface breakout of sewage, or to alleviate an imminent danger to public health, safety or the environment in accordance with 310 CMR 15.353.

Environmental Justice (EJ) Population:

(a) A Neighborhood that meets one or more of the following criteria:

1. the annual median household income is not more than 65% of the statewide annual median household income;
2. minorities comprise 40% or more of the population;
3. 25% or more of households lack English language proficiency;
4. minorities comprise 25% or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150% of the statewide annual median household income; or

(b) a geographic portion of a Neighborhood designated by the Secretary as an Environmental Justice Population pursuant to M.G.L. c. 30, § 62; provided, however, that a Neighborhood or a geographic portion of a Neighborhood that the Secretary has determined shall not be designated an Environmental Justice Population pursuant to M.G.L. c. 30, § 62 shall not be considered an Environmental Justice Population under 310 CMR 15.000.

15.002: continued

EPA - The United States Environmental Protection Agency.

Equalization Basin - A watertight tank or basin of sufficient size that has the capacity to store at a minimum the proposed daily design flows for the facility.

Facility - Any real property (including any abutting real property) and any buildings thereon, which is served, is proposed to be served, or could in the future be served, by a system or systems, where:

- (a) legal title is held or controlled by the same owner or owners; or
- (b) the local Approving Authority or the Department otherwise determines such real property is in single ownership or control pursuant to 310 CMR 15.011 (aggregation).

Failed Subsurface Sewage Disposal System or Failed System - A system which fails to protect public health and safety or the environment as set forth at 310 CMR 15.303 or 15.304.

Family Mobile Home Park - A facility upon which two or more mobile homes are located on a continual or seasonal non-recreational basis, regardless of whether a charge is made therefor.

Fill - The clean, uncontaminated, nonindigenous soil placed beneath, above, and/or around a soil absorption system, as specified in 310 CMR 15.201 through 15.293.

Foundation Drain - A drain around a foundation, usually located at the footing, and consisting of perforated pipe surrounded by crushed stone and filter fabric.

Geotextile Fabric - A porous material suitable to prevent fines from migrating down through the soil absorption system while still letting air circulate.

Grease Trap - A watertight structure located on a building sewer before a septic tank in which grease and oils are separated from other solid and liquid constituents of sewage and accumulated in accordance with 310 CMR 15.230.

Greywater - Any putrescible wastewater discharged from domestic activities including but not limited to washing machines, sinks, showers, bath tubs, dishwashers, or other source except toilets, urinals and any drains equipped with garbage grinders.

Groundwater - Water found in cracks, fissures and pore spaces in the saturated zone below the ground surface, including but not limited to perched groundwater.

High Groundwater Elevation - As determined in accordance with 310 CMR 15.101, 15.102 and 15.103.

Housing for the Elderly - A facility restricted to use by adults over 55 years of age (in accordance with 42 USC 3601 *et seq.* as referenced in M.G.L. c. 151B, § 4, paragraph 7.).

H-10 Loading - Standard H-10 truck loading as specified by the American Association of State Highway and Transportation Officials.

H-20 Loading - Standard H-20 truck loading as specified by the American Association of State Highway and Transportation Officials.

Humus/Composting Toilet - A self-contained system consisting of a composter with a separate toilet fixture from which no liquid or solid waste materials are discharged to the surface or subsurface environment and from which a humus/compost-like end product is produced. Such systems may be used in accordance with the provisions of 310 CMR 15.289.

Impervious Material - Soils with a percolation rate greater than 60 minutes per inch. (*See, also, the definition of unsuitable material.*)

Individual - A single or specific person (*See definition of Person.*)

15.002: continued

Industrial Waste - Any water-carried or liquid waste resulting from any process or industry, manufacture, trade, business, or activity listed in 310 CMR 15.004.

Interim Wellhead Protection Area (IWPA) - An interim well-head protection area, as defined in Massachusetts drinking water regulations, 310 CMR 22.02. Generally, this is a ½-mile radius for sources whose approved pumping rate is 100,000 gallons per day or greater. For smaller sources, the radius in feet is determined by multiplying the approved pumping rate in gallons per minute by 32, and adding 400.

Invert - The lowest portion of the internal cross section of a pipe or fitting.

Irrigation Well - Any on-site source of groundwater not certified as a potable water supply by the local Board of Health or the Department in accordance with M.G.L. c.111, § 122A and 160 or 310 CMR 22.00.

Local Approving Authority - The board of health or its authorized agent or an agent of a health district constituted pursuant to M.G.L. c. 111, § 27 acting on behalf of the applicable board of health.

Local Upgrade Approval - An approval granted by the Approving Authority allowing the owner or operator of an existing system, including a nonconforming system, to perform an upgrade of that system to the maximum feasible extent, all in accordance with the provisions of 310 CMR 15.401 through 15.405.

Long-term Acceptance Rate (LTAR) - The stable rate of effluent acceptance through the biological mat of a soil absorption system measured in gallons per day per square foot (gpd/sf) or centimeters per day (cm/d).

Maintenance - All activities required to assure the effective and continuous operation and performance of an on-site system including, but not limited to, solids and scum removal from the septic tank, grease trap, dosing chamber or pump chamber and, re-leveling the distribution box, but not including a system upgrade.

Massachusetts Estuary Project Report or MEP Report - A technical report produced by the Massachusetts Estuaries Project that has been accepted by the Department and was created to: determine current nitrogen loads to estuaries; evaluate reductions that would be necessary to support healthy ecosystems based on a linked model to evaluate nitrogen inputs to estuaries; and provide technical guidance to support appropriate wastewater, watershed, and embayment management techniques to reduce nitrogen loading.

Mobile Home - A single transportable structure on a chassis designed to be used, with or without a permanent foundation, as a dwelling. The support system of a mobile home is constructed so that the mobile home may be moved from time to time.

Modular Home - A prefabricated building designed and constructed to be used as a dwelling and to be transported in two or more sections to a site where the sections are permanently connected and installed on a permanent foundation.

Mottling Due to Wetness (Redoximorphic Features) - A color pattern in soil consisting of blotches or spots of contrasting high or low chroma colors which may be an indication of the upper extent of soil saturation by groundwater.

Multiple Compartment Tank - A septic tank containing more than one settling compartment in series.

Munsell System - The system of classifying soil color consisting of an alpha-numeric designation for hue, value and chroma together with a descriptive color name accepted by the USDA/Natural Resources Conservation Service (NRCS) used as a standard procedure in soil classification.

15.002: continued

Naturally Occurring Pervious Material - Naturally occurring soil exhibiting a percolation rate of 60 minutes or less per inch which was deposited on a site by natural causes and not by human action.

New Construction - The construction of a new building for which an occupancy permit is required or an increase in the actual or design flow to any system or an increase in the actual or design flow to any nonconforming system or an increase in the design flow to any system above the existing approved capacity. New construction shall not include replacement or repair of a building in existence as of March 31, 1995 that has been totally or partially destroyed or demolished, provided there is no increase in design flow, no increase in design flow above the existing approved capacity to any system, no increase in the number of dwellings or dwelling units or no increase in the number of bedrooms in any dwelling or dwelling unit.

Nitrogen Sensitive Area - An area of land and/or natural resource area so designated by the Department in accordance with 310 CMR 15.214.

Nonconforming System - Any system which is not in full compliance with the standards and requirements of 310 CMR 15.000 and for which a variance or local upgrade approval has not been obtained. Nonconforming systems include, but are not limited to, cesspools, privies, failed systems, and systems with a design flow above 10,000 gpd.

Notice of Intent and Application Period - The two-year period that begins on the effective date of a Nitrogen Sensitive Area designation pursuant to 310 CMR 15.214(1)(b).

Observed Ground-Water Elevation - That elevation below the ground surface at which water is observed weeping, flowing from the walls of, or standing in a deep observation hole.

On-site System or Disposal System or On-site Subsurface Sewage Disposal System or System - A system or series of systems for the treatment and disposal of sanitary sewage below the ground surface on a facility.

(a) The standard components of a system are: a building sewer; a septic tank to retain solids and scum; a distribution system; a soil absorption system containing effluent distribution lines to distribute and treat septic tank effluent prior to discharge to appropriate subsurface soils; and a reserve area.

(b) These terms also include tight tanks, shared systems and alternative systems. Unless the text of 310 CMR 15.000 indicates otherwise, these terms also include nonconforming systems.

Open Drain - Any uncovered ditch or culvert used for the conveyance of surface water runoff or groundwater. A culvert that carries a water course or intermittent stream is not a surface drain.

Operate - To use or occupy a facility served by an on-site system or to own a facility where such use or occupation exists.

Operator - A person who alone or together with other persons has charge or control of any system.

Owner - A person who, alone or together with other persons, has legal title to any facility served by a system or control of the facility, including but not limited to any agent, executor, administrator, trustee, lessee, or guardian of the estate for the holder of legal title.

Percolation Test - A field test to assess the suitability of soils in a defined area for the subsurface disposal of sewage as described at 310 CMR 15.104 and 15.105.

Person - Any individual, partnership, corporation, firm, association, authority, trust or group, including, but not limited to, a city, town, county, the Commonwealth and its agencies, and the federal government.

Pervious Soil - Soil with a percolation rate of 60 minutes per inch or less found in the B and C horizons.

15.002: continued

Pressure Distribution - The application under pressure of septic tank or treatment unit effluent to the entire soil absorption system at a prescribed rate.

Privy - A structure used for the disposal of human wastes without water transport consisting of a shelter built over an unlined pit or vault in the ground into which waste is deposited. A privy is a nonconforming system.

Pump Chamber - A watertight structure equipped with a pump designed to discharge effluent at a predetermined rate. (*See* definition of Dosing Chamber)

Recirculating Sand Filter (RSF) - A biological and physical treatment unit consisting of a bed of sand to which septic tank effluent is distributed and then collected in a recirculating tank prior to recirculating a portion through the sand bed filter and discharging a portion of the filtrate to the soil absorption system.

Regulatory Floodway - The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height (typically one foot), the boundary of which is the area designated as floodway on the most recently available flood profile data prepared for the community within which the site is located under the National Flood Emergency Program (NFIP, currently administered by the Federal Emergency Management Agency, successor to the U.S. Department of Housing and Urban Development). Within this area flooding characterized by a significant velocity of flow is likely to occur.

Reserve Area - An area of land with demonstrated capacity for subsurface sewage disposal upon which no permanent structure shall be constructed and which is intended for replacement of the primary disposal area should it fail.

Retirement Mobile Home Park - A facility upon which two or more mobile homes, restricted to use by adults over 55 years of age (in accordance with 42 USC 3601 *et seq.*), are located on a continual or seasonal non-recreational basis, regardless of whether a charge is made therefore.

Salt Marsh - A coastal wetland as defined in the Massachusetts Wetlands Protection Act, M.G.L. c. 131, § 40, and the regulations promulgated pursuant thereto at 310 CMR 10.32(2).

Sanitary Sewage or Sewage - Either greywater or blackwater or a combination of greywater and blackwater from domestic, commercial and other non-industrial sources. Sanitary sewage does not include stabilized waste.

Sanitary Sewer - Any system of pipes, conduits, pumping stations, force mains and all other structures and devices used for collecting and conveying wastewater to a public or private treatment works.

Saturated Zone - Any portion of the earth below the land surface where available openings (pore, fissure, joint or solution cavity) are filled with water.

Scientific Evaluation - A watershed assessment that is accepted by the Department because it is scientifically rigorous and based upon information, data, modeling, and analyses that could be used to:

- (a) delineate the watershed,
- (b) develop and implement an EPA-approved TMDL, and
- (c) develop and implement wastewater and nutrient management plans to satisfy the TMDL; and which produces, at a minimum, the following:
 1. quantitative and qualitative assessments of the nutrient related health of the waterbodies being assessed;
 2. identification of all controllable and uncontrollable nutrient sources and their respective contributions to the waterbodies for the present day and the next 20 years, including any projected buildout;

15.002: continued

3. nutrient threshold concentrations that must be achieved to comply with 314 CMR 4.00: *Massachusetts Surface Water Quality Standards* to support the ecosystem and restore and maintain indicator habitats, such as eel grass and benthic species, associated with nitrogen impacts;
4. analyses of watershed nutrient loading reductions that will be necessary to achieve at least the minimum nutrient threshold concentrations in the waterbody and restore and maintain the indicator habitats; and
5. site-specific, calibrated, watershed-waterbody model(s) that can be used to simulate the efficacy of strategies towards restoration and maintenance of the waterbodies.

A TMDL is not required to complete the Scientific Evaluation.

Scum - A mass of light solids, such as hair, grease, oils and soaps, floating on the surface of the wastewater in a septic tank.

Separation Distance - The clear distance between system components.

Septage - Material physically removed from any part of an on-site system, including, but not limited to, the solids, semi-solids, scum, sludge and liquid contents of a septic tank, privy, chemical toilet, cesspool, holding tank, or other sewage waste receptacle. It does not include any material which is hazardous waste.

Septage Hauler - A person licensed by an Approving Authority to remove septage from on-site sewage disposal systems and transport it to an approved disposal location in accordance with 310 CMR 15.500.

Septage Hauler Permit - A permit issued pursuant to the authority of M.G.L. c. 111, § 31 and 310 CMR 15.500 entitling a person to transport septage within the Commonwealth.

Septic System Additive - Any solid or liquid material or biological agent intended or used primarily for cleaning, treating, degreasing, unclogging, disinfecting, deodorizing or otherwise affecting the performance of any component of an on-site system.

Septic Tank - A watertight receptacle to receive sewage from a building sewer which is designed and constructed to allow for the separation of scum and sludge and the partial digestion of organic matter before discharge of the liquid portion to a soil absorption system or other intermediate structure in the treatment sequence.

Septic Tank Effluent - The liquid portion of settled sewage which is discharged from the outlet of a septic tank.

Shared System - A system sited and designed in accordance with 310 CMR 15.100 through 15.293 which serves, or is proposed to serve, more than one facility and which has been approved in accordance with 310 CMR 15.290 through 15.293. A system serving a condominium located on the same facility is not a shared system.

Soil Absorption System - A system of trenches, galleries, chambers, pits, field(s) or bed(s) together with effluent distribution lines and aggregate which receives effluent from a septic tank or treatment system.

Soil Evaluator - A person approved by the Department pursuant to 310 CMR 15.017 as capable of evaluating the suitability of a specific site for the use of an on-site subsurface sewage disposal system in compliance with 310 CMR 15.000.

Soil Texture - The relative proportions of sand, silt and clay in a given soil medium as defined by the USDA/NRCS.

Stabilized Waste - Any waste chemically fixated for the control of odors or whereby biological decomposition is affected.

15.002: continued

Structural Component - A tangible, removable item that is part of the on-site system. A soil absorption system is not a structural component.

Subsurface Drain - Any underground conduit used for the conveyance of surface or groundwater, including, but not limited to, stormwater culverts, curtain drains and French drains.

Supermarket - A retail market selling foods and household goods that also consists of a bakery, deli, or on-site meal preparation.

Surface Water - All waters other than groundwaters within the jurisdiction of the Commonwealth, including without limitation, rivers, streams, lakes, ponds, springs, reservoirs, impoundments, estuaries, wetlands, coastal waters and certified vernal pools.

Surface Water Supply - Any lake, pond, reservoir, or impoundment designated as a public water supply in 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*.

System - *see* on-site system.

System Inspector - A person approved by the Department pursuant to 310 CMR 15.340 as capable of appropriately assessing the condition of systems in accordance with 310 CMR 15.000.

Temporary - A single time period or an accumulation of time periods not exceeding 180 total days in any 365-day period.

Tight Tank - A water tight vessel having an inlet to receive raw sewage but no outlet and which is designed and used to collect and store sewage until it is removed for disposal.

Title 5 of the State Environmental Code, 310 CMR 15.000 - The Department's regulation for the siting, construction, inspection, upgrade and expansion of on-site sewage treatment and disposal systems and for the transport and disposal of septage.

Total Maximum Daily Load or TMDL - The sum of a receiving water's individual waste load allocations and load allocations and natural background, which, together with a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality, represents the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards in all seasons.

Training Contact Hours (TCH) - The hours of training a person has had prior to the renewal of either a soil evaluator or system inspector approval. Each seminar, workshop, training course, or college course will have a specific training hour value as rated by the Department or an agent authorized by the Department.

Treatment Works - Any and all devices, processes, and properties, real or personal, used in the collection, pumping, transmission, storage, treatment, disposal, recycling, reclamation or reuse of waterborne pollutants, including septage receiving facilities but not including any works receiving a hazardous waste from off the site of the works for the purpose of treatment, storage or disposal. Treatment works must be permitted by the Department pursuant to the authority of M.G.L. c. 21, §§ 27 through 52 and regulations thereunder.

Tributary to Surface Water Supply - Any body of running water, including a river, stream, brook or creek, which moves in a definite channel in the ground due to a hydraulic gradient, and which is designated as a tributary to a public water supply in 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*, provided that such water supply is a surface water supply as defined in 310 CMR 15.000. The exact location and extent of tributaries to surface water supplies shall be determined by reference to the most current U.S.G.S. and/or GIS maps and in consultation with the Department's Division of Watershed Management and the Drinking Water Program.

15.002: continued

Underground Injection Control Program or UIC Program - The Underground Injection Control Program under Part C of the federal Safe Drinking Water Act, 42 U.S.C. §§ 300f *et seq.*, which is implemented and enforced by the Department in Massachusetts pursuant to its UIC regulations at 310 CMR 27.00: *Underground Injection Control Regulations*.

Unsuitable Material - All impervious material, all organic sediments, and all material found in the following horizons: O (organic), A (topsoil), and E (mineral). All bedrock, including saprolite or weathered bedrock, schist, and ledge. (*see*, also, the definition of impervious material).

Upgrade - The modification of one or more components of an on-site system or the design and construction of a new on-site system which is intended to bring an existing system, including a nonconforming system, into conformance with 310 CMR 15.000. An emergency repair is not an upgrade.

USDA/NRCS - The United States Department of Agriculture, Natural Resources Conservation Service.

USGS - The United States Geological Survey, within the United States Department of the Interior.

Velocity Zone or V-zone, also known as the Coastal High Hazard Area - An area within the Special Flood Hazard Area that is subject to high velocity wave action or seismic sources. The Velocity Zone Boundaries are determined by reference to the currently effective or preliminary Flood Insurance Rate Map (FIRM) map whichever is more recent, prepared by the Federal Emergency Management Agency or at a minimum to the inland limit of the primary frontal dune, whichever is further landward.

Vernal Pool - *see* Certified Vernal Pool.

Waters of the Commonwealth or Waters or Water Bodies - All waters within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, wetlands, estuaries, coastal waters, groundwaters, and vernal pools.

Watershed - Any region or area measured in a horizontal topographic divide which directs water runoff from precipitation, normally by gravity, into a stream, a body of impounded surface water, or a coastal embayment, or any region or area measured by a groundwater divide which directs groundwater into a stream, a body of impounded surface water, or a coastal embayment.

Watershed Permit - A permit issued by the Department pursuant to 314 CMR 21.00: *Massachusetts Watershed Permit Regulations*, including the Pleasant Bay Watershed Permit (Permit No. 001-0) that was issued August 3, 2018, by the Department prior to the promulgation of 314 CMR 21.00.

Water Supply Well - Any public or private source of groundwater used for human consumption, including but not limited to, a source approved for such use by the local Board of Health or the Department in accordance with M.G.L. c. 111, § 122A or 310 CMR 22.00: *Drinking Water*.

Wetland - Any land area or surface area so defined by the Massachusetts Wetlands Protection Act, M.G.L. c. 131, § 40 and regulations promulgated pursuant thereto at 310 CMR 10.00: *Wetlands Protection* or pursuant to § 404 of the Federal Water Pollution Control Act, 33 U.S.C. 1341.

Working Level - The level between the pump “off” elevation and the high level alarm elevation.

15.002: continued

Zone I - The protective radius required around a public water supply well or wellfield, as defined in Massachusetts Drinking Water Regulations, 310 CMR 22.02: *Definitions*. For public water supply system wells with approved yields of 100,000 gpd or greater, the protective radius is 400 feet. Tubular well fields require a 250-foot protective radius. Protective radii for all other public water system wells are determined by the following equation: Zone I radius in feet = $[150 \times \log \text{ of pumping rate in gpd}] - 350$.

Zone II - That area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can realistically be anticipated, as defined in Massachusetts Drinking Water Regulations, 310 CMR 22.02: *Definitions*.

Zone A - As defined in Massachusetts Drinking Water Regulations, 310 CMR 22.02: *Definitions*:

- (a) the land area between the surface water source and the upper boundary of the bank;
- (b) the land area within a 400 foot lateral distance from the upper boundary of the bank of a Class A surface water used as a drinking water source, as defined in the 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*; and
- (c) the land area within a 200 foot lateral distance from the upper boundary of the bank of a tributary or associated surface water body.

15.003: Coordination with Local Approving Authorities

(1) In general, full compliance with the provisions of 310 CMR 15.000 is presumed by the Department to be protective of the public health, safety, welfare and the environment. Specific site or design conditions, however, may require that additional criteria be met in order to achieve the purpose or intent of 310 CMR 15.000.

(2) The approval of any system, including the issuance of Disposal System Construction Permits, Local Upgrade Approvals, and Certificates of Compliance, shall be by the Local Approving Authority, except that the Department shall be the Approving Authority for systems owned or operated by an agency of the Commonwealth or of the federal government, for systems serving a facility with a design flow of 10,000 gallons per day or greater, and for variances granted in accordance with 310 CMR 15.416. Unless otherwise specified herein, the following systems or circumstances are approved by the Department only:

- (a) alternative systems which are proposed in compliance with 310 CMR 15.280 through 15.289;
- (b) upgrade or expansion of systems with a design flow of 10,000 gpd or greater but less than 15,000 gpd, or continued use of systems subject to 310 CMR 15.304(2); and
- (c) any system or proposed system which the Department determines requires its review for the purposes of protection of public health, safety, welfare and the environment, or determining consistency with 310 CMR 15.000.

(3) Local approving authorities may enact more stringent regulations to protect public health, safety, welfare and the environment only in accordance with M.G.L. c. 111, § 31.

(4) Local requirements, or portions thereof, which were in effect prior to March 31, 1995 and which are less stringent than 310 CMR 15.000 shall not be applied to new construction, upgrade or expansion of existing systems.

(5) Local regulations adopted under M.G.L. c. 111, § 31 shall be filed with the Department's Boston Office in accordance with M.G.L. c. 21A, § 13.

15.004: Applicability

(1) The Approving Authority shall not approve the construction, upgrade, or expansion of an on-site subsurface sewage disposal system unless it is:

- (a) a system serving or designed to receive only sanitary sewage from a facility where the total design flow generated on the facility, is less than 10,000 gallons per day;

15.004: continued

(b) a system upgrade approvable in accordance with 310 CMR 15.403 or 310 CMR 15.404;
or

(c) a facility for which subdivision approval has been obtained, to construct dwellings with a cumulative total design flow of 10,000 gpd or greater provided that a disposal system construction permit to construct a system in compliance with 310 CMR 15.000 on each of the subdivision lots to be served by a system is obtained and such separate subdivision lots are to be conveyed to independent owners.

(2) No system shall serve more than one facility except as explicitly allowed pursuant to 310 CMR 15.010 (division and aggregation) or 310 CMR 15.290 through 15.292 (shared systems).

(3) No new system shall be constructed, and no system shall be upgraded or expanded, if it is feasible to connect the facility, or any portion of the facility for which system approval is sought, to a sanitary sewer, except in the following circumstances and particularly to promote recharge of stressed basins, improve low stream flow, or address other local water resource needs:

(a) the system is an alternative system approved for use pursuant to 310 CMR 15.280 through 15.288 and the Department has made the determination that any person using such alternative system need not connect the facility to such sanitary sewer;

(b) the system fully complies with 310 CMR 15.000 and does not require:

1. a local upgrade approval, unless issued pursuant to 310 CMR 15.405(1)(a) or (b); or
2. a variance; or

(c) the owner of an existing system has obtained a variance from this requirement pursuant to 310 CMR 15.410 through 15.415.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

15.004: continued

(4) The provisions of 310 CMR 15.000 apply only to the on site collection, treatment and disposal of sanitary sewage, and to the transport and disposal of associated septage and grease, and do not apply to the wastewater containing wastes from any other activity including, but not limited to, activities under the Standard Industrial Classification (SIC) Codes set forth at 310 CMR 15.004(5). SIC Codes are established by the U.S. Office of Management and Budget and may be determined by referring to the publication *Standard Industrial Classification Manual*. Systems designed to dispose of only sanitary sewage from facilities subject to the following SIC codes may be approved under 310 CMR 15.000. Facilities discharging wastewater that contains wastes from activities under the SIC codes listed below may request a determination from the Department that the wastewater's constituents are substantially similar to sanitary sewage and may be discharged to an on-site septic system.

(5) SIC CODE(S)	INDUSTRY CATEGORY
753-7549	Automotive Repairs and Services
7231,7241	Beauty Shops, Barber Shops
7211-7219	Laundry Cleaning and Garment Services
4911,4925,4931,4939	Electric, Gas Services (Power Generation Gas Production Only)
4011 - 4581	Transportation (Maintenance Only)
8062 - 8069	Hospitals
2000 - 3999	Manufacturing
2000 - 2099	Food Products
2100 - 2199	Tobacco Products
2200 - 2299	Textile Mill Products
2300 - 2399	Apparel and Other Finished Products Made from Fabrics and Similar Materials
2400 - 2499	Lumber and Wood Products, Except Furniture
2500 - 2599	Furniture and Fixtures
2600 - 2699	Paper and Allied Products
2700 - 2799	Printing, Publishing and Allied Industries
2800 - 2899	Chemicals and Allied Products
2900 - 2999	Petroleum Refining and Related Industries
3000 - 3099	Rubber and Miscellaneous Plastics
3100 - 3199	Leather Tanning and Finishing
3200 - 3299	Stone, Clay, Glass and Concrete Products
3300 - 3399	Primary Metal Industries
3400 - 3499	Fabricated Metal Products (Except Machinery and Transportation Equipment)
3500 - 3599	Industrial and Commercial Machinery and Computer Equipment
3600 - 3699	Electronic and Other Electrical Equipment and Components, Except Computer Equipment
3700 - 3799	Transportation Equipment
3800 - 3899	Measuring, Analyzing and Controlling Instruments; Photographic, Medical and Optical Goods; Watches and Clocks
3900 - 3900	Miscellaneous Manufacturing Industries

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

15.004: continued

(6) No person shall discharge or allow the discharge of wastes from the industry categories listed in 310 CMR 15.004(5) to any system regulated under 310 CMR 15.000. No system shall receive oil, hazardous materials or waste, medical wastes or radioactive wastes.

(7) No person shall discharge or allow the discharge of stabilized recreational vehicle wastes, stabilized boat wastes, stabilized motorcoach/bus wastes, stabilized portable toilet wastes, wastes from funeral homes, or vehicles washes to any system regulated under 310 CMR 15.000.

(8) 310 CMR 15.000 prohibits the discharge of sewage to a dry well or open drain. Discharges to dry wells shall be in compliance with the Department's Underground Injection Control regulations at 310 CMR 27.00: *Underground Injection Control Regulations*. Backwash of water purification or filtration devices shall not be discharged to an on-site system. The owner of the dry well shall register the dry well in accordance with 310 CMR 27.00: *Underground Injection Control Regulations*.

15.006: Facilities with a Design Flow of 10,000 gpd or Greater but Less than 15,000 gpd

(1) It shall be the duty of each owner or operator of systems with a design flow of 10,000 gpd or greater to ascertain the actual design flow of their system or systems.

(2) The Department may require the issuance of a groundwater discharge permit pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program* and the installation of technology capable of discharging effluent which meets groundwater standards pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program* for any system with design flow of 10,000 gpd or greater but less than 15,000 gpd unless the Department determines after consideration of the factors set forth in 310 CMR 15.304(3) that this requirement would be manifestly unjust, considering all the relevant facts and circumstances of the individual case, and the owner or operator has established that a level of environmental protection that is at least equivalent to that provided by 314 CMR 5.00: *Ground Water Discharge Permit Program* can be achieved without strict application of 310 CMR 15.006.

(3) There shall be no increased flow to an existing system which results in a design flow of 10,000 gpd or greater except in accordance with a variance issued by the Department pursuant to 310 CMR 15.414.

15.007: Campgrounds

(1) For the purposes of 310 CMR 15.000, a campground is any facility which is regulated pursuant to 105 CMR 430.00: *Minimum Standards for Recreational Camps for Children (State Sanitary Code: Chapter IV)* or 440.00: *Minimum Standards for Developed Family Type Campgrounds (State Sanitary Code: Chapter VI)* and/or is a campground operated by the Department of Conservation and Recreation in a State Park.

(2) Except as otherwise set forth in 310 CMR 15.007(3) and (4), a campground in existence on December 1, 1993 with design flows in excess of 10,000 gpd but less than 15,000 gpd and which receives only temporary use is in compliance with 310 CMR 15.000 provided that all of the following conditions are met:

- (a) the campground is not subject to an existing enforcement order issued by the local Approving Authority, the Department or court;
- (b) the campground is not failing to protect public health or safety or the environment pursuant to 310 CMR 15.304(2);
- (c) each system serving the facility is in compliance with 310 CMR 15.000;
- (d) no single system on the facility has a design flow in excess of 10,000 gpd;
- (e) no system is less than 100 feet from another system;
- (f) systems on the campground are inspected and maintained in accordance with 310 CMR 15.300 through 15.354, including necessary upgrade of systems or components;
- (g) no sewage from mobile home tight tanks which has been fixated or treated with chemical additives, except as approved by the Department, is disposed of at the campground; and
- (h) no additional flows of sewage are added over the approved design flow of the system as of March 1, 1995.

15.007: continued

- (3) Campgrounds in existence as of December 1, 1993 and which receive more than temporary use are in compliance with 310 CMR 15.000 provided:
 - (a) the provisions of 310 CMR 15.007(2) are complied with; and
 - (b) the volume of sewage flow generated from all systems on the facility from non-temporary use does not exceed 10% of the design flow generated during peak seasonal use.
- (4) All new construction at campgrounds shall be in accordance with the provisions of 310 CMR 15.000.

15.010: Division and Aggregation of Facilities

- (1) Ownership of a facility and the design flow of the facility shall be determined whenever application is made for a Disposal System Construction Permit.
- (2) Prior to dividing a facility all existing systems shall be inspected in accordance with 310 CMR 15.301(8). The division of a facility shall not be approved unless the Approving Authority has determined that the division will not put existing systems in noncompliance with the Title 5 and the applicant has demonstrated to the satisfaction of the Approving Authority that the division of property will not prevent the upgrade of existing systems in accordance with Title 5. Failed systems shall be upgraded in accordance with 310 CMR 15.305. Existing systems shall be altered as required by the Approving Authority for each new facility divided out of the original facility. Prior to the division of a facility, any shared systems to be created as a result of the division shall comply with 310 CMR 15.290, and the owner(s) or operator(s) shall obtain a shared system approval if the system will serve more than one facility after division of the facility.
- (3) If two or more facilities in separate ownership are later joined into single ownership control after construction of systems to serve the separate facilities, the owner or operator of the new combined facility shall obtain a Certificate of Compliance from the Approving Authority for the new, combined facility within one year. If the total design flow from the facility is 10,000 gpd or greater, the owner shall have an inspection of all of the systems pursuant to 310 CMR 15.301(6) and 15.302 completed within one year.
- (4) Whenever the Department or the local Approving Authority determines, based upon consideration of one or more of the factors in 310 CMR 15.011, that facilities asserted to be in separate ownership or control shall be regulated as a single facility, the Department or the local Approving Authority, based on the total design flow from the single facility, may order the single facility to comply with the requirements of 310 CMR 15.202 (Recirculating Sand Filters) or the Department may order the single facility to comply with the requirements of 314 CMR 5.00: *Ground Water Discharge Permit Program* by obtaining a groundwater discharge permit.

15.011: Criteria to Assess Whether Facilities are in Separate Ownership or Control

- (1) In assessing whether facilities are in single ownership for purposes of determining whether the total design flow exceeds the 2,000 gpd threshold of 310 CMR 15.202 (recirculating sand filters) or the permitting, treatment and effluent standard requirements of 314 CMR 5.00: *Ground Water Discharge Permit Program*, the Approving Authority may consider one or more of the following factors:
 - (a) whether the owner or operator of facilities asserted to be in separate ownership operate the facilities independently, including whether there are any common or related beneficiaries among the separate ownership entities, and whether each owner acts with due regard for the independent financial interests of the owner, operator and any beneficiaries of the assertedly separate facilities;
 - (b) whether, and the extent to which, legal agreements exist which provide the owner or operator of facilities asserted to be in separate ownership the right to access each other's facilities and/or to use and share financial responsibility for common buildings, infrastructure, or services;

15.011: continued

- (c) the existence of some evidence that ownership or control of the facilities asserted to be in separate ownership or control was arranged to circumvent the requirements of 310 CMR 15.202 (Recirculating Sand Filters), or 314 CMR 5.00: *Ground Water Discharge Permit Program*, including evidence that two or more facility owners have acted in concert to acquire or dispose of adjacent properties to avoid the above regulatory requirements;
- (d) the effect of the facilities on the public health and environment, including an evaluation of whether the facilities provide local groundwater recharge and/or are cluster developments that preserve open space.

(2) In the event the Approving Authority determines, using the criteria set forth at 310 CMR 15.011(1) that facilities asserted to be in separate ownership or control should be treated as a single facility for the purposes of 310 CMR 15.000, that determination may be appealed in accordance with 310 CMR 15.422 (appeals).

15.017: Approval of Soil Evaluators

(1) Any person who meets the criteria of 310 CMR 15.017(2) and who passes a standardized examination prepared and administered by the Department or an agent of the Department shall be approved as a Soil Evaluator by the Department.

(2) Eligibility for the examination described in 310 CMR 15.017(6) may be demonstrated to the Department, or an agent authorized by the Department, by people with the following qualifications:

- (a) Massachusetts Registered Sanitarians;
- (b) Massachusetts Registered Professional Engineers;
- (c) Engineers in Training (EIT certificate) with a concentration in civil, sanitary or environmental engineering;
- (d) Massachusetts Registered Land Surveyors;
- (e) Certified Health Officers;
- (f) Board of Health Members or Agents;
- (g) Employees of the Department involved in the administration of 310 CMR 15.000;
- (h) Those with a Bachelor of Arts or Sciences degree, or more advanced degree in Soil or Geological Sciences from an accredited college or university; or
- (i) Those successfully completing a minimum of 15 semester credits in soil science courses from an accredited institution. At least three of the 15 credits must be in Soil Genesis, Classification, Morphology and Mapping. The remaining soil science credits must be in at least three of the following six categories: Introductory Soil Science; Soil Chemistry/Fertility; Soil Physics; Soil Microbiology/Biochemistry; Soil Survey Interpretations/Soils and Land-use/Soils and the Environment; and Independent Study/Seminar/Geology.

(3) The Department or an agent authorized by the Department shall maintain a list of approved Soil Evaluators. Any person who is denied approval as a Soil Evaluator based on failure to pass the examination required in 310 CMR 15.017(6) may request, within 90 days of receiving the results of the examination, and is entitled to receive from the Department or its agent, a written statement of the Department's basis for denial.

(4) The Department may revoke or suspend the approval and/or listing of a Soil Evaluator approved pursuant to 310 CMR 15.017, for a time specified by the Department, during which time the Soil Evaluator may not reapply to become a Soil Evaluator, after opportunity for a hearing conducted pursuant to M.G.L. c. 30A, when it determines that the Soil Evaluator has failed to comply with 310 CMR 15.000 with respect to one or more soil evaluations or has violated the provisions of 310 CMR 15.018 or has falsified, substantially misinterpreted or misrepresented a soil evaluation in the evaluator's certification, or has failed to perform a soil evaluation as required pursuant to 310 CMR 15.100 through 15.107. Reinstatement following revocation shall be by written and field examination only. Based on a Soil Evaluator's non-compliance with 310 CMR 15.000, the Department, by issuance of an order, may require the Soil Evaluator to, among other things, attend or repeat the training course referred to in 310 CMR 15.017(5) and/or to retake the examination referred to in 310 CMR 15.017(1).

15.017: continued

(5) A training course provided by the Department or an agent authorized by the Department is highly recommended for any person meeting the criteria of 310 CMR 15.017(2) in order to prepare for the standardized examination required pursuant to 310 CMR 15.017(6).

(6) A standardized written and field examination shall be prepared and administered by the Department or an agent authorized by the Department to the applicant meeting the criteria of 310 CMR 15.017(2). The examination shall consist of at least the following elements:

- (a) principles of on-site sewage treatment and disposal;
- (b) geology and soils of Massachusetts;
- (c) soil profile descriptions;
- (d) estimating high ground-water elevations using soil morphology;
- (e) principles of ground-water hydrology;
- (f) methods for documenting site conditions;
- (g) important reference materials; and
- (h) field training in soil evaluation and logging.

The passing score shall be correctly answering 70% of all the questions on the written examination and successful completion of the field examination.

(7) Soil Evaluators initially approved by the Department prior to January 1, 2005, shall apply to the Department to renew their approval by January 1, 2007. Soil Evaluators initially approved after January 1, 2005, shall apply to the Department or an agent authorized by the Department to renew their approval at least 90 days prior to the expiration of the three years following their initial approval date. Provided that a Soil Evaluator timely files a complete renewal application, the Soil Evaluator's approval shall not expire until the Department issues a final determination on the renewal application. A fee established by the Department shall accompany each renewal application; any application that does not include payment of the fee shall be deemed incomplete. The approval of a renewal application shall expire three years from the date of its issuance. Each Soil Evaluator thereafter shall file a complete renewal application at least 90 days prior to the expiration date of his/her most recent approval.

(8) Beginning in 2010, at the time of filing any subsequent renewal application in accordance with 310 CMR 15.017(7), a Soil Evaluator shall demonstrate that he or she has earned ten Training Contact Hours in the previous three years that improve the Soil Evaluator's abilities in the following areas:

- (a) safely and accurately conducting soil evaluations according to the requirements of 310 CMR 15.000;
- (b) the principles of on-site sewage treatment and disposal;
- (c) the geology and soils of Massachusetts;
- (d) soil profile descriptions;
- (e) accurately estimating high groundwater elevations using soil morphology;
- (f) the methods of documenting site conditions; and
- (g) field training in soil evaluation and logging.

15.018: Function of Soil Evaluators

(1) The function of the Soil Evaluator is to enhance the review and approval of proposed systems by ensuring that appropriate expertise in soil identification, groundwater hydrology, and topography is available when the characteristics of the proposed disposal area are determined for purposes of applying the siting and design criteria set forth in 310 CMR 15.000. Soil Evaluators may perform the site evaluation required by 310 CMR 15.100 while acting either as an agent of an Approving Authority (a fee may be assessed pursuant to M.G.L. c. 40, § 22F), or as an independent agent of the owner in the presence of the Approving Authority. If the evaluator is an agent or member of the Approving Authority having jurisdiction over the system, he or she shall not act as an agent for the owner.

(2) Based upon an evaluation of the suitability of the proposed disposal area for a proposed, upgraded or expanded system in accordance with 310 CMR 15.100 through 15.107, the Soil Evaluator shall certify to the Approving Authority and the Designer as to the accuracy of the soil evaluation in conformance with 310 CMR 15.100 through 15.107. The certification shall contain a recitation of the facts and rationale underlying the soil evaluation and a copy of the soil evaluation form. The soil evaluator shall submit the results to the Approving Authority with the following statement:

15.018: continued

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise, and experience described in 310 CMR 15.017. I further certify that the results of my soil evaluation, as indicated on the attached soil evaluation form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Any certifications shall be forwarded to the Approving Authority, the Designer and the property owner. Failure to forward certifications to the Approving Authority within 60 days of the date of the field testing shall be cause for revocation of the Soil Evaluator's approval.

15.019: Disposal System Installer's Permit

No individual shall engage in the construction, upgrade, modification, emergency repair, or expansion of any on-site system without first obtaining a Disposal System Installer's Permit from the Approving Authority. Disposal System Installer Permits shall be issued for a period of not more than two years. The Local Approving Authority shall issue Disposal System Installer Permits only to those individuals who have demonstrated knowledge of and experience with the proper construction and installation of systems in accordance with 310 CMR 15.000. The Approving Authority, by issuance of an order, may suspend or revoke a Disposal System Installer's Permit, for a time specified in the order, when it determines that the Installer has failed to comply with 310 CMR 15.000 with respect to the installation of one or more systems, including, without limitation, the Installer's failure to provide the certification required by 310 CMR 15.021(3), or the Installer's installation or certification of a system that fails to comply with the Disposal System Construction Permit.

15.020: Disposal System Construction Permits

(1) No person shall construct, upgrade, modify or expand a system without a Disposal System Construction Permit which has been issued by the Approving Authority after the site evaluation set forth in 310 CMR 15.100 through 15.107 has been completed. In the event it is discovered during installation of the system that site conditions differ from those contained in the site evaluation and/or the approved design plans, the originally issued Disposal System Construction Permit is void, installation shall stop, and the applicant shall reapply for a new Disposal System Construction Permit. Except for subdivisions entitled to M.G.L. c. 111, § 127P protection, M.G.L. c. 40B comprehensive permit land, and large systems with approved plans or pursuant to a variance issued by the Department in accordance with 310 CMR 15.414, a Disposal System Construction Permit shall not authorize increased design flow which would bring the total design flow to 10,000 gpd or greater. Disposal System Construction Permits shall be in a form approved by the Department.

(2) Construction of all systems for which a Disposal System Construction Permit application has been approved by the local Approving Authority and/or the Department shall be completed, and the Certificate of Compliance obtained within three years of issuance of the final approval. Unless an extension pursuant to 310 CMR 15.020(3) is issued, the permit, and any variances or local upgrade approvals from 310 CMR 15.000 allowed therewith, shall expire if the work authorized by it is not completed within the three-year period.

(3) The local Approving Authority or the Department may issue a written one year extension to the Disposal System Construction Permit required by 310 CMR 15.020(1) upon written request of the permittee, filed before the expiration date, and documenting the facts that prevent completion of the approved system within the time of the original permit. Only one extension may be granted.

(4) The local Approving Authority shall not issue a Disposal System Construction Permit until any approval(s) required by the Department pursuant to 310 CMR 15.000 have been issued.

15.020: continued

(5) Any person required to obtain a permit pursuant to 310 CMR 15.000 shall complete and submit the appropriate application forms to the Approving Authority. As part of an application for a permit or approval, the Approving Authority may require the applicant to provide information and analyses as it may reasonably require to determine whether such applicant meets the requirements of 310 CMR 15.000.

15.021: Certificates of Compliance

(1) No person shall discharge sewage to a new, upgraded or expanded system without first obtaining a Certificate of Compliance from the Approving Authority in accordance with 310 CMR 15.021(2) through (5). Certificates of Compliance shall be in a form approved by the Department. The Approving Authority shall provide the owner or operator a copy of the Department's operation and maintenance guide, or inform him or her where a copy can be obtained.

(2) Subsurface components of a system shall not be backfilled or otherwise concealed from view until a final inspection has been conducted by the Approving Authority and permission has been granted by the Approving Authority to backfill the system. The Designer shall inspect the construction after the initial excavation, prior to backfilling, and during backfilling. In addition, the final inspection of the system shall be conducted by the Approving Authority, the system installer and the Designer prior to the issuance of a Certificate of Compliance pursuant to 310 CMR 15.021(3). Any component of the system which has been covered without such permission shall be uncovered upon the request of the Approving Authority or the Department.

(3) Upon availability, the designer shall file an electronic registration for the system with the Department or an agent authorized by the Department, prior to signing the Certificate of Compliance in accordance with 310 CMR 15.021(4). Documentation of the registration must be provided to the Approving Authority and the system owner.

(4) Within 30 days of the final inspection of the system and prior to the issuance of a Certificate of Compliance, the Disposal System Installer and the Designer shall certify in writing on a form approved by the Department that the system has been constructed in compliance with 310 CMR 15.000, the approved design plans and all local requirements, and that any changes to the design plans have been reflected on as-built plans which have been submitted to the Approving Authority by the Designer prior to the issuance of a Certificate of Compliance. The as-built plans shall be prepared in accordance with 310 CMR 15.220 and, at a minimum, shall reflect any changes to the approved design plans and show the exact location and elevation of all system components. As-built plans are required to be submitted to the Approving Authority only when changes have been made to the approved plans. If no changes have been made to the approved plans, the approved plan showing the distances from a known structure to the system components shall be submitted to the Approving Authority in place of an as-built plan. Prior to the issuance of a Certificate of Compliance for a system, the Approving Authority shall make sufficient inspections of the system in accordance with 310 CMR 15.021(2) to determine that the work has been completed in compliance with the requirements of 310 CMR 15.000, the Disposal System Construction Permit, the approved design plans, and any local requirements.

(5) A Certificate of Compliance does not constitute a statement that the system will function as designed nor shall it in any way limit the powers or responsibilities of the local Approving Authority or the Department to enforce any requirement, or to take any other action to protect public health, safety, welfare or the environment.

(6) The Approving Authority shall give to the building inspector or other official of the municipality responsible for the issuance of a Certificate of Occupancy pursuant to 780 CMR 100 a copy of the Certificate of Compliance. No person shall apply for a Certificate of Occupancy to inhabit or use new construction until a Certificate of Compliance has been issued by the Approving Authority.

15.022: Duty of Compliance

Except as otherwise specified, the duty to comply with the provisions of 310 CMR 15.000 with regard to any system shall be upon the owner(s) and the operator(s) of a facility served by a system, jointly and severally.

15.023: Approving Authority Access

The local Approving Authority or the Department may at any reasonable time examine facilities served by systems in order to determine compliance with 310 CMR 15.000 and any permits, approvals or orders issued under 310 CMR 15.000 or under local authority. If access to a facility is denied or restricted, the local Approving Authority or the Department may seek a warrant in order to obtain access. The filing of an application for a Disposal System Construction Permit or other approval under 310 CMR 15.000 shall constitute the applicant's consent for entry at reasonable times for these purposes.

15.024: Violations of 310 CMR 15.000

Violations of Title 5 shall include but not be limited to the following:

- (1) construction or use of a system in any manner that is not in compliance with an applicable Disposal System Construction Permit, Certificate of Compliance, or the terms and conditions of any other approval or order issued by the Approving Authority or the Department;
- (2) construction or use of a system prior to obtaining the applicable Disposal System Construction Permit, Certificate of Compliance, or any other approval or order issued by the Approving Authority or the Department;
- (3) use, modification, or alteration of a facility in such a way that a larger system is required under 310 CMR 15.000 using the design flows at 310 CMR 15.203 without the approval of the Approving Authority in accordance with 310 CMR 15.000;
- (4) aggregation of facilities or division of a facility into separate facilities without complying with the provisions of 310 CMR 15.010;
- (5) construction, upgrade, or expansion of a system without the prior approval of the Approving Authority or the Department in the form of a Disposal System Construction Permit or approval of an emergency repair;
- (6) failure to upgrade systems or to take other necessary corrective actions as ordered or otherwise directed by the Approving Authority or the Department in accordance with 310 CMR 15.000;
- (7) failure to obtain an inspection in accordance with 310 CMR 15.000 when and as required by 310 CMR 15.301;
- (8) discharge of effluent directly or indirectly to the surface of the ground through ponding or surface breakout above the disposal area or to a surface water of the Commonwealth;
- (9) violation of any other provision of 310 CMR 15.000;
- (10) violation of the terms and conditions of a deed restriction, covenant or easement recorded or imposed pursuant to 310 CMR 15.000;
- (11) failure to submit a soil evaluation to the Approving Authority as required by 310 CMR 15.018(2);
- (12) failure to submit an inspection form to the Approving Authority as required by 310 CMR 15.301(10);
- (13) making any false, inaccurate, incomplete or misleading statement in any submission required by 310 CMR 15.000;
- (14) making any false, inaccurate, incomplete or misleading statement in any record, report, plan, file, log, register, or other document required to be kept pursuant to 310 CMR 15.000; or
- (15) failure to provide any information required by the Approving Authority under 310 CMR 15.000.

15.025: Enforcement by Approving Authorities

- (1) The provisions of 310 CMR 15.000 shall be implemented and enforced by the Approving Authority with oversight and assistance by the Department as necessary or as set forth in 310 CMR 15.000.
- (2) Local Approving Authorities may enforce the provisions of 310 CMR 15.000 in the same manner in which local health rules and regulations are enforced.
- (3) The Department may enforce the provisions of 310 CMR 15.000 under applicable provisions of M.G.L. c. 21, §§ 26 through 53; M.G.L. c. 21A, §§ 13, 13A and 16 and any other applicable law. In addition, the Department may require any person to provide information as the Department may reasonably require to determine whether that person is subject to or in violation of M.G.L. c. 21A, §§ 13, 13A and 16, 310 CMR 15.000, and/or M.G.L. c. 21, §§ 26 through 53 and the Department regulations promulgated thereunder.
- (4) The local Approving Authority or the Department may document the noncompliance of an owner or operator of a system through the issuance of a notice of noncompliance which requests the recipient to perform actions necessary to come into compliance with 310 CMR 15.000. Such letter is not an order and is not appealable pursuant to 310 CMR 15.420 through 15.422.
- (5) Whenever a Local Approving Authority fails to enforce 310 CMR 15.000 within a reasonable time, the Department may act to affect compliance with 310 CMR 15.000. Nothing in 310 CMR 15.025 shall be construed to limit the authority of the Department to take any action pursuant to M.G.L. c. 21 or other applicable law.

15.026: Orders

- (1) The Local Approving Authority or the Department may issue orders requiring the owner or operator of a facility, or a system inspector, system installer, designers, soil evaluator, or the holder of a permit, approval or certification issued pursuant to 310 CMR 15.000 to come into compliance with the provisions of 310 CMR 15.000 or to take any other action necessary to protect public health, safety, welfare or the environment. Any person aggrieved by such orders may appeal to any court of competent jurisdiction pursuant to 310 CMR 15.421 if such order is issued by the local Approving Authority. Any person who is subject to an order issued by the Department may request an adjudicatory hearing pursuant to 310 CMR 15.422.
- (2) Unless otherwise stated in 310 CMR 15.000, orders may be served on any person responsible for a violation of 310 CMR 15.000 in accordance with the following procedure:
 - (a) personally, by any person authorized to serve civil process, or
 - (b) by any person authorized to serve civil process by leaving a copy of the order at his or her last and usual place of abode, or
 - (c) by sending him or her a copy of the order by registered or certified mail, return receipt requested, if his or her last and usual place of abode can be determined based on a review of the local tax assessor's records, or
 - (d) if his or her last and usual place of abode is unknown, by posting a copy of the order in a conspicuous place on or about the facility and by advertising it for at least three out of five consecutive days in one or more newspapers of general circulation within the municipality wherein the affected facility is situated.
- (3) Whenever an imminent threat to public health, safety, welfare or the environment exists, or could result during the pendency of a hearing on the order, the local Approving Authority or the Department may issue the order reciting the existence of the emergency and requiring that such action be taken as they may deem necessary.
- (4) Notwithstanding any other provision of 310 CMR 15.000, any person to whom an order is directed shall comply therewith within the time specified in the order. Each day's failure to comply with the order shall constitute a separate offense and may result in penalties. Any person who is subject to an order issued by the Department may seek review pursuant to 310 CMR 15.421 or 15.422 (Appeals).

15.027: Prohibition of Septic System Additives

- (1) It shall be a violation of 310 CMR 15.000 for any approved System Inspector, Soil Evaluator, Permitted System Installer or Septage Hauler to add, place, introduce or recommend the addition, placement or introduction of septic system additives to any system without the prior written determination of the Department that the additive has met the criteria set forth in 310 CMR 15.027(3). The Department shall maintain and publish a list of allowed septic system additives.
- (2) It shall be a violation of 310 CMR 15.000 for any person to add, place or introduce septic system additives to any system without the prior written determination of the Department that the additive has met the criteria set forth in 310 CMR 15.027(3).
- (3) The Department may allow a septic system additive when it is demonstrated to the Department's satisfaction that the additive will not:
 - (a) harm the components of the system;
 - (b) adversely affect the functioning of the system; or
 - (c) adversely affect the environment.
- (4) A Department determination that an additive has met the criteria contained in 310 CMR 15.027 shall not constitute an endorsement or approval with respect to the effectiveness or performance of the additive. Representation by any person that such Department determination constitutes such endorsement or approval shall be a violation of 310 CMR 15.000.

15.028: Soil Absorption System Restoration

- (1) It shall be a violation of 310 CMR 15.000 for any person or any approved System Inspector, Soil Evaluator, Permitted Installer or Septage Hauler to introduce, recommend the use of, or market for sale any physical, chemical or biological treatment process to restore or condition a soil absorption system that has not been approved by the Department for use as an alternative system pursuant to 310 CMR 15.280 through 15.288. Physical treatment includes a physical application to or alteration of the leaching field within the soil absorption system, but is not intended to include pumping, flushing, and routing of pipes or any mechanical methods of repairing existing components. The Department shall maintain and publish a list of allowed treatment processes.
- (2) It shall be a violation of 310 CMR 15.000 for any person to use any physical, chemical or biological treatment process to restore or condition a soil absorption system that has not been approved by the Department for use as an alternative system pursuant to 310 CMR 15.280 through 15.288.
- (3) A Department approval of the treatment process use as an alternative system pursuant to 310 CMR 15.280 through 15.288 shall not constitute an endorsement or approval with respect to the effectiveness or performance of the treatment process. Representation by any person that such Department determination constitutes such endorsement or approval shall be a violation of 310 CMR 15.000.

15.029: Construction of Wells Near Existing Systems

It is a violation of 310 CMR 15.000 for any person to construct or install a water supply well closer to a system component than the relevant setbacks set forth in 310 CMR 15.211.

15.030: Records

- (1) The Approving Authority shall maintain records for each system within its jurisdiction and shall keep on file copies of the following documents:
 - (a) applications, plans and specifications for the construction, upgrade or expansion of on-site subsurface sewage disposal systems, including all forms and data submitted by the applicant and Soil Evaluator;
 - (b) disposal system construction permits;

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

15.030: continued

- (c) as-built plans indicating all modifications to the approved plans subsequent to the issuance of a Disposal System Construction Permit;
- (d) reports of construction inspections made prior to issuance of a Certificate of Compliance;
- (e) Certificates of Compliance issued or denied;
- (f) inspection forms and plans and specifications for the upgrade or expansion of failing or nonconforming on-site subsurface sewage disposal systems in compliance with 310 CMR 15.300 through 15.354;
- (g) system pumping records;
- (h) Letters of Non-compliance issued;
- (i) local enforcement actions taken; and
- (j) disposal system installers permits.

(2) The records listed in 310 CMR 15.030(1) shall be available for review upon request.

(3) The Approving Authority shall maintain the records set forth in 310 CMR 15.030(1) until such time as the system is abandoned in accordance with 310 CMR 15.000 or an approved connection is made to a sewer in accordance with 314 CMR 7.00: *Sewer System Extension and Connection Permit*.

15.040: Advisory Committee

An Advisory Committee shall be appointed by the Commissioner of the Department to consult with the Department regarding the implementation of 310 CMR 15.000 and to make recommendations regarding regulatory revisions as appropriate. The advisory committee shall at a minimum consist of representatives from health boards, environmental, real estate, and homebuilders organizations and a concerned citizen. The advisory committee shall meet at least quarterly and the members shall serve without compensation. The Commissioner may invite the heads of other state agencies to delegate representatives to the Advisory Committee.

15.050: Severability

The provisions of 310 CMR 15.000 are severable. If any provision of 310 CMR 15.000 is declared to be invalid or inapplicable to any particular circumstance, that invalidity or inapplicability will not effect the enforceability of the remainder of 310 CMR 15.000.

SUBPART B: SITING OF SYSTEMS

15.100: General Provisions

(1) Every location proposed for the construction, upgrade, or expansion of an on-site subsurface sewage disposal system shall be evaluated based upon an analysis of all site characteristics which may affect system function and performance in accordance with the evaluation criteria specified in 310 CMR 15.101 through 15.107.

(2) Each location shall be field evaluated for suitability for subsurface sewage disposal consistent with 310 CMR 15.000 by a Soil Evaluator approved by the Department in accordance with 310 CMR 15.017 prior to the commencement of final system design pursuant to Subpart C of 310 CMR 15.000 and application for a Disposal System Construction Permit. The evaluation shall include a soil profile on every proposed disposal area for which a Disposal System Construction Permit has not yet been issued.

15.101: Site Evaluation Criteria

(1) Every proposed disposal area shall be examined by a Soil Evaluator and the Approving Authority to determine if the disposal area is compatible with the proposed sewage disposal system in relation to the design flow set forth in 310 CMR 15.203 and system location criteria set forth in 310 CMR 15.106.

15.101: continued

- (2) Every proposed disposal area shall be assessed based on the following field test and analysis criteria:
 - (a) deep observation hole testing;
 - (b) soil profile determination;
 - (c) percolation testing;
 - (d) landscape position; and
 - (e) hydrogeologic properties
- (3) Site evaluation may be conducted at any time of the calendar year, provided that the Soil Evaluator makes and records on the site evaluation form proper consideration of the hydrogeologic properties of the specific site as required in 310 CMR 15.107 for the period of the water year within which the evaluation is performed.

15.102: Deep Observation Hole Test

- (1) The purpose of the deep observation hole test is to determine in accordance with 310 CMR 15.103 the soil profile in the proposed disposal area, the depth of overburden above ledge, bedrock or impervious layer(s), and to determine the observed ground-water elevation at the time of testing and to gather evidence to determine the adjusted ground-water elevation.
- (2) A minimum of two deep observation hole tests shall be performed in the presence of the Approving Authority at every proposed disposal area, two in the primary area and two in the reserve area. Additional testing shall be required if, in the opinion of the Soil Evaluator or the Approving Authority, there is evidence of inconsistent soil characteristics, the presence of ledge, or additional testing is necessary to properly assess site conditions within the proposed location to ensure that it can be installed entirely on soils and slopes in conformance with the requirements of 310 CMR 15.000. When a trench system is to be designed with the reserve area between the trenches, the Approving Authority may allow two deep hole observations if in the opinion of the Approving Authority the two deep holes adequately characterize the soils in both the primary and reserve areas.
- (3) Deep observation holes shall be excavated in two adjoining segments, the first ending at approximately the five-foot level to allow detailed examination by the Soil Evaluator without need for shoring, and an adjoining segment which shall extend to a minimum depth of four feet below the bottom elevation of the proposed soil absorption system but in no case less than ten feet below existing/natural grade unless such depth is unattainable due to bedrock or refusal or high groundwater, or where human safety may be in jeopardy.
- (4) Every deep observation hole shall be located from known and recoverable reference points or benchmarks so that it may be located on the system design plan with an accuracy of one foot. The location of the hole shall be defined as being half way between the side walls of the excavation at the point where the five foot deep segment adjoins the deeper segment.
- (5) It shall be the responsibility of the owner or agent to ensure that every deep observation hole is secured to prevent accidents whenever work is not in progress.

15.103: Soil Profile

- (1) The Soil Evaluator shall prepare a soil log using a form approved by the Department, in accordance with the Department's most recent manual for Soil Evaluators.
- (2) The following characteristics of each recognizable soil horizon or substratum in the deep observation hole testing shall be determined and recorded on the form:
 - (a) depth and thickness of horizon;
 - (b) estimated soil textural class, using the USDA/NRCS system of classification;
 - (c) estimated volume percentage of coarse fragments;
 - (d) abundance, size and contrast of redoximorphic features, if present;
 - (e) soil structure (soil profile pits only); and
 - (f) soil consistence.

15.103: continued

- (3) High ground-water elevation shall be determined by:
- (a) soil color using the Munsell system, the abundance, size and contrast of redoximorphic features, if present;
 - (b) one or more of the following methods may be used to supplement the method in 310 CMR 15.103(3)(a) and shall be used when no redoximorphic features are present:
 1. observation of actual water table during times of annual high water table;
 2. the use of USGS wells for correlating comparisons in water tables during times when the water table is not at the annual high range;
 3. a Department-approved method for determining inland high ground-water elevation as contained in Frimpter, M.H. "Probable High Groundwater Levels in Massachusetts," Open File Report 80-1205, USGS or Frimpter, M.H. and G.C. Belfit, 1992, "Estimating highest ground-water levels for construction and land use planning, Cape Cod, Massachusetts," updated, Barnstable, MA Cape Cod Commission Technical Bulletin 92-001"; or
 4. a Department-approved method for determining coastal high groundwater elevation which incorporates tidal fluctuation information into the use of historical high groundwater data as contained in Frimpter, M.H. and G.C. Belfit, 1992, "Estimating highest ground-water levels for construction and land use planning, Cape Cod, Massachusetts," updated, Barnstable, MA, Cape Cod Commission Technical Bulletin 92-001 or, if the location of the system is affected by tidal cycle typically within 300 feet of mean high water of the ocean, monitoring the high groundwater elevation over a tidal cycle during a full moon high tide.
- (4) The Soil Evaluator shall indicate on the soil log whether four feet of naturally occurring pervious materials exist in all areas observed throughout the area proposed for the soil absorption system.

15.104: Percolation Testing

- (1) The standard percolation test is intended to give an approximate measure of the soil's percolating capacity. Unsaturated hydraulic conductivities vary dramatically from the saturated hydraulic conductivity with changes in soil characteristics and moisture content. Percolation testing may be conducted at any time of the year and the data obtained in accordance with the procedures specified by 310 CMR 15.000 may be deemed valid for an indefinite period provided the soils within the site evaluated remain undisturbed and unaltered. All percolation testing shall be performed in the presence of the Approving Authority.
- (2) A percolation test shall provide data necessary to assess the suitability of the soil to transmit water from the soil absorption system and to a depth of four feet below this elevation. Where the soil varies with depth as indicated by the results of the deep observation hole testing performed pursuant to 310 CMR 15.102, percolation tests shall be conducted in the soil which is identified to be the most restrictive by the Soil Evaluator with the concurrence of the Approving Authority.
- (3) Percolation tests shall be performed by a Massachusetts Registered Professional Engineer, Massachusetts Registered Sanitarian, a Soil Evaluator, or a person who:
- (a) in the opinion of the Approving Authority is qualified to perform such tests;
 - (b) has one year of documented experience in satisfactorily performing such tests; and
 - (c) has used or gained skills that demonstrate sufficient competence to perform such tests.
- (4) At least one percolation test shall be performed at every proposed disposal area, one in the primary area in which the soil absorption system is to be located and one in the proposed reserve area. Additional tests shall be required where soil conditions vary or as determined by the Approving Authority or where system design exceeds 2,000 gpd. In such instances, a minimum of three percolation tests, spaced uniformly over the proposed soil absorption area, shall be performed in addition to the test in the proposed reserve area.
- (5) Where 310 CMR 15.104(4) or the Approving Authority requires multiple percolation tests, the results of the test providing the slowest rate shall be used for system design. Averaging of percolation test rates across the site is prohibited.

15.104: continued

- (6) Percolation tests may be performed at any time of the year provided the soil to be tested is below the frozen soil layer.
- (7) Percolation tests shall not be performed in holes that have remained open to the atmosphere for more than three consecutive days.
- (8) Percolation tests shall not be performed in filled or disturbed ground.

15.105: Procedure for Performing a Percolation Test

A percolation test shall be conducted by performing the following steps in sequence:

- (1) Prepare a test hole located within the proposed disposal area which, in the judgment of the Soil Evaluator and the Approving Authority, is the most limiting. The test hole shall have a diameter of 12 inches, as precisely as possible, with vertical sides 18 inches deep not including any allowable liners or filter layers on either the bottom or sides.
- (2) Establish a fixed point at the top or bottom of the test hole from which all measurements will be taken.
- (3) Scratch the bottom and sides of the test hole to remove any smeared soil surfaces, taking care not to significantly change the hole dimensions. Add two inches of coarse sand to protect the bottom from scouring, or insert a board or other impervious object in the hole so that water may be poured down or on it during the filling operation. A mesh or perforated liner designed to maintain the test hole dimensions in extremely loose soils while allowing essentially unrestricted flow of water may be used with permission of the Approving Authority.
- (4) Carefully fill the hole with clear water to a minimum depth of 12 inches from the bottom of the hole. Maintain this minimum 12 inch or greater water level by adding water as necessary in order to saturate surrounding soils for a period of no less than 15 minutes after first filling the hole.
- (5) After saturation, let the water level drop to a depth of nine inches and then measure the length of time in minutes for it to drop from a depth of nine inches to a depth of six inches. If the rate is erratic in the opinion of the Approving Authority, the hole shall be refilled and soaked until the drop per increment of time is steady. The time for the level to drop from a depth of nine inches to a depth of six inches, divided by three, is the percolation rate in minutes per inch.
- (6) In certain soils, particularly coarse sands, the soil may be so pervious as to make a percolation test difficult, impractical, and meaningless. At the discretion of the Soil Evaluator and with the concurrence of the Approving Authority, the percolation test may be discontinued and a rate of two minutes per inch or less can be assumed provided that at least 24 gallons of water has been added to the percolation hole within 15 minutes and it is impossible to obtain a liquid depth of nine inches.

15.106: Landscape Position

- (1) The topography of the proposed disposal area shall be identified and recorded on the evaluation form. Particular attention shall be given to recording features which may adversely affect the functioning of an on-site system. These include:
 - (a) bedrock outcrops or areas with many stones and/or boulders;
 - (b) steep slopes (greater than 3:1, horizontal to vertical) exhibiting signs of unstable soil such as landslide scars, slump blocks, tree trunks or shrubs bending downslope;
 - (c) highly disturbed ground as indicated by such features as remnants of foundations or pavements or buried construction debris;
 - (d) low-lying coastal areas exhibiting signs of tidal inundation or tidal marsh vegetation;
 - (e) low-lying inland areas exhibiting signs of influence of surface water runoff, ponding or freshwater wetland vegetation;
 - (f) flat low-lying areas adjacent to surface water bodies and streams; and
 - (g) the boundary of a velocity zone.

15.107: Hydrogeologic Properties

(1) The hydrogeologic properties of the proposed disposal area shall be identified and recorded on the evaluation form with respect to the following:

- (a) estimated direction of ground-water flow;
- (b) high ground-water elevation;
- (c) estimated depth to bedrock if a factor in design of proposed system, or actual depth if encountered during deep observation hole tests;
- (d) depth of unsaturated zone, including any perched water tables;
- (e) drainage classification of dominant soil type as defined by NRCS;
- (f) lateral distance to surface water and wetland delineation;
- (g) location of every water supply, public and private,
 - 1. within 400 feet of the proposed system location in the case of surface water supplies and gravel packed public water supply wells,
 - 2. within 250 feet of the proposed system location in the case of tubular public water supply wells, and
 - 3. within 150 feet of the proposed system location in the case of private water supply wells;
- (h) approximate safe yield or design capacity of every public water supply, if information is available; and
- (i) identification of proposed disposal area in relation to the location of nitrogen sensitive areas designated pursuant to 310 CMR 15.214.

(2) When observation wells are appropriate or necessary to determine the hydrogeologic properties of a site or region, such as direction of ground-water flow, perched ground-water tables and seasonal ground-water elevation fluctuations, the general guide for the proper use and installation of ground-water observation wells provided in Department guidance shall be followed.

SUBPART C: DESIGN, CONSTRUCTION, REPAIR, AND REPLACEMENT OF
ON-SITE SEWAGE DISPOSAL SYSTEMS

15.201: Type of System

Each on-site subsurface sewage disposal system approved pursuant to 310 CMR 15.000 shall consist of a septic tank which discharges liquid effluent through a gravity distribution, dosing or pressure distribution network to a soil absorption system as hereinafter described. No modifications or alterations to the design criteria shall be allowed except pursuant to the alternative system and shared systems provisions of 310 CMR 15.280 through 15.293, or the local upgrade approval or variance procedures of 310 CMR 15.400.

15.202: Use of Recirculating Sand Filters

(1) A recirculating sand filter ("RSF") or equivalent alternative technology approved by the Department in accordance with 310 CMR 15.280 through 15.288 is a required component of all systems designed to serve a facility or facilities with a design flow of 2,000 gpd or more to be located in a Nitrogen Sensitive Area as designated in 310 CMR 15.214(1)(a), provided that such RSF shall not be required for a facility for which subdivision approval has been obtained to construct dwellings with a cumulative total design flow of 2,000 gpd or greater if a disposal system construction permit to construct a system with a total design flow of less than 2,000 gpd in full compliance with 310 CMR 15.000 on each of the subdivision lots to be served by a system is obtained and such separate subdivision lots are to be conveyed to independent owners.

(2) A recirculating sand filter or equivalent alternative technology approved by the Department in accordance with 310 CMR 15.280 through 15.288, may be used to enhance nitrogen removal in systems in Nitrogen Sensitive Areas designated pursuant to 310 CMR 15.214(1)(a), in accordance with 310 CMR 15.217 (Systems with Enhanced Nitrogen Removal).

(3) Recirculating sand filters designed and approved in accordance with Department guidance are certified for general use.

15.202: continued

- (4) Recirculating sand filters or equivalent alternative technology shall meet the following requirements:
- (a) effluent discharge concentrations shall meet or exceed secondary treatment standards of 30 mg/L BOD₅ and 30 mg/L TSS. The effluent pH range shall be 6.0 to 9.0.
 - (b) total nitrogen concentration in the effluent shall not exceed 25 mg/L.
 - (c) system owners shall have effluent quality monitored quarterly for systems serving a facility with a design flow of less than 2,000 gallons per day, and both influent and effluent quality monitored quarterly for systems serving a facility with a design flow of 2,000 gallons per day or greater, for BOD₅, TSS, pH and total nitrogen, unless otherwise required or approved by the Department. Unless otherwise required by the Department, the system owner shall submit all monitoring results to the local Approving Authority and the Department by January 31st of each year for monitoring conducted during the previous calendar year.
 - (d) recirculating sand filter systems shall contain all components of a standard on-site system and be capable of functioning as a conventional system. Any departures from this provision require written approval from the Department.
 - (e) the system owner shall notify the local Approving Authority of any system failure within 24 hours of detection of such failure.
 - (f) pressure distribution, in accordance with 310 CMR 15.254, is required for all systems serving a facility with a design flow of 2,000 gallons per day or greater. Pressure distribution systems shall be designed in accordance with Department guidance.
 - (g) for systems serving a facility with a design flow of 2,000 gpd or greater, the separation from high groundwater as required under 310 CMR 15.212 shall be calculated after adding the effect of groundwater mounding to the high groundwater elevation as determined pursuant to 310 CMR 15.103(3).
 - (h) by January 31st of each year, unless otherwise determined by the Department, the system must be inspected at least annually by a Massachusetts certified operator of an appropriate grade to operate the system, unless the Department has approved in writing a reduction in frequency of inspection or the facility is subject to a Department approved comprehensive local plan of on-site system inspection, the system owner shall submit a certification by the system operator to the local Approving Authority and the Department for the previous calendar year stating that the system and its components are functioning as designed and were inspected in accordance with the Department's approval.
 - (i) an operation and maintenance manual shall be prepared by the system designer or a Massachusetts Registered Professional Engineer and submitted as part of the application.

15.203: System Sewage Flow Design Criteria

- (1) Each component of an on-site subsurface sewage disposal system shall be designed to treat sanitary sewage discharged from all buildings to be served by the system using the System Sewage Flow Design flows set forth at 310 CMR 15.203(2) through (5), except as provided in 310 CMR 15.203(6). Actual water meter data shall not be substituted for the design flow criteria for the activities listed in 310 CMR 15.203(2) through (5) unless pursuant to 310 CMR 15.416. Design flow is equivalent to estimated generated flow for the proposed use plus a factor representing flow variations.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

15.203: continued

TYPE OF ESTABLISHMENT	UNIT	GALLONS PER DAY	MINIMUM ALLOWABLE GPD FOR SYSTEM DESIGN
(2) RESIDENTIAL			
Bed & Breakfast	per bedroom	110	440
Bed & Breakfast	per bedroom	110	
with restaurant open to public add	per seat	35	1000
Camp, resident, mess hall, washroom and toilets	per person*	35	
Camp, day, washroom and toilets	per person	10	
Camp, day, mess hall, washroom and toilets	per person	13	
Campground, showers and toilets	per site	90	
Family Dwelling, Single including, but not limited to, single family condominiums & cooperatives	per bedroom	110	330**
Family Dwelling, Multiple	per bedroom	110	***
Family Mobile Home Park	per mobile home	300	
Motel, Hotel, Boarding House	per bedroom	110	
Retirement Mobile Home Park	per site	150	
Housing for the Elderly	per two bedroom unit	150****	
Work or Construction Camp	per person	50	
* Person in the context of 310 CMR 15.203 means an individual.			
** A system may be designed for flows of not less than 220 gpd, if a deed restriction essentially identical to the model Grant of Title 5 Bedroom Count Deed Restriction developed by the Department, is provided that limits the dwelling to two bed rooms as the term "bedroom" is defined in 310 CMR 15.002. A home office or home retail business whose only employees reside in the home, where no additional wastewater is generated other than toilet and hand washing waste, is not considered a change in the type of establishment and does not require the addition of flow for the purpose of designing the system.			
*** The number of bedrooms in a condominium shall be as specified in the Master Deed. Establishment of bedrooms in excess of the specified number shall be considered an increase in design flow. A home office or home retail business whose only employees reside in the home, where no additional wastewater is generated other than toilet and hand washing waste, is not considered a change in the type of establishment and does not require the addition of flow for the purpose of designing the system.			
**** One bedroom unit Housing for the Elderly, and units with more than two bedrooms shall be designed based on 110 gallons per day per bedroom.			
(3) COMMERCIAL			
Airport	per passenger	5	150
Barber Shop/Beauty Salon	per chair	100	
Bowling Alley	per alley	100	
Country Club, dining room	per seat	10	
Country Club, snack bar or lunch room	per seat	10	
Country Club, lockers and showers	per locker	20	
Doctor Office	per doctor	250	
Dentist Office	per dentist	200	

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

15.203: continued

TYPE OF ESTABLISHMENT	UNIT	GALLONS PER DAY	MINIMUM ALLOWABLE GPD FOR SYSTEM DESIGN
(3) COMMERCIAL (continued)			
Factory, Industrial Plant, Warehouse or Dry Storage Space without cafeteria	per person	15	
Factory, Industrial Plant, Warehouse or Dry Storage Space with cafeteria	per person	20	
Gasoline Station with service bays	per island***** per bay	75 125	300
***** Plus flows for bays, if any			
Kennel/Veterinary Office Lounge, Tavern	per kennel per seat	50 20	
Marina	per slip	10	500
Movie Theater	per seat	5	
Non-single family/ automatic clothes washer	per washing machine	400	
Office building	per 1000 sq.ft.	75	200
Retail Store (except supermarkets)	per 1000 sq.ft.	50	200
Restaurant	per seat	35	1000
Restaurant, thruway service area	per seat	150	1000
Restaurant, Fast Food	per seat	20	1000
Restaurant, kitchen flow [for sizing of grease trap only]	per seat	15	
Service Station [no gas]	per bay	150	450
Skating Rink	per seat	5	3000
Supermarkets	per 1000 sq.ft.	97	
Swimming Pool	per person	10	
Tennis Club	per court	250	
Theater, Auditorium	per seat	3	
Trailer, dump station	per trailer	75	
(4) INSTITUTIONAL			
Place of worship without kitchen	per seat	3	
with kitchen	per seat	6	
Correctional Facility	per bed	200	
Function Hall	per seat	15	
Gymnasium	per participant	25	
Gymnasium	per spectator	3	
Hospital	per bed	200	
Nursing Home/Rest Home	per bed	150	
Assisted Living Facilities	per bed	150	
Public Park, toilet waste only	per person	5	

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

15.203: continued

TYPE OF ESTABLISHMENT	GALLONS UNIT	MINIMUM ALLOWABLE GPD FOR SYSTEM PER DAY	DESIGN
(4) INSTITUTIONAL (continued)			
Public Park, bathhouse, showers and flush toilets	per person	10	
Day Care Facility	per person	10	
(5) SCHOOLS*****			
Elementary School, without cafeteria, gymnasium or showers	per person	5	
Elementary School, with cafeteria but no gymnasium with showers	per person	8	
Elementary School, with cafeteria, gymnasium and showers	per person	10	
Secondary/Middle School, without cafeteria, gymnasium or showers	per person	10	
Secondary/Middle School, with cafeteria but no gymnasium or showers	per person	15	
Secondary/Middle School, with cafeteria, gymnasium and showers	per person	20	
Boarding Schools, Colleges	per person	65	

***** All schools to be served by an alternative technology approved pursuant to 310 CMR 15.280 through 15.288 shall have an equalization basin as part of the system design and have it installed prior to the treatment device.

(6) Facilities other than those listed in 310 CMR 15.203(2) through (5), and nonresidential facilities with unique design features that result in significantly different design flows than those listed above may apply to the Department for a determination of design flow using actual meter readings of established flows from existing or similar installations without the need for a variance pursuant to 310 CMR 15.410 or 15.416. Prior to making a determination the Department will consult with the local Approving Authority. For state and federal facilities, the Department may also establish system design flows other than those listed above using actual meter readings of established flows from existing or similar installations. Any design flow established by the Department pursuant to 310 CMR 15.203(6), shall be based on 200% of average water meter readings in order to assimilate maximum daily flows or on other methods determined to be appropriate by the Department.

(7) In schools, flows generated from sinks or other drains receiving wastes from science laboratories, graphics arts classrooms, or vocational school activities, including, but not limited to, automotive repair painting, or metal fabrication are classified industrial wastes and shall be directed pursuant to an appropriate permit, to a sewer, if a sewer connection is feasible and, if not, then to an industrial waste holding tank in accordance with 314 CMR 18.000: *Industrial Wastewater Holding Tank and Container Construction, Operation, and Record Keeping Requirements* or an approved hazardous waste collection receptacle.

15.204: Increases in Design Flow to System

No person shall increase the actual or design flow to any cesspool or to any other system above the existing approved capacity, or change the type of establishment of a facility served by a cesspool, unless the cesspool or system is upgraded first. Upgrades to accept increased design flow shall be performed in full compliance with the requirements applicable to new construction unless a variance is allowed pursuant to 310 CMR 15.414. For purposes of 310 CMR 15.204, the approved design flow shall be the flow listed in the most recent Disposal Works Construction Permit.

15.211: Minimum Setback Distances

(1) All systems must conform to the minimum setback distance for septic tanks, holding tanks, pump chambers, treatment units and soil absorption systems, including reserve area, measured in feet and as set forth below. Where more than one setback applies, all setback requirements shall be satisfied.

	Septic Tank Holding Tank Pump Chamber Treatment Unit Grease Traps	Soil Absorption System
Property Line	10[5]	10[5]
Cellar or Crawl Space Wall, Swimming Pool (inground), foundation drain	10	20
Slab Foundation	10	10
Water Supply Line (pressure)	10[1]	10[1]
Surface Waters (except wetlands) Bordering Vegetated Wetland (BVW), Salt Marshes, Inland and Coastal Banks	25	50
Surface Water Supply - Reservoirs and Impoundments	400	400
Tributaries to Surface Water Supplies	200	200
Wetlands bordering Surface Water Supply or Tributary thereto	100	100
Certified Vernal Pools	50	100[2]
Private Water Supply Well or Suction Line	50	100
Public Water Supply Well	(2)	(2)
Irrigation Well	10	25
Open, Surface or Subsurface Drains which discharge to Surface Water Supplies or tributaries thereto	50	100
Other Open, Surface or Subsurface Drains (excluding foundation drains) which intercept seasonal high groundwater table [3]	25	50
Other Open, Surface or Subsurface Drains (excluding foundation drains)	5	10
Leaching Catch Basins & Dry Wells	10	25
Downhill Slope	not applicable	15[4]

[1] Disposal facilities shall be at least 18 inches below water supply lines. Wherever sewer lines must cross water supply lines, both pipes shall be constructed of class 150 pressure pipe and shall be pressure tested to assure watertightness.

[2] The required setback shall be 50 feet where the applicant has provided hydrogeologic data acceptable to the Approving Authority demonstrating that the location of the soil absorption system is hydraulically downgradient of the vernal pool. Surface topography alone is not determinative.

15.211: continued

[3] Surface or subsurface drains which will regularly or periodically intercept the seasonal high groundwater table and carry that groundwater away from an area must meet the specified setbacks.

[4] The setback distance shall be measured from a naturally-occurring downhill slope which is not steeper than 3:1 (horizontal:vertical). A minimum 15 foot horizontal separation distance shall be provided between the top of the two inch layer of 1/8 to 1/2 inch washed stone above the pipe, or the geotextile material above the pipe or the top of the chamber and the adjacent downhill slope. For a system located in an area with any adjacent naturally occurring downhill slope steeper than 3:1, slope stabilization shall be provided in accordance with best engineering practice which may include construction of a retaining wall designed by a Massachusetts Registered Professional Engineer.

[5] Locating a system component or any part thereof beyond a property line of the facility, whether pursuant to an easement or otherwise, requires a variance issued in accordance with 310 CMR 15.410, except that the placement of fill or grading material beyond the property line of the facility, pursuant to an easement or otherwise, shall not require a variance under 310 CMR 15.410.

(2) No system shall be constructed within a Zone I of a public water supply well or wellfield. No system shall be upgraded or expanded within a Zone I of a public water supply well or wellfield unless a variance is granted pursuant to 310 CMR 15.410 through 15.415.

(3) All setback distances from water bodies shall be measured from the bank of the water body. All setback distances from wetlands shall be measured in accordance with the criteria of the Wetlands Protection Act and 310 CMR 10.00: *Wetlands Protection*, from the most landward edge of the following features: bordering vegetated wetland as defined in 310 CMR 10.55(2): *Definition, Critical Characteristics and Boundary*; salt marsh as defined in 310 CMR 10.32(2): *Definitions*; top of inland bank as defined in 310 CMR 10.54(2): *Definition, Critical Characteristics and Boundary*; or top of coastal bank as defined in 310 CMR 10.30(2): *Definition*. In the event of disputes concerning landward boundary of resources subject to the Wetlands Protection Act, the boundary shall be as delineated by the municipal Conservation Commission or the Department in accordance with 310 CMR 10.00: *Wetlands Protection*, and relevant interpretive guidance documents.

15.212: Depth to Groundwater

(1) The minimum vertical separation distance between the bottom of the stone underlying the soil absorption system above the high ground-water elevation shall be

- (a) four feet in soils with a recorded percolation rate of more than two minutes per inch;
- (b) five feet in soils with a recorded percolation rate of two minutes or less per inch.

(2) For systems with a design flow of 2,000 gpd or greater, the separation from high groundwater as required by 310 CMR 15.212(1) shall be calculated after adding the effect of groundwater mounding to the high groundwater elevation as determined pursuant to 310 CMR 15.103(3).

15.213: Construction in Velocity Zones and Floodways

(1) No septic tank or humus/composting toilet shall be constructed in a velocity zone on a coastal beach, barrier beach, or dune, or in a regulatory floodway, except a septic tank that replaces a tank in existence on the site as of March 31, 1995 that has been damaged, removed or destroyed, where placement of the tank outside of the velocity zone or regulatory floodway, either horizontally or vertically, is not feasible. Where reconstruction of a system in existence on March 31, 1995 occurs or reconstruction of a building or buildings is allowed in accordance with the Wetlands Protection Act and 310 CMR 10.00: *Wetlands Protection*, it shall be presumed to be feasible to elevate the tank if the building is elevated above the velocity zone or regulatory floodway.

(2) No soil absorption system shall be constructed in a velocity zone on a coastal beach, barrier beach, or dune, or in a regulatory floodway, unless

- (a) the system is to serve a building or buildings that were in existence on March 31, 1995 or reconstruction of such building or buildings where allowed in accordance with the Wetlands Protection Act, M.G.L. c. 140, § 131 and its implementing regulations as 310 CMR 10.00: *Wetlands Protection*;

15.213: continued

- (b) there is no increase in design flow from such building or buildings;
- (c) no connection to a public sewer or shared system is available;
- (d) the owner or applicant cannot site the system elsewhere;
- (e) the septic tank or humus/composting toilet is sited outside of the velocity zone or regulatory floodway, either horizontally or vertically;
- (f) the system achieves separation from high groundwater elevation as required by 310 CMR 15.212; and
- (g) any portion of the soil absorption system that is within the velocity zone or regulatory floodway is a leaching bed or trench system or any other system constructed in accordance with the Wetlands Protection Act and 310 CMR 10.00: *Wetlands Protection*.

15.214: Designation of Nitrogen Sensitive Areas

(1) The following areas have been determined by the Department to be particularly sensitive to the discharge of pollutants from on-site sewage disposal systems and are therefore designated Nitrogen Sensitive Areas:

(a) Public and Private Water Supply Protection Areas:

- 1. Department-approved Zone IIs for wells or wellfields used by public water systems as defined in 310 CMR 22.02 and, in the absence of a Department-approved Zone II, the Interim Wellhead Protection Area (IWPA) for a public water system's well or wellfield as defined in 310 CMR 22.02; and
- 2. Any areas where the use of both on-site systems and wells that are not regulated as public water supplies under 310 CMR 22.00: *Drinking Water* serve facilities.

(b) Natural Resource Areas:

- 1. any watershed to an embayment or sub-embayment that on July 7, 2023 is the subject of a nitrogen Total Maximum Daily Load (TMDL) approved by the EPA and an Area Wide Water Quality Management Plan approved by the EPA for Cape Cod in 2015 pursuant to Section 208 of the Federal Clean Water Act, 33 U.S.C. § 1251 *et. Seq.* ("208 Plan"), addressing nitrogen pollution. For any such watershed that is subject to an approved nitrogen TMDL and an approved 208 Plan as of July 7, 2023, the effective date of designation is July 7, 2023. A Nitrogen Sensitive Area designation for watersheds subject to the 208 Plan that receive an EPA-approved TMDL after July 7, 2023 becomes effective on the date EPA approves the TMDL.
- 2. any watershed to an embayment or sub-embayment subject to the 208 Plan as of July 7, 2023 that the Department designates as a Nitrogen Sensitive Area after a public review process based on:
 - a. a Massachusetts Estuary Project Report demonstrating nitrogen impacts; or
 - b. a Scientific Evaluation demonstrating nitrogen impacts. Nitrogen impacts include, but are not limited to, nitrogen related eutrophication; nitrogen related adverse ecological and habitat impacts; nitrogen concentrations that would cause or contribute to impairment of existing or designated uses pursuant to 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*; or nitrogen concentrations that exceed site-specific criteria developed by the Department pursuant to 314 CMR 4.00. The Department may accept a Scientific Evaluation commenced prior to July 7, 2023. If the Scientific Evaluation will not be conducted by or on behalf of the Department, a scope of work for the proposed Scientific Evaluation shall be submitted to the Department for its review and approval before the evaluation commences, by:
 - i. submitting a draft scope of work for the Scientific Evaluation in accordance with the Department's guidelines;
 - ii. within 21 days of submitting the draft scope of work to the Department, placing a public notice in the *Environmental Monitor* that the draft scope of work has been submitted to the Department for review and approval;
 - iii. conducting a joint pre-scoping meeting with the Department and appropriate representatives of the municipalities within the evaluation area to discuss the proposed scope of work and set a timeline for routine update meetings; and

15.214: continued

iv. submitting to the Department a copy of the public notice published in the *Environmental Monitor*; a proposed final scope of work for Department review; and a proposed plan and website to provide periodic informational updates regarding the Scientific Evaluation process to the community(ies) that may be affected.

(2) A public review process shall precede a final Nitrogen Sensitive Area designation pursuant to 310 CMR 15.214(1)(b)2. and shall include, at a minimum, the following:

(a) Public Notice. The Department shall provide public notice of its intent to formally designate the Nitrogen Sensitive Area. Public notice shall afford a public comment period of at least 60 days after the date of publication in the *Environmental Monitor*. The Department may elect to extend the public comment period. If the Department provides such an extension, the Department shall post notice thereof on the Department's website and provide electronic copies of the notice to anyone who requests it.

(b) The Department shall publish public notice of the intended designation in the *Environmental Monitor* and in a local or regional newspaper with the largest readership distribution both online and in hardcopy, if hardcopy exists, within the area that may be affected by the designation. The Department will request that notice be published in the local town or city hall and on the website of the community or communities that may be affected. The Department will also post notice on the Department's webpage. In municipalities with Environmental Justice Populations where the preceding method for publishing public notice does not specifically serve the Environmental Justice Population(s), public notice shall be provided by the Department to at least one additional news organization that primarily serves the Environmental Justice Population(s) within the area that may be affected by the designation. The public notice shall be translated into other languages that are prevalent in areas with persons of limited English proficiency.

(c) The Department shall send a copy of the public notice to the chief municipal elected official and the Board of Health of any municipality that may be affected by the intended designation.

(d) The public notice shall contain the following minimum information and any additional information the Department deems appropriate:

1. identification of the watershed or sub-watershed to be addressed by the intended designation;
2. a link to a website that includes a detailed factual and scientific basis and regulatory rationale explaining how the watershed satisfies the criteria for the intended designation under 310 CMR 15.214(1)(b)2.; and
3. the time within which the public may comment or request a public hearing.

(e) Public Hearings. If the Department determines a public hearing to be in the public interest, then the Department shall schedule and conduct such hearing in a community within the area that may be affected by the designation. Public notice of the public hearing shall be published in the same manner as the public notice for the public comment period. When a public hearing is held, the public comment period shall be extended to the conclusion of the public hearing or such later date as may be established by the Department.

(f) Determination. After the conclusion of the public comment period, the Department may issue or deny a final designation, which will be published on the Department's website. The effective date of the designation shall be the date of issuance and the requirements of 310 CMR 15.215 take effect upon that date.

(g) Appeals. Any person aggrieved by a Department final determination to designate a Nitrogen Sensitive Area pursuant to 310 CMR 15.214(1)(b)2.a. or b. and who also participated in the public comment period or public hearing may request an adjudicatory hearing in accordance with 310 CMR 1.00: *Adjudicatory Proceedings* and M.G.L. c. 30A within 21 days of the designation's issuance but only with respect to whether there is a sufficient factual or scientific basis for the Nitrogen Sensitive Area designation under 310 CMR 15.214(1)(b)2.a. or b. Participating in the public comment period or public hearing means verbally commenting during the public hearing or submitting written information to the Department prior to close of the public comment period.

15.215: Nitrogen Loading Limitations

The necessity of providing increased treatment of pollutants and reduction in nutrients discharged from on-site sewage disposal systems in areas designated as nitrogen sensitive areas warrants the imposition of the following nitrogen loading limitations:

(1) Public and Private Water Supply Protection Areas. No facility owner for New Construction in Nitrogen Sensitive Areas designated in 310 CMR 15.214(1)(a) shall install a system designed to receive or allow 310 CMR 15.202 (use of recirculating sand filters), a system to receive more than 440 gallons of design flow per day per acre except as set forth in 310 CMR 15.216 (aggregate flows) or 15.217 (enhanced nitrogen removal).

(2) Natural Resource Areas. Any system serving New Construction or an existing facility in a Nitrogen Sensitive Area designated pursuant to 310 CMR 15.214(1)(b) on or after July 7, 2023 shall incorporate Best Available Nitrogen Reducing Technology, as follows:

(a) Existing Systems. The owner of a system serving, or approved to serve, an existing facility as of the effective date of the Nitrogen Sensitive Area designation shall upgrade the system pursuant to 310 CMR 15.401 through 15.405 to incorporate the Best Available Nitrogen Reducing Technology within five years of the date on which the Notice of Intent and Application Period ends unless:

1. Except as otherwise provided in 310 CMR 15.215(2)(c)4. and 314 CMR 21.12(5), a Notice of Intent, a Watershed Permit application, or a *De Minimis* Nitrogen Load Exemption application is filed for the area during the Notice of Intent and Application Period pursuant to 310 CMR 15.215(2)(c), 314 CMR 21.03: *Application for a Watershed Permit*, or 314 CMR 21.12: *De Minimis Nitrogen Load Exemption*, respectively; or
2. The Nitrogen Sensitive Area is subject to a *De Minimis* Nitrogen Load Exemption and the facility is within the area covered by the exemption; or
3. The Nitrogen Sensitive Area is subject to a Watershed Permit, the facility is within the area covered by the permit, and:
 - a. The Watershed Permit to which the Nitrogen Sensitive Area is subject specifies that the five-year upgrade requirement has been suspended on the basis of permit conditions that ensure at least equivalent nitrogen reductions within the schedule included in the Watershed Permit; or, for Watershed Permits issued before promulgation of 314 CMR 21.00: *Massachusetts Watershed Permit Regulations*, the five-year upgrade requirement is suspended for each permittee's watershed area, unless and until the permit is revoked or terminated, in which case 310 CMR 15.215(2)(d) shall go into effect for each system in the watershed area of each permittee to whom the revocation or termination is applicable; and
 - b. The watershed permittee(s) is in compliance with the terms and conditions of the permit.

(b) New Construction. Beginning six months after the effective date of the Nitrogen Sensitive Area designation any systems serving New Construction shall incorporate Best Available Nitrogen Reducing Technology. The Department will suspend this requirement only if:

1. Except as otherwise provided in 310 CMR 15.215(2)(c)4. and 314 CMR 21.12(5), a Notice of Intent, a Watershed Permit application, or a *De Minimis* Nitrogen Load Exemption application is filed for the area during the Notice of Intent and Application Period pursuant to 310 CMR 15.215(2)(c), 314 CMR 21.03: *Application for a Watershed Permit*, or 314 CMR 21.12: *De Minimis Nitrogen Load Exemption*, respectively; or
2. The Nitrogen Sensitive Area is subject to a *De Minimis* Nitrogen Load Exemption and the facility is within the area covered by the exemption; or
3. The Nitrogen Sensitive Area is subject to a Watershed Permit and the New Construction is within the area covered by the permit and:
 - a. The Watershed Permit to which the Nitrogen Sensitive Area is subject specifies that the Best Available Nitrogen Reducing Technology incorporation requirement has been suspended on the basis of permit conditions that ensure nitrogen reductions will be sufficient to offset future additional nitrogen loads from newly constructed on-site systems; and
 - b. The watershed permittee(s) is in compliance with the terms and conditions of the Watershed Permit.

15.215: continued

(c) Notice of Intent and Application Period.

1. The filing of an application for a Watershed Permit or a *De Minimis* Nitrogen Load Exemption or a Notice of Intent to apply for a Watershed Permit during the Notice of Intent and Application Period by a party who could otherwise apply for such permit under 314 CMR 21.00: *Massachusetts Watershed Permit Regulations* will prevent commencement of the five-year time period in which Title 5 system upgrades would otherwise be required under 310 CMR 15.215(2)(a).

2. An application for a Watershed Permit or *De Minimis* Nitrogen Load exemption shall be filed pursuant to 314 CMR 21.03: *Application for a Watershed Permit* or 21.12: *De Minimis Nitrogen Load Exemption*, respectively. A Notice of Intent shall be filed on a form provided by the Department and shall include a proposed schedule with sufficient milestones to be approved by the Department for the filing of a Watershed Permit application and issuance of the permit as soon as practicable but no later than seven years from the applicable Nitrogen Sensitive Area designation under 310 CMR 15.214(1)(b).

3. Within 28 days of filing a Notice of Intent, a Watershed Permit application, or *De Minimis* Nitrogen Load Exemption application, the party who filed such notice or application must publish notice of its filing and any suspension of the Title 5 upgrade and New Construction requirements under 310 CMR 15.215(2)(a) and (b) in the forthcoming *Environmental Monitor*; on the party's official website; in the town hall where similar notices are published; and in a local or regional newspaper with the largest readership distribution within the area that may be affected by the Title 5 upgrade and New Construction requirements in 310 CMR 15.215(2)(a) and (b). In municipalities with Environmental Justice Populations where the preceding method for publishing public notice does not specifically serve the Environmental Justice Population(s), the party who filed the Notice of Intent or Watershed Permit application must publish the preceding notice in at least one additional news organization that primarily serves the Environmental Justice Population(s) within the area that may be affected by the designation. The public notice shall be translated into other languages that are prevalent in areas with persons of limited English proficiency.

4. A party's failure to comply with deadlines in a Watershed Permit application schedule in a Notice of Intent approved under 310 CMR 15.215(2)(c)2. will commence the New Construction requirements and five-year time period for mandatory upgrades to existing systems under 310 CMR 15.215(2)(a) and (b) upon issuance of notice from the Department to the noncompliant party. Within 28 days of issuing that notice to the noncompliant party, the Department shall publish notice in accordance with the notice publication provisions in 310 CMR 15.215(2)(c)3. that the Title 5 upgrade and New Construction requirements under 310 CMR 15.215(2)(a) and (b) have been invoked.

(d) Termination or Revocation of Watershed Permit or *De Minimis* Nitrogen Load Exemption. If a *De Minimis* Nitrogen Load Exemption or a Watershed Permit is terminated or revoked pursuant to 314 CMR 21.00: *Massachusetts Watershed Permit Regulations* for one or more permittees to the permit, any owner of an existing system or a system to serve New Construction in the designated Nitrogen Sensitive Area pertaining either to each permittee whose permit status is terminated or revoked or to the area that was covered by the *De Minimis* Nitrogen Load Exemption, as applicable, shall incorporate Best Available Nitrogen Reducing Technology, as follows:

1. For existing systems or those with a Disposal System Construction Permit for installation as of the date of the Watershed Permit or *De Minimis* Nitrogen Load Exemption termination or revocation, within five years of the date when the Notice of Intent and Application Period would have otherwise ended by its own terms or within two years of the date of termination or revocation of the Watershed Permit or *De Minimis* Nitrogen Load exemption (as applicable), whichever is longer.

2. New systems installed after the effective date of the Watershed Permit or *De Minimis* Nitrogen Load Exemption termination or revocation shall incorporate Best Available Nitrogen Reducing Technology.

(e) Notwithstanding 310 CMR 15.215(2)(a) through (d), the Department may extend any time limit contained in 310 CMR 15.215 for good cause including, but not limited to, an insufficient supply of necessary equipment or materials or unavailability of contractors.

15.215: continued

(f) Facility owners that install Best Available Nitrogen Reducing Technology pursuant to 310 CMR 15.215(2) shall not be required to upgrade to subsequent Best Available Nitrogen Reducing Technology unless the Approving Authority determines that: the system has failed and is required to be upgraded; there is an alteration to or change in use of the facility that is determined to be New Construction; or the system is failing to protect the public health, safety, and the environment.

(g) The Department will maintain and publish a list on its website of Best Available Nitrogen Reducing Technologies and nitrogen reducing technologies that have received general, provisional, or piloting approval pursuant to 310 CMR 15.285 through 15.288. The Department may allow the use of technologies that do not meet the Best Available Nitrogen Reducing Technology definition in the event of significant supply or market limitations. The Department may prohibit the use of a technology as Best Available Nitrogen Reducing Technology based on a technology's noncompliance with the performance standards established in the technology's approval.

(h) Facility owners that upgraded their system within ten years of the effective date of the Nitrogen Sensitive Area designation with Department-approved nitrogen removing technology are exempt from the individual system upgrade requirements in 310 CMR 15.215(2)(a) unless the Approving Authority determines that: the system has failed and is required to be upgraded; there is an alteration to or change in use of the facility that is determined to be New Construction; or the system is failing to protect the public health, safety, and the environment.

(i) A facility owner of a system(s), which pursuant to 310 CMR 15.006 serves an existing facility with a design flow of 10,000 gpd or greater but less than 15,000 gpd, shall upgrade the system(s) pursuant to 310 CMR 15.304 when the facility is in a location designated as a Nitrogen Sensitive Area pursuant to 310 CMR 15.214.

(3) The owner of a system serving New Construction in a Nitrogen Sensitive Area designated in both 310 CMR 15.214(1)(a) and (1)(b) shall comply with the requirements of 310 CMR 15.215(2).

(4) The owner of a system or proposed system shall ascertain whether the facility is in a designated Nitrogen Sensitive Area. The Department will prepare and make available on the Department's website maps portraying designated Nitrogen Sensitive Areas within the Commonwealth. Prior to any transfer of title for property where the facility is located, the transferor shall disclose to the transferee and Board of Health whether the facility is subject to an upgrade requiring Best Available Nitrogen Reducing Technology pursuant to 310 CMR 15.215.

15.216: Aggregate Determinations of Flows and Nitrogen Loadings

(1) The 440 gallons per day per acre nitrogen loading limitation imposed by 310 CMR 15.215(1) may be calculated in the aggregate by using nitrogen credit land in accordance with an approved Facility Aggregation Plan or Community Aggregation Plan. Applicants proposing systems to be located within a community or region covered by a Community Aggregation Plan approved by the Department shall calculate aggregate determinations of flows and nitrogen loadings in accordance with the Plan and the Department's *Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading*. All other applicants seeking aggregate determination of flows and nitrogen loading shall prepare a Facility Aggregation Plan in accordance with 310 CMR 15.216 and the Department's *Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading*.

15.216: continued

- (2) To qualify as Nitrogen Credit Land, the land must:
- (a) be within the same Nitrogen Sensitive Area as the facility if the facility is in a Nitrogen Sensitive Area;
 - (b) be within the same subdivision in an area where the use of both on-site systems and drinking water wells are proposed to serve the facility;
 - (c) not have any manmade sources of nitrogen, including, but not limited to, wastewater discharges and nitrogen based fertilizer located thereon;
 - (d) not be used for raising, breeding or keeping of animals;
 - (e) be pervious;
 - (f) be outside of Zone As, Velocity Zones and Regulatory Floodways;
 - (g) not be covered by any surface water body including, but not limited to, a river, stream, lake, pond, or ocean;
 - (h) not be currently designated as nitrogen credit land; and
 - (i) meet the criteria set forth in the Department's *Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading*.
- (3) Land located within a Zone I of a public water supply well may be used as nitrogen credit land unless the well is determined to be at risk in accordance with the Department's "Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading" or the proposed design flow is 2,000 gallons per day or greater.
- (4) Community Aggregation Plans.
- (a) A city or town may seek Department approval for aggregate determination of flows and nitrogen loading across a region wide area such as, but not limited to, a Zone II of a public water supply well. Department approval of a Community Aggregation Plan may authorize the local Approving Authority to approve site specific facility aggregation plans in accordance with the approved Community Aggregation Plan.
 - (b) The Department may approve a Community Aggregation Plan provided that the following conditions are met:
 1. the local Approving Authority has approved the Plan;
 2. the Plan contains a mechanism to protect surface and ground water supplies within the community or region from pollutant and nitrogen loading and a proposed mechanism for implementing the Plan;
 3. the Plan meets the criteria in the Department's "Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading;"
 4. for areas that include a Zone II, the Plan includes a nitrate loading analysis and nitrate management plan as specified in 310 CMR 22.21(2)(d); and
 5. any other conditions that the Department deems appropriate.
- (5) Facility Aggregation Plans. The Approving Authority may approve a Facility Aggregation Plan provided that the following conditions are met:
- (a) The proposed facility meets the criteria in the Department's *Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading*,
 - (b) the design flow of 440 gallons per day per acre equivalency across the facility and other land areas for which nitrogen credit is sought, but not necessarily on every individual acre, will be met through recorded land use restrictions that restrict nitrogen loading on facility land and nitrogen credit land. These land use restrictions must be substantially identical to those contained in the Department's *Guidelines for Title 5 Aggregation of Flows and Nitrogen Loading*, run in perpetuity, be approved by the respective land owners, run to the benefit of the municipality acting by and through the Local Approving Authority and, in the case of nitrogen credit land, also run to the benefit of the facility land. The applicant shall record or register such restrictions and easements in the appropriate Registry of Deeds or Land Registration Office within 30 days of approval of the plan; and
 - (c) any other conditions that the Approving Authority deems appropriate.

15.217: Systems with Enhanced Nitrogen Removal

(1) The nitrogen loading limitations established in 310 CMR 15.215(1) shall not apply to discharge of an effluent meeting the federal Safe Drinking Water Act nitrate standard of 10 ppm through either an approved alternative system or a treatment works with a groundwater discharge permit issued pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program*.

(2) For systems located in a Nitrogen Sensitive Area designated pursuant to 310 CMR 15.214(1)(a), an increase in calculated allowable nutrient loading per acre may be allowed with the use of a technology approved for enhanced nutrient removal pursuant to either the piloting, provisional or general use certification provisions in 310 CMR 15.281 through 15.288 as illustrated by the following example: Recirculating Sand Filter 550 gpd/acre

(3) In the event that the Department determines that a system approved for enhanced nutrient removal using a technology approved by the Department on a piloting or provisional basis pursuant to 310 CMR 15.285 and 15.286 respectively is not performing in accordance with the approval, the Department or the Local Approving Authority may require the system owner to instead use an enhanced nutrient removal technology that has been certified for general use by the Department. The increased design flow allowed reflects the nutrient removal performance of the approved technology compared to a standard system otherwise described in 310 CMR 15.100 through 15.255. A system receiving a design flow credit for enhanced nutrient removal pursuant to 310 CMR 15.217 must still comply with the requirements of 310 CMR 15.100 through 15.293 with respect to system siting and design; the credit does not affect any other siting or design requirement.

15.220: Preparation of Plans and Specifications

The plans and specifications for every on-site system shall be prepared as follows:

(1) Every system shall be designed by a Massachusetts Registered Professional Engineer or a Massachusetts Registered Sanitarian provided that a Registered Sanitarian shall not design a system to discharge more than 2,000 gallons per day pursuant to 310 CMR 15.203. Any other agent of the owner may prepare plans for the repair of one or more components, excluding the soil absorption system, of a system designed to discharge not more than 2,000 gallons per day pursuant to 310 CMR 15.203 provided the plans are reviewed and stamped by a Massachusetts Registered Sanitarian or Massachusetts Registered Professional Engineer and approved by the Approving Authority.

(2) Every plan submitted for approval must be dated and bear the stamp and signature of the designer. At least one copy submitted shall bear the original stamp and signature of the designer.

(3) Every plan for a new system or plan for the upgrade or expansion of an existing system which requires a variance to a property line setback distance, must also reference a plan which bears the stamp and signature of a Massachusetts Licensed Land Surveyor in accordance with M.G.L. c. 112, § 81D;

(4) Every plan for a system shall be of suitable scale (one inch = 40 feet or fewer for plot plans and one inch = 20 feet or fewer for details of system components) and shall include depiction of:

- (a) the legal boundaries of the facility to be served;
- (b) the holder and location of any easements appurtenant to or which could impact the system;
- (c) the location of all dwelling(s) and building(s) existing and proposed on the facility and identification of those to be served by the system;
- (d) the location of existing or proposed impervious areas, including driveways and parking areas;
- (e) location and dimensions of the system (including reserve area);
- (f) system design calculations, including design daily sewage flow, septic tank capacity (required and provided); soil absorption system capacity (required and provided); and whether system is designed for garbage grinder;
- (g) North arrow and existing and proposed contours;

15.220: continued

- (h) location and log of deep observation hole tests including the date of test, existing grade elevations marked on each test, and the names of the representative of the Approving Authority and soil evaluator;
- (i) location and results of percolation tests including the date of test and the names of the representative of the Approving Authority and soil evaluator;
- (j) name and approval date of the Soil Evaluator of record;
- (k) location of every water supply, public and private,
 1. within 400 feet of the proposed system location in the case of surface water supplies and gravel packed public water supply wells,
 2. within 250 feet of the proposed system location in the case of tubular public water supply wells, and
 3. within 150 feet of the proposed system location in the case of private water supply wells;
- (l) any surface waters of the Commonwealth, Zone As, rivers, bordering vegetated wetlands, salt marshes, inland or coastal banks, regulatory floodway, velocity zone, surface water supplies, tributaries to surface water supplies, certified vernal pools, private water supplies or suction lines, gravel packed or tubular public water supply wells, and subsurface drains located up to 100 feet beyond the setback distances in 310 CMR 15.211, any leaching catch basins and dry wells located up to 25 feet beyond the setback distances in 310 CMR 15.211; and the location of any nitrogen sensitive area identified in 310 CMR 15.214 within which any portion of the facility or the proposed system is located as well as any nitrogen sensitive area up to 100 feet beyond any property line of the facility.
- (m) location of water lines and other subsurface utilities on the facility;
- (n) observed and adjusted ground-water elevation in the vicinity of the system;
- (o) a complete profile of the system;
- (p) a note on the plan listing all variances to the provisions of 310 CMR 15.000 sought in conjunction with the plan;
- (q) the location and elevation of one benchmark within 50 to 75 feet of the system components which is not subject to dislocation or loss during construction on the facility;
- (r) when pressure distribution or dosing is proposed, complete design and specifications of the distribution system proposed including but not limited to dosing chamber capacity (required and provided), pump curves and specifications, number of dosing cycles and depth per cycle;
- (s) when a Recirculating Sand Filter or equivalent alternative technology is required or proposed, a complete plan and specifications for the system, including a hydraulic profile;
- (t) a locus plan to show the location of the facility including the nearest existing street;
- (u) the street number and lot number, if any, and the tax map number and lot number, if any, of the facility; and
- (v) the materials of construction and the specifications of the system.

15.221: General Construction Requirements for All System Components

- (1) All tanks, including septic tanks, distribution boxes, pump chambers, dosing chambers and grease traps, shall be either:
 - (a) watertight through manufacturer's specification and warranty; or
 - (b) made watertight by the manufacturer, equipment supplier or installer using asphalt or synthetic polymer sealer specified by the concrete or synthetic material manufacturer.
- (2) Septic tanks, grease traps, pump chambers, dosing chambers and distribution boxes shall be constructed or set level and true to grade on a level stable base which has been mechanically compacted. If the component is placed in fill, proper compaction is required to ensure stability and to prevent settling; native ground with a six inch aggregate base is otherwise adequate.
- (3) Septic tanks, grease traps, pump chambers and dosing chambers shall be equipped with a watertight access manhole(s) with a minimum diameter of 20 inches and constructed of durable material.
- (4) All system components shall be constructed of corrosion resistant materials.

15.221: continued

- (5) All piping shall be a minimum of SDR 35 PVC in areas not subject to automobile or heavy equipment traffic. In areas where such traffic exists or is anticipated, Schedule 40 PVC, or an equivalent standard approved by the Department, shall be used.
- (6) All pressurized pipes shall be designed and installed to meet the following requirements:
 - (a) to prevent freezing by being installed below the frost line, by being adequately insulated if installed above the frost line, or be self-draining;
 - (b) to specify the appropriate class or schedule of pipe to withstand maximum pressure and/or anticipated vehicular loads; and
 - (c) to specify appropriate thrust blocking at all angles, bends, branches, plugs and wherever else necessary to prevent disruption of proper functioning of the line.
- (7) The top of all system components, including the septic tank, distribution box, pump chamber, dosing chamber and soil absorption system, shall be installed no more than 36" below finish grade.
- (8) Where any portion of any component is to be placed at or below the ground-water table, all system tankage, including the septic tank, distribution box, pump chamber or grease trap, shall be designed with counter weights, anchors or ballast and a buoyancy calculation for the entire volume of each component, when empty, shall be performed and submitted with the system plans and specifications.
- (9) Recirculating sand filters or equivalent technology shall be used in accordance with the provisions of 310 CMR 15.202 and Department guidance.
- (10) Except as provided in 310 CMR 15.232(3), all pipes connecting system components shall be designed to provide a minimum flow velocity of two feet per second when flowing full.
- (11) All septic tanks, tight tanks, pump chambers, dosing chambers and grease traps shall be watertight.
- (12) All system components shall be marked with magnetic marking tape or a comparable means in order to locate them once buried.
- (13) For septic tanks and d-boxes equipped with risers, the risers shall be no deeper than six inches below ground surface.

15.222: Building Sewers

- (1) The building sewer shall be sufficient to serve the connected fixtures. In no case shall the building sewer be less than four inches in diameter.
- (2) The minimum distance between a building sewer, and a private water supply well or suction line shall be ten feet.
- (3) The building sewer shall be constructed of corrosion resistant material and equipped with water tight joints; cast-iron, schedule 40 PVC pipe or the equivalent.
- (4) All pipe joints of the building sewer shall be made water-tight and protected against damage by roots. Poured-type joints shall be properly wiped on the inside to eliminate obstruction of flow.
- (5) The building sewer shall be laid on a compacted firm base.
- (6) The building sewer shall be designed to provide a minimum velocity of sewage flow of two feet per second when flowing full. This requirement is met when a four-inch building sewer is laid at a slope of not less than 0.01 (1/8 inch per foot). A slope of 0.02 (1/4 inch per foot) is preferable.

15.222: continued

(7) The building sewer shall be laid on a continuous grade and as nearly as possible in a straight line in accordance with accepted engineering practice.

(8) Manholes, with metal frames and covers at grade, sweeping bends, or a cleanout accessible at the surface of the ground, shall be provided at the junction of two or more sewers, at all changes in direction or a change in grade of the sewers, and at intervals no greater than 100 feet. All gravity sewer manholes shall have an open channel depth equal to or greater than the diameter of the inlet sewer and the change of direction in each manhole shall not exceed 90°. (Change of direction is the interior angle between the new direction of flow and the projected extension of the original direction of flow.)

(9) The building sewer shall be vented through the vent stack or main vent of the building served by it. No trap shall be installed in the building sewer or building drain.

(10) All building sewers shall be constructed in accordance with the State Plumbing Code, 248 CMR 2.00.

15.223: Septic Tanks

(1) Septic tanks shall have the following capacities:

(a) For a single family dwelling unit with a design flow of less than 1,000 gallons per day, a minimum effective liquid capacity of 200% of the design flow or a minimum hydraulic detention flow of 48 hours, whichever is greater, shall be required. In no case shall the effective liquid capacity of the tank as measured below the outlet invert elevation be less than 1,500 gallons.

(b) When designed to serve facilities other than a single family dwelling unit or whenever the calculated design flow is 1,000 gallons per day or greater, a two compartment tank or two tanks in series are required. The design of the tanks shall be in accordance with 310 CMR 15.224 for multiple compartment tanks and 310 CMR 15.225 for tanks in series. At a minimum, the total, combined effective liquid capacity of both tanks in series or of the multiple compartment tank shall not be less than 1,500 gallons.

(c) When a domestic garbage grinder is proposed or installed, the minimum liquid capacity of the septic tank shall be 200% of the design flow with a minimum tank size of 1,500 gallons and a two compartment tank or two tanks in series shall be required which meet the design criteria specified in 310 CMR 15.223(1)(b). Domestic garbage grinders are prohibited in facilities which include an elevated septic tank constructed in accordance with 310 CMR 15.213 (construction in V-zones).

(2) The liquid depth of the tank, measured from the outlet tee invert to the tank bottom, shall be a minimum of four feet. A tank with a minimum depth of three feet below the outlet tee invert may be permitted only for upgrade of existing nonconforming or failed systems, pursuant to 310 CMR 15.405 (local upgrade approvals), where installation of a tank with a four foot liquid depth is not feasible and shall be pumped on an annual basis with the results submitted to the Approving Authority.

(3) Tanks which are rectangular in cross-section shall have a minimum inside length to width ratio of no less than 1.5 to 1. Round tanks may be allowed. The inside length of all tanks, measured from the inlet tee to the outlet tee, shall be a minimum of six feet. The inside width of the tank shall be a minimum of three feet. Larger length to width ratios are preferred.

(4) Vertical cylindrical tanks shall have a minimum diameter of five feet.

(5) Horizontal cylindrical tanks shall have a minimum length of six feet and a minimum width at the liquid surface of three feet.

15.224: Multiple Compartment Tanks

Tanks with multiple compartments shall be required as specified in 310 CMR 15.223(1). When multiple compartment tanks are used the following shall be required:

15.224: continued

- (1) The number of compartments shall not exceed two;
- (2) The first compartment shall be sized for a minimum hydraulic detention time of 48 hours based on the design flow;
- (3) The second compartment shall be sized for a minimum hydraulic detention time of 24 hours based on the design flow;
- (4) The compartments shall be interconnected by a minimum four inch vented, inverted U-shaped pipe which extends below the bottom of the scum layer; and
- (5) The outlet tee of each compartment shall be equipped with a corrosion resistant gas baffle or a Department approved effluent tee filter.

15.225: Tanks in Series

Tanks in series may be approved to satisfy the requirements of 310 CMR 15.224 provided that:

- (a) the number of tanks does not exceed two; and
- (b) the design criteria of each tank corresponds to the requirements for compartmental tanks in 310 CMR 15.224.

15.226: Construction of Septic Tanks

(1) Septic tanks shall be constructed of sound and durable watertight materials not subject to excessive corrosion, decay, or frost damage, or cracking or buckling due to settlement or backfilling. Septic tanks may be constructed of the following materials:

- (a) poured-in-place concrete;
- (b) precast reinforced concrete;
- (c) fiberglass reinforced plastic;
- (d) polyethylene; or
- (e) other materials as approved in writing by the Department.
- (f) metal septic tanks are prohibited.

(2) Tank construction materials shall meet the following minimum specifications or an ASTM equivalent standard:

- (a) Concrete
 1. Concrete Strength f_c 4,000 PSI @ 28 days. Density 140 PCF
 2. Cement, Portland Type I or III per ASTM C150-96
 3. Admixtures per ASTM C233-95
 4. Reinforcing per ASTM A615 for wire fabric. Grade 40/60 R'd or equivalent.
 5. Design loading H-10
 6. Minimum wall thickness: four inches; three inch thickness is allowable if reinforced.
 7. The tank shall be watertight.
- (b) Fiberglass Reinforced Plastic.
 1. Unless otherwise indicated, plastics terminology is in accordance with the definitions given in the most recent edition of ASTM D 883 or equivalent method.
 2. Fiberglass reinforced plastic (FRP) tanks shall be made of a chemical resistant grade of polyester resin reinforced with a suitable grade of glass fiber (E glass) treated with a coupling agent that will provide a compatible bond between the resin and the glass. Glass fiber surfacing materials, if used, shall be of a chemical resistant glass (C glass) bonded with a suitable binder.
 3. The resins shall not contain fillers except as required for viscosity control. Up to 2% by weight of the total resin content of thixotropic agent that will not interfere with visual inspection may be added to the resin for viscosity control.
 4. The tank shall be constructed as a laminate consisting of the following:
 - a. Primary chemical resistant surface between 0.13 and 0.30 mm of a reinforced resin rich surface.

15.226: continued

- b. Internal wicking barrier shall be not less than 2.5 mm of chemical resistant laminate next to the inner surface and reinforced by not less than 20% and not more than 30% by weight of mat and chopped strand.
 - c. Structural layer of chemically resistant construction of minimum ¼ inch thickness meeting a tensile strength of a minimum of 12,000 psi when tested in accordance with the most recent edition of ASTM D-638. It shall meet a flexural strength minimum of 19,000 psi and flexural modulus of elasticity of 800,000 psi both of which tested in accordance with the most recent edition of D-790.
 - d. External wicking barrier as in 310 CMR 15.226(2)(b)4.b.
 - e. Exterior surface layer between 0.13 and 0.30 inch thick consisting of resin. No glass fibers are allowed in this layer.
5. All cut edges shall be treated and shall be coated with resin so that no glass fibers are exposed and all voids are filled. Structural elements having edges exposed to the chemical environment shall be made with chopped strand glass reinforcement only.
 6. The tank laminate shall have a Barcol Hardness of at least the manufacturers minimum specified hardness for cured resins when tested in accordance with the most recent edition of ASTM D-2583.
 7. The tank shall be free from visual defects. The most recent edition of ASTM D-2563 visual acceptance level 3 shall be the minimum standard for acceptance.
 8. The tank shall be watertight.

(c) Polyethylene.

1. The polyethylene used shall be Type II or III and category three per the most recent edition of ASTM D-1248, Class B (requiring an ultraviolet stabilizer) or Class C (requiring a minimum of 1% carbon black), and shall have a stress crack resistance of 150 hours, Condition C (20% failure rate) when measured in accordance with the most recent edition of ASTM D-1693 and ASTM-638 with a value of equal to or greater than 2400 psi; ASTM-790, with a flexural modulus of elasticity equal to or greater than 85,000 psi.
2. Wall thickness of the sides, top and bottom shall be a minimum of ¼ inch. The thickness of the inlet and outlet ends shall be at least ¼ inch and the thickness of internal walls shall be at least 3/16 inches.
3. The tank shall be watertight.

(3) Tanks, covers, connections and piping shall be designed and constructed so as to withstand an anticipated minimum H-10 loading. Any tank installed in a location where there is the potential for vehicles or heavy equipment to pass over it shall be designed to withstand an H-20 loading.

(4) Septic tanks shall be manufactured in accordance with a quality control/quality assurance program. The program for concrete tanks shall be in conformity with ASTM standard C 1227-96 or an ASTM equivalent standard. Concrete tanks shall be embossed with a seal stating that this ASTM standard has been met.

15.227: Placement and Construction of Tees

(1) Inlet and outlet tees shall be Schedule 40 PVC and shall extend a minimum of six inches above the flow line of the septic tank and be on the center line of the septic tank located directly under the clean-out manhole. Transverse flow baffles shall not be used as substitutes for inlet or outlet tees.

(2) The minimum separation between inlet and outlet tees shall be no less than the liquid depth of the septic tank and shall be the longest direction (which shall not include the diagonal distance) across the tank in plan view.

(3) Inlet and outlet tees to rectangular tanks shall be set in the end walls or into a side wall within 12 inches of the end wall. For circular tanks, the inlet and outlet tees shall be set and stabilized on opposite ends of a diameter of the tank.

15.227: continued

(4) There shall be an air space of at least three inches between the tops of the tees and the inside of the tank cover. The tops of the tees shall be left open to provide ventilation or separate ventilation shall be provided. All outlet tees shall be equipped with a gas baffle or a Department approved effluent tee filter.

(5) The inlet pipe elevation shall be no less than two inches nor more than three inches above the invert elevation of the outlet pipe. The inlet and outlet invert elevations shall be at least 12 inches above the high groundwater elevation. If high groundwater (redoximorphic features) is determined by soil evaluation in accordance with 310 CMR 15.100 through 15.107 at the proposed location of the septic tank, the Approving Authority may reduce the 12 inch required separation, but in no cases shall it be reduced to less than one inch above high groundwater as determined by redoximorphic features.

(6) The inlet tee shall extend a minimum of ten inches below the flow line. The outlet shall be provided with a tee extending below the flow line in accordance with the following table:

Liquid Depth in Septic Tank	Depth of Outlet Tee below Flow Line
4 feet	14 inches
5 feet	19 inches
6 feet	24 inches
7 feet	29 inches
8 feet	34 inches

(7) Effluent tee filters may be installed in *lieu* of outlet tees provided that they are installed in accordance with the manufacturer's specifications, include an appropriate outlet cover at grade, and are inspected and cleaned at least on an annual basis.

15.228: Placement and Accessibility of Septic Tank

(1) Septic tanks shall be installed level and true to grade on a level stable base that has been mechanically compacted and on to which six inches of crushed stone has been placed to minimize uneven settling. If the septic tank is placed in fill, proper compaction is required to ensure stability and to prevent settling. Septic tanks shall have a minimum cover of nine inches. Systems buried greater than nine inches below grade must be equipped with risers on all tank top openings and the distribution box.

(2) At least three manholes with readily removable impermeable covers of durable material shall be provided. The manholes over the inlet and outlet tees shall have a minimum opening of 20 inches and the center manhole shall have a minimum opening of eight inches. By July 1, 2007, manufacturers of fiberglass and polyethylene tanks shall comply with the center hole requirement. Access ports shall be placed at the center and over each inlet and outlet tee. For compartmental tanks, the center manhole shall be placed as access to the compartment connection. Inlet and outlet tees shall be made accessible for inspection and maintenance by providing precast concrete or equivalent watertight risers (with steps where appropriate) with covers over the access ports to within six inches of finish grade for system designs in excess of 1,000 gpd. For system designs of 1,000 gpd or less, at least one access port shall be accessible within six inches of final grade. Manholes brought to final grade shall be secured to prevent unauthorized access.

(3) Septic tanks shall be accessible for inspection and maintenance. No structures shall be located directly upon or above the septic tank access locations which interfere with performance, access, inspection, pumping, or repair.

(4) Septic tanks shall be inspected and maintained in accordance with 310 CMR 15.300 and applicable local requirements.

15.229: Pumping to Septic Tanks

(1) System designs specifying pumping of sewage to a septic tank may be approved by the Approving Authority for a single family dwelling provided that the volume of sewage pumped is less than 25% of the design flow of the system, the pump discharge pipe is connected to the building sewer and:

- (a) where a sewage ejector pump (non-grinder pump) is used, the discharge flow rate shall be fewer than 60 gallons per minute at the design total dynamic head (TDH) and capable of passing a two-inch diameter solid, and the septic tank shall have a minimum effective volume of 1,500 gallons; or
- (b) where a grinder pump is used, the discharge flow rate shall comply with the discharge capacity specified in the State Plumbing Code for sump and ejector pumps in sanitary drainage systems, and the septic tank shall either be a multi-compartment tank or two tanks in series.

(2) It is not recommended to pump greater than 25% of the design flow of the system to a septic tank; however, when necessary system designs specifying pumping of sewage to a septic tank may be approved by the Approving Authority for a single family dwelling discharging a volume of sewage greater than 25% of the design flow of the system, provided the pump discharge pipe is connected to the building sewer and:

- (a) the requirements of 310 CMR 15.229(1)(a) or 15.229(1)(b) are met;
 - (b) the building sewer discharges to a multi-compartment septic tank or two tanks in series designed in accordance with 310 CMR 15.223 and 15.224; and
 - (c) standby power, a hookup for standby power or storage capacity in the pump chamber equal to at least the volume of the design flow for one day is provided.
- Non-grinder pumps are the preferred alternative.

(3) All other uses of sewage pumps prior to the septic tank without the prior written approval of the Approving Authority are prohibited.

15.230: Pretreatment Units - Grease Traps

(1) Grease traps shall be provided for kitchen flows at restaurants, nursing homes, schools, hospitals and other facilities from which grease can be expected to be discharged.

(2) Grease traps shall be installed on a separate building sewer serving kitchen flows into which the grease will be discharged. The discharge from the grease trap must flow to a properly designed septic tank or to a building sewer prior to the septic tank.

(3) Grease traps shall have a minimum depth of four feet and a minimum capacity of 1,000 gallons, and shall have sufficient capacity to provide at least a 24-hour detention period for the kitchen flow. Kitchen flow shall be calculated in accordance with 310 CMR 15.203.

(4) Grease traps shall be watertight and constructed of the materials specified in 310 CMR 15.221 and 15.226(1) and (2).

(5) The inlet tee shall extend to the mid depth of the tank. The outlet tee shall extend to within 12 inches of the bottom of the tank. Tees shall be Schedule 40 PVC and properly supported by a hanger, strap or other device.

(6) Grease traps shall be installed on a level stable base that has been mechanically compacted and onto which six inches of crushed stone has been placed to minimize uneven settling.

(7) Grease traps shall be provided with a minimum 20-inch diameter manhole frame and cover to grade over the inlet and outlet tees.

(8) Grease traps shall be accessible for inspection and maintenance. No structures shall be constructed directly upon or above the grease trap access locations.

(9) The invert elevation of the inlet of a grease trap shall be at least two inches above the invert elevation of the outlet. The inlet and outlet shall be located at the center line of the tank, and at least 12 inches above the high groundwater elevation.

15.230: continued

- (10) Backfill around the grease trap shall be placed in such a manner as to prevent damage to the tank.
- (11) Grease traps shall be maintained in accordance with 310 CMR 15.351.
- (12) Grease removal by other devices located within the building as part of the internal plumbing are not within the jurisdiction of 310 CMR 15.000, shall not be considered for compliance with 310 CMR 15.230 and shall comply with the State Plumbing Code. Grease removal devices located outside of the building, other than those in compliance with 310 CMR 15.230, require the prior written approval of the Department.
- (13) The Approving Authority may require that alarms and/or remote monitoring devices be installed and connected to grease traps.

15.231: Dosing Chambers and Pumps

- (1) A dosing chamber shall be required for any system that is not designed to discharge by gravity to the soil absorption system, for any system that is designed for the intermittent discharge of septic tank or recirculating sand filter effluent, and in conjunction with pressure distribution pursuant to 310 CMR 15.254(2) for any system with either a design flow of 2,000 gpd or greater, or where multiple soil absorption systems are proposed.
- (2) All dosing chambers shall have an emergency storage capacity above the working level equal to the daily design flow of the system, or standby power, and shall be equipped with sensors and alarms to protect against high water due to failure of the pump or pump controls. It is advisable to provide some emergency storage even if an on-site emergency generator is provided. The volume below the working level shall include an allowance for the volume of all drainage which may flow back to the chamber when pumping has ceased.
- (3) The volume of the dosing chamber between pump operating levels shall be adequate to assure the entire soil absorption system is dosed each cycle in accordance with the required number of cycles per day.
- (4) Construction and materials of dosing chambers shall be in accordance with 310 CMR 15.221 and 15.226.
- (5) All dosing chambers shall be designed and constructed to withstand a minimum H-10 loading. Any dosing chamber installed where there is the potential for vehicles or heavy equipment to pass over it shall be designed to withstand an H-20 loading. Dosing chambers shall be equipped with one manhole with a minimum opening of 20 inches with a readily removable watertight cover of durable material. The access cover shall be located at final grade.
- (6) Every dosing chamber, except for systems serving two dwelling units or less, shall be equipped with two pumps the discharge lines of which shall be valved to allow dosing of the entire soil absorption system by either pump.
- (7) Pumps shall be installed in accordance with the manufacturers and the designer's specifications.
- (8) Pumps shall operate in the following sequence:
 - (a) pumps off
 - (b) primary (lead) pump on
 - (c) backup (lag) pump on and alarm on
 - (d) pumps must alternate.
- (9) All pumps must be equipped with a high water level alarm located in the building served which is powered by a circuit separate from the circuit to the pumps.

15.231: continued

- (10) An effluent tee filter or equivalent technology approved by the Department is required prior to or within a dosing chamber.
- (11) All dosing chambers shall be watertight.
- (12) All dosing chambers proposed to provide standby power instead of emergency storage capacity shall include a permanently installed on-site emergency generator that shall automatically switch on in the event of power failure.

15.232: Distribution Boxes

- (1) For all gravity flow distribution systems, a water tight distribution box designed to provide equal distribution of septic tank effluent to the distribution lines of the soil absorption system shall be provided between the septic tank and soil absorption system.
- (2) Construction of the distribution box shall be in conformance with the provisions of 310 CMR 15.221 (general construction requirements) and 15.226 (septic tank construction), with the following exceptions:
 - (a) The distribution box may be constructed of plastic or other materials approved by the Department if it is installed level and true to grade on a level stable base that has been mechanically compacted and onto which six inches of crushed stone has been placed to minimize uneven settling or on a concrete pad which is at least six inches in thickness and 1.5 times the bottom surface area of the distribution box.
 - (b) The minimum inside dimension of the distribution box, regardless of material, shall be 12 inches.
 - (c) The minimum wall thickness for reinforced concrete shall be two inches.
- (3) The distribution box shall conform to the following design specifications:
 - (a) When the soil absorption system is to be dosed or the slope of the inlet pipe exceeds 0.08 feet per foot, an inlet tee, baffle or splash plate extending to one inch above the outlet invert elevation shall be provided to dissipate the velocity of the influent.
 - (b) The invert elevation of all outlets shall be equal to each other and located at least two inches below the invert elevation of the inlet. The distribution lines leading from the distribution box shall all have the same invert elevation as determined by flooding the distribution box to the height of the distribution line invert after all lines have been sealed in place. If all inverts are not the same elevation, they shall be adjusted by filling with durable and non-deformable material permanently fastened to the line or reconstructing the lines until all inverts are at the same elevation.
 - (c) Outlet distribution lines shall be level for a minimum of the first two feet of their length. There shall be at least one outlet for each effluent distribution line.
 - (d) Every distribution box shall have a water tight cover or in the case of systems with a design flow greater than 2,000 gpd, water tight manhole with cover.
 - (e) Every distribution box shall have a minimum sump of six inches as measured below the outlet invert elevation.
 - (f) Distribution boxes buried greater than nine inches below grade shall be equipped with risers.

15.233: Siphons

The use of siphons for on-site systems, including shared systems, is prohibited.

15.240: Soil Absorption Systems

- (1) On-site subsurface sewage disposal systems shall be located in an area where there is at least a four foot depth of naturally occurring pervious soil below the entire area of the soil absorption area and reserve area unless a variance is issued in accordance with the provisions of 310 CMR 15.415(2). The four foot stratum must be free of impervious and unsuitable materials.

15.240: continued

- (2) Effluent from any component of an on-site sewage disposal system shall not be disposed of by direct discharge to any waters of the Commonwealth, unless in compliance with a permit issued pursuant to 314 CMR 3.00 (surface water permitting) or 314 CMR 5.00 (groundwater permitting).
- (3) Soil absorption systems shall be designed as an integral part of the system. Septic tank effluent is to be distributed throughout the soil absorption system by means of effluent distribution lines so that the effluent can migrate through the underlying soil column under unsaturated flow conditions. All soil absorption systems shall achieve the following objectives of the soil treatment process:
 - (a) maximum stabilization of organic wastes in the effluent;
 - (b) removal of pathogenic organisms, nutrients, and particulates;
 - (c) recharge of the ground-water table with adequately treated effluent with minimal attendant pollution of the groundwater; and
 - (d) disposal of the effluent without discharge to the ground surface or the creation of any nuisance.
- (4) The minimum area for the design of a soil absorption system shall be determined by the results of the site evaluation set forth in 310 CMR 15.100 through 15.107 and in accordance with the appropriate long-term acceptance rate criteria specified in 310 CMR 15.242 (effluent loading rates). Area requirements increase by 50% when garbage grinders are installed and the system shall be upgraded to meet such requirements prior to the installation of a garbage grinder.
- (5) All soil absorption systems designed to serve single family dwellings, including but not limited to single family condominiums and cooperatives, shall be designed to serve a minimum of three bedrooms, unless a deed restriction limiting use to two bedrooms is granted to the local Approving Authority.
- (6) Absorption trenches should be used whenever possible.
- (7) No driveway, parking or turning area or other impervious area shall be located above a soil absorption system, except where restrictions on the use of the land make it unavoidable. In such cases, the soil absorption system shall be vented to the atmosphere in accordance with 310 CMR 15.241.
- (8) The bottom of each soil absorption system shall be excavated to a level grade. If the removal of stones or boulders is required, creating localized depressions, filling to grade with the excavated naturally occurring pervious soil or material in compliance with 310 CMR 15.255 is acceptable.
- (9) The soil placed as backfill over the soil absorption system shall be a minimum of nine inches, excluding topsoil, placed in lifts and sufficiently compacted to prevent depressions due to settling which may intercept or collect surface water runoff above the system. Backfill must be clean and free of stones and boulders greater than six inches in size. Tailings, clay or similar materials are prohibited.
- (10) Final cover above the system shall be stabilized and graded to reduce infiltration of surface water and minimize erosion. Finish grade shall have a minimum slope of 0.02 feet per foot.
- (11) Surface drainage shall be directed away from the soil absorption system.
- (12) For systems with a design flow of 2,000 gpd or greater, the separation distance to the high groundwater elevation required by 310 CMR 15.212 shall be determined by adding the effect of groundwater mounding to the high groundwater elevation as determined pursuant to 310 CMR 15.103(3).

15.240: continued

(13) All soil absorption systems shall have a minimum of one inspection port consisting of a perforated four inch pipe placed vertically down into the stone to the naturally occurring soil or sand fill below the stone. The pipe shall be capped with a screw type cap and accessible to within three inches of finish grade.

15.241: System Venting

Systems to be located either in whole or in part under driveways, parking or turning areas or other areas of impervious material shall be designed to achieve proper venting of the system according to the following criteria:

- (a) the disposal area distribution system shall be piped to the atmosphere using the same diameter pipe as the distribution system;
- (b) the vent pipe shall be designed to prevent entrance of animals or precipitation and shall be backfilled tightly to prevent seepage of surface water into the system;
- (c) the vent pipe shall be located beyond the limit of the impervious area subject to vehicular traffic;
- (d) where trenches, fields or beds are used, the end of each distribution lateral shall be connected to one or more vent(s);
- (e) where pits are used, the vent shall extend under the cover of the pit; and
- (f) the riser and above ground components of the vent shall be constructed of durable, non-corrosive materials.

15.242: LTAR - Effluent Loading Rates

(1) The effluent loading rates set forth below are adjusted to account for the long term acceptance rate (LTAR) of the proposed soil absorption system. The LTAR is limited in large part by both the texture of the most hydraulically restrictive soil layer included within the four-foot zone beneath the proposed soil absorption system and the formation of a biomat based on the strength of effluent applied to the soil. As such the effluent loading rates have been based on the strength of typical settled sanitary sewage and may be adjusted proportionately downward if the proposed effluent strength is determined by the local Approving Authority or the Department to exceed that of typical sanitary sewage. Soil textural classes and soil types comprising the classes are defined in 310 CMR 15.243 and 310 CMR 15.244 based upon the general soil classification used by the U.S. Department of Agriculture.

- (a) The following effluent loading rates apply:

EFFLUENT LOADING RATE gpd/sq.ft (cm/day)

PERC. RATE (min./inch)	SOIL CLASS			
	CLASS I	CLASS II	CLASS III	CLASS IV
≤5	.74 (3.0)	0.60 (2.5)	-	-
6	0.70 (2.9)	0.60 (2.5)	-	-
7	0.68 (2.8)	0.60 (2.5)	-	-
8	0.66 (2.7)	0.60 (2.5)	-	-
10	-	0.60 (2.5)	-	-
15	-	0.56 (2.3)	0.37 (1.5)	-
20	-	0.53 (2.2)	0.34 (1.4)	-
25	-	0.40 (1.6)	0.33 (1.3)	-
30	-	0.33 (1.3)	0.29 (1.2)	-
40	-	-	0.25 (1.0)	-
50	-	-	0.20 (0.8)	0.20 (0.8)
60	-	-	0.15 (0.6)	0.15 (0.6)

- (b) The effluent loading rates set forth below may be used in place of those listed above at 310 CMR 15.242(1)(a) when the effluent from a septic tank, installed in compliance with 310 CMR 15.223, is distributed over the soil absorption system using pressure distribution designed in compliance with 310 CMR 15.254(2). However, the effluent loading rates set forth below cannot be used in conjunction with reductions to the soil absorption system approved under 310 CMR 15.280 through 15.289 or 310 CMR 15.404 through 15.405.

15.242: continued

SEPTIC TANK EFFLUENT LOADING RATE WITH PRESSURE DISTRIBUTION
gpd/sq.ft (cm/day)

PERC. RATE (min./inch)	SOIL CLASS			
	CLASS I	CLASS II	CLASS III	CLASS IV
10	-	0.63(2.6)		
15	-	0.61(2.5)	0.41(1.7)	
20	-	0.58(2.4)	0.37(1.5)	
25	-	0.44(1.8)	0.36(1.4)	
30	-	0.38(1.6)	0.33(1.3)	
40	-	-	0.29 (1.2)	
50	-	-	0.25 (1.0)	0.25 (1.0)
60	-	-	0.20 (0.8)	0.20 (0.8)

15.243: Types of Soil Textural Classes

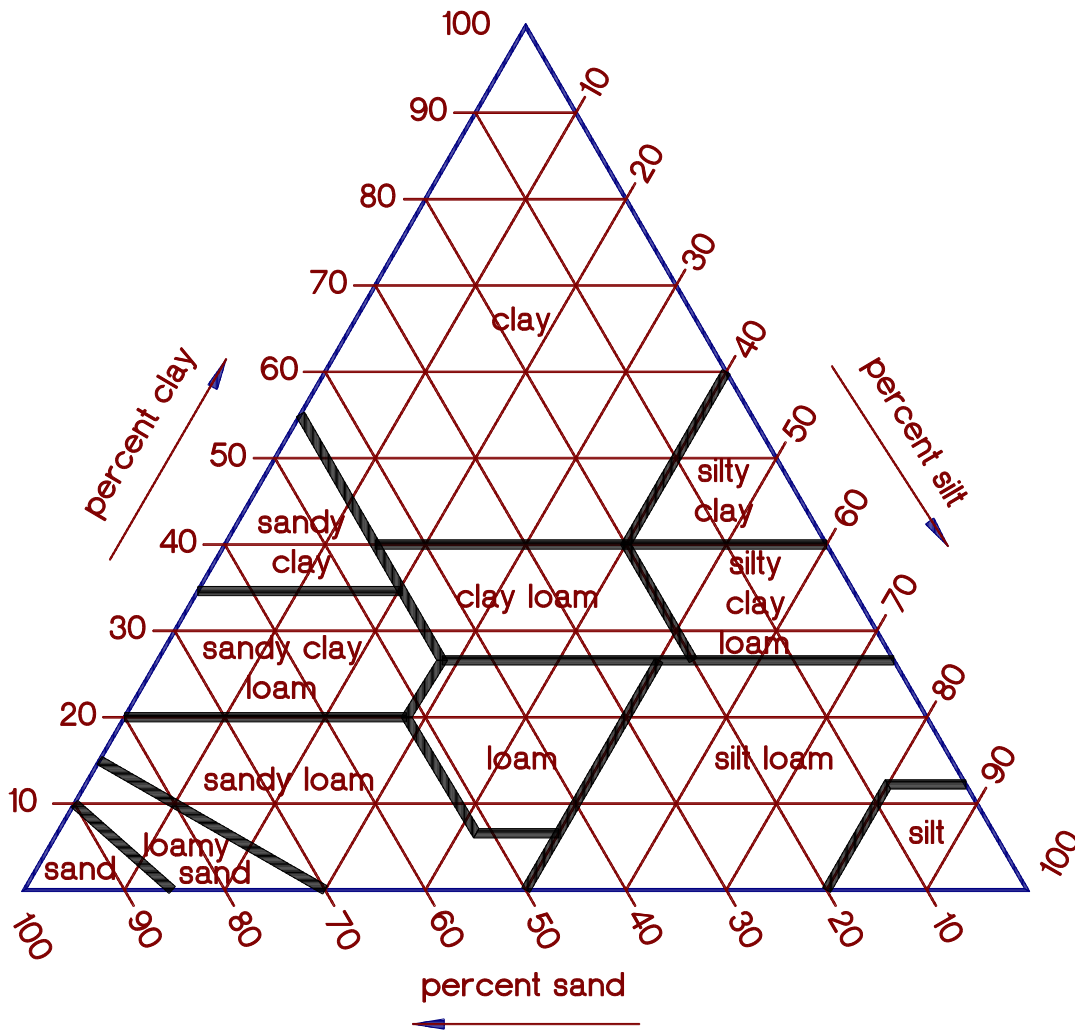
(1) The following soil textural classes apply to soil types of which they are composed:

- CLASS I Sands, Loamy Sands
- CLASS II Sandy Loams, Loams
- CLASS III Silt Loams, Sandy Clay Loams with less than 27% clay, Silt
- CLASS IV Clays, Silty Clay Loams, Sandy Clay Loams with 27% or more Clay, Clay Loams and Silty Clays

15.243: continued

(2) Textural Classifications are made based on the relative proportion of sand, silt and clay in the soils and in accordance with the following textural triangle:

SOIL TEXTURAL TRIANGLE



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percentage of clay is 15 or less.

- Loamy sands: At the upper limit soil is 85 to 90% sand and the percentage of silt plus 1.5 times the percentage of clay is 15 or less; at the lower limit, soil is 70 to 85% sand and the percentage of silt plus twice the percentage of clay is 30 or less.
- Sandy loams: Soil is 20% or less clay and 52% or more sand and the percentage of silt plus twice the percentage of clay exceeds 30; or soil is less than 7% clay, less than 50% silt, and between 43 and 52% sand.
- Loam: Soil is 7 to 27% clay, 28 to 50% silt, and less than 52% sand.
- Silt loam: Soil is 50% or more silt and 12 to 27% clay; or 50 to 80% silt and less than 12% clay.
- Silty clay loam: Soil is 27 to 40% clay and less than 20% sand.
- Clay: 40% or more clay, less than 45% sand, and less than 40% silt.
- Silt: 80% or more silt and less than 12% clay.
- Sandy clay loam: 20 to 35% clay, less than 28% silt, and more than 45% sand.
- Clay loam: 27 to 40% clay and 20 to 46% sand.
- Sandy clay: 35% or more clay and 45% or more sand.

15.245: Soil Absorption System Siting Requirements

- (1) Systems serving new construction shall not be sited in areas with percolation rates slower than 60 minutes per inch.
- (2) When recorded percolation rates are between those listed in 310 CMR 15.242, the next slower rate shall be used for design purposes.
- (3) Surface and subsurface drainage shall be directed away from the soil absorption system.
- (4) Approval of a soil absorption system in soils with a recorded percolation rate of between 60 and 90 minutes per inch may be granted only for upgrades of existing systems with no increase in design flow. In such cases, the soil absorption system design shall be based on a maximum effluent loading rate of 0.15 gpd/square foot.

15.246: Excavation and Flagging of Soil Absorption System

- (1) Excavation for construction of a soil absorption system may be by mechanical means, provided care is taken to assure that the soil at the bottom of the excavation is not compacted or smeared. The bottom and sides of the excavation shall be level and scarified. Vehicular traffic and parking of vehicles or equipment in or on the area of the soil absorption system should be avoided at all times prior, during and after construction of the system.
- (2) Prior to the installation of the soil absorption system and until receipt of a Certificate of Compliance from the Approving Authority in accordance with 310 CMR 15.021, the perimeter of the soil absorption system shall be staked and flagged to identify the location of the soil absorption system and prevent the use of such area for all activities which might damage the soil absorption system. Such flagging is not intended to preclude the final grading and landscaping of the area of the soil absorption system. Stockpiling of materials or equipment within the area is prohibited.

15.247: Aggregate

Aggregate shall be required for all soil absorption systems, unless otherwise approved in writing by the Department in accordance with 310 CMR 15.280 through 15.288, according to the following specifications:

- (a) Base aggregate for leaching structures shall be provided from below the elevation of the crown of the distribution line(s) to the bottom elevation of the soil absorption system and shall consist of double washed stone ranging from $\frac{3}{4}$ to $1\frac{1}{2}$ inches in diameter and shall be free of iron particles, fines and dust in place;
- (b) A minimum of a two-inch layer of double washed stone ranging from $\frac{1}{8}$ to $\frac{1}{2}$ inch diameter and free of iron particles, fines and dust in place shall cover the base aggregate to prevent intrusion of fine textured soils to the system. Geotextile fabric may be substituted for the minimum two-inch layer of double washed stone.

15.248: Reserve Area

- (1) Systems for new construction or increased flow designed and approved in accordance with 310 CMR 15.000 shall include a reserve area sufficient to replace the primary soil absorption system. The area required for the reserve area shall be calculated in accordance with 310 CMR 15.242 (effluent loading rates), based on the percolation rate in the reserve area.
- (2) No permanent buildings or other structures shall be constructed on the reserve area.

15.249: Design Criteria for Soil Absorption Systems

- (1) Every soil absorption system shall consist of one or more trenches, beds, fields, pits, galleries or chambers.
- (2) Effluent disposal area requirements shall be determined in accordance with 310 CMR 15.242.
- (3) System designs employing equipment designed to distribute effluent without the use of aggregate (*i.e.*, "gravelless systems") are prohibited except in accordance with the procedures set forth at 310 CMR 15.280 through 15.288.
- (4) Soil absorption systems for Class III and IV soils with percolation rates greater than 60 minutes per inch shall not include beds or fields except in accordance with 310 CMR 15.245(4).

15.251: Trenches

- (1) Trench Design Specifications:
 - (a) Length (each trench) 100 feet maximum
 - (b) Width (each trench) 2 feet minimum
3 feet maximum
 - (c) Effective Depth: shall be equal to the depth of the trench below the invert of the distribution pipe with a minimum of six inches up to a maximum of two feet.
 - (d) The minimum separation distance between any two trenches shall be two times the effective width or depth of each trench, whichever is greater, or where the area between trenches is designated as reserve area, three times the effective width or depth of each trench, whichever is greater.
 - (e) The effective leaching area shall be calculated using the bottom area and a maximum of two feet (per side) of side wall area for each trench.
- (2) Trenches shall be situated, where possible, with their long dimension perpendicular to the slope of the natural soil. Where possible they shall follow the contour lines.
- (3) Trenches constructed at different elevations shall be designed to prevent effluent from the higher trench(es) flowing into the lower trench(es).
- (4) The area between trenches may be designated as system reserve area only where the separation distance between the excavation sidewalls of the primary trenches is at least three times the effective width or depth of each trench, whichever is greater.
- (5) Distribution lines for soil absorption systems shall be constructed of either polyvinyl chloride (PVC), acrylonitrile-butadiene-styrene (ABS), or high density polyethylene (HDPE). PVC pipe shall be schedule 40 General Purpose Sewer Pipe (ASTM D 1785), schedule 40 Drain, Waste and Vent Pipe (ASTM D 2665) or SDR 35 PVC Gravity Sewer Pipe and Drain Pipe (ASTM D 3034). ABS pipe shall be schedule 40 (ASTM F 628). HDPE pipe shall meet ASTM F 810 for Smoothwall Polyethylene Pipe for use in Drainage and Waste Disposal Fields. A material that meets an equivalent ASTM standard as a material specified in 310 CMR 15.251(5) may be substituted for that material.
- (6) All connections and joints shall be mechanically sound and tight.
- (7) Minimum diameter of each gravity distribution line shall be three inches.
- (8) Gravity effluent distribution line outlet orifices shall be evenly spaced along two rows running the length of the line, on each side, midway between the invert and center-line which separates the upper and lower halves of the pipe, and orifices shall be no smaller than $\frac{3}{8}$ inch and no larger than $\frac{5}{8}$ inch in diameter.
- (9) Gravity effluent distribution lines shall have a slope of 0.005 feet per foot along a straight line without bends and shall have ends capped or connected together by unperforated pipe of the same materials specifications.

15.251: continued

- (10) Distribution lines connecting the distribution box or pump chamber to the soil absorption system distribution lines shall be unperforated with water tight connections and joints.
- (11) Effluent distribution lines exceeding 50 feet in length shall be connected and venting provided in accordance with 310 CMR 15.241.

15.252: Beds or Fields

- (1) The use of leaching beds or fields is restricted to systems with a calculated design flow of less than 5,000 gpd per leaching bed or field.
- (2) Bed or field specifications:
 - (a) Minimum number of distribution lines = 2.
 - (b) Length - 100 feet maximum.
 - (c) Slope of distribution lines - 0.005 feet per foot.
 - (d) Separation distance between lines - six feet maximum.
 - (e) Lateral separation distance between lines and edge of the bed - four feet maximum.
 - (f) Separation distance between adjacent beds/fields - ten feet.
 - (g) Aggregate depth (below the invert of the distribution lines) - six inches minimum, 12 inches maximum.
 - (h) Distribution lines - refer to 310 CMR 15.251(5) through (10) (Trenches).
 - (i) Effective leaching area - shall include only the bottom area, not the sidewalls.

15.253: Pits, Galleries, or Chambers

- (1) Pit, Gallery or Chamber design specifications:
 - (a) Effective Depth - A maximum of two feet of sidewall depth below the invert of the inlet per unit shall be used when calculating the effective leaching area.
 - (b) Surrounding Aggregate -

1 foot minimum per side.
4 feet maximum per side.
 - (c) Separation Distance Between Units - two times the effective width or depth, whichever is greater.
- (2) Construction shall be of precast perforated concrete or interlocking concrete blocks laid dry with open joints in a manner to prevent displacement or as otherwise approved by the Department.
- (3) Each pit, gallery or chamber shall have a minimum of one inspection access cover per unit. For systems with a design flow greater than 2,000 gpd, the manholes shall be at least 24 inches in diameter with metal frames and covers to finished grade.
- (4) When two or more pits are used, the system shall be designed so that all pits function in parallel.
- (5) Two or more chambers or galleries connected in series shall constitute a chamber or gallery system. The application of 310 CMR 15.253(1)(c) (separation distance) shall be applied to adjacent chamber or gallery systems as a unit rather than to the individually connected chambers or galleries.
- (6) Inlets to chamber and gallery systems installed in trench configuration shall be provided at intervals not to exceed 20 feet. Chamber or gallery systems in bed configuration shall be provided with at least one inlet for every 40-foot square section.
- (7) when using pits, galleries, or chambers in a leaching bed or field configuration, the effective leaching area shall include only the bottom area, not the side walls.

15.254: Pressure Dosing and Pressure Distribution

(1) Gravity Distribution.

- (a) Dosing systems employing gravity distribution to the soil absorption system shall be restricted to systems designed to accept less than 2,000 gpd.
- (b) The dosing chamber and pumps shall be designed in accordance with 310 CMR 15.231.
- (c) Distribution lines to the soil absorption system shall have a minimum diameter of two inches and shall otherwise be in conformance with the provisions of 310 CMR 15.251(Trenches).
- (d) Septic tank effluent shall be dosed to the soil absorption system at a rate based on volume and number of doses that prevent the ponding of the effluent in the soil absorption system.

(2) Pressure Distribution.

- (a) Pressure distribution of septic tank/recirculating sand filter effluent to the soil absorption system shall be required for: a system to serve a facility with a design flow of 2,000 gpd or greater; a system that is not designed to discharge by gravity either from the septic tank or to the soil absorption system; a system designed for intermittent discharge of effluent to the soil absorption system; and a system with a multiple soil absorption system, unless otherwise determined in writing by the Approving Authority.
- (b) The pumping chamber and pumps shall be designed in accordance with 310 CMR 15.231.
- (c) The pressure distribution system shall be designed in accordance with Department guidance.
- (d) Pumps, alarms and other equipment requiring periodic or routine inspection and maintenance shall be operated, inspected and maintained in accordance with the manufacturer's and the designer's specifications. In no instance shall inspection be performed less frequently than once every three months for a system serving a facility with a design flow of 2,000 gallons per day or greater and annually for a system serving a facility with a design flow of less than 2,000 gallons per day. The system owner shall submit the results of such inspections to the Approving Authority annually by January 31st of each year for the previous calendar year.

15.255: Construction in Fill

(1) Any system where fill is required to replace topsoil, peat or other unsuitable or impervious soil layer above the requisite four feet of naturally occurring pervious material is a system constructed in fill. Any system constructed in fill which extends either wholly or partially above natural grade for the purpose of complying with 310 CMR 15.212 (depth to groundwater) is a mounded system. All soil absorption systems constructed in fill shall be sized using the soil class of the underlying naturally occurring pervious material.

(2) The finished side slopes of a mounded system shall not be steeper than 3:1 (horizontal:vertical). A minimum 15 foot horizontal separation distance shall be provided between the soil absorption area and the adjacent side slope as measured from the edge of the top of the two inch layer of 1/8 to 1/2 inch washed stone aggregate or geotextile fabric cover. The toe of the slope shall be a minimum of five feet from any property line, or a swale or other drainage system directing runoff away from the adjacent property shall be installed. Adjustments to the above horizontal separation may be allowed if a suitable impervious barrier is installed to prevent potential sewage breakout. The impervious barrier shall meet the following requirements:

- (a) the impervious barrier shall be designed by a Massachusetts Registered Sanitarian or a Massachusetts Registered Professional Engineer.
- (b) construction of the impervious barrier shall be supervised by the designer.
- (c) prior to issuance of a Certificate of Compliance, the applicant shall submit to the Approving Authority an as-built plan prepared and certified by the designer that the impervious barrier has been constructed in accordance with the approved design plan.
- (d) the elevation of the top of the impervious barrier shall be no lower than the "breakout" elevation, which is the elevation of the top of the two inch layer of 1/8 inch to 1/2 inch washed stone aggregate cover.
- (e) the recommended distance from the impervious barrier to the edge of the soil absorption system closest to the barrier should be at least ten feet.

15.255: continued

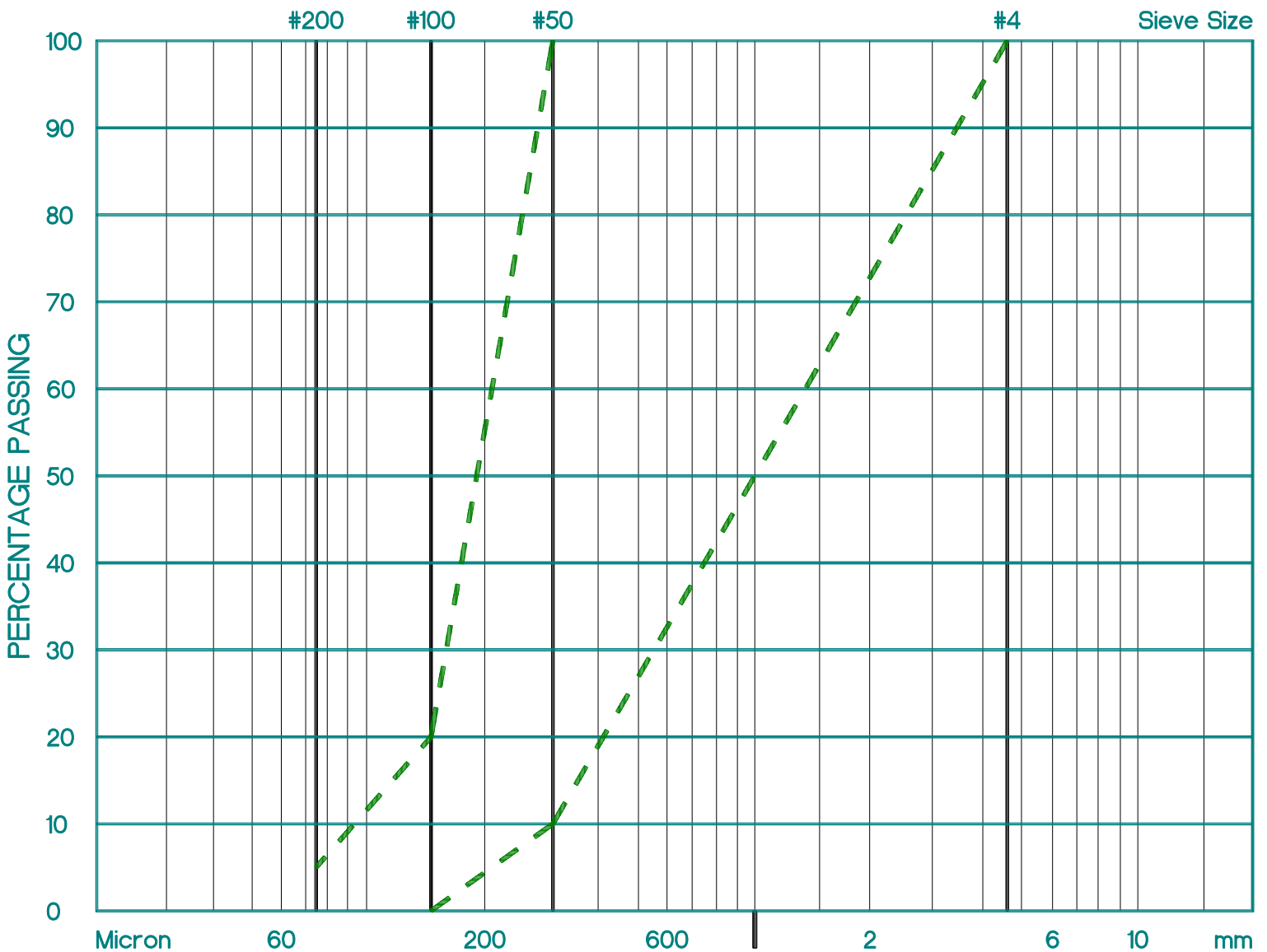
(f) where a retaining wall to stabilize the slope is required and also is proposed as an impervious barrier, in addition to meeting the requirements in 310 CMR 15.255(2), it shall be constructed of suitable structural material and be designed by a Massachusetts Registered Professional Engineer.

(3) Fill material for systems constructed in fill shall consist of select on-site or imported soil material. The fill shall be comprised of clean granular sand, be free from organic matter and deleterious substances, and shall not contain Remediation Waste as that term is defined in 310 CMR 40.0000. Mixtures and layers of different classes of soil shall not be used. The fill shall not contain any material larger than two inches. A sieve analysis, using a #4 sieve, shall be performed on a representative sample of the fill. Up to 45% by weight of the fill sample may be retained on the #4 sieve. Sieve analyses also shall be performed on the fraction of the fill sample passing the #4 sieve, such analyses must demonstrate that the material meets each of the following specifications:

SIEVE SIZE	EFFECTIVE PARTICLE SIZE	% THAT MUST PASS SIEVE
# 4	4.75 mm	100%
# 50	0.30 mm	10% - 100%
#100	0.15 mm	0% - 20%
#200	0.075 mm	0% - 5%

A plot of the sieve analyses of the portion of the sample passing the #4 sieve shall fall on or between the lines on the following graph:

PARTICLE SIZE DISTRIBUTION



15.255: continued

(4) If required by the Approving Authority, a minimum of one representative sample shall be taken from the in-place fill for a system serving a single family residence and tested for compliance with the grain size distribution specification. One soil test per pit per removal day shall be required for systems with design flows of 2,000 gpd or more.

(5) Where fill is required to replace unsuitable or impermeable soils, the excavation of the unsuitable material shall extend a minimum of five feet laterally in all directions beyond the outer perimeter of the soil absorption system to the depth of naturally occurring pervious material as required by 310 CMR 15.240 (soil absorption systems) and replaced with fill material meeting the specifications of 310 CMR 15.255(3).

(6) Prior to placement of the fill, which shall be stockpiled at the edge of the excavation and filled in gradually, the bottom surface of the excavation shall be scarified and relatively dry. Fill shall not be placed during rain or snow storms. If the groundwater elevation is above the elevation of the bottom of the excavation, the excavation shall be dewatered prior to placement of the fill.

15.260: Tight Tanks

(1) Approval of a tight tank may be granted only to eliminate a failed on-site system when no other feasible alternative to upgrade the system in accordance with 310 CMR 15.201 through 15.293 exists, except as provided in 310 CMR 15.260(8). Tight tanks shall not be approved for new construction or for increased flow to existing systems except as approved by the Approving Authority for:

- (a) boat waste pump-out facilities where no other feasible alternative exists; or
- (b) to serve buildings necessary for the operation of a public water supply where it is not feasible to connect to a sewer or to construct a system in compliance with 310 CMR 15.000;
- (c) to serve publicly owned and operated seasonal structures where it is not feasible to connect to a sewer or to construct a system in compliance with 310 CMR 15.000.

(2) The design of a tight tank shall conform to the following criteria:

- (a) The tight tank shall be sized at a minimum of 500% of the system sewage design flow established by 310 CMR 15.203, but in no case less than 2,000 gallons;
- (b) plans for the tank shall be prepared, stamped and signed by a Massachusetts Registered Professional Engineer or Registered Sanitarian and submitted to the Approving Authority by the applicant for approval;
- (c) audio and visual alarms shall be set to activate at 3/5 tank capacity in a suitably convenient location. Transmission of the alarm signal to a locus manned 24 hours per day may be required;
- (d) the application for approval shall indicate the method and frequency of removal of the contents;
- (e) the specific location and method of disposal of the contents shall be indicated and be in accordance with 310 CMR 15.501 through 15.505;
- (f) the tight tank shall have at least one 24-inch diameter cast iron frame and cover at finished grade constructed so as to eliminate entrance of surface waters. Permanent suction piping may also be required;
- (g) the tight tank shall be located so as to provide year round access for pumping;
- (h) a permit to install the tank shall be obtained from the Approving Authority;
- (i) an operation and maintenance plan, acceptable to the Approving Authority, shall be implemented which requires monitoring of the system to ensure proper operation and maintenance;
- (j) the tight tank shall be waterproof and watertight and shall not be located below the water table without extensive testing to prove the integrity of the tank and design against uplift;
- (k) aeration or other method of odor control may be required; and
- (l) the tight tank shall be designed in compliance with the requirements for the construction of septic tanks in 310 CMR 15.226(1) through (4).

(3) The Approving Authority may require the submission of monthly or less frequent reports concerning operation and maintenance of the tank.

15.260: continued

- (4) No tight tank shall be utilized until written certification by a Massachusetts Registered Professional Engineer or Registered Sanitarian that the tight tank has been constructed and installed in accordance with the approved plan has been submitted to the Approving Authority.
- (5) When a sewer system becomes available, any person owning a tight tank shall connect to the sewer within 30 days and the tight tank system shall be abandoned in accordance with 310 CMR 15.354.
- (6) Prior to the issuance of the Disposal System Construction permit for a tight tank, the facility owner shall record or register in the chain of title for the property served by the tight tank at the Registry of Deeds or the Land Registration Office, as applicable, a copy of the Approving Authority's written approval.
- (7) No tight tank shall be constructed in a velocity zone on a coastal beach, barrier beach, or dune, or in a regulatory floodway, unless it replaces a tank in existence on the site as of March 31, 1995, that has been damaged or destroyed, and placement of the tank outside of the velocity zone or regulatory floodway, either horizontally or vertically, is not feasible.
- (8) The Approving Authority may allow the use of a tight tank at an existing, seasonal-use residential facility as remedial upgrade of the failed system serving such facility. For the purposes of 310 CMR 15.260(8), a seasonal-use residential facility means a residential facility that is used six months or less during the calendar year. This approval may be renewed upon transfer of the property. The tight tank must comply with the provisions of 310 CMR 15.260. Prior to the issuance of the Certificate of Compliance by the Approving Authority the facility owner shall record or register in the chain of title for the property served by the tight tank at the Registry of Deeds or the Land Registration Office, as applicable, a deed restriction limiting the facility to seasonal residential use and to the approved design flow.

15.262: Greywater Systems

- (1) Greywater from residential, commercial and public facilities may be discharged or reused in accordance with the provisions of 310 CMR 15.262. For purposes of 310 CMR 15.262, public facilities shall include facilities owned or operated by a local political subdivision of the Commonwealth or an agency of the Commonwealth or federal government.
- (2) Soil Absorption System for Greywater. When the total discharge to an on-site subsurface sewage disposal consists entirely of greywater as defined in 310 CMR 15.002 (Greywater), the following shall apply:
 - (a) the minimum soil absorption area for residential systems, as determined by the results of the site evaluation set forth in 310 CMR 15.100 through 15.107 and in accordance with the appropriate long-term acceptance rate criteria specified in 310 CMR 15.242, for design of a soil absorption system for new construction of a facility, or for upgrades to existing systems may be reduced by no more than 50%, provided, however, that for new construction, the owners of residential facilities shall demonstrate that a system in full compliance with 310 CMR 15.000 can be installed on the facility to serve the proposed design flow. Reductions for commercial and public facility systems shall be determined on a case-by-case basis as approved by the Department in accordance with 310 CMR 15.203(6).
 - (b) the depth of soil placed as backfill over the system shall be at least nine inches, placed in lifts and sufficiently compacted to prevent depression due to settling which may intercept surface runoff above the system. Backfill must be clean and free of stones greater than two inches in size. Tailings, clay, or similar material is prohibited.
 - (c) in a remedial upgrade of an existing system with no increase in flow, the required separation between the bottom of the soil absorption system and the high groundwater elevation may be reduced to a minimum of two feet in soils with a recorded percolation rate of more than two minutes per inch or a minimum of three feet in soils with a recorded percolation rate of two minutes or less per inch.

15.262: continued

(3) Septic Tanks or Filter for a Greywater System. Greywater systems may include either a septic tank or a filter, provided the filter has been approved by the Board of State Examiners of Plumbers and Gas Fitters and/or the Department in accordance with 310 CMR 15.289(1)(b).

(a) The septic tank shall have a minimum effective liquid capacity of 1000 gallons and shall be designed in accordance with 310 CMR 15.223 through 15.226.

(b) Septic tanks for commercial and public facilities shall be at least $\frac{2}{3}$ the size of a septic tank based on the design flows presented in 310 CMR 15.203.

(c) When 310 CMR 15.203 does not provide design flows the design flow shall be based on historical flows (one year or more) of the facility or similar facilities if historical flows are not available and shall be 200% of average water meter readings or 125% of the recorded peak flow, whichever is greater.

(4) Greywater may be discharged using an alternative to a soil absorption system approved by the Department pursuant to 310 CMR 15.280 through 15.288.

(5) Greywater from commercial or public facilities may be approved by the Department on a case-by-case basis for reuse in accordance with 314 CMR 20.00: *Reclaimed Water Permit Program and Standards*, and applicable policies and guidance of the Department pertaining to wastewater reuse.

(6) Greywater systems shall be operated, maintained, and inspected in accordance with 310 CMR 15.300.

(7) For residential facilities utilizing composting toilets and greywater systems in nitrogen sensitive areas an allowable loading rate of 660 gpd/acre may be used provided that there is no discharge of blackwater at the facility and the compost is disposed off-site. Annual inspections shall be conducted in accordance with 310 CMR 15.300(5).

(8) For commercial and public facilities utilizing composting toilets and greywater systems in nitrogen sensitive areas, an allowable loading rate up to 770 gpd/acre shall be determined by the Department on a case-by-case basis provided that there is no discharge of blackwater at the facility and the compost is disposed off-site. Annual inspections shall be conducted in accordance with 310 CMR 15.300(5).

(9) Greywater systems for new construction or increases in flows to existing systems within nitrogen sensitive areas as defined in 310 CMR 15.214 must comply with the nitrogen loading limitations in accordance with 310 CMR 15.215.

15.280: Approval of Alternative Systems

15.281: Purpose

(1) Alternative systems, when properly designed, constructed, operated and maintained, may provide enhanced protection of public health, safety, welfare and the environment. The purposes of 310 CMR 15.281 through 15.288 are: to provide an orderly system to facilitate review of proposed alternative systems; to encourage development of alternative systems with performance superior to conventional systems; and to ensure that alternative systems are approved with appropriate conditions to protect public health, safety, welfare and the environment.

(2) The provisions of 310 CMR 15.281 through 15.288 shall apply to all proposals to construct, upgrade, or replace on-site systems using alternative systems.

15.281: continued

(3) Any proposed system which is designed or constructed in any manner other than as described in 310 CMR 15.100 through 15.262 shall be considered an alternative system, unless a groundwater discharge permit is obtained pursuant to 314 CMR 5.00 (groundwater discharge permit program). Alternative systems may include substitutes or alternatives for one or more components of a conventional system as described in 310 CMR 15.100 through 15.262, or may be fundamentally different approaches intended to eliminate the need for a conventional system. The use of an alternative system in accordance with conditions established pursuant to 310 CMR 15.281 through 15.289 may be authorized without a variance. It shall be a violation of 310 CMR 15.000 for any person to sell or install an alternative system which has not been approved by the Department.

(4) The review processes established in 310 CMR 15.280 through 15.288 are intended to provide two different mechanisms for approval of alternative systems. Approval for remedial use (310 CMR 15.284) is intended to provide a mechanism for system owners to improve existing conditions at particular sites (including upgrade or replacement of failed or nonconforming systems) through the use of an alternative system. The sequence of approval for piloting (310 CMR 15.285), provisional approval (310 CMR 15.286), and certification for general use (310 CMR 15.288), is intended to provide a process through which proponents of an alternative system may have that system approved for general usage in the Commonwealth, including use for new construction. This sequence is intended to develop information on the performance of the alternative system; if adequate information from other jurisdictions or from systems in remedial use is available, it is unnecessary to proceed separately through all three steps of this sequence.

15.282: Types of Alternative Systems

Alternative systems proposed may include, but shall not be limited to, any of the following:

- (1) humus or other composting toilets;
- (2) alternative mounded systems (such as the "Wisconsin mound") designed to overcome limiting site conditions;
- (3) any system designed to chemically or mechanically aerate, filter, separate or pump the liquid, semi-solid or solid constituents in the system; or
- (4) any system designed specifically to reduce, convert, or remove nitrogenous compounds, phosphorus, or pathogenic organisms (including bacteria and viruses) by biological, chemical, or physical means.

15.283: Process for Review of Alternative System Proposals

(1) A person seeking approval of an alternative system shall prepare and submit a formal application to the Department, or an agent authorized by the Department. No application to the Department is required for use of an alternative system that has been certified for general use pursuant to 310 CMR 15.288, provided that such use is consistent with any conditions established in the certification.

(2) For site specific piloting use approval pursuant to 310 CMR 15.285, the applicant shall obtain the approval of the Local Approving Authority prior to seeking approval by the Department.

(3) Any proposal to construct, upgrade or expand any existing system using an alternative system of any type shall be subject to the permitting requirements set forth at 314 CMR 5.00 (discharges of pollutants to groundwater) unless the applicant complies with the terms and conditions of 310 CMR 15.281 through 15.288.

15.283: continued

(4) The Department or an agent authorized by the Department may request additional information regarding alternative system proposals in the course of its application review, pursuant to 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*, and may consider any such information submitted when acting on the application.

(5) When using alternative systems designed under 310 CMR 15.280 through 15.288, if the facility design and operation will result in flows significantly different from the values listed in 310 CMR 15.203(1) through (5), the alternative technology shall reflect the actual range of flows and loadings that the facility is expected to generate rather than the peak flow values listed in 310 CMR 15.203(1) through (5). The applicant, with the approval of the Department, may request to demonstrate a more appropriate design flow in accordance with 310 CMR 15.203(6). Notwithstanding the requirements of 310 CMR 15.203(6), the Department may establish a design flow thereunder that is based on the actual range of flows rather than based on 200% of average water meter readings. The soil absorption system and other units shall still be designed in accordance with 310 CMR 15.203(1) through (5) and 15.242.

15.284: Approval for Remedial Use

(1) The purpose of approval for remedial use is to allow for the rapid approval of an alternative system that is likely to improve existing conditions at a particular facility or facilities currently served by a failed, failing or nonconforming system.

(2) Remedial use of an alternative system shall be allowed where the Department finds that all of the following conditions are met:

(a) the proposed use of the alternative system is for upgrade of a failed, failing or nonconforming existing system(s);

(b) the design flow is less than 10,000 gallons per day, and there is no increase in design flow to be served by the proposed alternative system;

(c) the applicant has established, through evidence of effective past performance of the alternative system over a period of at least one year of general usage in other states where relevant physical and climatological conditions are similar to those in Massachusetts, that the alternative system will provide a level of environmental protection

1. at least equivalent to that of a system designed and constructed in accordance with 310 CMR 15.100 through 15.255, for use where connection to a sewer system is not feasible, or

2. at least equivalent to a sewer system, for use where connection to a sewer system is feasible.

The Department may waive this requirement in situations where such evidence is already on file with the Department for that system. When relying on system performance in other states, all available information including but not limited to a copy of the other state's written approval, testing and performance data shall be provided.

(d) the Local Approving Authority has found that that conditions of 310 CMR 15.284(2)(a) through (c) are satisfied; and

(e) the applicant has made arrangements through contract with a vendor or in another manner acceptable to the local Approving Authority and the Department to ensure that necessary operation and maintenance of the alternative system will be performed appropriately.

(3) The provisions of 310 CMR 15.287 apply to any remedial use of an alternative system.

(4) If at any time the Local Approving Authority or the Department determines that a system that has been installed pursuant to an approval for remedial use is failing or has failed, enforcement action may be taken.

(5) Unless an environmental and performance monitoring and reporting program has been approved by the Department and implemented at facilities approved for remedial use, the record of performance of an alternative system at such facilities shall not constitute a basis to approve that alternative system for provisional use or to certify the system for general use. Approval for remedial use is not intended to provide the sole means for demonstrating that an alternative system is acceptable for provisional approval or certification for general use.

15.284: continued

(6) In approving remedial use of an alternative system, the Department shall determine whether any person wishing to use such system must connect the facility to a sanitary sewer if such connection is or becomes feasible.

15.285: Approval for Piloting

(1) Approval for piloting is intended to provide field testing and technical demonstration that a particular alternative system can or cannot function effectively under relevant physical and climatological conditions at one or more pilot facilities. Although information obtained during piloting is likely to be relevant to long term operation and maintenance concerns about a particular alternative system, approval for piloting is not intended, in and by itself, to provide a full evaluation of these issues. Approvals for site-specific piloting may be issued to technology proponents or to individuals seeking to use an alternative system at a particular Facility.

(2) The Department shall approve a number of pilot facilities, not greater than 15, at which piloting may be conducted for an alternative system, and shall approve each individual proposed piloting facility prior to use of the alternative system on that facility. The use of multiple piloting sites is strongly encouraged and may be required by the Department. Piloting facilities must comply with one or more of the following conditions:

- (a) the proposed use of the alternative system will modify or replace an existing system provided there is no increase in design flow to the system;
- (b) the proposed use of the alternative system is for new construction or increased flow to serve a facility for which an on-site sewage disposal system in compliance with 310 CMR 15.000 exists on site, or for which a site evaluation for an on-site system in compliance with 310 CMR 15.100 through 15.255 has been approved by the Approving Authority;
- (c) the proposed use of the alternative system is for new construction or increased flow to serve a facility which has access to a municipal sewer, as evidenced by a local connection or discharge permit, to which any discharge from the proposed system will be made should the alternative system fail; or
- (d) the site is owned or controlled by an agency of the Commonwealth or of the federal government and has been approved by the Department.

A local Approving Authority may impose additional conditions on the use of alternative systems approved for piloting under 310 CMR 15.000 only in accordance with regulations adopted pursuant to 310 CMR 15.003(3).

(3) The Department shall approve an alternative system for piloting when all of the following conditions are met:

- (a) the Department has determined, based upon relevant technical data including without limitation actual field performance of the proposed alternative system in other states or data obtained by independent testing organizations, that the proposed alternative system is likely to be capable of providing a level of environmental protection at least equivalent to that of a system designed and constructed in accordance with 310 CMR 15.100 through 15.255. When relying on system performance in other states, all available information including but not limited to a copy of the other state's written approval, testing and performance data shall be provided;
- (b) the applicant has proposed an environmental monitoring and reporting plan covering no less than 18 months of operation at each pilot facility that will produce a timely and full technical evaluation of the performance of the alternative system at the pilot facilities, including prompt identification of performance difficulties and the effectiveness of any corrective actions or adjustments to the alternative system; and
- (c) the applicant has made arrangements through contract with a vendor or in another manner acceptable to the Department and the local Approving Authority to ensure that necessary operation and maintenance activities will be performed appropriately.

(4) The Department may establish special conditions, as it deems necessary, to ensure protection of public health, safety, welfare and the environment in its approval for piloting.

(5) The provisions of 310 CMR 15.287 apply to any piloting of an alternative system.

15.285: continued

- (6) If at any time the Department or the local Approving Authority determines that an alternative system installed pursuant to an approval for piloting is failing or has failed, enforcement action may be taken.
- (7) Upon completion of piloting in compliance with 310 CMR 15.285, the Department may: grant provisional approval of the alternative system pursuant to 310 CMR 15.286; determine that additional piloting in accordance with this 310 CMR 15.285 is required; or disapprove use of the alternative system. The Department may determine that successful site-specific pilots may remain in place at an individual Facility on a long-term basis consistent with the terms and conditions of the system approval.
- (8) If the Department determines that additional piloting is necessary, it may require an additional number of piloting facilities, not greater than five, and may require any modifications or adjustments to the alternative system, or impose such other requirements, as the Department deems necessary to ensure protection of public health, safety, welfare and the environment.
- (9) Should the Department disapprove use of the alternative system, any person wishing to use such an alternative system may file a permit application for use of such alternative system pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program*. Denial for the use of an alternative system pursuant to 310 CMR 15.000 shall not prejudice any action on an application pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program*.
- (10) It shall be a violation of 310 CMR 15.000 to make a false representation that an alternative system has been approved for piloting.

15.286: Provisional Approval of Alternative System

- (1) Provisional approval is intended to evaluate alternative systems that appear technically capable of providing levels of protection at least equivalent to those of standard on-site disposal systems, to determine whether, under actual field conditions in Massachusetts with broader usage than a controlled pilot setting, general use of the alternative system will provide such protection, and to determine whether any additional conditions addressing long term operation, maintenance and monitoring considerations are necessary to ensure that such protection will be provided.
- (2) The Department shall grant provisional approval for use of an alternative system where connection to a sewer is not feasible if the applicant demonstrates that the alternative system is likely to provide a level of environmental protection at least equivalent to that of a system designed and constructed in accordance with 310 CMR 15.100 through 15.255. The Department shall grant provisional approval for use of an alternative system where connection to a sewer is feasible if the applicant demonstrates that the alternative system is likely to provide a level of environmental protection at least equivalent to that of a sewer in the following manner:
 - (a) evidence, satisfactory to the Department, of effective past performance of the alternative system over a period of at least two years of general usage in one or more states where relevant physical and climatological conditions are comparable to those in Massachusetts;
 - or
 - (b) successful completion of piloting pursuant to 310 CMR 15.285, or equivalent piloting in one or more states where relevant physical and climatological conditions are comparable to those in Massachusetts. Piloting shall be considered successful when at least 75% of piloted systems have performed at the relevant level for at least 12 months.When relying on system performance in other state's, all available information including but not limited to a copy of the other state's written approval, testing and performance data shall be provided.

15.286: continued

(3) The Department may establish any special conditions deemed necessary to ensure adequate protection of public health, safety and the environment, and to ensure appropriate evaluation and testing of the alternative system in the provisional use approval. Such conditions may include without limitation: specification of site or effluent characteristics; flow limitations; monitoring, testing, and reporting requirements; operation and maintenance contracting requirements; and financial assurance mechanisms. The Department may also specify changes or modifications of requirements otherwise applicable to conventional systems that are appropriate for use of the alternative system.

(4) The Approving Authority may allow the use of a provisionally approved system, subject to any special conditions established pursuant to 310 CMR 15.286(3), in any of the following situations:

(a) the proposed use of the alternative system is for upgrade of an existing system that has failed, is failing, or is nonconforming; provided there is no increase in design flow to the system. If connection of the facility to a sewer is feasible, provisional use shall be allowed only if the Department has determined that the alternative system is likely to provide a level of environmental protection at least equivalent to that of a sewer;

(b) the proposed use of the alternative system is for new construction or increased flow to serve a facility where access to a sewer is not feasible and for which an on site sewage disposal system in compliance with 310 CMR 15.000 exists on site, or for which a site evaluation for an on site system in compliance with 310 CMR 15.100 through 15.255 has been approved by the Approving Authority;

(c) the proposed use of the alternative system is for new construction or increased flow to serve a facility which has access to a municipal sewer, as evidenced by a local connection or discharge permit, and to which any discharge from the proposed system will be made should the alternative system fail, if the Department has determined that the alternative system is likely to provide a level of environmental protection at least equivalent to that of a sewer; or

(d) the site is owned or controlled by an agency of the Commonwealth or of the federal government and has been approved by the Department for use of the provisionally approved system.

(5) A Local Approving Authority may impose additional conditions on the use of alternative systems approved for provisional use under 310 CMR 15.000 only in accordance with regulations adopted pursuant to 310 CMR 15.003(3).

(6) Prior to making a determination on an application for provisional use approval of a technology pursuant to 310 CMR 15.286, the applicant shall publish notice of the application in the MEPA Environmental Monitor.

(7) The proponent of a provisionally approved alternative system shall conduct a performance evaluation of at least the first three years of operation of at least the first 50 systems installed pursuant to the provisional approval, and a representative sampling of additional systems installed during this period in accordance with a plan approved by the Department pursuant to 310 CMR 15.287(2). The evaluation plan shall be designed to identify promptly any failure of the alternative system to provide the expected level of environmental protection, and to identify the cause if possible. The plan shall provide for reporting to the Department or an agent authorized by the Department at periodic intervals.

(8) Upon receipt of the performance evaluation conducted pursuant to 310 CMR 15.286(7), the Department may: certify the alternative system for general use pursuant to 310 CMR 15.288; determine that additional evaluation in accordance with 310 CMR 15.286 is required; or disapprove use of the alternative system.

(9) If the Department determines that additional evaluation is required, it may require any modifications or adjustments to the alternative system, or impose such other requirements, as are necessary.

15.286: continued

(10) Should the Department disapprove general use of the alternative system which was provisionally approved, any person wishing to use such system may file a permit application for use of the alternative system pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program*. Disapproval under 310 CMR 15.286 shall not prejudice any action on an application pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program*.

(11) The conditions established in 310 CMR 15.287 apply to any use of a provisionally-approved alternative system.

(12) If at any time the Local Approving Authority or the Department determines that an alternative system that has been installed pursuant to a provisional approval is failing or has failed, enforcement action may be taken.

(13) It shall be a violation of 310 CMR 15.000 to make a false representation that an alternative system has been approved for provisional use.

15.287: General Conditions for Use of Alternative Systems Pursuant to 310 CMR 15.284 through 15.286

The following conditions shall apply to all uses of alternative systems pursuant to 310 CMR 15.284 through 15.286:

(1) All plans and specifications shall be designed in accordance with 310 CMR 15.220.

(2) Any required operation and maintenance, monitoring and testing plans shall be submitted to the Department or an agent authorized by the Department and approved by the Department prior to initiation of the use. Monitoring and sampling shall be performed in accordance with a plan approved by the Department. Sample analysis shall be conducted by an independent U.S. EPA or Commonwealth of Massachusetts approved testing laboratory, or an approved independent university laboratory, unless otherwise provided in the written approval of the Department. It shall be a violation of 310 CMR 15.000 to omit from a report or falsify any data collected pursuant to an approved testing plan.

(3) The facility served by the alternative system and the system itself shall be open to inspection and sampling by the Department, any agent authorized by the Department, and the Local Approving Authority at all reasonable times.

(4) The Department and/or the Local Approving Authority may require the owner or operator of the system to cease operation of the system and/or to take any other action necessary to protect public health, safety, welfare and the environment.

(5) Prior to the transfer of any ownership interest in an alternative system, or of any right or responsibility to operate an alternative system, the owner or operator shall provide written notice to the proposed new owner or operator that the system is an alternative system. Such notice shall include notice of the general conditions and any special conditions applicable to the system and its owner. In addition, the owner shall include either a copy in full or a reference to the notice of the alternative system described in 310 CMR 15.287(10), and the recording information for that notice, in the instrument of transfer of any such ownership interest. In the event of the transfer of any such right or responsibility without a transfer of ownership interest, the owner or operator shall include a copy in full or a reference to the notice of the alternative system described in 310 CMR 15.287(10), and the recording information for that notice, in the agreement transferring such right or responsibility.

(6) The owner or operator, or the proponent of the alternative system, shall obtain and provide the Department or an agent authorized by the Department with a determination from the board of certification of operators of wastewater treatment facilities established pursuant to M.G.L. c. 21, § 34A, as to whether a certified operator is required for operation of the alternative system. The Department shall waive this requirement if it has on file a determination for the alternative system, and shall notify the owner, operator, or proponent of the determination.

15.287: continued

(7) It is a violation of 310 CMR 15.000 to install, construct, or operate an alternative system except in full compliance with the written approval and 310 CMR 15.287.

(8) The Department may require the issuance of a groundwater discharge permit pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program* for any alternative system.

(9) The system owner shall maintain an operation and maintenance contract with a Massachusetts certified operator where one is required by 257 CMR 2.00: *Certification of Operators of Wastewater Treatment Facilities*, or otherwise with a person qualified to operate and maintain the system in accordance with the Department's written approval.

(10) Prior to obtaining a Certificate of Compliance for installation of a new or upgraded system, the system owner shall record in the chain of title for the property served by the alternative system in the Registry of Deeds or Land Registration Office, as applicable, a form of Notice approved by the Department disclosing the existence of the alternative on-site system and its approval. The system owner shall provide evidence of such recording to the Approving Authority.

15.288: Certification of Alternative Systems for General Use

(1) Certification for general use is intended to facilitate the use, under appropriate conditions, of alternative systems that have been demonstrated to provide levels of environmental protection at least equivalent to those of conventional on-site systems.

(2) The Department shall certify an alternative system for general use when the Department determines that the applicant has demonstrated that the alternative system in general usage will provide a level of environmental protection at least equivalent to that of a conventional on site system designed and constructed in accordance with 310 CMR 15.100 through 15.255. Such demonstrations shall include the evaluation of broad scale field use in Massachusetts pursuant to 310 CMR 15.286, or comparable use in one or more states where relevant physical and climatological conditions are similar to those in Massachusetts. The required demonstration of comparable use in one or more states shall include, at a minimum, system use and system monitoring, and operation and maintenance information at least as comprehensive as the in-state protocols outlined in 310 CMR 15.280 through 310 CMR 15.288. When relying on system performance in other states, all available information including but not limited to a copy of the other state's written approval, testing and performance data shall be provided. The applicant shall be considered to have demonstrated effective performance of the out of state systems when the applicant has demonstrated to the Department's satisfaction that at least 90% of the systems have performed at a level at least equivalent to that of a conventional on-site system.

(3) The Department may establish any special conditions necessary, to ensure adequate protection of public health, safety, welfare and the environment in its certification of an alternative system for general use. Such conditions may include without limitation: specification of site or effluent characteristics; flow limitations; monitoring, testing, and reporting requirements; operation and maintenance contracting requirements; a requirement that a certified operator shall operate the system; or financial assurance mechanisms. The Department may also specify changes or modifications of requirements otherwise applicable to conventional systems that are appropriate for use of the alternative system.

(4) A Local Approving Authority may impose additional conditions on the use of alternative systems certified for general use under 310 CMR 15.000 only in accordance with regulations adopted pursuant to 310 CMR 15.003(3).

(5) Systems with performance superior to conventional systems:

(a) If the Department determines that an alternative system is more effective than conventional systems in removing nitrates, the Department shall establish the nutrient removal credit which will be allowed for use of such system pursuant to 310 CMR 15.217, based on the nutrient removal performance of the approved technology.

15.288: continued

(b) In certifying an alternative system for general use, the Department may determine that any person wishing to use such system need not connect the facility to a sanitary sewer if such connection is or becomes feasible, if the performance of the alternative system will provide a level of protection to public health and safety and the environment that is at least equivalent to that of a sewer system.

(6) Prior to making a determination on an application for general use approval of a technology pursuant to 310 CMR 15.288, the Department shall publish notice of the application in the *MEPA Environmental Monitor*.

(7) Should the Department deny certification of the alternative system for general use, any person wishing to use such system may file a permit application for use of such alternative system pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program*. Denial under 310 CMR 15.288 shall not prejudice any action on an application pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program*.

15.289: Humus/Composting Toilets

(1) Humus/Composting Toilets are certified for general use subject to the following conditions:

(a) There shall be no liquid wastewater discharge from the humus/composting toilet. If the humus/composting toilet produces a liquid by-product that is not recycled through the toilet, the liquid by-product must be either:

1. discharged through a greywater system on the facility that includes a septic tank and leaching system; or
2. removed by a licensed septage hauler and properly disposed.

Any other disposal of a liquid by-product requires specific approval by the Department.

(b) If there is a greywater discharge designed in accordance with 310 CMR 15.262 or a discharge from a drain equipped with a garbage grinder from the facility, there shall be a septic tank and a soil absorption system designed in accordance with 310 CMR 15.262(1)(a) and 310 CMR 15.240(4). A filter system specifically approved by the Department for that purpose may be used in place of the septic tank, provided that there is no discharge of garbage grinder waste or of liquid by-product from the composting toilet to the greywater system. For publicly used state and federal facilities at which the only sources of greywater are handwashing sinks, janitorial basins and drinking water fountains, the Department may approve a design flow for the greywater system based on water meter readings from the same or similar facilities with a safety factor to assimilate maximum daily flows. An existing cesspool may serve as a leaching pit for these purposes where:

1. the cesspool is pumped and cleaned when the other components of the system are installed;
2. the bottom of the cesspool does not extend below the high groundwater elevation as determined by a Soil Evaluator in accordance with 310 CMR 15.103(3);
3. the cesspool meets the design criteria of 310 CMR 15.253 (pits, chambers, and galleries) with respect to effective depth, separation between units, and inspection access, or the cesspool is replaced by a precast concrete leaching pit meeting those requirements; and
4. the hydraulic loading requirements of 310 CMR 15.242 (effluent loading rates) are satisfied; and

(c) The system shall be designed to store compostable and composted solids for at least two years, unless otherwise approved by the Department. Residuals from the system shall be disposed of either:

- a. by burial on-site or in another manner and location approved by the local Approving Authority, covered with a minimum of six inches of clean compacted earth; or
- b. by a licensed septage hauler.

(2) Humus/Composting Toilets are certified for general use in new construction for residential facilities subject to the conditions set forth at 310 CMR 15.289(1)(a), where a system in full compliance with 310 CMR 15.000 could otherwise be installed on the site.

15.289: continued

(3) For commercial and public facilities or private organizations, humus/composting toilets are certified for general use subject to the conditions at 310 CMR 15.289(1)(a) without the need to demonstrate that a system in full compliance with 310 CMR 15.000 could otherwise be installed on the site.

15.290: Shared Systems

(1) An Approving Authority may allow the use of shared systems, subject to any special conditions established pursuant to 310 CMR 15.292, to serve two or more facilities that will result from division of a Facility, for upgrade of existing systems, for new construction, or for increased flow to an existing system, in accordance with 310 CMR 15.290 through 15.292.

(2) Any application for use of a shared system shall include the following:

- (a) complete plans and specifications for the system as required by 310 CMR 15.201 through 15.255;
- (b) a proposed operation and maintenance plan for the shared system;
- (c) a description of the form of ownership which each component of the system serving more than one Facility will take, together with relevant legal documentation describing or establishing that ownership including, without limitation, easements, condominium master deed, or homeowners' association documents. All forms of private ownership of system components serving more than one Facility shall establish that each user of the system has the legal ability to accomplish any necessary maintenance, repair, or upgrade of the component;
- (d) a description of the financial assurance mechanism proposed to ensure effective long-term operation and maintenance of the system. Acceptable financial assurance mechanisms may include, but are not limited to, an escrow account, letter of credit, performance bond, or insurance policy, which names the Approving Authority as beneficiary, and which provides for upgrade of the shared system in the event the shared system fails to protect public health, safety, welfare or environment pursuant to the criteria established in 310 CMR 15.303. A copy of the final financial assurance mechanism shall be provided to the Approving Authority prior to construction of the system; and
- (e) a copy of a proposed Grant of Title 5 Covenant and Easement essentially identical to that contained in 310 CMR 15.000: *Appendix 1* shall be recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office within 30 days of the Approving Authority's approval of the Covenant and Easement. The applicant shall file a certified Registry copy of this Covenant and Easement with the Approving Authority within 30 days of its date of recordation and/or registration, and prior to construction of the system.

(3) A Local Approving Authority may impose additional conditions on the use of shared systems under 310 CMR 15.000 only in accordance with 310 CMR 15.003(3).

15.291: Division of a Facility and Upgrades Using Shared Systems

(1) The Approving Authority may allow use of shared systems for upgrade of existing systems or to serve two or more facilities that will result from division of a Facility without granting a variance pursuant to 310 CMR 15.410 through 15.413 only where:

- (a) the proposed shared system satisfies all technical requirements of 310 CMR 15.100 through 15.292 without the need for a variance except setbacks from property lines between facilities served by the shared system;
- (b) there will be no new construction or increase in design flow from the facility or facilities to be served by the shared system;
- (c) the applicant proposes institutional arrangements as described in 310 CMR 15.290(2)(c), and records a Grant of Title 5 Covenant and Easement essentially identical to that contained in 310 CMR 15.000: *Appendix 1*, in accordance with 310 CMR 15.290(2)(e); and
- (d) the applicant provides the Approving Authority with the insurance policy or other comparable financial assurance mechanism required pursuant to 310 CMR 15.290(2)(d).

(2) The use of shared systems for upgrade of existing systems in any situation not described in 310 CMR 15.291(1) may only be approved through a variance.

15.291: continued

(3) A Local Approving Authority may impose additional conditions on the use of shared systems under 310 CMR 15.000 only in accordance with 310 CMR 15.003(3).

15.292: New Construction or Increased Flow to Existing Systems and Division of a Facility Using Shared Systems

(1) The Approving Authority may allow use of shared systems for new construction, increased flow to existing systems, or to serve two or more Facilities that will result from division of a Facility without granting a variance only where:

(a) the proposed shared system satisfies all technical requirements of 310 CMR 15.100 through 15.292 except setbacks from property lines between facilities served by the shared system;

(b) with the exception of a shared system serving a cluster development as defined in 310 CMR 15.002, the applicant demonstrates that the design flow from the facility or facilities to be served by the shared system does not exceed the design flow which could have been constructed in compliance with 310 CMR 15.000 without the use of a shared system;

(c) the applicant proposes institutional arrangements as described in 310 CMR 15.290(2)(c) and records a Grant of Title 5 Covenant and Easement essentially identical to that contained in 310 CMR 15.000: *Appendix I*, in accordance with 310 CMR 15.290(2)(e); and

(d) the applicant provides the Approving Authority with the financial assurance mechanism required by 310 CMR 15.290(2)(d).

(2) The use of shared systems for new construction, for increased flow to existing systems or to serve two or more facilities that will result from division of a Facility in any situation not described in 310 CMR 15.292(1) may only be approved through a variance. An application for shared system approval of an existing system to serve two or more facilities resulting from division of a Facility is presumed to be for new construction where construction of any building served by the system was completed within the five years prior to the filing of the application.

(3) A Local Approving Authority may impose additional conditions on the use of shared systems under 310 CMR 15.000 only in accordance with regulations adopted pursuant to 310 CMR 15.003(3).

SUBPART D: INSPECTION AND MAINTENANCE OF SYSTEMS

15.300: Purpose and General Provisions

(1) The proper operation and maintenance of all systems is essential to their proper functioning, to the avoidance of public health hazards and to the protection of the environment. 310 CMR 15.300 is intended to ensure the proper operation and maintenance of all systems. The goal of system inspection is to provide sufficient information to make a determination as to whether or not the system is adequate to protect public health and the environment. If any of the criteria or conditions listed on the inspection form and specified in 310 CMR 15.303 and 15.304 are met, the system is failing to protect public health or the environment and must be repaired, replaced or upgraded.

(2) The provisions of 310 CMR 15.303 and 15.304 represent an initial effort to identify and upgrade those failed systems which pose the greatest risk to public health and safety, and to the waters of the Commonwealth.

(3) The Department shall produce educational materials suitable for distribution to the general public describing the importance of proper maintenance and operation of on-site systems and the impact of such systems on public health and the environment. In addition to its own distribution, the Department shall make such materials available to Local approving authorities and other interested persons.

(4) Any person owning or operating a facility on which an on site subsurface sewage treatment and disposal system is installed shall be responsible for the inspection and maintenance of, and any necessary upgrades to, the system.

15.300: continued

(5) Facilities with an increase in the nitrogen loading rate in accordance with 310 CMR 15.262(6) and (7) shall be inspected annually. The inspection shall document at a minimum: whether the system has been continually operated as approved; if the system consists of a greywater filter, whether it is operating properly; and whether compost and blackwater are disposed of off-site in accordance with all applicable laws and regulations. The results of each annual inspection shall be submitted to the Department and the Local Approving Authority by January 31st of the following year.

15.301: System Inspection

(1) Inspection at Time of Transfer. Except as provided in 310 CMR 15.301(2), 15.301(3), and 15.301(4), a system shall be inspected at or within two years prior to the time of transfer of title to the facility served by the system. An inspection conducted up to three years before the time of transfer may be used if the inspection report is accompanied by system pumping records demonstrating that the system has been pumped at least once a year during that time. If weather conditions preclude inspection at the time of transfer, the inspection may be completed as soon as weather permits, but in no event later than six months after the transfer, provided that the seller notifies the buyer in writing of the requirements of 310 CMR 15.300 through 15.305. A copy of the complete inspection report shall be submitted to the buyer or other person acquiring title to the facility served by the system.

(2) The following transactions shall not be considered transfers of title for the purposes of 310 CMR 15.301(1):

- (a) taking a security interest in a property, including but not limited to issuance of a mortgage;
- (b) refinancing a mortgage or similar instrument, whether or not the identity of the lender remains the same;
- (c) a change in the form of ownership among the same owners, such as placing the facility within a family trust of which the owners are the beneficiaries, or changing the proportionate interests among a group of owners or beneficiaries;
- (d) adding or deleting a spouse as an owner or beneficiary; or a transfer between spouses during life, out right or in trust; or the death of a spouse;
- (e) the appointment of or a change in a guardian, conservator, or trustee.

(3) Applicability to Specific Transfers of Title.

(a) Units in a Condominium or Cooperative Corporation. The cooperative corporation or condominium association shall be responsible for the inspection, maintenance, and upgrade of any system or systems serving the units, unless otherwise provided in the governing documents of the condominium association or the cooperative corporation. For a facility comprised of five or more condominium or cooperative units, each system located on the facility shall be inspected at least once every three years instead of at time of transfer of title and all existing systems shall be inspected by December 1, 1996. For a facility comprised of fewer than five condominium or cooperative units:

- 1. each system located on the facility shall be inspected at least once every three years and all existing systems shall be inspected by December 1, 1996, or
- 2. at the time of transfer of title of any unit, the system serving that unit shall be inspected in accordance with the time of transfer provisions of 310 CMR 15.301.

15.301: continued

(b) Foreclosure or Deeds in *Lieu* of Foreclosure. Inspection of the system must occur within two years before or six months after the execution of the memorandum of sale (irrespective of whether the foreclosing institution, the loan guarantor, the loan servicer, an unaffiliated third party, or any combination thereof, is/are executing such memorandum of sale) or delivery of the deed in lieu of foreclosure to the foreclosing institution or the loan servicer. An inspection conducted up to three years before the time of transfer may be used if the inspection report is accompanied by system pumping records demonstrating that the system has been pumped at least once a year during that time. To the extent that foreclosing institutions or loan servicers have contractually allocated responsibility for the inspection to the unaffiliated third party or the loan guarantor acquiring the property within the specified timeframes, such foreclosing institutions or loan servicers will not be responsible for inspection of the system(s). Entities foreclosing on properties are required to notify those who acquire title of the inspection and upgrade requirements contained at 310 CMR 15.300 through 15.305, in writing, prior to or at the time of transfer.

(c) Inheritance by Will or Intestacy (Without a Will). With the exception of inheritance by a spouse or inheritance of residential real property between any of the relationships listed in 310 CMR 15.301(4)(d), the inspection of the system must occur within two years before or one year after the will being allowed by the probate court and the appointment of the executor; or within two years before or one year after the appointment of an administrator if the deceased dies intestate regardless of whether the property passes specifically or as part of the residue of the estate. An inspection conducted up to three years before the time of transfer may be used if the inspection report is accompanied by system pumping records demonstrating that the system has been pumped at least once a year during that time. Executors or administrators are required to notify, in writing, those who acquire title to real property from an estate of the inspection and upgrade requirements contained at 310 CMR 15.300 through 15.305.

(d) Legal Life Estate or an Interest for Life or for a Term of Years in Trust. Inspection of the system must occur within two years before or six months of the death of the life tenant or the expiration of a present interest in trust for a term of years. If a successive life interest or an interest in trust for a term of years passes to a spouse, the inspection must occur within two years before or six months of the death of the last surviving spouse or the expiration of a present interest in trust to the spouse for a term of years. An inspection conducted up to three years before the time of transfer may be used if the inspection report is accompanied by system pumping records demonstrating that the system has been pumped at least once a year during that time.

(e) Interfamily Transfers That Are Not Excluded Under 310 CMR 15.301(4)(d). Inspection of the system must occur within two years prior to transfer of title or if weather conditions prevent inspection at the time of transfer, the inspection must occur as soon as the weather permits, but in no event later than six months after the transfer. An inspection conducted up to three years before the time of transfer may be used if the inspection report is accompanied by system pumping records demonstrating that the system has been pumped at least once a year during that time.

(f) Tax Taking Either by the Federal, State, or Municipal Government. Inspection of the system must occur within two years prior to transfer by governmental entity to buyer or within six months after the expiration of the right of redemption, provided that the governmental entity notifies the buyer in writing of the requirements contained at 310 CMR 15.300 through 15.305 for inspection and upgrade, if necessary. An inspection conducted up to three years before the time of transfer may be used if the inspection report is accompanied by system pumping records demonstrating that the system has been pumped at least once a year during that time.

(g) Levy of Execution that Results in a Conveyance of Property. Inspection of the system must occur within two years prior to officer's deed of debtor's interest to buyer or within six months after the expiration of the right of redemption, provided that the officer notifies the buyer in writing of the requirements contained at 310 CMR 15.300 through 15.305 for inspection and upgrade, if necessary. An inspection conducted up to three years before the time of transfer may be used if the inspection report is accompanied by system pumping records demonstrating that the system has been pumped at least once a year during that time.

15.301: continued

(h) Bankruptcy. Inspection of the system must occur within two years prior to transfer by bankruptcy trustee to buyer or within six months after the transfer, provided that the debtor notifies the buyer in writing of the requirements contained at 310 CMR 15.300 through 15.305 for inspection and upgrade, if necessary. An inspection conducted up to three years before the time of transfer may be used if the inspection report is accompanied by system pumping records demonstrating that the system has been pumped at least once a year during that time.

(i) Change in Ownership or the Form of Ownership Where New Parties are Introduced (*e.g.*, introduction of new beneficiary/ies in a nominee trust; introduction of new joint tenant(s) or new tenant(s) in common; introduction of new parties where property is transferring from joint ownership to nominee or business trust, or where a new general partner is introduced; creation of a legal life estate or an interest for life or for a term of years in trust for a party other than the creator or his or her spouse; a change in the controlling ownership interest of a corporation, *etc.*). Inspection of the system must occur within two years prior to transfer or if weather conditions prevent inspection at the time of transfer, the inspection must occur as soon as weather permits, but in no event later than six months after the transfer, provided that the new party is notified in writing of the requirements contained at 310 CMR 15.300 through 15.305 for inspection and upgrade, if necessary. In a nominee trust situation, whoever has authority to add a new beneficiary is responsible for the inspection. An inspection conducted up to three years before the time of transfer may be used if the inspection report is accompanied by system pumping records demonstrating that the system has been pumped at least once a year during that time.

(4) Exclusions. Inspection of a system is not required at the time of transfer of title of the facility served by the system in the following circumstances:

(a) a certificate of compliance for a new system has been issued by the Approving Authority within three years prior to the time of transfer and system pumping records demonstrate that the system was pumped at least once during the third year; or

(b) the owner of the facility or the person acquiring title has signed an enforceable agreement with the Approving Authority to upgrade the system or to connect the facility to a sanitary sewer or a shared system within the next two years following the transfer of title, provided that such agreement has been disclosed to and is binding on the subsequent owner(s); or

(c) the facility is subject to a comprehensive local plan of on-site septic system inspection approved in writing by the Department and administered by a local or regional governmental entity, and the system has been inspected at the most recent time required by the plan. A comprehensive local plan may prioritize systems to be inspected on the basis of proximity to water resources, soil or geological conditions, age or size of systems, history of performance, frequency of pumping or other routine maintenance activity, or other relevant factors, and may establish different schedules and frequency of inspection on the basis of such criteria, provided that all systems are inspected at least once every seven years by a System Inspector approved by the Department; or

(d) the transfer is of residential real property between the following relationships:

1. between current spouses;

2. between parents and their children;

3. between full siblings; and

4. where the grantor transfers the real property to be held in a revocable or irrevocable trust, where at least one of the designated beneficiaries is of the first degree of relationship to the grantor.

(5) A system shall be inspected prior to any change in the type of establishment, or increase in design flow, or prior to any expansion of use of the facility served for which a building permit or occupancy permit from the local building inspector is required. If the system is a cesspool, or if the system is failing as set forth in 310 CMR 15.303 or 15.304(1) or is a significant threat to public health, safety, welfare and the environment as set forth in 310 CMR 15.304(2), then the system shall be upgraded prior to the change in the type of establishment, increase in design flow or expansion of use of the facility. Prior to an increase in the design flow to any cesspool, or to any system above the existing approved capacity, the cesspool or the system shall be upgraded in accordance with the standards applicable to new construction. Whenever an addition to an existing structure which changes the footprint of a building with no increase in

15.301: continued

design flow is proposed, the system inspection shall be an assessment to determine the location of all system components, including the reserve area. The proposed construction shall not be placed upon any of the system components or within any applicable setback distances in 310 CMR 15.211. If official records are available to make a determination regarding location of system components, an inspection is not required for footprint changes.

(6) Facilities with a total design flow of 10,000 or more gallons per day but less than 15,000 gallons per day at full build out shall be inspected by the last day of the applicable calendar year listed below in compliance with the provisions of 310 CMR 15.006, and applicable provisions of 310 CMR 15.300 through 15.354, or 314 CMR 5.00. Such systems shall, unless subject to 310 CMR 15.301(3)(a), be re-inspected during the fifth calendar year following the applicable year of initial inspection, and then during every fifth calendar year thereafter. An inspection of a system conducted within 30 days prior to the last day of the applicable year of initial inspection may be used as the initial inspection, provided that a System Inspection Form approved by the Department is submitted to the Department within 30 days of the inspection. The Department may accept a Certificate of Compliance for the entire system, issued by the Department within the two year period prior to an inspection deadline, as a substitute for a required system inspection.

Year of initial inspection	Basin in which system is located
1997	Charles, Housatonic, Hudson (Hoosic), North Coastal, Ten Mile
1998	Blackstone, Chicopee, Connecticut, Nashua
1999	Boston Harbor (Neponset), Cape Cod, French & Quinebaug, Merrimack, Narragansett Bay/Mt. Hope Bay, Parker
2000	Buzzards Bay, Deerfield, Ipswich, Islands, Millers, Shawsheen
2001	Concord (Sudbury, Assabet, Concord), South Coastal, Farmington, Taunton, Westfield

Basin boundaries shall be determined by reference to the most recent edition of the Massachusetts GIS maps. If all of the components of a system are not located in the same basin, then the system shall be inspected during the earliest of the applicable inspection years.

(7) Shared systems shall be inspected every three years.

(8) When a facility is divided or the ownership of two or more facilities is combined as specified in 310 CMR 15.010(2) or (3), all systems serving the facility or facilities shall be inspected.

(9) All systems shall be inspected when the owner or operator thereof is ordered to do so by the local Approving Authority, the Department or court.

(10) The results of any inspection(s) required by 310 CMR 15.301 shall be submitted to the Approving Authority on a current System Inspection Form approved by the Department within 30 days of the field inspection of the system components by the approved System Inspector, provided that this sentence shall not be construed to require the owner of a system or a System Inspector to submit to the Approving Authority the results of a voluntary assessment of the condition of a system that is not performed to comply with a requirement of 310 CMR 15.301. Any system determined to require upgrade pursuant to 310 CMR 15.303 or 15.304 solely as a result of a voluntary assessment shall not be subject to the deadlines for completion of upgrades in accordance with 310 CMR 15.305 unless the owner or operator of the system is ordered to do so by the local Approving Authority, the Department or court. Inspection forms for systems with design flows over 10,000 gpd, and systems serving state or federal facilities shall be submitted to the Department by the approved System Inspector and the owner. All inspections required by 310 CMR 15.301 shall be conducted by a currently approved System Inspector. For each required inspection, the System Inspector shall complete the System Inspection Form in its entirety. Failure to complete the form is a violation of 310 CMR 15.302.

15.301: continued

(11) Failure of an owner or operator of a system to have the system inspected, and use or operation of any system described in 310 CMR 15.301(1) through (10) after the dates or events set forth therein without a required inspection shall constitute violations of 310 CMR 15.000. The failure to submit the required inspection form in accordance with 310 CMR 15.301(10) shall create a rebuttable presumption that the required inspection has not been performed.

15.302: Criteria for Inspection

(1) The intent of 310 CMR 15.302 is to provide reasonable guidance for the inspection of existing systems in as non-intrusive a manner as possible, set forth the requirements for conducting an inspection, and to avoid damage to the system and any unnecessary disturbance of the surrounding soil area which is related to the treatment process. At a minimum, the septic tank and distribution box, if present, or cesspool, if present, shall be located, uncovered and inspected, and reasonable professional efforts shall be made to locate and identify other components and features, as described in 310 CMR 15.302(2) and (3). The inspection is not designed to provide information to demonstrate that the system will adequately serve the use to be placed upon it by the new owner. The inspection criteria are intended to allow for timely inspection to avoid undue delay in the transfer of property.

- (2) An inspection shall consist of the collection and recording of the following information:
- (a) a general description of the system components and layout;
 - (b) quantification of the source/type of sanitary sewage. This should include type of use (domestic or commercial/industrial) as well as the design flow and whether or not the facility being served is occupied at the time of the inspection;
 - (c) an analysis of the factors set forth in 310 CMR 15.303 (failure criteria) and, if the system has a design flow of 10,000 gpd or greater, 15.304 (threats to public health and environment);
 - (d) water use records for the previous two years for facilities served by public water supply, if available from the supplier;
 - (e) a description of the septic tank including:
 1. approximate age, size, and condition of the tank;
 2. distance between bottom of grease/scum layer and the bottom of the outlet baffle;
 3. distance between the top of the scum layer and the top of the outlet tee;
 4. thickness of the grease/scum layer;
 5. depth of the sludge layer and distance from sludge to outlet tee;
 6. physical condition of inlet and outlet tees;
 7. any evidence of leakage into or out of tank; and
 8. any evidence of backup of effluent.
 9. a characterization of the distribution box, and of dosing tanks with pumps, if any, including:
 - a. any evidence of solids carryover;
 - b. leakage into or out of the distribution box;
 - c. whether the flow is equally divided; and
 - d. any evidence of backup.
 10. a description of the condition of the soil absorption system including:
 - a. any signs of hydraulic failure;
 - b. condition of surface vegetation;
 - c. level of ponding within disposal area;
 - d. encroachments into disposal area; and
 - e. other sources of hydraulic loading.
 11. the location of private water supply well (if any) in relation to system components; and
 12. a copy of pump-out records on file with the local Approving Authority.

15.302: continued

(3) The inspector shall make reasonable professional efforts to determine the location and condition of all system components and relevant physical features. If any component cannot be located or inspected, or any determination cannot be made, the inspector shall state on the inspection form the reasons and the steps taken to complete the inspection. At a minimum, reasonable professional efforts require compliance with the inspection requirements and protocol in 310 CMR 15.302(4) and (5). Where an inspection is conducted for the purpose of refuting or corroborating the findings of a prior inspection, reasonable professional efforts shall require, at a minimum, that the inspector employ methods to determine the location and condition of all system components and relevant physical features that are comparable to the methods employed by the prior inspector. Provided that these requirements are met, and the Approving Authority agrees with the findings in writing, the reinspection shall supersede the prior inspection unless otherwise determined in writing by the Approving Authority.

(4) Determination of High Groundwater Elevation. A deep hole observation test is not required to determine high groundwater elevation during an inspection. High groundwater elevation shall be estimated by the inspector, using best professional judgment, based on the methods described in 310 CMR 15.302(4)(a) through (c).

(a) The inspector shall review local maps and records of groundwater elevation (previous deep hole observation tests or groundwater monitoring results) on the site and nearby properties, if available.

(b) If the system includes a cesspool, the cesspool shall be pumped during the inspection and then examined to determine whether groundwater flows into the cesspool, indicating that the cesspool is below high groundwater elevation.

(c) If the system includes a septic tank and distribution box, the condition of these components and the surrounding soil shall be observed for indications that groundwater has infiltrated the system. Care should be taken not to destabilize the distribution box or the piping to or from the box.

These minimum requirements shall not prevent the use of additional methods. The elevation of nearby water bodies, or evidence of groundwater infiltration in other subsurface structures (for example, cellars), or hand augering to determine depth may aid in determining whether the system is located in the groundwater. The methods used to determine high groundwater elevation shall be described in the inspection report. A system owner may choose to have the high groundwater elevation determined by an observation well or deep hole observation test to confirm or disprove the results obtained by the minimum requirements of 310 CMR 15.302(4), or in place of the minimum requirements.

(5) Location of Soil Absorption System. The location of any cesspool must be determined. For systems with a septic tank and distribution box, excavation is not required to determine the location of the soil absorption system. Reference may be made to as-built plans of the system (if any). All components of the soil absorption system shall be located where the failure criteria specified in 310 CMR 15.303(1) are triggered. Where the failure criteria specified in 310 CMR 15.303(1) are not triggered, the location may be approximated by considering design flow, location of the distribution box and direction of outlet pipes, and physical condition of the site. The location may also be determined by running a metal snake or similar device from the outlet of the distribution box and using a metal detector, or use of similar methods. Nothing in 310 CMR 15.302(5) shall prevent an owner from choosing to establish the location of the leaching system through more intrusive methods.

(6) Compliance with Department Guidance. The inspector shall complete the system inspection in accordance with the Department's *Guidance for the Inspection of Subsurface Disposal Systems*.

15.303: Systems Failing to Protect Public Health and Safety and the Environment

(1) If one or more of the following conditions exist as documented by inspection by an approved System Inspector, or determined by the local Approving Authority or the Department, the system is failing to protect public health and safety and the environment and shall be upgraded in accordance with the timeframes of 310 CMR 15.305(1) and the standards of 310 CMR 15.404 and 15.405:

(a) Conditions applicable to all systems:

1. there is backup of sewage into the facility served by the system or any component of the system as a result of an overloaded and/or clogged soil absorption system or cesspool;

15.303: continued

2. there is a discharge of effluent directly or indirectly to the surface of the ground through ponding, surface breakout or damp soils above the disposal area or to a surface water of the Commonwealth;
 3. the static liquid level in the distribution box is above the level of the outlet invert;
 4. the liquid depth in a cesspool is less than six inches from the inlet pipe invert or the remaining available volume within a cesspool above the liquid depth is less than $\frac{1}{2}$ of one day's design flow;
 5. the septic tank or cesspool requires pumping more than four times a year;
 6. the septic tank and/or the tight tank is made of metal, unless the owner or operator has provided the System Inspector with a copy of a Certificate of Compliance indicating that the tank was installed within the 20 year period prior to the date of the inspection; or the septic tank and/or the tight tank is cracked or is otherwise structurally unsound, indicating that substantial infiltration or exfiltration is occurring or is imminent;
 7. a cesspool, privy or any portion of the soil absorption system extends below the high groundwater elevation;
- (b) Conditions applicable to cesspools and privies:
1. A cesspool or privy is located:
 - a. within 100 feet of a surface water supply or tributary to a surface water supply;
 - b. within a Zone I of a public well;
 - c. within 50 feet of a private water supply well;
 - d. less than 100 feet but 50 feet or more from a private water supply well, unless a well water analysis, conducted at a laboratory that is certified by the Department for the parameters analyzed, indicates an absence of fecal coliform bacteria, the presence of ammonia nitrogen and nitrate nitrogen is equal to or less than five ppm. The laboratory's sampling protocols shall be followed and its chain of custody forms shall be signed and completed. If water well analysis is conducted, the System Inspector shall attach a copy of the chain of custody forms and the laboratory results to the System Inspection Form.
 2. Evaluation of cesspools and privies near water resources:

A cesspool or privy is failing to protect public health and safety, welfare and the environment if any portion of it is within any of the dimensional criteria below and the local Approving Authority in its professional judgment determines the system is not functioning in a manner to protect the public health and safety, welfare and the environment:

 - a. within 50 feet of a surface water;
 - b. within 50 feet of a bordering vegetated wetland or a salt marsh.

In making a determination pursuant to 310 CMR 15.303(1)(b), the local Approving Authority shall consider:

 1. the condition, design, and treatment provided by the existing system;
 2. the vertical separation of the existing soil absorption system from groundwater;
 3. the horizontal separation of the existing soil absorption system from the water body;
 4. the soil characteristics of the site; and
 5. the condition of the waterbody or wetland, including any sensitive use areas such as beaches or shellfish beds.
- (c) Evaluation of systems with septic tanks and soil absorption systems near drinking water supplies:
- If any portion of the soil absorption system is within any of the dimensional criteria listed in 310 CMR 15.303(1)(c), unless the Approving Authority in its professional judgment, with the concurrence of the public water supplier, if any, determines the system is functioning in a manner to protect the public health and safety, welfare and the environment.
1. within 100 feet of a surface water supply or tributary to a surface water supply;
 2. within a Zone I of a public well;
 3. within 50 feet of a private water supply well;
 4. less than 100 feet but 50 feet or more from a private water supply well, unless a well water analysis, conducted at a laboratory that is certified by the Department for the parameters analyzed, indicates an absence of fecal coliform bacteria, and the presence of ammonia nitrogen and nitrate nitrogen is equal to or less than 5 ppm. The laboratory's sampling protocols shall be followed and its chain of custody forms shall be signed and completed. If water well analysis is conducted, the System Inspector shall attach a copy of the chain of custody forms and the laboratory results to the System Inspection Form.
- (d) In making a determination pursuant to 310 CMR 15.303(1)(c), the Approving Authority shall consider:

15.303: continued

1. the condition, design, and treatment provided by the existing system;
2. the vertical separation of the existing soil absorption system from groundwater;
3. the horizontal separation of the existing soil absorption system from the water body;
4. the soil characteristics of the site; and
5. the condition of the water supply, including a water supply analysis that meets the requirements of 310 CMR 15.303(1)(c) for fecal coliform bacteria and whether the presence of ammonia nitrogen and nitrate nitrogen is equal to or less than five ppm. Where available, existing data may be used for this analysis.

(2) Any system shall be upgraded upon the order of the Department or the Local Approving Authority if either determines that a specific circumstance exists by which any system threatens public health, safety, welfare or the environment, causes or threatens to cause damage to property or creates a nuisance. The Local Approving Authority or the Department may require that such upgrades be completed within a shorter period of time than specified in 310 CMR 15.305. Where necessary to protect public health, safety, welfare and the environment, the Department or the Local Approving Authority may require the owner to install a recirculating sand filter or equivalent alternative technology in accordance with 310 CMR 15.202 or to obtain a groundwater discharge permit in accordance with 314 CMR 5.00: *Ground Water Discharge Permit Program*.

(3) A cesspool serving a facility with a design flow of 2000 gpd or greater but less than 10,000 gpd is failing to protect public health, safety, welfare and the environment. The owner of such Facility is required, pursuant to 310 CMR 27.04(4) to notify the Department's Underground Injection Control Program and the Local Approving Authority 30 days prior to upgrading the cesspool and to have completed the upgrade of the cesspool by April 5, 2005.

15.304: Large Systems which Fail to Protect or which Threaten Public Health and Safety and the Environment

(1) A system serving a facility with a design flow of 10,000 gpd or greater but less than 15,000 gpd is failing to protect public health, safety and the environment if any of the conditions identified in 310 CMR 15.303(1) are present, as documented by inspection by an approved System Inspector, or determined by the Local Approving Authority or the Department. Any such system shall be upgraded in accordance with the timeframes of 310 CMR 15.305(1) and the standards of 310 CMR 15.404 and 15.405; provided, that the Department shall be the Approving Authority for all such upgrades.

(2) A system serving a facility with a design flow of 10,000 gpd or greater but less than 15,000 gpd is a significant threat to public health, safety and the environment if any of the following conditions are present, as documented by inspection by an approved System Inspector, or as determined by the Local Approving Authority or the Department:

- (a) the system is located within 400 feet of a surface water supply or within 200 feet of a tributary to a surface water supply; or
- (b) the system is located within a nitrogen sensitive area as designated pursuant to 310 CMR 15.214;
- (c) The owner or operator of any such system shall bring the system and the facility into compliance with the groundwater permit program requirements of 314 CMR 5.00: *Ground Water Discharge Permit Program*, including the obligation to obtain a groundwater discharge permit, within the time required by 310 CMR 15.305(2), unless the Department determines after consideration of the factors set forth in 310 CMR 15.304(3) that this requirement would be manifestly unjust, considering all the relevant facts and circumstances of the individual case, and the owner or operator has established that a level of environmental protection that is at least equivalent to that provided by 314 CMR 5.00 can be achieved without strict application of this requirement.

(3) (a) In determining whether enforcement of the requirement set forth at 310 CMR 15.304(2) would be manifestly unjust, the Department shall include at a minimum the following considerations:

15.304: continued

1. The owners of any such system for which permit applications were filed after May 9, 1994, or anywhere new construction occurred after March 31, 1995, shall be deemed to have had knowledge that a groundwater discharge permit would likely be required for such system pursuant to 310 CMR 15.304(2), and to have had a reasonable opportunity to make arrangements to come into compliance within the timeframes of 310 CMR 15.305(2);
 2. The costs of preparing the demonstrations and implementing control measures required by 310 CMR 15.304 shall be compared to the costs of compliance with the requirement to obtain a groundwater discharge permit; and
 3. Any other relevant factor.
- (b) In determining whether the applicant can provide the same degree of environmental protection as required by 310 CMR 15.304(2), the Department shall require at a minimum, the following:
1. inspection reports for the system as required by 310 CMR 15.301;
 2. an assessment of the groundwater flow at the site, including but not limited to direction and rate of groundwater flow, assessment of saturated flow conditions and concentrations of nitrate and other pollutants associated with the system;
 3. an assessment of water quality of relevant surface water supply, groundwater supply, or nitrogen sensitive areas;
 4. a proposed design and engineering plans for upgrade of the system, prepared by a Massachusetts Registered Professional Engineer, that will, at a minimum,
 - a. satisfy the requirements of 310 CMR 15.202 (recirculating sand filter or equivalent alternative technology);
 - b. satisfy the nitrogen loading requirements of 310 CMR 15.215; and
 - c. ensure that the standards applicable to groundwater discharge permits pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program* are met at the property line and at the point the discharge from the facility reaches any surface water or water supply well.
 5. a proposed maintenance, monitoring, and reporting plan that will ensure proper functioning of the upgraded system, and detection of any malfunction or failure to attain required discharge quality before discharges from the system leave the property; and
 6. if size and use of the facility is relevant to the demonstration that an equal level of environmental protection has been provided, appropriate use restrictions shall be granted and recorded in the chain of title for the property served by the system in the Registry of Deeds or Land Registration Office, as applicable, to ensure that such conditions are not changed.
- (c) An applicant for a determination pursuant to 310 CMR 15.304(3) shall file a request for such determination not less than two years prior to the date by which the owner would otherwise be required to obtain the groundwater discharge permit pursuant to 310 CMR 15.305(2).
- (d) In making any determination pursuant to 310 CMR 15.304(3), the Department shall impose such conditions as it determines appropriate to ensure protection of public health, safety, welfare and the environment. At a minimum, such conditions shall include upgrade of the system to the standards described in 310 CMR 15.304(3)(b)4., and a maintenance, monitoring and reporting plan as described in 310 CMR 15.304(3)(b)5.
- (4) Any system serving a facility with a design flow of 10,000 gpd or greater but less than 15,000 gpd shall be upgraded upon the order of the Department or the Local Approving Authority when a specific circumstance exists by which the system threatens public health, safety, welfare or the environment or causes or threatens to cause damage to property or creates a nuisance as determined by the Local Approving Authority or the Department. Where necessary to protect public health, safety, welfare and the environment, the Department or the Local Approving Authority may require the owner to install a recirculating sand filter or equivalent alternative technology in accordance with 310 CMR 15.202 or to obtain a groundwater discharge permit in accordance with 314 CMR 5.00.
- (5) A cesspool serving a facility with a design flow of 10,000 gpd or greater but less than 15,000 gpd is failing to protect public health, safety, welfare and the environment. The owner of such Facility is required, pursuant to 310 CMR 27.04(4), to notify the Department's Underground Injection Control Program 30 days prior to upgrading the cesspool and to complete the upgrade of the cesspool by April 5, 2005.

15.305: Deadlines for Completion of Upgrades

(1) If a system is failing to protect public health, safety, welfare or the environment as set forth in 310 CMR 15.303(1) or 15.304(1), the owner or operator shall upgrade the system within two years of discovery unless:

(a) a shorter period of time is set by the Local Approving Authority or the Department based upon the existence of an imminent health hazard; or

(b) the continued use of the system is permitted by the Local Approving Authority in accordance with the provisions of an enforceable schedule for upgrade. Bases for continued use include, but are not limited to, proposals to connect to a sanitary sewer or shared system. A fiscal commitment to the sewerage plan or shared system plan, together with an approved facility plan where appropriate, proposing connection or replacement of the failing system within five years, and an enforceable commitment by the owner to perform interim measures (for example, regular pumping) shall accompany any such local approval. Such approval shall expire in five years or upon the failure of the applicant for such approval to meet interim deadlines set forth in the enforceable schedule for upgrade and the plan. The Department may by specific written approval authorize the Local Approving Authority to allow a longer period of time, where the municipality has provided the Department a proposed implementation schedule for design and construction and has made a demonstrated financial commitment to the construction schedule. The Department may revoke any such approval if the approved schedule is not met.

(2) If a system serving a facility with a design flow of 10,000 gpd or greater but less than 15,000 gpd is a significant threat to public health, safety, welfare or the environment as set forth in 310 CMR 15.304(2), the owner or operator shall upgrade the system within five years of discovery in accordance with the provisions of an enforceable schedule unless:

(a) a shorter period of time is set by the Department based upon the existence of an imminent health hazard;

(b) the continued use of the system is permitted by the Department because it is necessary to allow implementation of an environmentally superior solution. An enforceable commitment by the owner to perform interim measures (*e.g.*, regular pumping, addition of fill) shall accompany any such approval by the Department. Such approval shall expire in seven years or upon the failure of the applicant for such approval to meet interim deadlines set forth in the enforceable schedule for upgrade.

(3) The owner or operator shall take appropriate measures throughout the period between discovery of the condition requiring upgrade and completion of the upgrade to ensure that there is no backup or direct discharge of sewage or effluent to buildings, to the surface of the ground, or to surface waters. The local Approving Authority or the Department may order the owner or operator to take any measure necessary to ensure the protection of public health, safety, welfare and the environment during such period.

(4) Except as provided in 310 CMR 15.004(3), all systems shall be abandoned in accordance with 310 CMR 15.354 and the buildings served by the systems shall be connected to a sewer when a sewer becomes available, unless:

(a) the system is an alternative system approved for such use pursuant to 310 CMR 15.280 through 15.287;

(b) the Department has made the determination in approving either the remedial use of an alternative system pursuant to 310 CMR 15.284 or in certifying an alternative system for general use pursuant to 310 CMR 15.288 that any person using such system need not connect the facility to a sanitary sewer if such connection is feasible; or

(c) the owner of an existing system has obtained a variance from this requirement pursuant to 310 CMR 15.410 through 15.415.

All systems shall be abandoned in accordance with 310 CMR 15.354 and the buildings served by the systems shall be connected to a sewer when directed to do so by the Board of Health pursuant to M.G.L. c. 83, § 11, by the Department pursuant to 310 CMR 15.000, or by court order.

15.340: Approval of System Inspectors

(1) System Inspectors who perform inspections pursuant to 310 CMR 15.301 shall be approved by the Department and shall be limited to:

15.340: continued

- (a) Massachusetts Registered Professional Engineers with a concentration in civil, sanitary or environmental engineering; Massachusetts Registered Sanitarians; or Massachusetts Certified Health Officers;
 - (b) Board of Health members or agents with at least one year of experience at the time of application; Engineers in Training (EIT certified) with a concentration in civil, sanitary or environmental engineering; Massachusetts licensed home inspectors and associate home inspectors as defined in St. 1999, c. 146, licensed septage haulers; disposal system installers; or other individuals with a minimum of one year of demonstrated experience in septic system design or inspection, who have attended training provided or authorized by the Department; and who have passed an examination prepared and administered by the Department or an agent authorized by the Department to qualify as an approved System Inspector pursuant to 310 CMR 15.340(4); or
 - (c) Individuals certified as on-site inspectors by the National Sanitation Foundation or other certifying organizations approved by the Department.
- (2) Individuals who qualify pursuant to 310 CMR 15.340(1) shall apply to the Department, or an agent authorized by the Department, for approval to perform inspections required under 310 CMR 15.000. Such application shall demonstrate satisfactorily to the Department, or an agent authorized by the Department, the qualifications of the applicant and shall be accompanied by a fee as established by the Department.
- (3) No persons other than those listed at 310 CMR 15.340(1) may perform inspections required by 15.301.
- (4) The Department may approve System Inspectors who attend training provided or authorized by the Department and pass a standard examination prepared and administered by the Department or an agent authorized by the Department. Said examination shall be designed to establish the fitness of the applicant for certification to assess the condition and function of on-site systems and to determine whether maintenance, including repair or replacement of system components, is necessary.
- (5) The passing score for the examination shall be 75% correct answers to all questions posed. Any person who is denied approval as a System Inspector based on his or her failure to pass the examination given by the Department, or an agent authorized by the Department, may request, and is entitled to receive, a written statement of the basis for denial.
- (6) The Department, or an agent authorized by the Department, shall maintain a list of all approved System Inspectors. The list shall be available for inspection or examination by any person.
- (7) The Department may revoke or suspend the approval and/or listing of a System Inspector approved pursuant to 310 CMR 15.340(1) for a time specified by the Department, during which time the inspector may not reapply to become a System Inspector, after opportunity for a hearing conducted pursuant to M.G.L. c. 30A, when it determines that the System Inspector has failed to comply with 310 CMR 15.000 with respect to the inspection of one or more systems including, without limitation:
- (a) the inspector has falsified or fraudulently altered a system inspection report or misrepresented the results of an inspection;
 - (b) the inspector has conducted a system inspection which does not comply with 310 CMR 15.000 and has incorrectly passed or failed the system;
 - (c) the inspector has failed to submit or accurately complete a system inspection report as required by 310 CMR 15.000; or
 - (d) the inspector has engaged in deceptive practices. Reinstatement following revocation shall be by written examination only.
- (8) Based on a System Inspector's noncompliance with 310 CMR 15.000, the Department, by issuance of an order, may require the System Inspector, among other things, to attend or repeat the System Inspector training course and/or to take or retake the System Inspector examination described in 310 CMR 15.340(4).

15.340: continued

(9) It shall be a violation of 310 CMR 15.000 for any person to falsify, misrepresent or fraudulently alter a system inspection report or the results of an inspection.

(10) System Inspectors shall submit the results of their inspection within 30 days of completing the inspection on a System Inspection Report form approved by the Department to the Approving Authority together with the signed statement at the bottom of the form certifying that the inspection has been performed and any recommendations regarding upgrade, repair, or maintenance of the system made by the System Inspector on the form were made consistent with the Inspector's training and experience in the maintenance and proper functioning of on site systems.

(11) System Inspectors may perform system inspections required by 310 CMR 15.301 while acting as an agent of an Approving Authority (a fee may be assessed pursuant to M.G.L. c. 40, § 22F), or as an independent agent of the system owner.

(12) System Inspectors initially approved by the Department prior to January 1, 2005, shall apply to the Department, or an agent authorized by the Department, to renew their approval by January 1, 2007. System Inspectors initially approved by the Department after January 1, 2005, shall apply to the Department, or an agent authorized by the Department, to renew their approval at least 90 days prior to the expiration of the three years following their approval date. Provided that a System Inspector timely files a complete renewal application, the System Inspector's approval shall not expire until the Department issues a final determination on the renewal application. A fee established by the Department shall accompany each renewal application; any application that does not include the fee shall be deemed incomplete. The approval of a renewal application shall expire three years from the date of issuance. Each System Inspector thereafter shall file a complete renewal application at least 90 days prior to the expiration date of his/her most recent approval.

(13) Beginning in 2010, at the time of filing any subsequent renewal application in accordance with 310 CMR 15.340(12), a System Inspector shall demonstrate that he or she has earned ten Training Contact Hours in the previous three years that improve the System Inspector's abilities in the following areas:

- (a) the principles of on-site sewage treatment and disposal;
- (b) safely and accurately conducting system inspections according to the requirements of 310 CMR 15.000;
- (c) safely and accurately identifying and locating systems;
- (d) safely and accurately assessing the condition and function of systems; and
- (e) safely and accurately determining whether maintenance, including repair or replacement of system components, is necessary.

15.351: System Pumping and Routine Maintenance

(1) Every septic tank, tight tank, or cesspool shall be pumped whenever necessary to ensure proper functioning of the system. Pumping is required whenever the top of the sludge or solids layer is within 12 inches or less of the bottom of the outlet tee, or the top of the scum layer is within two inches of the top of the outlet tee, or the bottom of the scum layer is within two inches of the bottom of the outlet tee. Pumping frequency is a function of use, although pumping is typically necessary at least once every three years, and is recommended annually for a system with a domestic garbage grinder. Without limiting the foregoing, a septic tank, tight tank, or cesspool shall be pumped when the owner or operator is required to do so by the Local Approving Authority or the Department. Whenever a system component including, but not limited to, a septic tank, tight tank, cesspool, grease trap, pump chamber or distribution box is pumped, its condition shall be noted by the system pumper on a system pumping form approved by the Department, and the results shall be submitted by the system pumper to the Approving Authority within 14 days from the pumping date. Such notation of the system's condition on the system pumping form shall not constitute a System Inspection Report submitted to the Approving Authority in accordance with 310 CMR 15.340.

15.351: continued

(2) Grease traps shall be inspected monthly by the owner/operator and shall be cleaned by a licensed septage hauler whenever the level of grease is 25% of the effective depth of the trap, or at least every three months, whichever is sooner. The owner/operator shall keep all inspection and pumping records.

(3) Pumps, alarms and other equipment requiring periodic or routine inspection and maintenance shall be operated, inspected and maintained in accordance with the manufacturer's and the designer's specifications. In no instance shall inspection be performed less frequently than once every three months for any system serving a facility with a design flow of 2,000 gallons per day or greater, and annually for any system serving a facility with a design flow of less than 2,000 gallons per day. The system owner shall submit the results of such inspections to the Approving Authority annually by January 31st of each year for the previous calendar year.

15.353: Emergency Repair

(1) Emergency repair or replacement of system components shall be completed within 30 days and shall be limited to the following:

- (a) pumping of a septic tank, tight tank, or cesspool as frequently as necessary to prevent backup or breakout; or
- (b) repair or replacement of one or more structural components of a system otherwise in compliance with 310 CMR 15.000, excluding the soil absorption system, such as a clogged building sewer or distribution line, damaged building sewer, septic tank or distribution box, or broken tee, which is determined to be the probable cause of the system failure and for which no modification or alteration of the system design is required.

(2) The emergency repair shall be limited to pumping if pumping alleviates the imminent danger to the public health, safety, welfare or the environment. If pumping does not alleviate the imminent danger to the public health, safety, welfare, or the environment, the Disposal System Installer may repair or replace one or more structural components of a system, excluding the soil absorption system, provided that:

- (a) the system is otherwise in compliance with 310 CMR 15.000;
- (b) any structural component that is repaired or replaced shall be in compliance with or upgraded to the requirements of 310 CMR 15.000;
- (c) the Disposal System Installer has determined the structural component being repaired or replaced is the probable cause of the condition constituting an imminent danger to the public health, safety, welfare or the environment; and
- (d) no modification or alteration of the system design is required.

(3) Only a Permitted Disposal System Installer may conduct an emergency repair.

(4) All emergency repairs other than pumping shall be preceded by at least 24-hour notice to the Approving Authority. All emergency repairs other than pumping shall be followed within 14 days of commencement of the emergency repair by an application for a Disposal System Construction Permit, local upgrade approval, or an application for a variance, if needed, pursuant to 310 CMR 15.411(2). The applicant may backfill any excavation required for the emergency repair unless directed otherwise by the Approving Authority. Pumping shall be reported to the Approving Authority.

(5) Any upgrade or expansion of a system which is not an emergency repair shall be designed, approved, and constructed in accordance with 310 CMR 15.000.

15.354: Abandonment of Systems

(1) Whenever the use of a system is discontinued following connection to a municipal or private sanitary sewer or shared on-site system or following condemnation or demolition of a building served by the system, the system shall be considered abandoned and any further use of the system for any purpose shall be prohibited unless, after inspection, the Approving Authority determines the system is in compliance or can be brought into compliance with 310 CMR 15.000.

15.354: continued

- (2) Continued use of a septic tank where the tank is to become an integral part of a sanitary sewer system requires the prior written approval from the local municipal authority responsible for the operation of the sanitary sewer system.
- (3) The following procedure shall be used to abandon a system:
 - (a) Within 14 days prior to discontinuance of use of a system, the facility owner shall apply to the Approving Authority to abandon the existing system citing the reason(s) abandonment is necessary, and where connection to municipal or private sanitary sewer has been made, a copy of the sewer connection permit shall be submitted with the application;
 - (b) Upon receipt of the Approving Authority's written approval to abandon the system, the septic tank shall be pumped of its entire contents by a licensed septage hauler; and
 - (c) The tank shall be excavated and removed from the site, or the bottom of the tank shall be opened or ruptured after being pumped of its content so as to prevent retainage of water and the tank shall be completely filled with clean sand or other suitable material approved in writing by the Approving Authority.

SUBPART E: PROCEDURES FOR SEEKING AND RECEIVING LOCAL UPGRADE APPROVALS AND VARIANCES FROM THE PROVISIONS OF SUBPARTS B AND C OF 310 CMR 15.000

15.401: General Provisions

- (1) Except as set forth in 310 CMR 15.401 through 15.422, every application to construct, upgrade or expand a system shall be prepared, and the work therefore authorized pursuant to a Disposal System Construction Permit shall be conducted, in full compliance with the procedural and technical requirements of 310 CMR 15.100 through 15.293.
- (2) In general, full compliance with the provisions of 310 CMR 15.000 is presumed to be necessary for the protection of public health, safety, welfare and the environment. Any requests to vary from the standards of 310 CMR 15.000 by means of a local upgrade approval or a variance shall be carefully reviewed by the Approving Authority and, where required, by the Department.

15.402: Use of Local Upgrade Approvals or Variances

- (1) Local Upgrade Approvals may be granted by Local Approving Authorities without review by the Department for a required or voluntary upgrade of existing systems, including failed or nonconforming systems, with design flows below 10,000 gpd and for existing systems required to be upgraded to Best Available Nitrogen Reducing Technology pursuant to 310 CMR 15.215(2)(a) in accordance with the terms and provisions of 310 CMR 15.402 through 15.405. Upgrade Approvals for required or voluntary upgrade of systems with design flows of 10,000 gpd or greater but less than 15,000 gpd which are failing to protect or are a significant threat to public health, and safety, welfare and the environment as set forth in 310 CMR 15.304 shall be approved by the Department.
- (2) Proposals for new construction or for increase in flow to an existing system other than in full compliance with 310 CMR 15.100 through 15.293 must seek and obtain a variance from the Approving Authority in accordance with the terms and conditions of 310 CMR 15.410 through 15.417.

15.403: Local Upgrade Approvals

- (1) The owner or operator may upgrade an existing system, including: a failed or nonconforming system with design flows below 10,000 gpd (systems which trigger failure criteria set forth at 310 CMR 15.303); systems with design flows of 10,000 gpd or greater but less than 15,000 gpd which fail to protect public health, safety, welfare and the environment (large systems set forth at 310 CMR 15.304(1)); and existing systems required to be upgraded to Best Available Nitrogen Reducing Technology pursuant to 310 CMR 15.215(2)(a); all pursuant to a local upgrade approval in accordance with the standards and requirements of 310 CMR 15.404 and 15.405 without obtaining variances. Local upgrade approvals for any system serving a facility owned by an agency of the Commonwealth or the federal government or systems with design flows of 10,000 gpd or greater but less than 15,000 shall be granted by the Department applying the same standards. The application for a local upgrade approval shall be made using a form approved by the Department. Notification to abutters shall be provided pursuant to the process in 310 CMR 15.411(1)(b), as required by 310 CMR 15.405(2), where the application is for reduction in the setback from a property line or from a private water supply well.

15.403: continued

(2) Local Upgrade approvals shall not be granted for upgrade proposals which include the addition of new design flows to a cesspool or privy or for the addition of new design flows above the existing approved capacity of a system constructed in accordance with the provisions of 310 CMR 15.000 or the 1978 Code.

(3) System upgrades which cannot be performed in accordance with 310 CMR 15.404 and 15.405 require a variance from the provisions of 310 CMR 15.000, which shall be processed in accordance with 310 CMR 15.410 through 15.417.

15.404: Maximum Feasible Compliance - Approvals for Upgrades

(1) Goal of Full Compliance. Wherever feasible, existing systems, including failed or nonconforming systems (other than systems threatening public health, safety, welfare or the environment as described in 310 CMR 15.304(2)) and existing systems required to be upgraded to Best Available Nitrogen Reducing Technology pursuant to 310 CMR 15.215(2)(a), shall be brought into full compliance through installation of one or more of the following:

- (a) an upgraded system which is in full compliance with 310 CMR 15.100 through 15.293;
- (b) an alternative system which has been approved for such use pursuant to 310 CMR 15.284 (remedial use), 15.285 (piloting), 15.286 (provisional approval), or 15.288 (certification for general use);
- (c) an RSF or equivalent alternative technology where the system is located in a Nitrogen Sensitive Area and has a design flow of 2000 gpd or greater in accordance with 310 CMR 15.202(1);
- (d) where proposed by the owner or operator, a shared system which has been approved for such use pursuant to 310 CMR 15.290 and 15.291; or
- (e) connection to a sewer system.

(2) Where failure of the system is solely due to failure of the septic tank, distribution box, soil absorption system, piping, and/or building sewer, upgrade of that component(s) in full compliance with 310 CMR 15.000 shall be deemed to meet the goal of full compliance; provided that the upgraded component functions properly with the other system components, the system functions properly hydraulically, and the owner obtains a certificate of compliance from the Approving Authority for the component repaired or replaced. If other system failures are discovered during upgrade of that component(s), such other system failures shall be upgraded in accordance with 310 CMR 15.405.

(3) When full compliance pursuant to 310 CMR 15.404(1) is not feasible, the Approving Authority may issue a local upgrade approval authorizing upgrade of the system with the goal of maximizing protection of public health, safety, welfare and the environment to the maximum extent feasible. The following requirements shall not be varied by the Approving Authority except as explicitly set forth in 310 CMR 15.404(3)(b) and (d):

- (a) a septic tank with an effective liquid capacity providing no less than 24 hours of retention time or 1000 gallons, whichever is greater, shall be provided unless the septic tank is an elevated tank constructed in accordance with 310 CMR 15.213 (construction in V-zones) in which case the effective liquid capacity may consist of a 500-gallon tank;
- (b) a minimum of four feet of separation between the bottom of the soil absorption system and the high groundwater elevation shall be provided, using fill if necessary. The Approving Authority may allow a three foot separation only in full compliance with 310 CMR 15.405(1)(h).
- (c) a minimum of four feet of naturally occurring pervious soil below the entire area of the soil absorption area and reserve area shall be provided;
- (d) the soil absorption system shall be designed to provide as much of the required area as possible on the facility served or, if proposed by the owner or operator, on an abutting facility pursuant to a valid recorded easement. The Approving Authority may reduce the required soil absorption system area no more than 25%, as provided in 310 CMR 15.405(1). Reductions in the required subsurface disposal area in excess of 25% may only be varied by the Department, and may require the installation of a Department-approved septic tank effluent tee filter, dosing of portions of the soil absorption system on an alternating basis, and/or other measures to protect the integrity of the soil absorption system; and
- (e) the soil absorption system shall not be located within 100 feet of a surface water supply or tributary to a surface water supply, within 50 feet of a private water supply well, or within the Zone I of a public water supply well.

15.405: Contents of Local Upgrade Approval

(1) In granting local upgrade approvals pursuant to 310 CMR 15.404(3) where full compliance as defined in 310 CMR 15.404(1) is not feasible, the Approving Authority shall consider the impact of the proposed system and shall vary to the least degree necessary the requirements of 310 CMR 15.100 through 15.293 so as to allow for both the best feasible upgrade within the borders of the lot, and have the least effect on public health, safety, welfare and the environment. Under a local upgrade approval, the Approving Authority is allowed to diverge from the goal of full compliance only to the extent necessary to achieve a feasible upgrade and may allow divergence only from those provisions, and to the extent, as specified in 310 CMR 15.404(2) and 15.405(1). In determining whether full compliance is feasible, the Approving Authority should appropriately consider not only physical possibility as dictated by the conditions of the site, but also the economic feasibility of the upgrade costs. The Approving Authority should emphasize protection of water resources and treatment of the sanitary sewage. Absent conditions which would result in a different outcome based on best professional judgment, the options set forth below should be considered in the order in which they appear with 310 CMR 15.405(1)(a) being the first option to be considered and rejected or adopted and 310 CMR 15.405(1)(k) being the last option to be considered and rejected or adopted:

- (a) Reduction of system location setbacks otherwise established in 310 CMR 15.211 for property lines provided that the system is within the property lines, a survey of the property line is required if a component is to be placed within five feet of the property line, and no such reduction shall result in the soil absorption system being located less than ten feet from a soil absorption system on an abutting property;
- (b) Reductions of system location setbacks from cellar wall, crawl space, swimming pool, or slab foundations; an increase in the maximum allowable depth of system components required by 310 CMR 15.221(7), from 36 inches to 72 inches below finish grade, provided that adequate venting and adequate access are provided and H-20 loading is provided for all system components; a decrease in the liquid depth of the septic tank required by 310 CMR 15.223(2) from four feet to three feet;
- (c) Up to a 25% reduction in the required subsurface disposal area design requirements;
- (d) Where upgrade is required pursuant to 310 CMR 15.303(1) because it is within Zone I of public well or within 100 feet of private well, relocation of the well. Any relocation of a public well shall be performed pursuant to 310 CMR 22.00: *Drinking Water* (water supply source approval);
- (e) Reduction of system location setbacks from bordering vegetated wetlands;
- (f) Reduction of system location setbacks from surface waters, salt marshes, inland and coastal banks, certified vernal pools in accordance with 310 CMR 15.211(1)[2], leaching catch basins, dry wells, or surface or subsurface drains other than those which discharge to surface water supplies or tributaries thereto;
- (g) Reduction of system location setbacks from water supply lines, private water supply wells (but not within 50 feet of the well), tributaries to surface water supplies, surface water supplies, but not within 100 feet of the surface water supply or tributary thereto or open, surface or subsurface drains which discharge to surface water supplies or tributaries thereto;
- (h) the Approving Authority may reduce the required four foot separation (in soils with a recorded percolation rate of more than two minutes per inch) or the required five foot separation (in soils with a recorded percolation rate of two minutes or less per inch) between the bottom of the soil absorption system and the high groundwater elevation only if all of the following conditions are met:
 1. An approved Soil Evaluator who is a member or agent of the local Approving Authority determines the high groundwater elevation;
 2. A minimum three foot separation (in soils with a recorded percolation rate of more than two minutes per inch) or a minimum four foot separation (in soils with a recorded percolation rate of two minutes or less per inch) between the bottom of the soil absorption system and the high groundwater elevation is maintained;
 3. The system is a failed or non-conforming system serving an existing building with a design flow of less than 2,000 gpd;
 4. No increase in design flow is allowed;
 5. No reduction in required soil absorption system size or setbacks from public or private wells, bordering vegetated wetlands, surface waters, salt marshes, coastal banks, certified vernal pools, water supply lines, surface water supplies or tributaries to surface water supplies, or drains which discharge to surface water supplies or their tributaries, is allowed.

15.405: continued

- (i) A sieve analysis may be performed in accordance with Department guidance if a percolation test in accordance with 310 CMR 15.104 and 15.105 can not be performed as determined by the Approving Authority;
 - (j) Reduction of the requirement of a 12 inch separation between the inlet and outlet tees and high groundwater, provided that all boots or pipe joints are sealed with hydraulic cement or installed with watertight sleeves and the tank is proven watertight. Expandable foam spray is not an acceptable alternative for sealing pipe joints; or
 - (k) At least one deep hole has been performed in the proposed disposal area and it has been determined by the Approving Authority that the deep hole adequately characterizes the soils for the purpose of designing the soil absorption system.
- (2) No application for a local upgrade approval in which the setback from property lines or a private water supply well is reduced shall be complete until the applicant has notified all abutters whose property or well is affected by certified mail at his or her own expense at least ten days before the Board of Health meeting at which the upgrade approval will be on the agenda. The notification shall reference the standards set forth in 310 CMR 15.402 through 15.405 and indicate the date, time and place where the upgrade approval will be discussed.
- (3) If the system cannot be upgraded in accordance with 310 CMR 15.404 and 15.405(1) the owner shall:
- (a) obtain a groundwater discharge permit pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program*;
 - (b) apply to the Approving Authority to use a tight tank in accordance with the provisions of 310 CMR 15.260;
 - (c) apply for a variance pursuant to 310 CMR 15.410 through 15.415; or
 - (d) abandon the system in compliance with 310 CMR 15.354.
- (4) Nothing in 310 CMR 15.405 shall authorize violation of M.G.L. c. 131, § 40 and 310 CMR 10.00: *Wetlands Protection*, or any other applicable provision of law.

15.410: Variances - Standard of Review

- (1) Local Approving Authorities and the Department may vary the application of any provisions of 310 CMR 15.000 with respect to any particular case except those listed in 310 CMR 15.415. Variances for increased flow to existing systems shall be governed by the provisions of 310 CMR 15.414. Variances for schools shall be governed by the provisions of 310 CMR 15.416. Variances shall be granted only when, in the opinion of the Approving Authority:
- (a) The person requesting a variance has established that enforcement of the provision of 310 CMR 15.000 from which a variance is sought would be manifestly unjust, considering all the relevant facts and circumstances of the individual case; and
 - (b) The person requesting a variance has established that a level of environmental protection that is at least equivalent to that provided under 310 CMR 15.000 can be achieved without strict application of the provision of 310 CMR 15.000 from which a variance is sought.
- (2) With regard to variances for new construction, enforcement of the provision from which a variance is sought must be shown to deprive the applicant of substantially all beneficial use of the subject property in order to be manifestly unjust.

15.411: Process for Seeking a Variance from Local Approving Authorities

- (1) The Local Approving Authority shall review requests for variances as follows.
- (a) Every request for a variance shall be in writing, shall make reference to the specific provision of 310 CMR 15.000 for which a variance is sought, and shall include a statement demonstrating compliance with 310 CMR 15.410.
 - (b) No application for a variance shall be complete until the applicant has notified all abutters by certified mail at his or her own expense at least ten days before the Board of Health meeting at which the variance request will be on the agenda. The notification shall reference the specific provisions of 310 CMR 15.000 from which a variance is sought, a statement demonstrating compliance with 310 CMR 15.410, and the date, time and place where the application will be discussed.

15.411: continued

(2) Emergency repairs pursuant to 310 CMR 15.353 may be performed prior to seeking a variance. The owner of the system shall seek a variance within 14 days of commencement of the emergency repairs.

(3) Any variance allowed by the Local Approving Authority shall be in writing. Any denial of a variance shall also be in writing and shall contain a brief statement of the reasons for the denial. A copy of each variance shall be conspicuously posted for 30 days following its issuance; and shall be available to the public at all reasonable hours in the office of the city or town clerk or the office of the Board of Health while it is in effect.

(4) A request for a variance for a residential facility with four units or less, as described in M.G.L. c. 111, § 31E, shall be deemed constructively approved by the Local Approving Authority if the Local Approving Authority does not act upon it within 45 days of receipt of a complete application.

(5) With the exception of those watersheds (Ware, Quabbin and Wachusett) to which the provisions of 350 CMR 11.00: *Watershed Protection* apply, Local Approving Authorities may, after consultation with the local water supplier, issue variances for the siting of systems within the setbacks from surface water supplies, or from tributaries to surface water supplies, and may exempt tributaries consistent with the standards and procedures of 350 CMR 11.00: *Watershed Protection* without Department approval, provided that no such variance or exemption shall result in: the siting of a septic tank or soil absorption system within 200 feet of said surface water supplies or 100 feet of said tributaries; or siting of a septic tank within 25 feet or a soil absorption system within 50 feet of any surface water. Copies of all such variances and exemptions of tributaries shall be submitted to the Department by the Local Approving Authority within 30 days of issuance.

15.413: Conditioning of Variances

(1) The Local Approving Authority or the Department may issue variances subject to such conditions, including, but not limited to, monitoring and reporting requirements, deed recordation requirements, financial assurances or other qualifications on the use of the system, as it deems necessary to protect public health, safety, welfare and the environment. Any conditions shall be expressed in writing in allowing the variance.

(2) Any denial of a variance by the Local Approving Authority or the Department may direct the applicant to upgrade an existing system consistent with the requirements and standards of 310 CMR 15.404 and 15.405. Failure to do so may be the subject of enforcement action by the Local Approving Authority or the Department.

15.414: Variances for Increased Flow to Existing System

(1) Local Approving Authorities or the Department may vary the application of any provisions of 310 CMR 15.000 with respect to any particular case involving increased flow to an existing system only when in the opinion of the Department or the Local Approving Authority all of the conditions in 310 CMR 15.414(2) through (4) are met. A showing by the person requesting a variance that the proposed variance would satisfy the maximum feasible compliance provisions as set forth in 310 CMR 15.404 and 15.405 shall not presumptively entitle such person to a variance.

(2) The person requesting a variance has established that strict enforcement of the provision of 310 CMR 15.000 from which a variance is sought would be manifestly unjust, considering all the relevant facts and circumstances of the individual case including, at a minimum, the following:

- (a) the owners of any such system for which permit applications were filed after March 31, 1995 shall be deemed to have had knowledge that full compliance with the requirements applicable to new construction is preferred;
- (b) the costs of full compliance with the requirements applicable to new construction shall be compared to the costs of compliance with a variance; and

15.414: continued

- (c) whether an upgrade in full compliance with 310 CMR 15.000 is feasible without increased flow.
- (3) The system cannot be brought into full compliance through any of the following:
 - (a) an upgraded system which is in full compliance with 310 CMR 15.100 through 15.293;
 - (b) an alternative system which has been approved for such use pursuant to 310 CMR 15.284 (remedial use), 15.285 (piloting), 15.286 (provisional approval), or 15.288 (certification for general use);
 - (c) a shared system which has been approved for such use pursuant to 310 CMR 15.290 and 15.291; or
 - (d) connection to a sewer system.
- (4) The upgraded system with the increased flow provides better protection of public health and safety and the environment than the existing system with no increase in flow. Increased flows not in compliance with 310 CMR 15.000 will rarely provide better protection than existing flows to a system designed and constructed in compliance with the 1978 Code or 310 CMR 15.000, but are more likely to constitute improvements over nonconforming or failed systems.

15.415: Provisions from Which No Variance May be Granted

- (1) No variance from the minimum requirement of four feet of naturally occurring pervious material set forth in 310 CMR 15.240(1) shall be granted for new construction.
- (2) For upgrade of systems, or increase of flow to existing systems, no variance from the minimum requirement of four feet of naturally occurring pervious material set forth in 310 CMR 15.240(1) shall be granted unless the applicant demonstrates that alternatives for siting an on-site system with four feet of naturally occurring pervious material or connection to a sanitary sewer or connection to a shared system are not feasible. Where no such alternatives are feasible, a variance to allow the repair or replacement in the disposal area with no less than two feet of naturally occurring pervious material may be considered upon the applicant's demonstration of the following:
 - (a) evidence, the result of deep observation hole testing, that the four feet requirement cannot be met anywhere on the site;
 - (b) evidence that easements to adjacent property on which a system in compliance with the four feet requirement could be installed have been requested and can not be obtained; and
 - (c) evidence that site testing to establish high ground-water elevation conducted in accordance with the procedures set forth in 310 CMR 15.103 has been conducted in conjunction with preparation of design plans and specifications for the repair or replacement of the system.

15.416: Variances for Schools

- (1) For purposes of 310 CMR 15.416, a school means any public or privately-owned elementary, middle, or secondary school. University, college or other adult educational facilities, regardless of ownership, are not considered schools for these purposes. The provisions of 310 CMR 15.413 shall apply to such variances.
- (2) The Department may vary the application of provisions of 310 CMR 15.000 as specified in 310 CMR 15.416 where a school demonstrates to the satisfaction of the Department that:
 - (a) the variance is necessary to accommodate an overriding community, regional, state or national public interest; and
 - (b) a level of environmental protection that is at least equivalent to that provided under 310 CMR 15.000 can be achieved without strict application of the provision of 310 CMR 15.000 from which a variance is sought.
- (3) The Department may vary the design flow values for elementary, middle or secondary schools set forth in 310 CMR 15.203(5), where the applicant:
 - (a) satisfies the criteria of 310 CMR 15.416(2);
 - (b) demonstrates through the use of metered maximum daily water flow readings from the facility or similar facilities in the same or surrounding communities that because of water conservation techniques or other factors flows are or will be substantially different from those contained in 310 CMR 15.203(5), including consideration of occupancy and use rates; and

15.416: continued

(c) demonstrates that system design has also accounted for any anticipated pollutant loadings and greater concentration of pollutants that result from reducing flows.

If the Department grants such a variance, it shall require determination of design flows based on 200% of the average daily water meter readings when school is in session in order to assimilate maximum daily flows.

(4) If any school with a design flow of 10,000 gpd or greater but less than 15,000 gpd is threatening public health, safety, welfare and the environment pursuant to 310 CMR 15.304(2), a groundwater discharge permit will be required unless the Department determines after consideration of the factors set forth in 310 CMR 15.304(3) that this requirement would be manifestly unjust and the owner or operator of the school has established that a level of environmental protection that is at least equivalent to that provided under 310 CMR 15.000 can be achieved without strict application of this requirement.

(5) The Department may vary the prohibition on increased flows to systems with design flows between 10,000 and 15,000 gpd set forth in 310 CMR 15.006(3), where the applicant:

(a) satisfies the criteria of 310 CMR 15.416(2) and 310 CMR 15.414(3) (increases in flow to existing facilities);

(b) demonstrates that there are no reasonable conditions or alternatives that would allow the system to be expanded in compliance with the provisions of 310 CMR 15.000 or other applicable requirements; and

(c) demonstrates that the upgraded system with the increased flow provides better protection of public health, safety, welfare and the environment than the existing system with no increase in flow.

15.421: Appeals From Determinations by Local Approving Authority

Any person aggrieved by any order, variance, issuance or denial of a Disposal System Construction Permit, Local Upgrade Approval or Certificate of Compliance issued by a Local Approving Authority may appeal to any court of competent jurisdiction as provided for by the laws of the Commonwealth.

15.422: Appeals of Departmental Determinations

(1) An applicant who is aggrieved by a shared system, recirculating sand filter or equivalent alternative technology, a remedial use, a certification for general use, or variance determination by the Department may request an adjudicatory hearing on that determination in accordance with 310 CMR 1.00 and M.G.L. c. 30A.

(2) Any person subject to an order, or any person aggrieved by a commonality determination pursuant to 310 CMR 15.011, issued by the Department, may request an adjudicatory hearing in accordance with the provisions of 310 CMR 1.00 and M.G.L. c. 30A.

SUBPART F: TRANSPORTATION AND DISPOSAL OF SEPTAGE

15.500: Purpose

The provisions of 310 CMR 15.500 through 15.505 are intended to provide for safe, efficient and economical means of collecting, transporting and disposing of septage.

15.501: Regional Abatement Districts

(1) Handling of septage through regionalized authorities or districts can promote public safety, efficient regional planning, sufficient capacity and cost-savings for individuals, the Commonwealth and its political subdivisions.

(2) One or more cities and towns, pursuant to the provisions of M.G.L. c. 21, §§ 29 and 30, and M.G.L. c. 111, §§ 31 and 31D may enter into an abatement district for the purpose of arranging for the transport and disposal of septage generated within their boundaries. A model regulation for the purposes of forming a district may be obtained from the Department.

15.502: Transportation

- (1) No person shall remove and/or transport septage through the streets of any city or town or via any state or federal highway located within any city or town in which the septage was first collected without first obtaining a permit from the board of health of such city or town in accordance with 310 CMR 15.000 and M.G.L. c. 111, § 31A. An application for such permit shall be in such form and contain such information, on oath, as such board shall require.
- (2) All such permits shall expire at the end of the calendar year in which they are issued, but may be renewed annually on application as herein provided. No permit shall be transferred except with the written approval of the said board.
- (3) All permits shall designate the treatment works, approved by the Department, where the hauler is authorized to dispose of septage and a copy of all contracts or other agreements between the hauler and the receiving facility shall be submitted to, and retained by, the Approving Authority.
- (4) A duly registered septage hauler may transport septage through the streets of a city or town in which said substances were not collected provided the hauler registers with the board of health of such city or town; and, provided further, that he or she transports said substances in accordance with such reasonable rules and regulations as may be established by such board of health.
- (5) Motor vehicles owned by the Commonwealth or any of its political subdivisions and motor vehicles engaged under contract with the Commonwealth in the transportation of septage shall be exempt from the provisions of 310 CMR 15.502. A city or town may recommend to the department of highways, in writing, an alternative route of travel for such motor vehicles whereby the noise or nuisance incident to such travel shall be minimized or abated and said department shall consider such alterations or changes in the travel routes of such motor vehicles as will result in the minimization of such noise or nuisance.
- (6) The contents of privies, cesspools, septic tanks and tight tanks shall be transported in a manner that will not create a nuisance or a health hazard.
- (7) Pumping records shall be submitted to the Approving Authority within 14 days from the pumping date in accordance with 310 CMR 15.351(1), unless the Approving Authority requires more frequent submittals.

15.503: Transfer Locations

Local Boards of Health may regulate locations for the transfer of septage from one truck, tanker or other storage container equipped with wheels sufficient for over-the-road or rail travel to another pursuant to M.G.L. c. 111, §§ 31D and 143, provided that no permanent structures for holding or storage are constructed. The Department may impose additional requirements on transfer locations pursuant to the authority of 310 CMR 15.000 and M.G.L. c. 21 §§ 26 through 53 and M.G.L. c. 83, § 6.

15.504: Disposal

- (1) Cities, towns and sewerage districts may, subject to the approval of the Department, provide treatment works for the receipt and disposal of septage and may establish such charges for the use of such facilities as may be necessary for defraying the cost of construction, operating and maintaining the same.
- (2) Disposal of septage shall be by discharge to a sanitary sewer or to a treatment works. All such treatment works shall be approved by the Department in accordance with M.G.L. c. 21, §§ 26 through 53, and applicable provisions of 314 CMR 3.00: *Surface Water Discharge Permit Program*, 4.00: *Massachusetts Surface Water Quality Standards*, 5.00: *Ground Water Discharge Permit Program*, 7.00: *Sewer System Extension and Connection Permit Program* and 12.00: *Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Dischargers*. If disposal is by discharge to a sanitary sewer, it shall be in a manner and at such times as may be acceptable to the authority having jurisdiction over the sewer and in accordance with any applicable regulations or permit conditions. Any other disposal is a violation of 310 CMR 15.000.

15.504: continued

(3) The Department may investigate treatment works for the receipt of septage in cities, towns and sewerage and septage districts. If the Department determines such works are inadequate for proper disposal of septage, it may recommend necessary action for the protection of the public health, safety and welfare. If after a reasonable time, the city, town or sewerage or septage district fails to act upon the Department's recommendation, the Department may issue an order requiring the provision of adequate septage receiving facilities. Nothing in 310 CMR 15.504 shall be construed to limit the authority of the Department to take any action pursuant to M.G.L. c. 21, §§ 26 through 53.

(4) Pursuant to M.G.L. c. 40, § 22F, a city, town or sewerage or septage district may establish such charges for the use of septage receiving facilities as may be necessary for defraying the cost of constructing, operating and maintaining the works.

(5) Disposal of septage at treatment works where it is dewatered and beneficially reused shall be encouraged and practiced wherever feasible.

15.505: Equipment

(1) No person shall use equipment to remove or transport the contents of privies, cesspools, septic tanks or tight tanks unless such equipment has first been inspected and approved by the Approving Authority.

(2) Mobile tanks shall be securely mounted on trucks. They shall be watertight, equipped with necessary odor controls, provided with a leak proof cover and tight discharge valves.

(3) Mobile tanks shall be provided with a vent constructed in a manner that will permit the escape of gas, but not the liquid contents of the tank.

(4) Suction or pressure hoses shall be in good repair.

(5) Pumps shall be maintained in a condition that will prevent the leakage of septage.

Appendix 1

Upon recording, mail to:
Approving Authority

GRANT OF TITLE 5 COVENANT AND EASEMENT
(property served by Shared System)
310 CMR 15.290(2)(e)

This GRANT OF TITLE 5 COVENANT AND EASEMENT made as of this ___ day of _____, 20___, by _____, of _____, _____ County, Massachusetts ("Grantor").

WITNESSETH

WHEREAS, Grantor being the owner(s) in fee simple of that [those] certain parcel(s) of [vacant] land located in _____, _____ County, Massachusetts, with the buildings and improvements thereon, pursuant to a deed from _____ to Grantor, dated _____, and recorded with _____ County Registry of Deeds in Book ___, Page ___ [source of title other than by deed] and/or pursuant to Certificate of Title No. _____ issued by the Land Registration Office of the _____ County Registry District, said parcel(s) of land being more particularly bounded and described in Exhibit A, attached hereto and made a part hereof, and being shown on a plan entitled, " _____ ", dated _____, prepared by _____, recorded with _____ County Registry of deeds as Plan No. ___, in Plan Book _____ and/or registered as Land Court Plan No. ___, on file with the Land Registration Office of _____ County Registry District ("Property"); and

WHEREAS, there is appurtenant to and the Property has the benefit of a Shared System, as defined in 310 CMR 15.002, said Shared System being located on a parcel(s) of [vacant] land located in _____, _____ County, Massachusetts, with the buildings and improvements thereon, pursuant to a deed from _____ to _____ [or Grantor], dated _____, and recorded with _____ County Registry of Deeds in Book ___, Page ___ [source of title other than by deed] and/or pursuant to Certificate of Title No. _____ issued by the Land Registration Office of the _____ County Registry District, said parcel(s) of land being more particularly bounded and described in Exhibit B, attached hereto and made a part hereof, and being shown on a plan entitled, " _____ ", dated _____, prepared by _____, recorded with _____ County Registry of deeds as Plan No. ___, in Plan Book _____ and/or registered as Land Court Plan No. ___, on file with the Land Registration Office of _____ County Registry District ("Shared System Property"); and

WHEREAS, the Property has the benefit of a Shared System Easement, being more particularly bounded and described in Exhibit C, attached hereto and made a part hereof, and being shown on a plan entitled, " _____ ", dated _____, prepared by _____, recorded with _____ County Registry of Deeds as Plan No. ___, in Plan Book _____ and/or registered as Land Court Plan No. ___, on file with the Land Registration Office of _____ County Registry District [or to be recorded/filed for registration herewith] ("Shared System Easement"); and

WHEREAS, the Shared System has been approved by the Local Approving Authority, as defined in 310 CMR 15.002, in accordance with Title 5, 310 CMR 15.000, as amended ("Title 5"); said approval being based upon the agreement by Grantor to incur certain obligations regarding the construction, inspection, maintenance, upgrade and expansion of the Shared System and to grant to the Local Approving Authority a perpetual easement to construct, inspect, maintain, upgrade and expand any component of the Shared System and in connection herewith a perpetual easement to pass and repass over the Property and the Shared System Property for purposes of inspecting the Shared System to insure compliance with and fulfillment of the terms of this Covenant/Easement as hereafter set forth;

Appendix 1: continued

NOW, THEREFORE, pursuant to the provisions of 310 CMR 15.290, Grantor does hereby GRANT to the Town/City of _____, a Massachusetts municipal corporation situated in _____ County, having an address at _____, Massachusetts, acting through its Board of Health ("_____"), (also referred to herein as the Local Approving Authority), for nominal, non-monetary consideration, with QUITCLAIM COVENANTS, a TITLE 5 COVENANT AND EASEMENT ("Covenant/Easement") in, on, upon, through, over and under the Shared System Easement, the terms and conditions of which are as follows:

OBLIGATIONS AND EASEMENT

1. Inspection and Pumping. Grantor agrees to have the Shared System inspected at least every three years by a System Inspector, as defined in 310 CMR 15.002, and pumped on an as needed basis, but in no event shall the Shared System be pumped less than every three years. The System Inspector shall submit the results of the inspection on a System Inspection Report (Appendix __) to the _____ [Local Approving Authority] and to the Department of Environmental Protection (DEP) within 30 days of the Shared System's inspection. Grantor shall provide the _____ [Local Approving Authority] and DEP with a copy of the receipt obtained from the duly registered septage hauler upon pumping of the Shared System within 30 days of the Shared System's pumping.
2. Financial Assurance Mechanism. Grantor agrees to provide the _____ [Local Approving Authority] and DEP with the financial assurance mechanism, naming the _____ [Local Approving Authority] and DEP as additional beneficiaries, which shall provide for upgrade of the Shared System in the event the Shared System fails to protect public health and the environment pursuant to the criteria established in 310 CMR 15.303.
3. Maintenance. The Grantor agrees to construct the Shared System such that the Sanitary Sewage, as defined in 310 CMR 15.002, from any Facility, as defined in 310 CMR 15.002, owned by Grantor may be denied access to the Shared System in the event Grantor fails to pay its proportionate share of the construction, inspection, maintenance, upgrade and expansion costs incurred by said Shared System.
4. Easements. In creating this Covenant/Easement, Grantor hereby grants to the _____ [insert Local Approving Authority], its agents, contractors, subcontractors and employees, a perpetual EASEMENT to enter upon and the right to bring equipment onto the Shared System Easement to do any and all acts deemed necessary to construct, install, lay, operate, maintain, inspect, upgrade, repair, remove, excavate, replace, and expand any component of the Shared System, together with a right to pass and repass by foot and by vehicle over the Shared System Easement for said purposes, including the removal and trimming of crops, vegetation, trees, or shrubs therefrom, and for purposes of inspecting the Shared System Easement to insure compliance with and fulfillment of the terms of this Covenant/Easement.
5. Lien Authority of Local Approving Authority. For purposes of enforcing a lien against the Property and the Shared System Property, Grantor hereby agrees that the phrase "...land upon which the structure is or was located..." as used in the second paragraph of M.G.L. c. 111, § 127B shall include the Property and the Shared System Property, thereby authorizing the _____ [insert Local Approving Authority] to impose a lien on either or both the Property and the Shared System Property in the event the _____ [insert Local Approving Authority] has incurred debt in accordance with the provisions of M.G.L. c. 111, §127B.
6. Severability. If any court or other tribunal determines that any provision of this instrument is invalid or unenforceable, such provision shall be deemed to have been modified automatically to conform to the requirements for validity and enforceability as determined by such court or tribunal. In the event the provision invalidated is of such a nature that it cannot be so modified, the provision shall be deemed deleted from this instrument as though it had never been included herein. In either case, the remaining provisions of this instrument shall remain in full force and effect.
7. Enforcement. Grantor expressly acknowledges that a violation of the terms of this instrument could result in the following:

Appendix 1: continued

(i) upon determination by a court of competent jurisdiction, in the issuance of criminal and civil penalties, and/or equitable remedies, including, but not limited to, injunctive relief, such injunctive relief could include the issuance of an order to modify or remove any improvements constructed upon the Shared System Easement in violation of the terms of this Covenant/Easement; and

(ii) in the assessment of penalties and enforcement action by the Local Approving Authority and DEP to enforce the terms of this Covenant/Easement, pursuant to Title 5; M.G.L. c. 111, §§ 17, 31, 122, 124, 125, 125A, 127A through 127O, and 129; and M.G.L. c. 83, § 11.

8. Provisions to Run with the Land. This Covenant/Easement sets forth rights, liabilities, agreements and obligations upon and subject to which the Shared System Easement or any portion thereof, shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, or conveyed. The rights, liabilities, agreements and obligations herein set forth shall run with the Property and the Shared System Property, as applicable thereto, and any portion thereof and shall inure to the benefit of and be binding upon Grantor and all parties claiming by, through or under the Local Approving Authority or Grantor. The rights hereby granted to the Local Approving Authority, its successors and assigns, constitute the perpetual right of the Local Approving Authority to enforce this Covenant/Easement and Grantor hereby covenants for himself/herself/itself and his/her/its executors, administrators, heirs, successors and assigns, to stand seized and hold title to the Property and the Shared System Property, as applicable thereto, and any portion thereof, subject to this Covenant/Easement, provided, however, that a violation of this Covenant/Easement shall not result in a forfeiture or reversion of Grantor's title to the Property or the Shared System Property, as applicable thereto.

9. Concurrence Presumed. It being agreed that Grantor and all parties claiming by, through or under Grantor shall be deemed to be in accord with the provisions herein set forth and to agree for and among themselves and any party claiming by, through or under them, and their respective agents, contractors, sub-contractors and employees, that the Covenant/Easement herein established shall be adhered to and not violated and that their respective interests in the Property and the Shared System Property, as applicable thereto, shall be subject to the provisions herein set forth.

10. Incorporation into Deeds, Mortgages, Leases and Instruments of Transfer. Grantor hereby agrees to incorporate this Covenant/Easement, in full or by reference, into all deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer by which an interest in and/or a right to use the Property and the Shared System Property, or any portion thereof, is conveyed.

11. Recordation. Grantor shall record and/or register this Covenant/Easement with the appropriate Registry of Deeds and/or Land Registration Office within 30 days of the latter of: receipt from the Local Approving Authority of the approved Covenant/Easement or the expiration of the 60-day constructive approval period granted to DEP pursuant to 310 CMR 15.293. Grantor shall file with the Local Approving Authority and the DEP a certified Registry copy of this Covenant/Easement as recorded and/or registered within 30 days of its date of recordation and/or registration.

12. Amendment and Release. This Covenant/Easement may be amended or released only upon approval by the Local Approving Authority and DEP. Any such amendment or release shall be recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office.

13. Term. This Covenant/Easement shall run in perpetuity and is intended to conform to M.G.L. c. 184, § 26.

Appendix 1: continued

14. Rights Reserved. This Covenant/Easement is granted to the Local Approving Authority in connection with the approval of a Shared System pursuant to 310 CMR 15.290 through 15.293. It is expressly agreed that acceptance of this Covenant/Easement by the Local Approving Authority or constructive approval of the Shared System by DEP shall not operate to bar, diminish, or in any way affect any legal or equitable right of the Local Approving Authority or DEP to issue any future order with respect to the Property and the Shared System Property, as applicable thereto, or in any way affect any other claim, action, suit, cause of action, or demand which the Local Approving Authority or DEP may have with respect thereto. Nor shall acceptance of this Covenant/Easement serve to impose any obligations, liabilities, or any other duties upon the Local Approving Authority.

This Covenant/Easement shall become effective upon its recordation and/or registration with the appropriate Registry of Deeds and/or Land Registration Office.

WITNESS the execution hereof under seal this ___ day of _____, 20__.

Grantor

COMMONWEALTH OF MASSACHUSETTS

_____, §§ _____, 20__

Then personally appeared the above-named _____ and acknowledged the foregoing instrument to be ___ free act and deed before me.

Notary Public:

My commission expires:

The _____ [insert Local Approving Authority] hereby approves this Grant of Title 5 Covenant and Easement (as to form only).

Date: _____

Local Approving Authority

REGULATORY AUTHORITY

310 CMR 15.000: M.G.L. c. 21A, § 13.

310 CMR 16.00: SITE ASSIGNMENT REGULATIONS FOR SOLID WASTE FACILITIES

Section

PART I: PROCEDURES FOR SUBMISSION AND REVIEW OF SITE ASSIGNMENT APPLICATIONS

- 16.01: General Requirements
- 16.02: Definitions
- 16.03: Exemptions From Site Assignment
- 16.04: General Permit for Recycling, Composting or Aerobic and Anaerobic Digestion Operations
- 16.05: Permit for Recycling, Composting or Conversion (RCC) Operations
- 16.06: General Requirements for General Permits and Recycling, Composting and Conversion Permits
- 16.07: Certification
- 16.08: Site Assignment Application Submission Requirements
- 16.09: Public Access to Application
- 16.10: Review of Application for Completeness
- 16.11: Review Period
- 16.13: Department Report On Suitability (Report)
- 16.14: Reconsideration of Findings
- 16.15: Further Action on Application
- 16.16: Requests for Technical Assistance from the Department
- 16.17: Application Review by the Department of Public Health
- 16.18: Waiver

PART II: BOARD OF HEALTH PUBLIC HEARINGS

- 16.21: Alternative Use of Assigned Site
- 16.22: Modifications to and Rescissions and Suspensions of Site Assignments

PART III: APPLICATION FEE

- 16.30: Fees

PART IV: SITE SUITABILITY CRITERIA

- 16.40: Site Suitability Criteria
- 16.99: APPENDIX A

16.01: General Requirements

- (1) Purpose and General Description. The purpose of 310 CMR 16.00 is to protect public health, safety and the environment by comprehensively regulating:
 - (a) the siting of solid waste facilities; and
 - (b) operations which recycle, compost, or convert recyclable or organic materials.
- (2) Organization. 310 CMR 16.00 is composed of four parts.
 - (a) Part I identifies the activities that require a site assignment and the activities that are exempt from site assignment but remain subject to regulation by the Department.
 - (b) Part II establishes the rules for a public hearing held by the board of health for assigning a site.
 - (c) Part III describes the application fee paid by a site assignment applicant and used by a board of health for technical review of the data and for conducting a public hearing.
 - (d) Part IV establishes the site suitability criteria that are to be applied by the board of health or the Department, whichever is applicable, in determining whether a site is suitable.
- (3) Authority. Pursuant to M.G.L. c. 21A, §§ 2 and 8, c. 21H, § 7, and c. 111, §§ 150A and 150A½, the Department has the authority to:
 - (a) establish a process for a board of health and the Department to issue site assignments; and
 - (b) regulate recycling, composting and conversion operations.
- (4) Applicability. The site assignment requirements set forth at 310 CMR 16.00 shall apply to facilities that process, store, transfer, treat, or dispose of solid waste. They shall not apply to:

16.01: continued

- (a) Hazardous Waste Facilities. Facilities that manage hazardous wastes which are regulated pursuant to 310 CMR 30.000: *Hazardous Waste*;
 - (b) Waste Water Treatment Residuals Facilities. Facilities which manage waste-water treatment plant residuals subject to the siting process pursuant to M.G.L. c. 83, § 6 and regulated pursuant to 314 CMR 12.00: *Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Dischargers*, provided that 310 CMR 16.00 does apply to solid waste management facilities which co-dispose waste-water treatment plant residuals with solid waste;
 - (c) Small Combustion Facilities. A solid waste combustion facility that is rated by the Department at one ton per hour or less pursuant to M.G.L. c. 111, § 150A; and
 - (d) Beneficial Reuse of a Solid Waste pursuant to 310 CMR 19.060: Beneficial Use of Solid Waste. The beneficial use of a solid waste as a secondary material in compliance with the requirements set forth at 310 CMR 19.060: *Beneficial Use of Solid Waste*.
- (5) Access to Facilities and Properties.
- (a) Reasonable Access. At all reasonable times and without prior notice, personnel or authorized representatives of the Department may enter any facility or other property where solid waste or recyclable or organic material has been or is being disposed, handled, managed, placed, processed, reused, stored, transferred, treated, used or for the purposes of: assessing, preventing or remediating damage to the environment; protecting the public health, safety or the environment; determining or enforcing compliance; or preventing or abating public nuisances; provided that the personnel or authorized representatives of the Department present Department-issued identification and receive the consent of the owner, operator or person in control of said facility or property. Notwithstanding the foregoing, personnel or authorized representatives of the Department may enter a facility or property without such consent if emergency conditions require immediate entry as authorized by the conditions of any authorization, determination, modification, permit, or other approval, by the terms of any order or other enforcement document, or as otherwise authorized by law.
 - (b) During Inspection. After entry, personnel or authorized representatives of the Department may inspect, investigate, photograph, or sample any condition, equipment, operation, practice, record or property and make examinations and evaluations of a facility or other property specified in 310 CMR 16.01(5)(a), to determine and enforce compliance with M.G.L. c. 21A, §§ 2 and 8, M.G.L. c. 111, §§ 150A and 150A½ and/or 310 CMR 16.00 or take or arrange for actions authorized by M.G.L. c. 21H, § 7.
 - (c) Access to Information. Where necessary to ascertain facts relevant to compliance or to actual or potential harm to public health or safety, actual or potential public nuisances, or actual or potential damage to the environment that may be caused by the disposal, handling, management, placement, processing, reuse, storage, transfer, treatment or use of solid waste or recyclable or organic materials, the Department may request and any person shall, within a reasonable time, furnish the requested information and shall permit said Department personnel or authorized representatives to have access to and to copy, or to take images of, all records relating thereto.
 - (d) Duty to Cooperate. The owner and operator of a facility or other property and the person possessing information as specified in 310 CMR 16.01(5)(c) shall in no way restrict, impede, or delay an inspection or any request for information by personnel or authorized representatives of the Department where such inspection or request is made pursuant to a reasonable request in accordance with 310 CMR 16.01(5), or in accordance with the conditions of any authorization, determination, modification, permit, or other approval, or pursuant to the terms of any order or other enforcement document, or as otherwise authorized by law.
 - (e) Warrants. Upon denial of access or if the Department cannot locate with reasonable efforts the owner, operator or person in control of a facility or property, or upon refusal of a person to provide information requested, the Department may seek, from a court, judge, justice or magistrate, a warrant authorizing personnel or authorized representatives of the Department to conduct a reasonable search of the facility or property or to obtain the information requested. 310 CMR 16.01(5)(e) shall not preclude the Department from gaining access through other legal means, including, but not limited to, a court order or injunctive relief.

16.01: continued

(6) Joint and Several Liability. Wherever 310 CMR 16.00 states that the owner or operator shall take action or refrain from taking action, the owner and operator shall be jointly and severally liable such that the Department may take action for any violation against the owner, the operator or both.

(7) Burden of Proof. In every proceeding, the owner and operator bear the burden to persuade the Department that the activities or operations being conducted pursuant to 310 CMR 16.00 do not create public nuisance conditions and do not pose a significant threat to public health, safety or the environment.

(8) Enforcement.

(a) Violations. It shall be a violation of 310 CMR 16.00 for any person to:

1. fail to submit a certification, log, notification, permit application or modification, plan, report or any other document within the time period specified in 310 CMR 16.00 or as specified in any approval, order, or permit issued by the Department;
2. make any false, inaccurate, incomplete or misleading statements in any certification, log, notification, permit application or modification, plan, report, or any other document which that person is required to maintain and submit pursuant to 310 CMR 16.00, or as specified in any approval, order, or permit issued by the Department;
3. hold himself or herself out as a responsible official when he/she is not fully authorized to bind the corporation, company, partnership, trust, sole proprietorship or municipality in violation of 310 CMR 16.00;
4. deny the Department access, upon reasonable request pursuant to 310 CMR 16.01(5) or pursuant to an authorization, modification, permit or other approval or order or other enforcement document, or as otherwise authorized by law, to:
 - a. enter upon and inspect the site, or other property where solid waste or recyclable or organic material has been or is being disposed, handled, managed, placed, processed, reused, stored, transferred, treated or used; and
 - b. review and copy any relevant records to determine and compel compliance with applicable regulations and any permit, modification or other approval or order issued pursuant to 310 CMR 16.00;
5. maintain or operate any place as a facility unless such place has been assigned by the board of health or the Department, whichever is applicable, pursuant to M.G.L. c. 111, § 150A;
6. handle or dispose of solid waste at any location that does not have a site assignment, except as may be allowed pursuant to 310 CMR 16.03;
7. recycle, compost, convert or otherwise handle recyclable or organic materials in a manner that is not in compliance with 310 CMR 16.03, 16.04 or 16.05;
8. fail to comply fully with the applicable provisions of 310 CMR 16.00 or with any authorization, modification, permit or other approval or order or other enforcement document issued pursuant to 310 CMR 16.00 or with any certification submitted pursuant to 310 CMR 16.00;
9. act without submitting a notification or certification, whichever is applicable, in accordance with 310 CMR 16.00; or
10. violate any other provision of 310 CMR 16.00.

(b) Action by the Department. Nothing in 310 CMR 16.00, or in any order or other enforcement document issued pursuant thereto, shall be construed to limit any right of the Department to take enforcement action pursuant to any other authority. Whenever the Department has cause to believe that a violation has occurred, it may without limitation:

1. order the owner or operator, or any other person responsible for the violation, to:
 - a. cease operations until the violation is corrected to the satisfaction of the Department or until such person obtains a site assignment and solid waste management facility permit or a permit issued pursuant to 310 CMR 16.00;
 - b. cease all illegal activity immediately or at a specified date and to comply fully with 310 CMR 16.00 and 19.000: *Solid Waste Management* or with any permit or conditions pursuant to 310 CMR 16.00; or
 - c. take appropriate remedial measures immediately or by a specified date to bring the site into compliance or to protect public health, safety or the environment, including without limitation, closure of the site.

16.01: continued

2. rescind, suspend, revoke, or modify any general permit or permit issued pursuant to 310 CMR 16.00 and/or initiate an enforcement action in accordance with applicable statutes or regulations. Where a permit is rescinded, suspended or revoked, the owner or operator shall cease operations until:
 - a. the owner or operator corrects the violation to the satisfaction of the Department; or
 - b. the owner or operator applies for and obtains a site assignment and solid waste management facility permit.
3. issue a notice of non-compliance or assess a civil administrative penalty pursuant to M.G.L. c. 21A, § 16 and 310 CMR 5.00: *Administrative Penalty*; or
4. take such other action provided by 310 CMR 16.00 or 310 CMR 19.000: *Solid Waste Management* or other applicable statutory or regulatory authority as the Department deems appropriate.

(c) Right to Adjudicatory Hearing. A person who is the subject of an order issued pursuant to 310 CMR 16.01(8)(b)1. or 2. shall have the right to request an adjudicatory hearing on such order within 21 calendar days of the date of service of the order by filing a notice of claim with the Department in accordance with the procedures set forth in 310 CMR 16.01(8) and in 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection*. Any right to an adjudicatory hearing concerning assessment of a civil administrative penalty shall be determined in accordance with the provisions of 310 CMR 5.00: *Administrative Penalty*.

(d) Waiver of Right to Adjudicatory Hearing. Any person who is the subject of an order issued pursuant to 310 CMR 16.01(8)(b)1. or 2. shall be deemed to have waived the right to an adjudicatory hearing, unless, within 21 calendar days of the date of service of the order, the Department receives a request for an adjudicatory hearing with a notice of claim setting forth the basis for the request for an adjudicatory hearing, subject to and in compliance with the applicable provisions of 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection*

(e) Service of Notices and Orders. Service in all civil administrative penalty actions is governed by 310 CMR 5.00: *Administrative Penalty*. The Department may serve an order issued pursuant to 310 CMR 16.00 according to any of the following procedures except for any process, notice, or order issued in the course of an adjudicatory hearing governed by the provisions of 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection*.

1. Service of an order is complete when it is hand delivered by an employee or agent of the Department to the person to be served or to any officer, employee, responsible official or agent of the person. The fact and date of service is established by the return or affidavit of the person making service.
2. Service of an order, when made by any form of mail requiring the return of a receipt signed by the person to be served, is complete upon delivery to the person or to any officer, employee, responsible official or agent of the person. The fact and date of service is established by the returned receipt.
3. The Department may make service of an order in any other manner, including any form of electronic mail, facsimile or other electronic medium, national overnight carrier, or regular mail to the last known address, or by publication or other method of delivery reasonably calculated to give actual notice to the recipient of the order. The Department may use such alternative methods of service only when the person to be served declines to accept receipt by the service methods specified in 310 CMR 16.01(8)(e)1. and 2. The fact of service in such cases is established by such records as may be available. Service is complete upon the date on which the Department initiates electronic transmission, the date of publication, one day after the date of overnight mailing or three days after the date of regular mailing or other method of service.

16.01: continued

(9) Time.

(a) Computation of Time. Unless otherwise specifically provided by law or regulation or any determination issued pursuant to 310 CMR 16.00, any time period prescribed or referred to in 310 CMR 16.00 shall begin with the first day following the act which initiates the running of the time period, and shall include every calendar day, including the last day of the time period so computed. If the last day is a Saturday, Sunday, legal holiday, or any other day on which the Department's offices are closed, the time period shall run until the end of the next business day. If the time period prescribed or referred to is six days or less, only days when the offices of the Department are open shall be included in the computation.

(b) Timely Filing. Papers required or permitted to be filed under 310 CMR 16.00, or any provision of the applicable law, must be filed at the board of health office or such other place as the board of health, Department or 310 CMR 16.00 shall designate within the time limits for such filings as set by 310 CMR 16.00. Papers filed in the following manner shall be deemed to be filed as set forth in 310 CMR 16.01(6)(b)1. through 5.:

1. hand-delivery during business hours shall be deemed filed on the day delivered;
2. hand-delivery during non-business hours shall be deemed filed on the next regular business day;
3. mailing by placing in U.S. mail shall be deemed filed on the date so postmarked;
4. electronic delivery during regular business hours shall be deemed filed on the date received; and
5. electronic delivery after regular business hours shall be deemed filed on the business day following receipt.

(c) Papers shall show the date received by the board of health and the Department. The board of health and the Department shall cooperate in giving date receipts to any person filing papers by hand-delivery.

(10) Severability. It is hereby declared the provisions of 310 CMR 16.00 are severable, and if any provision hereof or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions of 310 CMR 16.00 and the application thereof to any person or circumstance that can be given effect without the invalid provision or application.

(11) Notwithstanding 310 CMR 19.000: *Solid Waste Management* and any solid waste management facility permit condition, the owner and operator of a solid waste management facility with a solid waste management permit issued pursuant to 310 CMR 19.000: *Solid Waste Management* may conduct any activity pursuant to 310 CMR 16.03, 16.04 or 16.05 by complying with the applicable requirements of 310 CMR 16.03, 16.04 and 16.05; provided that:

- (a) if the activity conducted pursuant to 310 CMR 16.03, 16.04 or 16.05 is conducted on the landfill footprint, then the owner and operator shall also comply with 310 CMR 19.039: *Applicant's Request to Modify a Permit*; and
- (b) the activity conducted pursuant to 310 CMR 16.03, 16.04 or 16.05 will be conducted consistently with the solid waste management facility's site assignment and will not adversely impact the solid waste management facility.

(12) Transition Provisions.

(a) Determinations of Need. An owner and operator to whom a determination of need has been issued are subject to the following requirements.

1. Operation Pursuant to Determination of Need for Transition Period. An owner and operator to whom a determination of need has been issued may continue operating in compliance with such determination of need until the date of expiration of the determination of need or the date five years after November 23, 2012, whichever is sooner, hereafter referred to as the transition deadline.
2. Requirements for Transition Notices or Filings by Transition Deadline. The owner or operator must take one of the following steps prior to the transition deadline:
 - a. at least 180 days prior to the transition deadline, file a notice with the Department demonstrating that the operation qualifies for an exemption pursuant to 310 CMR 16.03. Upon filing of such notice, the owner and operator shall continue operating only in accordance with the applicable exemption at 310 CMR 16.03, and the determination of need shall no longer be in effect.

16.01: continued

b. at least 180 days prior to the transition deadline, file a certification with the Department in accordance with 310 CMR 16.06(1) stating that the operation is in compliance with 310 CMR 16.04. Upon such filing, the owner and operator shall continue operating only in accordance with the applicable general permit at 310 CMR 16.04, and the determination of need shall no longer be in effect.

c. at least 180 days prior to the transition deadline, if 310 CMR 16.01(12)(a)1. and 2. do not apply, submit a renewal application that complies with 310 CMR 16.05 to the Department.

(b) Conditional Exemptions. An owner and operator of an operation previously exempt pursuant to the provisions of 310 CMR 16.05 in effect prior to November 23, 2012 shall comply with the applicable requirements of 310 CMR 16.00. If the operation is subject to an annual certification, the owner or operator shall submit the first certification on or before February 15, 2014. Thereafter, the owner and operator shall continue to comply with 310 CMR 16.00, including but limited to, if applicable, filing an annual certification in accordance with 310 CMR 16.06(1).

(c) Nothing in 310 CMR 16.01(12) shall be construed to limit the authority of the Department to take any enforcement action if the owner or operator fails to comply with any determination of need during its remaining term or with the requirements of 310 CMR 16.00 or 310 CMR 19.000: *Solid Waste Management* at any time.

16.02: Definitions

The following words when used in 310 CMR 16.00, except as otherwise required by the context, shall have the following meaning:

Abutter means the owner of land sharing a common boundary or corner with the site of the proposed activity in any direction, including, but not limited to, land located directly across a street, way, creek, river, stream, brook or canal.

Adjacent Area means a parcel of land contiguous to a site or in close enough proximity to be directly impacted by water, air or soil borne pollutants, not exceeding a ½ mile radius from the site.

Adjudicatory Hearing or Hearing means the portion of the adjudicatory proceeding initiated by filing a notice of claim with the Office of Administrative Appeals pursuant to 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection*, where parties may present evidence on issues of fact and argument on issues of law, and concluded by the Commissioner's issuance of a final decision pursuant to 310 CMR 1.01(14): *Decisions*.

Adjudicatory Proceeding means a proceeding under M.G.L. c. 30A that may culminate in an adjudicatory hearing and the Commissioner's issuance of a final decision pursuant to 310 CMR 1.01(14): *Decisions*. It is a proceeding before the Department in which the legal rights, duties or privileges of specifically named persons are required by constitutional right, by provisions of M.G.L. c. 30A, or by any other provision of the General Laws to be determined after opportunity for a Department hearing, but does not include the types of proceedings described in M.G.L. c. 30A, § 1(a) through (f).

Adverse Impact means an injurious impact which is significant in relation to the public health, safety, or environmental interest being protected.

Aerobic Digestion means a process of accelerated biodegradation of organic materials using microorganisms under controlled conditions in the presence of oxygen.

Aggrieved Person means any person who, because of an act or failure to act by the Department, may suffer an injury in fact which is different either in kind or magnitude from that suffered by the general public and which is within the scope of the interests protected by 310 CMR 16.00.

16.02: continued

Agricultural Material means organic materials produced from the raising and processing of plants and animals as part of agronomic, horticultural, aquacultural or silvicultural operations including, but not limited to, animal manures, animal products and by-products (including carcasses), bedding materials and plant materials.

Anaerobic Digestion means a process of accelerated biodegradation of organic materials using microorganisms under controlled conditions in the absence of oxygen.

Applicant means the person named in the application as the owner of a property interest in the site or the operator of the proposed facility or operation where the owner has entered into an agreement with an operator at the time the application is filed.

Area of Critical Environmental Concern (ACEC) means an area designated by the Secretary of the Executive Office of Environmental Affairs pursuant to 301 CMR 12.00: *Areas of Critical Environmental Concern*.

Asphalt Pavement, Brick, and Concrete Rubble means rubble that contains only weathered (cured) asphalt pavement, clay bricks and attached mortar normally used in construction, or concrete that may contain rebar. The rubble shall not be painted, coated or impregnated with any substance. The rubble shall not be mixed with or contaminated by any other wastes or debris.

Biodegradable or Biodegradation means capable of being broken down into carbon dioxide, water and humus by biological organisms including, but not limited to, microorganisms.

Biodegradable Product means a product that meets the standards of the American Society for Testing and Materials (ASTM) D6400 and D6868 as of November 23, 2012.

Board of Health or (Board) means the legally designated health authority of the municipality or other legally constituted governmental unit within the Commonwealth having the usual powers and duties of the board of health of a municipality, or its authorized agent or representative; provided that in any case in which a solid waste management facility extends into two or more municipalities, said boards may coordinate activities in effecting compliance with 310 CMR 16.00 for the management of solid waste or recycling, composting or conversion operations. Unless otherwise explicitly stated, "the board of health" means the board of health of the municipality in which the proposed activity is located.

Clean Wood means discarded material consisting of trees, stumps and brush including, but not limited to, sawdust, chips, shavings, bark, and new or used lumber. Clean wood does not include:

- (a) wood from commingled construction and demolition waste;
- (b) engineered wood products; and
- (c) wood containing or likely to contain:
 1. asbestos;
 2. chemical preservatives such as, but not limited to, chromated copper arsenate (CCA), creosote or pentachlorophenol; or
 3. paints, stains or other coatings, or adhesives.

Combustion Facility means a facility established in accordance with a valid site assignment and Department-issued permit and employing an enclosed system including, but not limited to, a refuse disposal incinerator using controlled flame combustion, the primary purpose of which is to thermally break down solid waste and producing ash that contains little or no combustible materials.

Commissioner means the Commissioner of the Department of Environmental Protection or his or her designee.

Composting or Composted means a process of accelerated biodegradation of organic materials using microorganisms under controlled conditions in the presence of oxygen using windrows or piles including, but not limited to, covered aerated piles or bays. For the purposes of 310 CMR 16.00, composting is not aerobic digestion or conversion.

16.02: continued

Construction and Demolition Waste means the waste building materials and rubble resulting from the construction, remodeling, repair or demolition of buildings, pavements, roads or other structures. Construction and demolition waste includes, but is not limited to, concrete, bricks, asphalt pavement, masonry, plaster, gypsum wallboard, metal, lumber, and wood.

Conversion means aerobic or anaerobic digestion or enzymatic, thermal or chemical degradation of organic materials. For purposes of 310 CMR 16.00, conversion does not include composting.

Department means the Department of Environmental Protection.

Department Report on Suitability means the report issued by the Department pursuant to M.G.L. c. 111, § 150A, stating whether a site proposed for a solid waste management facility in an application for a site assignment is suitable.

Disposal means the final dumping, landfilling or placement of solid waste into or on any land or water or the combustion of solid waste.

Disposal Facility means any combustion facility or any landfill.

Downgradient means:

- (a) in reference to surface water, the direction perpendicular to lines of equal elevation over a distance in which elevation continuously decreases, measured from the point or area in question; or
- (b) in reference to groundwater, the direction perpendicular to lines of equipotential over a distance in which total head continuously decreases, measured from the point or area in question.

Expand a Site means to move or expand a solid waste facility's operation to a previously unassigned site that is contiguous to the original site or to modify a solid waste facility's operations causing it to exceed any capacity or total volume limit stated in its current site assignment.

Facility means a site or works, and other appurtenances thereto, which is, has been or will be used for the handling, storage, transfer, processing, treatment or disposal of solid waste, including all land, structures and improvements which are directly related to solid waste activities.

Food Material means material produced from human or animal food production, preparation and consumption activities and which consists of, but is not limited to, fruits, vegetables, grains, and fish and animal products and byproducts.

Group of Ten Persons means a group of at least ten persons who are residents of Massachusetts.

16.02: continued

Handling means processing, storing, transferring or treating a material or solid waste.

Handling Area means an area used for the processing, storage, transfer or treatment of solid waste, excluding weigh stations or access roads.

Handling Facility means any facility that is not a disposal facility including, but not limited to, a transfer station, storage facility and any other facility used primarily for the storage, processing or treatment of solid waste.

Interim Wellhead Protection Area (IWPA) means that wellhead area established pursuant to 310 CMR 22.02: *Definitions*.

Issuance means the date on which the Department sends its permit decision to the applicant.

Land Actively Devoted to Agricultural or Horticultural Uses means that land as defined at M.G.L. c. 61A, § 3.

Landfill means a facility or part of a facility established in accordance with a valid site assignment and Department-issued permit for the disposal of solid waste into or on land.

Medical or Biological Waste means medical or biological waste as defined in 105 CMR 480.000: *Minimum Requirements for the Management of Medical or Biological Waste (State Sanitary Code Chapter VIII)*.

New Site means a parcel of land for which an applicant seeks site assignment as a solid waste facility which has not been previously assigned and is not contiguous to an existing site assigned area.

Non-potential Drinking Water Source Area means that area defined by 310 CMR 40.0006: *Terminology, Definitions and Acronyms*.

Operation means recycling, composting or conversion activities, subject to 310 CMR 16.03, 16.04 or 16.05, and the property on which any such activities take place.

Operator means any person who has care, charge or control of a facility, operation or activity subject to 310 CMR 16.00 including, without limitation, an agent or lessee of the owner or an independent contractor.

Organic Material means any of the following source-separated materials: vegetative material; food material; agricultural material; biodegradable products; biodegradable paper; clean wood; or yard waste. It does not include sanitary wastewater treatment facility residuals.

Owner means any person who alone or in conjunction with others has legal ownership, a leasehold interest, or effective control over the real property upon which a facility or operation is located, or the airspace above said real property; "owner" does not mean persons holding bare legal title for the purpose of providing security for financing.

Perennial Water Course means a stream or river that flows year round.

Person(s) means any individual, partnership, association, firm, company, corporation, department, agency, group, public body (including a city, town, district, county, authority, state, federal, or other governmental unit), trust or any other entity responsible in any way for any activity, facility or operation subject to 310 CMR 16.00.

Pollution shall have the same meaning as in 310 CMR 19.006: *Definitions*.

Post-consumer Recyclables means the following materials which have served their intended use and have been pre-sorted:

16.02: continued

- (a) containers, films and wraps and other forms of packaging made from metal, glass, plastic or paper; and
- (b) newspaper, office paper, cardboard and other grades of paper.

Potential Private Water Supply means a potable water supply as defined at 314 CMR 5.11: *Ground Water Standards*, capable of yielding water of sufficient quality and quantity which is located under a parcel of land that at the time of the earlier of the following two filings, the Site Assignment Application or, where applicable, the Massachusetts Environmental Policy Act Environmental Notification Form, is:

- (a) zoned residential or commercial;
- (b) not served by a public water supply; and
- (c) subject to a subdivision plan or a building permit application approved by the appropriate municipal authority.

Potentially Productive Aquifer means:

- (a) any aquifers delineated by the U.S. Geological Survey (USGS) as a high or medium yield aquifer; and
- (b) any aquifers located east of the Cape Cod Canal (Cape Cod), on the Elizabeth Islands, on Martha's Vineyard, or on Nantucket.

Pre-sort means to separate from solid waste and to keep separate from solid waste. Pre-sorting does not require the separation of components that are integral to that material (*e.g.* insulation or electronic components in white goods).

Private Water Supply means a well used as a source of drinking water supplying a non-public water system with any volume of groundwater from any source.

Processing means the use of any method, technique or process to alter the physical characteristics of a material or solid waste through any means, including, without limitation, separating, baling, shredding, crushing or reworking. Storage alone does not constitute processing.

Proposed Drinking Water Source Area means the preliminary Zone II or the preliminary IWPA for a proposed water supply well that has received a site exam approval by the Department and is actively pursuing source approval under the Drinking Water Regulations at 310 CMR 22.21(1): *Source Approval*.

Public Water Supply means a source of drinking water supplying a public water system as defined in 310 CMR 22.00: *Drinking Water*.

Recyclable or Recyclable Material means a material that has the potential to be recycled and which is pre-sorted. Recyclable material includes biodegradable paper, but does not include:

- (a) organic materials that will be composted or converted; or
- (b) construction and demolition waste unless it has been separated and kept separate into at least the following categories: asphalt, brick and concrete; ceiling tiles; wood; metals; plaster and wallboard; roofing materials; and carpet.

Recycle or Recycled means to recover materials or by-products which will be:

- (a) reused;
- (b) used as an ingredient or a feedstock in an industrial or manufacturing process to make a marketable product; or
- (c) used in a particular function or application as an effective substitute for a commercial product or commodity.

Recycle does not mean to recover energy from the combustion of a material or to create a fuel. Recycle does not include composting or conversion.

Recycling Drop-off Center means a location where pre-sorted post-consumer recyclables are deposited by the generators of the recyclables for collection and transfer to a facility or operation for processing or directly to a market.

Regional Disposal Facility means a solid waste facility that is a member of a regional disposal district established in accordance with M.G.L. c. 40, § 44K, or a solid waste facility that receives substantial quantities of solid waste on a regular basis from two or more municipalities.

16.02: continued

Residence or Residential means a single, multi-family, or group home, residential unit or apartment complex. For purposes of 310 CMR 16.00, a group home means an establishment, usually resembling a private home, for providing a small group of persons with special needs, such as handicapped or elderly persons or children, with lodging and supervised care.

Residual means all waste remaining after treatment or processing. Residual remaining after treatment or processing is not pre-sorted material. Air and water discharges managed in accordance with applicable regulations are not residuals.

Responsible Official means one of the following:

- (a) for a corporation: a president, secretary, treasurer, or a vice-president of the corporation in charge of a principal business function who has been duly authorized to bind the corporation pursuant to a corporate vote, or a representative of the corporation who has been duly authorized to bind the corporation pursuant to a corporate vote provided the representative is responsible for the overall operation of the facility or operation;
- (b) for a limited liability company, person authorized pursuant to M.G.L. c. 156C, § 24 and the limited liability company's operating agreement to bind the company and all the members;
- (c) for a trust: a trustee or any other natural person authorized:
 - 1. to enter into contracts regarding the trust property;
 - 2. to bind the trust; or
 - 3. to encumber or dispose of the trust property.
- (d) for a partnership: a general partner who has been duly authorized to bind the partnership;
- (e) for a sole proprietorship; the sole proprietor; or
- (f) for a municipality, state, federal, or other public agency including any legislatively created authority, board, commission, district, *etc.*: a principal executive officer or a ranking elected official who is empowered to enter into contracts on behalf of the municipality or public agency.

Restricted Area means an area specified in 310 CMR 16.40(3) and (4) from which a solid waste management facility is excluded.

Review Period means the 60 day period during which the Department shall review the Site Assignment Application and issue the Department report.

Riverfront Area means that area defined by 310 CMR 10.00: *Wetlands Protection*.

Site Assignment means a determination by a board of health or by the Department as specified in M.G.L. c. 111, § 150A which:

- (a) designates an area of land for one or more solid waste uses subject to conditions with respect to the extent, character and nature of the facility that may be imposed by the assigning agency after a public hearing in accordance with M.G.L. c. 111, § 150A; or
- (b) establishes that an area of land was utilized as a site for the disposal onto land of solid waste or as a site for a refuse disposal incinerator prior to July 25, 1955 as provided in St. 1955, c. 310, § 2. The area of land site assigned under 310 CMR 16.02: *Site Assignment* shall be limited to the lateral limits of the waste deposition area ("the footprint"), or the area occupied by the incinerator, as they existed on July 25, 1955, except as otherwise approved by the Department in approved plans. Said assignment shall apply only to uninterrupted solid waste disposal activities within the footprint or plan-approved area and shall have no legal force or effect at any time after the cessation of disposal activities except as otherwise provided at 310 CMR 16.21.

Sludge means the accumulated solids and/or semisolids deposited or removed by the processing and/or treatment of gasses, water or other fluids.

Sole Source Aquifer means an aquifer so designated by the U.S. Environmental Protection Agency, or by the Department under the authority of a state program as may be established, that supplies 50% or more of the drinking water for the aquifer service area, and the volume of water which could be supplied by alternative sources is insufficient to replace the petitioned aquifer should it become contaminated.

16.02: continued

Solid Waste or Waste means useless, unwanted or discarded solid, liquid or contained gaseous material resulting from industrial, commercial, mining, agricultural, municipal or household activities that is disposed or is stored, treated, processed or transferred pending such disposal, but does not include:

- (a) hazardous wastes as defined and regulated pursuant to 310 CMR 30.000: *Hazardous Waste*;
- (b) sludge or septage which is land applied in compliance with 310 CMR 32.00: *Land Application of Sludge and Septage*;
- (c) waste-water treatment facility residuals and sludge ash from either publicly or privately owned waste-water treatment facilities that treat only sewage and which is treated and/or disposed at a site regulated pursuant to M.G.L. c. 83, §§ 6 and 7 and/or M.G.L. c. 21, §§ 26 through 53 and the regulations promulgated thereunder, unless the waste-water treatment residuals and/or sludge ash are co-disposed with solid waste;
- (d) septage and sewage as defined and regulated pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program*, and regulated pursuant to either M.G.L. c. 21, §§ 26 through 53 or 310 CMR 15.00: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*, provided that 310 CMR 16.00 does apply to solid waste management facilities which co-dispose septage and sewage with solid waste;
- (e) ash produced from the combustion of coal when reused as prescribed pursuant to M.G.L. c. 111, § 150A;
- (f) solid or dissolved materials in irrigation return flows;
- (g) source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954;
- (h) materials and by-products generated from and reused within an original manufacturing process;
- (i) materials which are recycled, composted, or converted in compliance with 310 CMR 16.03, 16.04 or 16.05; and
- (j) organic material when handled at a Publicly Owned Treatment Works as defined in 314 CMR 12.00: *Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Dischargers* and as approved by the Department pursuant to 314 CMR 12.00: *Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Dischargers*.

Solid Waste Management Facility means Facility.

Source Separated means separated from solid waste at the point of generation and kept separate from solid waste. Source separated does not require the separation of components that are integral to that material (e.g. insulation or electronic components in white goods).

Storage means temporary containment of a material or solid waste in a manner which does not constitute disposal.

Storage Facility means a handling facility where solid waste is stored.

Suitable means a determination by the Department that a proposed site meets the Site Suitability Criteria as set forth in 310 CMR 16.00.

Transfer Station means a handling facility where solid waste is brought, stored and transferred from one vehicle or container to another vehicle or container for transport off-site to a solid waste handling or disposal facility.

Treatment means the use of any method, technique or process to change the chemical, biological character or composition of material or waste; to neutralize such material or waste; to render such material or waste safer to transport, store or dispose; or make such material or waste amenable to recovery, storage or volume reduction. Storage alone does not constitute treatment.

Upgradient means:

- (a) in reference to surface water, the direction perpendicular to lines of equal elevation over a distance in which elevation continuously increases, measured from the point or area in question; or

16.02: continued

(b) in reference to groundwater, the direction perpendicular to lines of equipotential over a distance in which total head continuously increases, measured from the point or area in question.

Vegetative Material means plant material.

Watershed means that area defined by 310 CMR 22.02: *Definitions*.

Yard Waste means deciduous and coniferous seasonal deposition (e.g., leaves), grass clippings, weeds, hedge clippings, garden materials and brush.

Zone A means that area defined by 310 CMR 22.02: *Definitions*.

Zone B means that area defined by 310 CMR 22.02: *Definitions*.

Zone C means that area defined by 310 CMR 22.02: *Definitions*.

Zone of Contribution means the recharge area that provides water to a well

Zone I means that area defined by 310 CMR 22.02: *Definitions*.

Zone II means that area defined by 310 CMR 22.02: *Definitions*.

16.03: Exemptions from Site Assignment

(1) Manufacturing or Industrial Activities. The following manufacturing or industrial operations which handle recyclable or organic materials in the manufacturing or industrial process do not require a site assignment, a facility permit pursuant to 310 CMR 19.000: *Solid Waste Management*, a general permit pursuant to 310 CMR 16.04, or a recycling, composting or conversion permit pursuant to 310 CMR 16.05, but shall handle such recyclable or organic materials in a manner that prevents an unpermitted discharge of pollutants to air, water, land or other natural resources of the Commonwealth, does not create a public nuisance, and does not present a significant threat to public health, safety or the environment:

- (a) paper mills, including de-inking plants and paperboard manufacturers;
- (b) steel mills;
- (c) aluminum smelting plants and mills;
- (d) glass manufacturing plants;
- (e) plastic manufacturing plants;
- (f) tire re-capping plants;
- (g) de-tinning plants;
- (h) cement and concrete plants;
- (i) foundries;
- (j) asphalt batching plants; and
- (k) rendering plants.

(2) The activities listed in this subsection at 310 CMR 16.03(2)(a) through (c) do not require a site assignment, a facility permit pursuant to 310 CMR 19.000: *Solid Waste Management*, a general permit pursuant to 310 CMR 16.04, or a recycling, composting or conversion permit pursuant to 310 CMR 16.05, provided that the owner and operator incorporates best management practices in a manner that prevents an unpermitted discharge of pollutants to air, water or other natural resources of the Commonwealth, does not create a public nuisance, and does not present a significant threat to public health, safety or the environment.

(a) Handling Solid Waste.

1. Temporary Solid Waste Storage. Temporary storage of solid waste in dumpsters, roll-offs, or other temporary storage containers for the collection of solid waste generated on-site.
2. Temporary Storage by a Public Works Department. Dumpsters, roll-offs, or other temporary storage containers or temporary storage areas at a location controlled by a public works department such as a municipal or state department, agency or authority of

16.03: continued

public works, transportation, public parks or recreation or similar government entity, when used exclusively for solid waste generated and collected by the government entity and when storage is appropriate for the type of waste (e.g., materials such as trash from roadside trash barrels are stored in dumpsters or roll-offs while materials such as street sweepings may be stored without containers).

3. Occasional Solid Waste Vehicle Layover. Property owned or leased by a solid waste transporter for purposes of truck storage or repair where trucks, trailers and other solid waste handling and transfer equipment containing loads of solid waste are occasionally stored for overnight or weekend layover prior to transportation to a solid waste management facility, provided that:

- a. there is no unloading or transfer of the solid waste from the container or vehicle to the ground or to another container or vehicle;
- b. the trucks or other solid waste handling and transfer equipment are sufficiently enclosed to prevent public nuisance conditions; and
- c. the zoning provisions applicable to the truck storage or repair site would not disallow such an activity or use.
- d. For purposes of 310 CMR 16.03(2)(a)3., occasionally means not a routine or scheduled activity, but the result of unexpected circumstances such as equipment breakdown or unscheduled closure of a solid waste management facility.

4. Hospital and Laboratory Medical or Biological Waste Storage Area. A hospital, medical laboratory or biotechnology company which accepts for storage, pending off-site treatment or disposal, medical or biological waste generated on-site by the hospital, medical laboratory or biotechnology company, or medical or biological waste generated off-site, provided that the hospital, medical laboratory or biotechnology company complies with the following requirements.

- a. The hospital, biotechnology company or medical laboratory has sufficient properly designed and operated medical or biological waste storage areas to accommodate on-site and off-site medical or biological waste and manages all medical or biological waste in compliance with 105 CMR 480.000: *Minimum Requirements for the Management of Medical or Biological Waste*, and any other applicable law or regulation.
- b. The hospital, medical laboratory or biotechnology company accepts and stores medical or biological waste generated off-site with medical or biological waste generated on-site in accordance with the applicable requirements below.
 - i. Hospital. A hospital collects and stores medical or biological waste generated on-site and off-site only from hospitals or clinics that the hospital owns or from hospitals, clinics or physicians with whom the hospital has a professional affiliation for the provision of medical services.
 - ii. Medical Laboratory. A medical laboratory collects and stores medical or biological waste generated on-site and only generated off-site from laboratories that it operates or generated off-site by customers to whom the laboratory provides laboratory services but only to the extent that the medical or biological waste collected and stored from such customers does not, on a daily basis, exceed the amount of medical or biological waste generated on-site from the medical laboratory's own laboratory activities.
 - iii. Biotechnology Company. A biotechnology company collects and stores medical or biological waste generated on-site and off-site only from the company's biotechnology operations conducted at buildings owned or leased by the biotechnology company.

(b) Handling Recyclable Material.

1. Recycling Drop-off Center. A recycling drop-off center.
2. One Day Collection Event. A one day collection event for recyclable materials.
3. Beverage Container Redemption Center. A redemption center which collects, stores, and processes beverage containers subject to the provisions of M.G.L. c. 94, §§ 321 through 326.
4. Paper Baling and Handling. Paper baling and handling of recyclable paper (including all grades of paper and paperboard).
5. Asphalt Pavement, Brick and Concrete Recycling Operation. An asphalt pavement, brick or concrete rubble processing (crushing) operation when:

16.03: continued

- a. the operation is located at:
 - i. an active quarry or active sand and gravel pit where any asphalt pavement, brick and concrete rubble that is transported to the operation is presorted, so it contains only asphalt pavement, brick or concrete rubble; or
 - ii. the site of a demolition and/or construction project where all the asphalt pavement, brick and concrete rubble processed is generated at the site;
 - b. the material consists solely of asphalt pavement, brick and concrete rubble that is not mixed with or contaminated by wastes;
 - c. the asphalt pavement, brick and concrete rubble is processed so the maximum length of the largest dimension of any piece of rubble is less than six inches;
 - d. all rebar is removed in the process and is recycled or disposed in an approved facility;
 - e. there is no accumulation of the asphalt pavement, brick and concrete rubble or rebar prior to or after processing whether in its as-received, in-process or processed condition for more than six months from the date of receipt;
 - f. at least 30 days prior to commencement of operation, the owner or operator notifies the Department and the board of health in writing using a form provided by the Department; and
 - g. the owner or operator maintains accurate records for at least three years to demonstrate compliance with 310 CMR 16.03(2)(b)5.
6. Tire Chipping, Shredding or Other Tire Processing. Tire chipping, shredding or other tire processing when:
- a. only tires or tires with wheel rims attached, that are not mixed with other solid waste, are processed;
 - b. the quantity of whole tires on site does not exceed the number of tires that can be processed in a 24-hour period or 1000 tires, whichever is greater;
 - c. the total quantity of processed tires (tire chips, shreds or other tire derived products) at the site does not exceed five times the weight of tires that can be processed in a 24-hour period or the equivalent of 5000 tires, whichever is greater;
 - d. whole tires and processed tires are stored in buildings, covered containers or covered to prevent the infiltration of water;
 - e. whole tires and processed tires are stored in accordance with 310 CMR 7.00: *Air Pollution Control* and local fire department requirements for storing combustible material;
 - f. there is no accumulation of tires and/or processed tires prior to or after processing whether in its as-received, in-process or processed condition for more than 30 days from the date of receipt;
 - g. the processed tires are:
 - i. used to make new synthetic polymers ("rubber");
 - ii. used in accordance with a beneficial use determination or other approval required by the Department;
 - iii. combusted in a facility that is not a solid waste facility and in accordance with a specific air quality approval issued under 310 CMR 7.00: *Air Pollution Control* that approves the combustion of tires or processed tires as an alternative fuel;
 - iv. transferred to a solid waste management facility approved by the Department; or
 - v. transferred out-of-state and managed in accordance with that state's laws; and
 - h. at least 30 days prior to commencement of operation, the owner or operator notifies the Department, the board of health, and the local fire department in writing using a form provided by the Department.
- (c) Handling or Disposal of Organic Materials.
1. Activities Located at an Agricultural Unit. Activities located at an agricultural unit as defined in 330 CMR 25.02: *Definitions*, provided that the owner and operator comply with the regulations and guidelines of the Department of Agricultural Resources. If the Department of Agricultural Resources determines that the activity at a specific agricultural unit is no longer regulated by the Department of Agricultural Resources, then the owner and operator shall be subject to 310 CMR 16.00.

16.03: continued

2. Small Composting Operations Not at a Residence. Composting (other than at a residence) provided that:
 - a. less than 20 cubic yards or less than ten tons per week of vegetative materials, food materials or animal manures that are generated on-site and then combined with the addition of bulking materials (from on- or off-site) to achieve effective composting; and
 - b. at least 30 days prior to commencement of operation, the owner or operator notifies the Department and the board of health in writing using a form provided by the Department.
3. Municipal Food Material Collection Center. A municipally owned collection center for residents to drop off food materials, provided that:

16.03: continued

- a. the center accepts only food materials from residents of the municipality;
 - b. the food material is stored in a container which is kept sealed when food material is not being added;
 - c. no more than one ton of food material is collected per day and no more than three tons are on-site at any time;
 - d. the food material is stored at the center and removed from the center in a manner that does not create public nuisance conditions, such as, but not limited to, odors or vectors. In no case shall food material be on-site for more than seven days after receipt; and
 - e. at least 30 days prior to commencement of operations, the owner or operator notifies the Department and the board of health, in writing, using a form provided by the Department.
4. Land Application of Manure. The land application or composting of manures in normal farming activities.
 5. Residential Composting. At a residence, composting of organic materials generated at the residence.
 6. Residential Disposal of Stumps, Trees and Brush. Disposal of stumps, trees and brush at a single family home or farm where the stumps, trees and brush are generated and disposed within the boundaries of such home or farm by the occupant or resident of that home or farm.
 7. Handling of Clean Wood. The handling and use of clean wood as defined in 310 CMR 16.02.
 8. Leaf and Yard Waste Transfer Operation. A leaf and yard waste transfer operation provided that all materials are transferred off-site within seven days of receipt.

16.04: General Permit for Recycling, Composting or Aerobic and Anaerobic Digestion Operations

- (1) Applicability. The following operations are eligible for a general permit and do not require a site assignment, a facility permit pursuant to 310 CMR 19.000: *Solid Waste Management*, or a recycling, composting, or conversion permit pursuant to 310 CMR 16.05, provided the operation meets the requirements of 310 CMR 16.04:
 - (a) a recycling operation that receives no more than 250 tons per day of recyclable materials, not including paper;
 - (b) a composting operation that:
 1. receives no more than 105 tons per week and no more than 30 tons per day of Group 2 organic materials, listed at 310 CMR 16.04(3)(b): *Table 1. Examples of Organic Materials*, or other organic materials with a carbon to nitrogen ratio of 30:1 or less;
 2. contains less than 5,000 cubic yards of organic materials per acre; and
 3. has less than 50,000 cubic yards of organic materials on site at any one time; or
 - (c) an aerobic or anaerobic digestion operation that receives no more than 100 tons per day of organic material from on or off site, based on a 30 day rolling average.
- (2) General Permit Requirements for a Recycling Operation. The owner and operator of an operation that handles recyclable materials shall:
 - (a) ensure the operation and its products do not result in an unpermitted discharge of pollutants to air, water, land or other natural resources of the Commonwealth, create a public nuisance, or present a significant threat to public health, safety or the environment;
 - (b) ensure that the recyclable materials and products are not contaminated by toxic substances at levels which may pose a significant threat to public health, safety or the environment;

16.04: continued

- (c) ensure that the type and quality of recyclable materials is sufficient for the operation and that the quality of the operation's products is sufficient for the products to be marketable;
- (d) ensure that the operation handles recyclable materials and residuals only within a handling area, containers or trucks that are sufficiently enclosed and covered to prevent a public nuisance;
- (e) ensure that the amount of residuals generated at a single-stream recycling operation does not average more than 15%, or at any other type of recycling operation 10%, by weight of the materials received during any quarter;
- (f) ensure that the material, in its as-received, in-process or processed condition, shall not exceed the amount of recyclable or organic material that can be received in one year. This time limit may be exceeded in the case of storage of a processed material pending accumulation of one full container load;
- (g) ensure that all solid and liquid materials produced as a result of the operation are managed in accordance with all other applicable regulations and approvals, including but not limited to, a beneficial use determination;
- (h) maintain accurate records for at least three years to demonstrate compliance with 310 CMR 16.04 and submit a report to the Department annually by February 15th on a form provided by the Department that shall include, but not be limited to, the amounts and types of recyclable materials received, transferred and recycled and the amount of residuals managed during the previous calendar year; and
- (i) submit a compliance certification in accordance with 310 CMR 16.06(1).

(3) General Permit Requirements for Composting or Aerobically or Anaerobically Digesting Organic Materials.

- (a) The owner and operator of an operation that composts or aerobically or anaerobically digests organic materials shall:
 1. ensure the operation and its products do not result in an unpermitted discharge of pollutants to air, water or other natural resources of the Commonwealth, create a public nuisance, or present a significant threat to public health, safety or the environment;
 2. ensure that the operation incorporates best management practices, including but not limited to:
 - a. producing stabilized organic materials;
 - b. maintaining proper thermal regulation and monitoring to prevent spontaneous combustion and destroy pathogens;
 - c. managing stormwater and leachate to prevent ponding and water pollution;
 - d. maintaining access to an adequate water supply with adequate pressure for fire control;
 - e. implementing an odor control plan that is appropriate for the size and type of the operation that will minimize the production and migration of odorous compounds. The plan shall identify specific actions that will be taken to address complaints if unacceptable odors occur beyond the property line of the operation;
 - f. implementing a vector control plan that is appropriate for the size and type of the operation that will minimize the presence of vectors. The plan shall identify specific actions that will be taken to address complaints if unacceptable vectors occur beyond the property line of the operation;
 - g. employing an appropriate number of properly trained personnel for the size and type of the operation;
 - h. using equipment that is appropriate for the size and type of the operation; and
 - i. developing a contingency plan that describes corrective actions to be taken for management of the organic materials and products in the event of equipment breakdowns, delivery of unacceptable material, spills, fires, extreme weather conditions or other events, including but not limited to the failure of the odor or vector control plan;
 3. ensure that the operation is located at least 250 feet from any existing water supply well in use at the time the operation commences;
 4. ensure that the type and quality of organic materials is sufficient for the operation and that the quality of the operation's products is sufficient for the products to be marketable;

16.04: continued

5. ensure that the organic material and products are not contaminated by toxic substances at levels which may pose a significant threat to public health, safety or the environment, including but not limited to implementing a toxics control plan that:
 - a. will minimize entry of toxic materials into the operation;
 - b. is appropriate for the organic materials to be managed at the operation; and
 - c. ensures that the final products resulting from the operation do not pose a significant threat to public health, safety or the environment.

Should toxics be detected in the final products at levels that pose a significant threat to public health, safety or the environment for any likely use of the product, the plan shall also include a contingency plan that identifies steps to be taken to reduce toxics in incoming organic materials, describes corrective actions to be taken for management of the organic materials and products, and identifies how any contaminated products are to be used or disposed;

6. ensure that the amount of residuals generated does not average more than 5% by weight of the materials received during any quarter;
7. ensure that all solid and liquid materials produced as a result of the operation are managed in accordance with all other applicable regulations and approvals, including but not limited to, a beneficial use determination;
8. not allow materials, in their as-received, in-process or processed condition, to be stored for more than one year from the date of their receipt at the operation. This time limit may be exceeded in the case of storage of a processed material pending accumulation of one full container load;
9. maintain accurate records for at least three years to demonstrate compliance with 310 CMR 16.04 and submit a report to the Department annually by February 15th on a form provided by the Department that shall include, but not be limited to, the amounts and types of organic materials received and composted and the amount of residuals managed during the previous calendar year; and
10. submit a compliance certification in accordance with 310 CMR 16.06(1).

(b) Additional Requirements for a Composting Operation. The owner and operator of a composting operation shall comply with 310 CMR 16.04(3)(a) and shall:

1. ensure that no more than 25%, by volume, of the total compost mixture shall be a Group 2 Organic Material listed at 310 CMR 16.04(3)(b): *Table 1. Example of Organic Materials* or other organic materials with a carbon to nitrogen ratio of 30:1 or less;
2. ensure that adequate and appropriate bulking material (consisting of Group 1 organic materials listed at 310 CMR 16.04(3)(b): *Table 1. Example of Organic Materials* or other organic materials with a carbon to nitrogen ratio of greater than 30:1) is readily available on-site to mix with incoming Group 2 organic materials or other organic materials with a carbon to nitrogen ratio of 30:1 or less;
3. ensure that all Group 2 organic material or other organic materials with a carbon to nitrogen ratio of 30:1 or less is mixed into the compost windrows or piles to such an extent that it is unrecognizable as a separate material as soon as possible but no later than the close of business each day, or transferred off-site by the close of business on the same day that it is received at the operation; and
4. ensure timely and regular aeration of the compost to ensure proper aerobic, temperature, moisture and porosity conditions.

16.04: continued

Table 1. Examples of Organic Materials

Table 1 Examples of Organic Materials			
Group 1 Organic Materials		Group 2 Organic Materials	
Example Materials	C:N ratio	Example Materials	C:N ratio
Clean wood	100-1300:1	Vegetables	11-19:1
Cardboard	560:1	Food material	14-16:1
Paper and paper products	125-850:1	Grass clippings	17:1
Leaves	40-80:1	Green plant material	15-19:1
Straw	60-80:1	Fish waste	2-5:1
Corn stalks	60-75:1	Manure	6-14:1
Shrub trimmings	50:1	Solid and liquid digestate from aerobic and anaerobic digestion processes	Variable

Source: U.S. Composting Council, Best Management Practices (BMPs) for Incorporating Food Residuals Into Existing Yard Waste Composting Operations, p. 20. found at <http://compostingcouncil.org/admin/wp-content/uploads/2010/09/BMP-for-FW-to-YW.pdf>.

(c) Additional Requirements for an Aerobic or Anaerobic Digestion Operation. The owner and operator of an aerobic or anaerobic digestion operation shall comply with 310 CMR 16.04(3)(a) and shall:

1. ensure that all Group 2 organic material, listed at 310 CMR 16.04(3)(b): *Table 1. Example of Organic Materials*, or other organic materials with a carbon to nitrogen ratio of less than 30:1 generated off-site is delivered to the operation via sealed tank or vessel and transferred using a direct connection (e.g. hose) technology, however, this requirement does not apply to an operation that accepts less than 15 tons per day of Group 2 organic materials listed at 310 CMR 16.04(3)(b): *Table 1. Example of Organic Materials* or other organic materials with a carbon to nitrogen ratio of less than 30:1;
2. ensure that all handling occurs in sealed tanks or vessels, with odor controls; and
3. ensure that all organic material is either added to the active digestion system by the close of business on the same day that it is received at the operation or stored in sealed tanks or vessels, with odor controls.

16.05: Permit for Recycling, Composting and Conversion (RCC) Operations

(1) Applicability. The recycling, composting, conversion or handling of recyclable or organic materials that does not qualify for an exemption pursuant to 310 CMR 16.03 or a general permit pursuant to 310 CMR 16.04, shall apply for a recycling, composting or conversion (RCC) permit pursuant to 310 CMR 16.05. A RCC operation that has a RCC permit does not require a site assignment or a solid waste management facility permit pursuant to 310 CMR 19.000: *Solid Waste Management* provided the owner or operator complies with the permit.

(2) RCC Permit Application. Any applicant applying for a RCC permit pursuant to 310 CMR 16.05 shall submit an application to the Department, using forms and procedures provided by the Department, including without limitation, those specified in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*, with a copy to the board of health.

(a) Pre-application Meeting. The applicant shall attend a pre-application meeting with the Department. The applicant shall provide to the Department, at least 14 days prior to the meeting date, sufficient information to describe the general nature and scope of the applicant's proposal including, but not limited to, the following information:

16.05: continued

1. the location;
 2. a description of the technology, including a process flow chart and the size and type of all equipment used;
 3. the type, quantity and quality of all materials received and products or residuals produced; and
 4. identification of the potential public nuisances and adverse impacts from the operation and the proposed methods for controlling such public nuisances and impacts.
- (b) General Application Requirements. The applicant shall submit an application that meets the following requirements.
1. The application shall include sufficient information such that the Department can:
 - a. evaluate the feasibility of the proposal to accomplish the intended recycling, composting or conversion activity; and
 - b. evaluate the potential for public nuisances and impacts of the operation on public health, safety and the environment.
 2. The application shall identify all other local, state or federal permits required.
 3. All forms, plans, and other papers pertaining to design and construction of an operation to be permitted pursuant to 310 CMR 16.05, shall be completed under the supervision of a Massachusetts registered professional engineer knowledgeable about the proposed technology, design and construction and shall bear the seal, signature and discipline of said engineer. Any other form, plan or paper shall be completed by a competent professional experienced in the appropriate field.
 4. All mapping and surveying shall be completed by a registered surveyor.
 5. The application shall provide an estimate for a financial assurance mechanism, if required by the Department, similar to the types of financial assurance approved in 310 CMR 19.051: *Financial Assurance Requirements*.
 6. The application shall include documentation that the MEPA process:
 - a. does not apply;
 - b. applies and the Secretary has determined that an EIR is required; or
 - c. has been completed, and the Secretary has issued a certificate or a determination that an EIR is not required.
 7. The Department reserves the right to require additional information.
- (c) Specific Application Information. The owner or operator shall ensure that the application includes the following information, as may be modified by the pre-application meeting or pursuant to 310 CMR 16.05(2)(b)7.
1. Recyclable or Organic Material. The following information shall be provided for each material managed at the operation:
 - a. a detailed description of the type, quantity, and sources of all material(s) to be received by the operation;
 - b. the physical, biological and chemical specifications governing the quality of material accepted for recycling, composting or conversion;
 - c. where known or when requested, a detailed chemical and physical characterization of the material, including contaminants;
 - d. the methods and procedures employed to ensure the material specifications are met. This may include, but is not limited to:
 - i. training, signage or other aids for generators of the material; and
 - ii. sampling and testing of materials at the site of generation, when received at the operation or after processing and treatment to ensure the quality of the material, including minimizing toxic substances; and
 - e. a toxics control plan that:
 - i. will minimize entry of toxic materials into the operation;
 - ii. is appropriate for the organic materials to be managed at the operation; and
 - iii. ensures that the final products resulting from the operation do not pose a significant threat to public health, safety or the environment. Should toxics be detected in the final products at levels that pose a significant threat to public health, safety or the environment for any likely use of the product, the plan shall also include a contingency plan that identifies steps to be taken to reduce toxics in incoming organic materials, describes corrective actions to be taken for management of the organic materials and products, and identifies how any contaminated products are to be used or disposed.

16.05: continued

2. Site. The following descriptions, plans, or other site information shall be provided:
 - a. a general description of the site and the surrounding area;
 - b. a map indicating the location of the proposed operation;
 - c. a site map indicating:
 - i. the geographical and geological characteristics of the site;
 - ii. the location and distance to manmade structures and features (such as but not limited to, parks, conservation areas, buildings, roads and power lines) within ½ mile of the site; and
 - iii. the location and distance to environmental receptors, including but not limited to, public and private water supply wells, wetlands, streams, rivers or other water bodies within ½ mile of the site.
3. Design and Operation. The following plans, reports, diagrams, schematics, studies and other information shall be provided:
 - a. a description of the technology, including:
 - i. a process flow chart; and
 - ii. the history of the use of the technology, including:
 - (i) number of units operational;
 - (ii) type of materials processed;
 - (iii) products produced and their use;
 - (iv) an evaluation of operational successes and failures; and
 - (v) evaluation of operational issues including preventing public nuisances and adverse impacts to the public health, safety or the environment;
 - b. a design plan including:
 - i. a detailed description of the proposed method(s) for recycling, composting, converting or handling the material from initial receipt through final products and residuals;
 - ii. identification of all equipment to be used at the operation;
 - iii. the layout of the operation including all structures, equipment, buildings, roads and other appurtenances;
 - iv. the location, quantity and composition of all emissions or discharges, including but not limited to wastewater discharges and air emissions;
 - v. environmental controls that:
 - (i) prevent public nuisances, including but not limited to, odor, vectors, noise and dust; and
 - (ii) protect public health, safety and the environment, including but not limited to, the proposed method of treatment and management of wastewater discharges, air emissions, stormwater and leachate;
 - vi. the location and size of on-site storage areas for received materials, products and residuals; and
 - vii. the size of the operation in tons per day;
 - c. An operations and maintenance plan, including:
 - i. a description of the methods and procedures employed to ensure and verify the quality of materials received and products produced;
 - ii. a description of the proposed material handling methods and techniques;
 - iii. an odor control plan that is appropriate for the size and type of the operation that will minimize the production and migration of odorous compounds. The plan shall identify specific actions that will be taken to address complaints if unacceptable odors occur beyond the property line of the operation;
 - iv. a vector control plan that is appropriate for the size and type of the operation that will minimize the production and migration of odorous compounds. The plan shall identify specific actions that will be taken to address complaints if unacceptable odors occur beyond the property line of the operation;
 - v. a description of the routine environmental monitoring and sampling protocols;
 - vi. an inspection plan to ensure the operation will be in compliance with the RCC permit and all applicable regulations; and
 - vii. a record keeping system that documents the compliance of the operation with its RCC permit and all applicable regulations;

16.05: continued

- d. contingency plans for:
 - i. management of incoming recyclable or organic materials should there be an interruption in operation;
 - ii. management of incoming recyclable or organic materials that do not meet specifications and need to be rejected;
 - iii. response to a fire, flood, or other extreme weather conditions or acts of nature;
 - iv. response to a spill or leakage of any material at the site requiring remediation or corrective action; and
 - v. repairing or replacing broken or inoperative equipment.
- 4. Products and Residuals. The owner or operator shall ensure that the application includes the following information:
 - a. a description of the type and quantity of products to be produced and how they will be used;
 - b. documentation that markets or uses exist for the products to be produced;
 - c. a description of how organic materials that are to be land-applied are to be stabilized and how pathogens are to be destroyed; and
 - d. the quantity and composition of any residuals generated and how and where they will be managed.

(3) Review Criteria. The Department shall issue an RCC permit only if it is persuaded that 310 CMR 16.05(3)(a) through (h) are met.

(a) Recyclable or Organic Materials Only. Incoming materials meet the definition of recyclable or organic materials, and the operation will minimize toxic materials. The Department may take into account the following factors in making its decision:

- 1. whether the materials have been separated from solid waste to the maximum extent possible and contain the least possible amount of solid waste;
- 2. the nature of any contaminants and their probable effect on public health, safety and the environment from handling or use of products;
- 3. whether the materials are or are likely to be contaminated with toxic substances, as determined by the Department; and
- 4. whether the toxics control plan is sufficient to prevent significant threats to public health, safety or the environment.

(b) Design and Operation is Feasible. The operation will function as it has been proposed and designed in that:

- 1. the materials can feasibly be and will be recycled, composted or converted under the proposal set forth in the application;
- 2. the incoming material and product specifications will be met consistently;
- 3. the products will have markets or a reasonable likelihood of having a market;
- 4. materials, whether in their as-received, in-process or processed condition, shall not be stored for more than one year from the date of their receipt at the operation. The time limit may be exceeded in the case of storage of a processed material pending accumulation of one full container load; and
- 5. the quantity of residuals generated through the processing and treatment of materials will not average more than the following percentages by weight of materials handled during any calendar quarter:
 - a. 5% for organic materials;
 - b. 5% for recycling of construction and demolition waste;
 - c. 10% for recycling of recyclable material except at a single-stream operation;
 - d. 15% for recycling of recyclable material at a single-stream operation; or
 - e. Such other percentage as the Department may establish in order to minimize residual generation. The residual generation criteria established at 310 CMR 16.05(3)(b)5.a. through d. may be modified by the Department under the following circumstances:
 - i. the industry average for processing materials of the same nature utilizing the best available processing equipment is different than the percentages set forth in 310 CMR 16.05(3)(b)5.a. through d; or
 - ii. the scale of the operation is sufficiently small that actual residual generation is minimal.

16.05: continued

- (c) No Significant Threats or Nuisances. The operation will not present a significant threat to public health, safety or the environment and will not create a public nuisance.
 - (d) No Unpermitted Discharges. The operation will not result in an unpermitted discharge to air, water, land or other natural resources of the Commonwealth.
 - (e) Appropriate Siting. The site is appropriate for the particular proposed activity, size, and technology taking into consideration, but not limited to, distances to sensitive human and environmental receptors, such as residences, schools, public and private water supply wells, wetlands, streams and rivers.
 - (f) MEPA Compliance. The owner and operator have demonstrated that either the MEPA process does not apply or the MEPA process has been completed and the Secretary has issued a certificate or a determination that an EIR is not required.
 - (g) Financial Assurance. The owner or operator has provided a sufficient financial assurance mechanism, similar to the types of financial assurance approved in 310 CMR 19.051: *Financial Assurance Requirements*, if required by the Department, to pay for the removal and proper management of materials and restoration or remediation of the buildings, equipment or land should the operation be terminated.
 - (h) No Adverse Impact on Solid Waste Facility. If the operation is located at a solid waste management facility, it will not adversely impact the solid waste management facility and will be operated consistently with the facility's site assignment and solid waste management facility permit.
- (4) RCC Permit Conditions. The Department may issue an RCC permit subject to conditions. These conditions may include but are not limited to:
- (a) requirements that the owner and operator operate in a manner that prevents an unpermitted discharge of pollutants to air, water, land or other natural resources of the Commonwealth, does not create a public nuisance, and does not present a significant threat to public health, safety or the environment;
 - (b) requirements that the owner and operator ensure the quality of the incoming materials, including but not limited to, requirements to ensure that recyclable and organic materials are not contaminated by toxic substances at levels which may pose a significant threat to public health, safety or the environment and that the type and quality of incoming materials is sufficient for the operation;
 - (c) requirements that the owner and operator ensure the quality of final products, including but not limited to, requirements to ensure that products are not contaminated by toxic substances at levels which may pose a significant threat to public health, safety or the environment and that the quality of the products is sufficient for products to be marketable;
 - (d) requirements that the operation handle materials in a manner that prevents public nuisance conditions, including but not limited to, requirements for enclosed, covered or sealed handling areas, containers or trucks, timely incorporation of organic materials, required ratios of organic material types, and maintenance of proper aerobic or anaerobic temperature, moisture and porosity conditions;
 - (e) requirements for an odor control plan that is appropriate for the size and type of the operation that will minimize the production and migration of odorous compounds and that identifies specific actions that will be taken to address complaints if unacceptable odors occur beyond the property line of the operation;
 - (f) requirements for a vector control plan that is appropriate for the size and type of the operation that will minimize the presence of vectors and that identifies specific actions that will be taken to address complaints if vectors occur beyond the property line of the operation;
 - (g) requirements for a contingency plan that describes corrective actions to be taken for management of recyclable or organic materials and products in the event of equipment breakdowns, delivery of unacceptable material, spills, fires, extreme weather events or other events, including but not limited to the failure of the odor or vector control plan;
 - (h) requirements for establishing the operation at appropriate distances from sensitive human and environmental receptors, such as residences, schools, public and private water supply wells, wetlands, streams and rivers;
 - (i) requirements that the owner and operator minimize generation of residuals, limiting the amount of solid waste or other materials mixed in with incoming recyclable or organic materials;
 - (j) requirements to ensure proper disposal of residuals;

16.05: continued

- (k) requirements that the length of time that incoming material, products and residuals can be on-site is limited and in no case will create a public nuisance;
- (l) requirements for appropriate number of properly trained personnel for the size and type of operation;
- (m) requirements for equipment that is appropriate for the size and type of the operation;
- (n) requirements that all solid and liquid materials produced as a result of the operation are managed in accordance with all other applicable regulations and approvals, including but not limited to, a beneficial use determination;
- (o) requirements that the owner or operator maintain accurate records for adequate periods of time and report annually;
- (p) a requirement that the owner or operator annually submit a compliance certification in accordance with 310 CMR 16.06(1);
- (q) a requirement that the proposed operation obtain all other appropriate local, state and federal approvals or permits, including but not limited to, permits for air emissions or water discharges;
- (r) a requirement that the owner or operator provide a financial assurance mechanism similar to the types of financial assurance approved in 310 CMR 19.051: *Financial Assurance Requirements*;
- (s) a requirement that the owner and operator consent to the right of the Department without prior notice to periodically enter upon and inspect the property, the operation and relevant operating records, to determine and compel compliance with applicable regulations and the conditions of the permit;
- (t) an expiration date on which the RCC permit expires, with a date by which the applicant shall timely submit a renewal application for consideration by the Department; and
- (u) requirements that the owner and operator ensure that the operation does not adversely impact the solid waste management facility if the operation is located at a solid waste management facility and that the owner and operator operate consistently with the facility's site assignment and solid waste management facility permit.

(5) Public Review of RCC Permit.

- (a) Publication of Draft RCC Permit Decision. The Department shall issue a draft RCC permit decision granting or denying the application. A copy of the draft decision shall be provided to the applicant, to the board of health and to any person who asks in writing for a copy of the draft decision and provides the Department with an electronic mail address, or if he or she does not have an electronic mail address, then with his or her U.S. mail address.
 - 1. Public Notice. Public notice, paid for by the applicant, shall be provided in a daily or weekly newspaper of general circulation in the locality of the operation;
 - 2. Content of Public Notice. The public notice shall contain:
 - a. a description of the proposed operation including the type of technology, proposed tonnage, location and hours of operation;
 - b. the identity and mailing address of the applicant;
 - c. the public location where the application and the draft RCC permit decision can be inspected; and
 - d. the time period for written comments on the application and the address to which comments should be mailed.
- (b) Public Comment Period. The Department shall accept written comments from any person up to 30 days from the date the public notice is first published in a newspaper or a later date specified in the public notice. Any person who requests a copy of the RCC permit decision at the time of issuance shall provide the Department with his or her electronic mail address, or if he or she does not have an electronic mail address, then with his or her U.S. mail address. Submitting comments does not automatically make a person a party to the RCC permit proceeding.
- (c) Intervention by Group of Ten Persons. A group of ten persons may intervene in an adjudicatory proceeding relating to an RCC permit application by sending a letter to the Department prior to the public comment period deadline that states:
 - 1. its intent to intervene as a group of ten persons;
 - 2. the facts and grounds on why the group believes the RCC permit decision will cause damage to the environment, as defined in M.G.L. c. 214, § 7A; and
 - 3. the relief sought.

16.05: continued

The letter shall include an affidavit from each person stating his or her intent to be part of the group and to be represented by the group's authorized representative. Any group of ten persons filing written comments which meet these requirements shall be considered a party to the proceeding for the purposes of notice and any other procedural rights applicable to such proceedings under M.G.L. c. 30A, including specifically the right to request an adjudicatory hearing on the Department's RCC permit decision in accordance with 310 CMR 16.05(6)(d).

(d) Public Hearing. The Department shall schedule a public hearing on the draft RCC permit decision within the municipality wherein the proposed operation is to be located when:

1. the applicant requests a public hearing by submitting a written request to the Department prior to the close of the public comment period;
2. the municipality, through its board of selectmen or mayor as applicable, wherein the proposed operation is to be located, requests a public hearing by submitting a written request to the Department prior to the close of the public comment period; or
3. the Commissioner or his designee determines that there is sufficient public interest. The content of the public notice, paid for by the applicant, for such hearing shall include the date, time, and place of the public hearing and the nature and purpose of the public hearing. Such notice shall comply with 310 CMR 16.05(5)(a)1. and 2.

(e) The Department shall issue an RCC permit decision following the 30 day comment period or after the public hearing, if one is held. The RCC permit decision is final after the 21st day following the issuance of the RCC permit decision unless, if a person files a request for an adjudicatory hearing in a timely manner, then the Department's RCC permit decision is not final until the Commissioner issues a final decision pursuant to 310 CMR 1.01(14): *Decisions*. After the RCC permit decision is final, stay of the RCC permit shall be governed by M.G.L. c. 30A, §14.

(6) Request for Adjudicatory Hearing of the Department's RCC Permit Decision and Process for Intervention. The definitions of terms set forth at 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection* apply to 310 CMR 16.05(6) unless otherwise defined in 310 CMR 16.00. In the event of a conflict between definitions in 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection* and 310 CMR 16.00, the definitions in 310 CMR 16.00 prevail for purposes of 310 CMR 16.05(6).

(a) The following persons shall have the right to request an adjudicatory hearing of an RCC permit decision (not a draft decision) issued by the Department:

1. The Applicant.
2. An Aggrieved Person. An aggrieved person shall have the burden of proof to establish his or her status as an aggrieved person as defined at 310 CMR 16.02 and must state in the request for an adjudicatory hearing the specific basis of his or her aggrievement.
3. Groups of Ten Persons. A group of ten persons that has submitted written comments in accordance with 310 CMR 16.05(5)(c) has a right to request an adjudicatory hearing with respect to a RCC permit decision. In the case of a group of ten persons requesting an adjudicatory hearing, the issues at the adjudicatory hearing shall be limited to those of damage to the environment and the elimination or reduction thereof, as defined under M.G.L. c. 214, § 7A. The request for adjudicatory hearing shall clearly and specifically state the facts and grounds for the appeal and the relief sought, and each person shall file an affidavit stating the intent to be a part of the group and to be represented by its authorized representative.
4. The Municipality Wherein the Proposed Operation Is to Be Located. The board of selectmen or the mayor, as applicable, of the municipality wherein the proposed operation is to be located, provided the municipality has submitted written comments in accordance with 310 CMR 16.05(5)(b).

(b) Intervention in Adjudicatory Hearings. Nothing in 310 CMR 16.00 shall prevent a person from requesting to intervene in an adjudicatory hearing pursuant to 310 CMR 1.01(7): *Intervention and Participation*. Any motion to intervene pursuant to 310 CMR 1.01(7): *Intervention and Participation* shall be filed within 21 days from the date the first request for an adjudicatory hearing is filed with the Department.

16.05: continued

(c) Limitation on Matters Raised in Request for Adjudicatory Hearing. The matters that may be raised in a request for an adjudicatory hearing by a person who has the right to request an adjudicatory hearing, or by an intervenor, are limited to the matters raised during the public comment period; provided, however, that a matter may be raised upon a showing that it was not reasonably possible with due diligence to have raised such matter during the public comment process or for good cause shown.

(d) Process for Requesting an Adjudicatory Hearing. A written request for an adjudicatory hearing shall be filed or postmarked within 21 days from the date the Department issues its RCC permit decision. The adjudicatory hearing request shall be in the form of a notice of claim and shall comply with all the requirements of 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection*. The person requesting the adjudicatory hearing shall send a copy of the request for adjudicatory hearing by first class mail or hand delivery, to the applicant and to any person who has submitted an electronic or mailing address with timely written comments to the Department.

(e) Timeline and Procedures for Adjudicatory Hearing.

1. Pre-screening and Motions.

a. Upon receipt of the notice of claim, the presiding officer will schedule a prescreening conference to be conducted pursuant to 310 CMR 1.01(5)(a)15. and will send notice to all parties. Such prescreening conference will presumptively occur not more than 30 days after the notice of claim is filed. As used in 310 CMR 16.05(6)(e)1. through 4., "presumptively" means that the timeline is binding, absent extraordinary circumstances, in which case the presiding officer has authority to extend the timeline.

b. Any person who intervenes after filing of the notice of claim shall promptly receive the notice of the prescreening conference, but any intervention shall not change the schedule of the prescreening conference or the hearing.

c. Any party may file a motion to dismiss or for summary decision prior to the prescreening conference or by a date set by the presiding officer at the prescreening conference. Motions will not change the schedule of the prescreening conference or the hearing.

d. Upon notice to the parties, the presiding officer may provide an opportunity at the prescreening conference for a simplified hearing conducted pursuant to 310 CMR 1.01(8)(a): *Simplified Hearing*.

e. If the presiding officer determines an appeal to be major or complex, he or she will adjust the schedule either by extending it up to 30 days or by taking the matter ahead of other cases.

f. Every party must attend and be prepared to discuss settlement and the narrowing of issues at the prescreening conference. At the conclusion of the prescreening conference or shortly thereafter, the presiding officer shall prepare and send to all parties a prescreening conference report for any appeal not resolved in prescreening. The prescreening conference report shall contain a list of issues that are in dispute, are legally relevant and are to be addressed in the parties' direct and rebuttal cases.

g. The presiding officer may rule on the timeliness, standing and compliance with the requirements of 310 CMR 16.05(6)(e), *sua sponte* or in response to a motion, and provide a prompt ruling to the parties.

2. Pre-filed Testimony.

a. A petitioner must file its direct case with the Department and serve a copy on every party no later than 45 days after the prescreening conference. In its direct case, the petitioner must establish the legal and factual basis for its position on the issues identified by the presiding officer in the prescreening report. Failure to do so will result in a waiver of petitioner's direct case for that issue. In addition, the direct case at a minimum shall include:

- i. a description of the subject matter of the Department's RCC permit decision; and
- ii. credible evidence from a competent source in support of each claim of factual error, including any relevant expert report(s), plan(s), or photograph(s).

16.05: continued

b. A respondent that seeks to support or defend the Department's RCC permit decision shall file and serve on all parties a direct case within 30 days of the filing of the petitioner's direct case. The response shall, at a minimum, include a rebuttal to the petitioner's direct case setting forth the legal and factual basis supporting the Department's RCC permit decision, including relevant statutory and regulatory citations and evidentiary support consisting of credible evidence from a competent source and any affirmative defenses and evidentiary support for them.

c. An intervenor that contests the Department's RCC permit decision shall file a direct case that conforms to 310 CMR 16.05(6)(e)2.a. no later than the due date of the petitioner's direct case. An intervenor that supports the Department's RCC permit decision shall file a direct case that conforms to 310 CMR 16.05(6)(e)2.b. no later than the due date of the respondent's direct case.

d. The petitioner or an intervenor aligned with the petitioner may file rebuttal evidence no later than seven days after the filing of the direct case by the respondent or any intervenor aligned with the respondent. The rebuttal evidence shall be limited to countering evidence submitted in a respondent's or intervenor's direct case and shall be served on all parties.

3. Hearing.

a. Upon receipt of the notice of claim, the Department will schedule a hearing and will send notice to all parties. A hearing will be held presumptively within 120 days after the notice of claim is filed.

b. The presiding officer shall conduct a hearing. At the hearing, the parties' direct cases shall consist of, and be limited to, the evidence contained in their respective direct cases and rebuttal evidence, subject to evidentiary rulings of the presiding officer. The primary function of the hearing shall be cross-examination of witnesses and, at the presiding officer's discretion, an oral closing argument. The hearing shall be limited to one day, unless the presiding officer finds that there is good cause for a longer hearing.

4. Final Action. The presiding officer shall issue a written recommended final decision, presumptively within 30 days after the close of the hearing that shall include findings on the contested issues. The Commissioner shall issue a final decision consistent with 310 CMR 1.01(14)(b): *Final Decisions*, presumptively within six months of the filing of the notice of claim, or in the case of an appeal deemed major or complex in which the schedule was extended, in accordance with the extended schedule. Should a party request a tentative decision, the request shall be governed by 310 CMR 1.01(14)(a): *Recommended Decisions and Tentative Decisions*, and the schedule for completion of proceedings shall be extended to accommodate such request.

(f) Relationship to Other Rules of Adjudicatory Proceedings. To the extent there is conflict between the regulations governing appeals set forth in 310 CMR 16.05(6) and the Rules of Adjudicatory Proceedings set forth in 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection* the former shall prevail.

(7) RCC Permit Modifications.

(a) The proponent shall notify the Department and the board of health of proposed changes in design or operations where:

1. the owner or operator intends to recycle, compost or convert material(s) substantially different from those materials for which the RCC permit was granted;
 2. the design and/or management of the operation is to be altered;
 3. the owner or operator proposes to increase the volume or quantity of materials to be handled by the operation above that volume or quantity established in the RCC permit;
- or
4. as otherwise specified in the RCC permit.

(b) Where the Department determines that the change in design or operation is significant, the Department may require the submittal of a revised RCC permit application, with a copy submitted to the board of health, for review. Review of such revised RCC permit modification application shall be as if it were an initial RCC permit application.

(c) Where the Department issues a decision on a modification to an existing RCC permit, any person requesting an adjudicatory hearing pursuant to 310 CMR 16.05(6) may raise in such request only those issues relating to the modification of the RCC permit.

16.05: continued

(8) Demonstration Project for Recycling, Composting or Converting Recyclable or Organic Material. The Department may approve a project to demonstrate innovative recycling, composting or conversion projects as provided in 310 CMR 16.05(8)(a) through (d).

(a) General Conditions. The following conditions shall apply to any demonstration project approved pursuant to 310 CMR 16.05(8):

1. the materials to be processed shall be limited to the recyclable or organic materials permitted to be processed by operations set forth at 310 CMR 16.05; and
2. a project shall be limited to a specified time period not to exceed two years from the date of approval, after which time the project shall terminate unless an extension is granted in writing by the Department or applicable state and local permits are obtained.

(b) Application. An applicant shall submit an application to conduct a recycling, composting or conversion demonstration project to the Department, with a copy to the board of health. The application shall contain:

1. the information described at 310 CMR 16.05(2) as required by the Department;
2. the proposed duration of the demonstration project; and
3. a description and schedule of interim and final reports to be submitted to the Department describing and evaluating the project.

(c) Review Criteria. The Department shall consider the following criteria when determining whether to allow the demonstration project:

1. the potential for adverse impacts taking into account the type and amount of recyclable and organic materials, the project location, the design and operating controls, the management practices and the owner's and operator's experience;
2. whether the activity can be carried out in a manner that prevents an unpermitted discharge of pollutants to air, water or other natural resources of the Commonwealth, does not create a public nuisance; and does not present a significant threat to public health, safety or the environment;
3. the likelihood of obtaining useful, new information in the time frame proposed for the demonstration project; and
4. the ability of the applicant to appropriately use or dispose of all project materials once the demonstration project has been completed.

(d) Review Process. The Department shall follow the procedure described at 310 CMR 16.05(5) when issuing its decision on whether to allow the demonstration project.

16.06: General Requirements for General Permits and Recycling, Composting and Conversion Permits

(1) Compliance Certification Requirements.

(a) Compliance Certification Schedule.

1. New or Newly Acquired Operations. The owner or operator of each new recycling, composting or conversion operation that handles recyclable or organic materials, which qualifies for a general permit, pursuant to 310 CMR 16.04, or RCC permit issued by the Department, pursuant to 310 CMR 16.05, shall submit a compliance certification to the Department with a copy to the board of health, in accordance with 310 CMR 16.06(1)(b) 30 days prior to the commencement of a new operation or the acquisition of such an operation.
2. Existing Operations. The owner or operator of each operation in existence on or before November 23, 2012 shall submit a certification by February 15, 2014, unless the owner or operator has a Determination of Need issued before [the effective date of these regulations], in which case the owner and operator shall comply with the schedules set forth in 310 CMR 16.01(12) for submission of a certification for the operation.
3. Annual Certification Requirement. The owner or operator of an operation for which a certification is required to be submitted by 310 CMR 16.06(1)(a)1. or 2. shall submit a new annual compliance certification to the Department on or before February 15th of each calendar year on a form provided by the Department.

(b) Certification Requirements. The owner or operator shall ensure that a responsible official for either the owner or operator of each operation shall submit a certification. Each certification shall be on a form prescribed by the Department and shall address compliance with the performance standards and conditions to which the operation is subject. The certification form may include specialized forms for specific categories of operation, and any owner or operator required to submit a certification pursuant to 310 CMR 16.06(1)(a) shall submit all applicable forms. The certification shall:

16.06: continued

1. state whether the operation is in compliance with the applicable requirements as listed on the certification form and contained in 310 CMR 16.00;
2. include a commitment to identify to the Department any violations of 310 CMR 16.00 that occur;
3. if the operation is out of compliance, state what the owner and operator will do to return to compliance and the date by which compliance will be achieved; and
4. include the following statement: "I, [name of responsible official], attest under the pains and penalties of perjury:
 - a. that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification statement;
 - b. that, based on my inquiry of those individuals responsible for obtaining the information, the information contained in this submittal is to the best of my knowledge, true, accurate, and complete;
 - c. that systems to maintain compliance are in place at the operation and will be maintained even if processes or operating procedures are changed;
 - d. that I am fully authorized to make this attestation on behalf of this operation; and
 - e. that I am aware that there are significant penalties, including, but not limited to possible fines and imprisonment, for submitting false, inaccurate, or incomplete information".

16.07: Certification

Any person, required by 310 CMR 16.00 or any order issued by the Department, to submit papers shall identify themselves by name, profession, and relationship to the applicant and legal interest in the proposed site, and make the following certification: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties both civil and criminal for submitting false information including possible fines and imprisonment".

16.08: Site Assignment Application Submission Requirements

- (1) General. Any person wishing to establish a new facility at a New Site or to Expand a Site onto an area not previously assigned must file a Site Assignment Application (application) with the board of health and provide copies as specified at 310 CMR 16.08(2).
- (2) Copies. The applicant shall file:
 - (a) two copies of the application with the local board of health;
 - (b) one copy of the application with the local library;
 - (c) two copies of the application with the Department, one to the Business Compliance Division, Boston, and one to the regional office in which the proposed site is located;
 - (d) one copy of the application with the Massachusetts Department of Public Health, Bureau of Environmental Health Services, Boston;
 - (e) one copy of the application with the board of health (abutting board of health), and one copy with the library of any municipality within ½ mile of the proposed site assigned area;
 - (f) one copy of the application with the applicable regional planning agency duly established by the Legislature and governing the municipality in which the proposed facility is to be located; and
 - (g) one copy of the application with any Person requesting it during the public comment period, except that the applicant may charge the reasonable cost of reproduction for the copies requested under this provision. The applicant shall maintain a list of each Person requesting a copy, the date of each request, and the date each copy was sent out.

16.08: continued

(3) Service of Copies. Simultaneous with the filing of any and all papers with the board of health, the applicant filing such papers shall send a copy(ies) to the Department and the Department of Public Health, as prescribed in 310 CMR 16.08(2). All papers filed with the board of health shall be accompanied by a certificate signed under the pains and penalty of perjury that copies have been sent, specifying the mode of service, date mailed or delivered, the address, and address of service. Failure to comply with these requirements shall be grounds for refusal by the board of health or the Department to accept papers for filing.

(4) Fees. The applicant shall tender payment of the Technical Fee in accordance with 310 CMR 16.30(2)(b) or enter into alternative fee payment arrangements to the satisfaction of the board of health.

(5) Site Assignment Application.

(a) General. The application shall be completed using forms supplied by the Department and shall contain sufficient data and other relevant information to allow the Department and the board of health to determine, independent of additional information, whether the site is suitable. The level of analysis presented in an application shall be commensurate with the nature and complexity of the proposed facility.

(b) Preparation of Papers. All papers pertaining to design, operation, maintenance, or engineering of a site or a facility shall be prepared under the supervision of a registered professional engineer knowledgeable in solid waste facility design, construction and operation and shall bear the seal, signature and discipline of said engineer. The soils, geology and groundwater sections of an application, if applicable, shall be completed by professionals experienced in those fields under the supervision of a registered professional engineer. All mapping and surveying shall be completed by a registered surveyor.

(c) Waiver. The application shall clearly state whether a waiver, as provided in 310 CMR 16.18 or 310 CMR 16.40(6), is requested. Applications for waivers shall be independent of the main body of the Site Assignment Application and shall include:

1. reference to the specific criteria or provision for which the waiver is requested;
2. all documentation that the applicant wants to present in support of the waiver including detailed facility design plans where appropriate.

(d) Massachusetts Environmental Policy Act (MEPA).

1. The application shall include a demonstration that:
 - a. the MEPA process does not apply; or
 - b. the MEPA process does apply and the Secretary has determined that an EIR is required; or
 - c. the MEPA process has already been completed and the Secretary has issued a certificate or a determination that no EIR is required.
2. The first Technical Review Period (TR1) as specified under the Timely Action and Fee Provisions Regulations, 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*, shall not be completed until the Secretary's final certificate has been issued.

(e) Signatures. Applications shall be signed and sworn to by the applicant(s) and his or her agent, if different, as to all statements of fact therein, as set forth in 310 CMR 16.07. Where the applicant is not the owner in fee simple of the title or interest in the site, then said owner shall also sign the application.

(6) Confidentiality. Any information submitted pursuant to 310 CMR 16.00 may be claimed as confidential by the applicant in accordance with the provisions of 310 CMR 3.00: *Access to and Confidentiality of Department Records and Files*. Information regarding the name and address of the permittee and data related to the potential impact of the proposed activity on public health, safety and the environment shall not be classified as confidential.

16.09: Public Access to Application

The board of health shall ensure that a copy of the application and all subsequent filings are available for reasonable public inspection and copying. The board of health may charge reasonable fees for such copying.

16.10: Review of Application for Completeness

(1) Report Number. The Department shall assign a Report Number to each application when the application is filed with the Department and notify the applicant, the board of health, and the Department of Public Health. The Report Number shall be used in all subsequent correspondence with the board of health, the Department, the applicant and the Department of Public Health and shall appear on any subsequent filings by the applicant.

(2) Public Comments. During the Determination Period, as defined in 310 CMR 16.10(3) the Department shall accept written comments from the board of health or interested persons regarding the completeness of the application.

(3) Determinations. The Department shall issue a written determination to the applicant as to the completeness of the application on or before 21 days after the filing of said application with the Department. An application shall not be considered complete unless the Technical Fee, if any, has been paid and the application forms are complete and accompanied by the appropriate supporting documentation. If the Department determines that the application is incomplete, deficiencies shall be stated. The Department shall send a copy of such determination to the board of health and the Department of Public Health.

(4) Public Notice of Application. The applicant, after receipt of notice of completeness from the Department, shall notify all parties identified at 310 CMR 16.08(2) and abutters to the site by certified mail, and provide public notice that an application has been filed with the local board of health. The notice shall:

(a) appear in at least one newspaper that has general circulation within the municipality and in the *Massachusetts Environmental Policy Act (MEPA) Monitor*, where the proposed facility was required to file an Environmental Notification Form (ENF) or Environmental Impact Report (EIR) with MEPA;

(b) include the location of the site; the size of the site; the type of facility; the type of waste or material to be handled at the facility; daily tonnage or throughout; the names, and addresses of the proponents and the person to whom requests for copies of the application should be directed; the public location within the community and hours where the application may be inspected; the time period for comment to be received by the Department and the address to which the comments should be mailed; and

(c) Where the municipality has a population of greater than 15% of residents who do not speak English as their primary language, the applicant shall publish an additional notice in a daily or weekly newspaper(s) circulated in that community written in the primary language(s) of these residents.

(5) Commencement of Review Period. The Department Review Period shall commence when the applicant has provided proof to the Department that the public notice requirement as set forth in 310 CMR 16.10(4) has been satisfied. Proof may be in the form of a copy of the public notice in the publication.

16.11: Review Period

(1) General. Upon commencement of the Review Period, the Department shall review the application to determine if the site is suitable.

(2) Public Comments. During the initial 21 days of the Review Period the Department shall accept written comments from the board of health or other interested persons regarding the suitability of the site. All comments shall be filed with the Department's Regional Office in which the proposed site is located. The Department shall make available all comments received regarding the application to the applicant and the board of health at their request.

(3) Applicant Response and Modification.

(a) Response to Comments. The applicant may respond in writing and/or the Department may require the applicant to respond to comments during the initial 40 days of the Review Period.

(b) Modification of Application. During the initial 40 days of the Review Period the applicant may modify an application provided that said modifications, when taken in their totality, do not constitute a major modification. The Department shall determine if modifications are major and issue written notice of such determinations to the applicant.

16.11: continued

(c) Major Modifications. The applicant must notify the Department and the board of health within five days of receipt of a notice from the Department that a single modification or a series of modifications constitute a major modification, whether it intends to:

1. withdraw the application; or
2. withdraw the modifications and let the Department review of the application continue on the unmodified application.

(4) Failure to File Notification. Failure of the applicant to file a notification within the appropriate time will constitute a withdrawal pursuant to 310 CMR 16.11(3)(c)2.

(5) Additional Information. The Department may require the applicant to provide additional information as the Department deems necessary to fully evaluate if the site is suitable.

(6) Restricting of Comments or Response. After 40 days the Department may restrict further comments or responses to allow the completion of the Department review of the site.

(7) Issuance of Report. The Department shall issue the Report on Suitability (Report) within 60 days of the receipt of proof that the public notice requirement set forth in 310 CMR 16.10(4) has been satisfied.

16.13: Department Report On Suitability (Report)

(1) General. The Department shall forward the Report and the accompanying record to the board of health and shall provide a copy of the Report to the applicant.

(2) Content. The Report shall include:

- (a) the Report Number;
- (b) a statement indicating that the application does or does not contain sufficient data to allow the Department to determine if the site meets the criteria. A determination that an application did not contain sufficient information to allow a determination on each criteria shall be sufficient grounds for a negative determination of suitability;
- (c) a statement that the site meets or fails to meet each the site suitability criteria set forth in 310 CMR 16.40, including any conditions; and
- (d) findings of fact pertaining to the application, any waiver that was requested, and the suitability of the site.

(3) Basis for Report. The Report shall be based upon:

- (a) the record;
- (b) the facts and information otherwise available to the Department;
- (c) expertise of the Department;
- (d) expertise of other local, state or federal agencies consulted by the Department.

(4) Record. The record shall consist of the application, including any waivers requested or any modifications submitted; any report or records the Department has used in making its determination; and any and all correspondence, notices, and written comments by the Department, boards of health, applicant or the public which have been submitted in accordance with 310 CMR 16.00.

(5) Public Access. The board of health shall ensure that the Department's Report on Suitability and the Department Record are made available for copying and reasonable inspection.

16.14: Reconsideration of Findings

- (1) Motions for Reconsideration. When the Department's Report contains a finding that the site fails to meet the site suitability criteria, the Department may entertain written motions for reconsideration from the applicant stating the basis on which the reconsideration is requested, if filed within 14 days of issuance of the Report. The motion for reconsideration shall state the fact(s) which it is contended the Department has overlooked or misapprehended and shall contain such argument in support of the motion as the applicant desires to present. Action on any motion for reconsideration is at the discretion of the Department.
- (2) Comments. The Department may allow comments from the board of health, the Department of Public Health and the general public for a specified time period if it decides to reconsider the findings.
- (3) Reissuance of Report. In the event the Department reconsiders and changes its determination, it shall amend the Report accordingly and reissue the Report.

16.15: Further Action on Application

- (1) Negative Determinations of Suitability. When the Department issues a Report with a finding that a site fails to meet the site suitability criteria or that an application does not contain sufficient data to allow a determination on the criteria, the site assignment process is complete and the board of health shall not hold a public hearing as prescribed in 310 CMR 16.20, provided that an applicant may request the Department to reconsider the findings in the Report and the Report may be reissued.
- (2) Positive Determinations of Suitability. When the Department issues a Report with a finding that the site does meet the site suitability criteria, the board of health shall proceed to hold a public hearing pursuant to 310 CMR 16.20 for the purpose of deciding whether to grant or refuse to grant a site assignment for the parcel of property which is the subject of the Department Report.

16.16: Requests for Technical Assistance from the Department

- (1) Technical Assistance. The board of health may request advice, guidance, or technical assistance from the Department to assist in the review of the information contained within the application or the Report. Any request for technical assistance shall be in writing. The technical assistance from the Department shall stop on the date of the first scheduled public hearing, except where it will serve to clarify information contained within the Department Report.
- (2) Informal Arrangements. After a request for technical assistance, the Department and the board of health may enter into informal arrangements to facilitate the review of the application, provided that the applicant is informed of any such arrangement.

16.17: Application Review by the Department of Public Health

- (1) Review and Comments. The Department of Public Health (DPH) shall review the application and comment as to any potential adverse impacts the site may have on public health and safety. Such review and comment shall be made no later than 60 days after the start of the Review Period. The Department of Public Health may submit or discuss its comments with the Department during the Review Period.
- (2) Department of Public Health Report. The Department of Public Health at the written request of the board of health shall make or have made a written report containing its comments on the potential adverse impacts of the site on public health and safety and may submit said report no later than 60 days after the start of the Review Period. The DPH may submit such report to the board of health.
- (3) Coordination with Board of Health. The DPH shall coordinate and cooperate with the board of health on any matter relating to the report upon written request by the board of health to DPH.

16.18: Waiver

(1) General. The Commissioner may waive any provision or requirement contained in Part I of 310 CMR 16.00, or at 310 CMR 16.21: *Alternative Use of Assigned Site*, not specifically required by law where the Commissioner finds:

- (a) that the waiver is necessary to accommodate an overriding community, regional or state public interest; and
- (b) the granting of the waiver would not interfere with the ability of the board of health to fulfill its duties; and
- (c) the granting of the waiver would not diminish the ability of the general public to review and comment on the proposed project.

(2) Filings. All requests for waivers shall be filed and documented in accordance with 310 CMR 16.08(5)(c).

16.20: Public Hearing Rules

(1) Preamble. “Public Hearings” pursuant to M.G.L. c. 30A are not “Adjudicatory Proceedings” within the meaning of M.G.L. c. 30A, § 1. *See* M.G.L. c. 30A, § 2. Pursuant to M.G.L. c. 111, § 150A, however, “for the limited purpose of appeal from such public hearings, a local board of health shall be deemed to be a state agency under the provisions of M.G.L. c. 30A and its proceedings and decision shall be deemed to be a final decision in an adjudicatory proceeding”. The public hearing process is designed to permit the flexibility and informality appropriate to the board of health proceeding, while providing the board of health with procedural direction and the authority to create a record and render a decision within a limited time period which is amenable to the procedures and the standards of judicial review applicable under M.G.L. c. 30A, § 14.

(2) Applicability. 310 CMR 16.20, governs the conduct of public hearings by a board of health on a Site Assignment Application following the issuance of a Report by the Department finding that a proposed site is a suitable for a specified type(s) of solid waste facility(ies), as required by M.G.L. c. 111, § 150A.

(3) Public Hearing Definitions. The following words when used in 310 CMR 16.20, shall, except as otherwise required by context, have the following meaning:

Abutting Board of Health means a board of health of a municipality located within ½ mile of a boundary of the proposed site.

Applicant means person named in the application as the owner of a property interest in the site and the operator of the proposed facility where the owner has entered into an agreement with an operator at the time the application is filed.

Authorized Representative means individual authorized by a party to represent him in these matters.

Decision means final decision rendered by the board of health.

Hearing Officer means an individual(s) duly designated by the board of health to conduct the public hearing.

Papers means all written communications filed in the public hearing, including motions and other documents.

16.20: continued

Party means the applicant, any abutting board(s) of health and any abutter(s), group of ten citizens or other intervenor duly registered pursuant to 310 CMR 16.20(9)(b).

Person(s) means a private person, firm, or corporation, or any federal, state, or local governmental or other entity which is not an agency.

Subpoena means a document which commands a witness to appear at a given time and give testimony before a court or an administrative proceeding such as a hearing; and may require the witness to produce before the hearing tribunal any documents, papers, or records in his possession or control.

(4) Representation

(a) Appearance. An individual may appear on his own behalf. A duly authorized officer or employee may represent a corporation; an authorized member may represent a partnership or joint venture; and an authorized trustee may represent a trust. Any Party in the public hearing shall have the right to be accompanied, represented and advised by an authorized representative.

(b) Notice of Appearance. An appearance shall be made in the public hearing by filing a written notice with the board of health or Hearing Officer. Such notice shall contain the names, address and telephone number of the authorized representative.

(5) Time

(a) Timely Filing. Papers required or permitted to be filed under 310 CMR 16.20, or any provision of the applicable law must be filed at the board of health office or such other place as the board shall designate within the time limits for such filing as are set by 310 CMR 16.20 or the Hearing Officer. Papers filed in the following manner shall be deemed to be filed as set forth herein:

1. Hand-Delivery during business hours shall be deemed filed on the day delivered.
2. Hand-Delivery during times other than during regular business hours shall be deemed filed on the next regular business day.
3. Mailing in U.S. Mail shall be deemed filed on the date so postmarked.

All papers shall show the date received by the board and the board shall cooperate in giving date receipts to Persons filing papers by hand-delivery.

(b) Notice of Board of Health Actions. Communications concerning public hearings pursuant to 310 CMR 16.00 from the board or the Hearing Officer shall be presumably deemed received upon the day of hand-delivery or if mailed three days after deposit in the U.S. mail.

(c) Computation of Time. Unless otherwise specifically provided by law or 310 CMR 16.20, computation of any time period referred to in 310 CMR 16.20 shall begin with the first day following the act which initiates the running of the time period. The last day of the time period so computed is to be included unless it is a Saturday, Sunday, or legal holiday or any other day on which the office of the board is closed, in which event the period shall run until the end of the next following business day. When the time period is less than six days, intervening days when the board is closed shall be excluded in the computation.

(d) Extension of Time. It shall be within the discretion of the board or Hearing Officer, for good cause shown, to extend any time limit contained in 310 CMR 16.20. All requests for extension of time shall be made by motion before the expiration of the original or previously extended time period. This discretion shall not apply to any limitation of the time prescribed by the Massachusetts General Laws.

(6) Filings Generally

(a) Title. Papers filed with a board shall state the report number, the title of the proceeding, the name of the Person in whose behalf the filing is made and the name of the applicant.

16.20: continued

(b) Signatures. Papers filed with a board shall be signed and dated by the Party on whose behalf the filing is made or by the Party's Authorized Representative. This signature constitutes a certification by the signer that he has read the document, knows the content thereof, and that such statements are true, that it is not interposed for delay and that if the document has been signed by an Authorized Representative that he has full power and authority to do so.

(c) Form. Size and printing requirements. All Papers, except those submittals and documents which are kept in a larger format during the ordinary course of a Party's business, shall be hand-printed or typewritten on paper 8 to 8½ inches wide, by 11 inches long. Mimeographed, multigraphed, photoduplicated Papers will be accepted as hand-printed or typewritten. All papers shall be clear and legible.

(d) Copies. The original of all Papers shall be filed together with two copies.

(e) Service. Simultaneously with all filings of any and all Papers with the board, the Party filing such Papers shall send a copy thereof to all other Parties to the proceedings, by delivery in hand, or by United States mail, postage prepaid, properly addressed. All papers filed with the board shall be accompanied by a statement signed under the pains and penalty of perjury that copies have been sent, specifying the mode of service date, the Party to whom sent, the Party's address, and address of service. Failure to comply with this rule shall be grounds for refusal by the board to accept Papers for filing.

Any Party may request a waiver of the requirement of 310 CMR 16.20(6)(e). The Hearing Officer may grant the request if significant expense or waste of resources would be avoided and if adequate arrangements can be made for access to the Papers by all persons who would otherwise be entitled to service of a copy.

(7) Initiation of Hearings.

(a) Commencement. The board shall commence a public hearing pursuant to 310 CMR 16.40 within 30 days of receipt of the Department's Report On Suitability (Report).

(b) Public Notice. At least 21 days prior to commencement of the public hearing the board shall notify all parties identified at 310 CMR 16.08(2) of the hearing, by certified mail, and cause notice of the public hearing to be published. Such notice shall be published in daily or, if not possible, weekly newspapers of general circulation in the municipality. Where the municipality has a population of greater than 15% of residents that do not speak English as their primary language, the board of health shall publish an additional notice in a daily or weekly newspaper(s) circulated in that community written in the primary language(s) of those residents.

(c) Form and Content. The notice shall give the date, time and location of the public hearing, a description of the proposed facility including the type of facility, proposed disposal tonnage, proposed hours of operation, the identity and mailing address of the applicant; the public location within the community and hours where the application may be inspected; the time period for written comment on the application to the board and the address to which comments should be mailed. In addition the notice shall contain the following statement: "The Department of Environmental Protection has issued a Report in which it determines that the above described place is a suitable place for the proposed facility. Copies of the Department's Report On Suitability and the site suitability criteria (310 CMR 16.00) are available for copying and examination along with the application."

(8) Examination of Record Below; Discovery

(a) Availability of the Record. The Report, the application, and all comments received by the Department on the application are public records and shall be made available by the board for inspection and copying by any person during reasonable business hours. The board may charge reasonable copying fees for any of the documents comprising the record below. There shall be no additional discovery.

16.20: continued

(b) Prefiled Direct Testimony. The Hearing Officer may, on his/her own motion, order all Parties to file within a reasonable time in advance of the public hearing full written text of the testimony of their witnesses on direct examination on issues pertinent to site assignment, including all exhibits to be offered into evidence, or on issues specified by the Hearing Officer. Such testimony shall be filed by or before a time specified by the Hearing Officer and shall be available to examination and copying as provided in 310 CMR 16.20(8)(a). The Hearing Officer may also require the filing of written rebuttal testimony within a reasonable time after the filing of the direct testimony described in the preceding sentence. All testimony filed pursuant to this rule shall be subject to the penalties of perjury. All witnesses whose testimony is filed pursuant to this rule shall appear at the hearing on the merits and be available for further examination or cross-examination at the discretion of the Hearing Officer. If a witness is not available for further examination or cross examination at the hearing on the merits, the written testimony of the witness shall be excluded from the record unless the Parties agree otherwise.

(9) Intervention and Participation.

(a) Intervention. Any Person who with good cause wishes to intervene in a public hearing shall file a written request (petition) for leave to intervene. Persons whom the Hearing Officer determines are specifically and substantively affected by the hearing shall be allowed to intervene. For the purpose of the Public Hearing the following persons shall be considered to be specifically and substantively affected by the hearing and shall be eligible to register as a Party to the hearing:

1. Abutters. Any abutter or group of abutters to the proposed facility shall be a Party to the hearing by timely submission of a Party Registration Statement in accordance with 310 CMR 16.20(9)(b).

2. Ten Citizens Groups. Any group of ten or more persons may Register collectively as a Party to the public hearing in which damage to the environment, as defined in M.G.L. c. 214, § 7A, or public health and safety are or might be at issue; provided, however, that such intervention shall be limited to the issues of impacts to public health, safety and damage to the environment and the elimination or reduction thereof in order that any decision in the public hearing shall include the disposition of such issue.

(b) Registration. The registration of an abutter, group of abutters or ten citizen groups as a Party or the petition of a person to be an intervenor to the public hearing shall be valid only if submitted prior to the commencement of the hearing. The registration statement shall be signed under pains and penalty of perjury and contain the following information:

1. name and address of the registrant(s);
2. proposed party status (abutter, group of abutters, ten citizen group or intervenor);
3. identity of the Authorized Representative, if any;
4. for individuals wishing to register as an abutter a description of the abutting property including its boundaries and current use and a statement that the registrant is the owner of the parcel; and
5. for individuals or groups of individuals petitioning to be an intervenor a statement indicating how they will be substantially and specifically affected by the proposed facility.

If no Authorized Representative is identified in the Registration Statement the first person mentioned in the Statement as a member of the group shall be deemed the Authorized Representative of the group. Said Authorized Representative shall have the sole authority to sign submissions by the group. A group that registers as a Party shall be collectively deemed a Party and shall have the rights of participation of a Party as set forth in 310 CMR 16.20, except as limited by 310 CMR 16.20(9).

16.20: continued

(c) Rights of Intervenors. Any person permitted to intervene shall have all rights of, and be subject to, all limitations imposed upon a Party, however, the Hearing Officer may exclude repetitive or irrelevant material. Every Petition to intervene shall be treated as a petition in the alternative to participate.

(d) Rights of Participants

1. Any person specifically affected by a proceeding shall be permitted to participate. Permission to participate shall be limited to the right to present testimony, to argue orally at the close of the public hearing and to file a brief. Permission to participate, unless otherwise stated, shall not be deemed to constitute an expression that the person allowed to participate is a party in interest who may be aggrieved by any final decision.

2. Participants shall not be required to submit to cross examination except upon the determination of the Hearing Officer that cross examination is necessary in the interest of a full and fair hearing and an adequate record. Such cross examination of participants shall be conducted through the Hearing Officer. Failure of a Participant to submit to cross examination allowed by the Hearing Officer shall be grounds to strike the Participant's statements.

(10) Conduct of Public Hearing.

(a) Public Hearings, Where Held. Hearings shall be held at a public meeting hall, appropriately sized to accommodate all Parties and the number of persons reasonably anticipated to attend in the city or town where the site is located. The public hearing shall continue until it is closed by the Hearing Officer. Arrangements by the board to provide a place for such public meeting shall anticipate that the public hearing may extend for several days.

(b) General. Hearings shall be as informal as may be reasonable and appropriate under the circumstances. The applicant shall be the party to first proceed to introduce evidence and testimony except as ordered by the Hearing Officer.

(c) Decorum. All Parties, Authorized Representatives, witnesses and other persons present at the public hearing shall conduct themselves in a manner so as not to obstruct or delay the orderly presentation of evidence and issues. Where such decorum is not observed, the Hearing Officer may take appropriate action.

(d) Hearing Officer. The Hearing Officer shall define issues, receive and consider relevant and reliable evidence and exclude irrelevant evidence, ensure an orderly presentation of the evidence and issues, and aid the board in reaching a decision based on the evidence presented at the hearing and in accordance with the standards set forth in M.G.L. c. 111, § 150A.

(e) Rights of Parties. All Parties shall have the right to present evidence, cross-examine, make objections and make oral arguments. Cross-examination shall occur immediately after any witness' testimony has been received. Whenever appropriate, the Hearing Officer may permit redirect and recross.

(f) Evidence and Testimony

1. A witness' testimony shall be under oath or affirmation.

2. All evidence and testimony, materials and legal rules on which a decision is to be based must be entered into the Record of the public hearing, unless excluded pursuant to 310 CMR 16.20(8)(b), or (10)(f)3.

3. Witnesses giving testimony shall be available for such further examination or cross examination as is determined to be appropriate by the Hearing Officer. Failure of a witness to be so available may be grounds to strike any other testimony given by such witness from the record at the sole discretion of the Hearing Officer. The Hearing Officer may limit or exclude unduly repetitious or irrelevant evidence. The Report and the Department Record shall not constitute testimony for the purposes of 310 CMR 16.20

4. All documents and other evidence offered in evidence shall be open to examination by the Parties.

5. All evidence including any records, investigative reports, documents and stipulations which are to be relied upon in making a decision must be offered and made a part of the Record. Documentary evidence may be in the form of copies or excerpts, or by incorporation by reference.

16.20: continued

(g) Administrative Notice. The Hearing Officer or the board of health may take notice of any fact which may be judicially noticed by the courts, and in addition may take notice of general, technical or scientific facts within their specialized knowledge. Parties shall be notified of the material so noticed, and they shall be afforded an opportunity to contest the facts so noticed. The board may utilize their experience, technical competence and specialized knowledge in the evaluation of the evidence presented to them.

(h) Subpoenas. No subpoenas may be issued or enforced requiring the attendance and testimony of a witness or the production of documents at the public hearing.

(i) Transcript of Proceedings. Testimony and argument at the hearing shall be either recorded electronically or stenographically. Transcripts of the proceedings shall be supplied to any Party, upon request, at his own expense. Any Party, upon motion, may order a stenographer to transcribe the proceedings, at his own expense. In such event, a stenographic record shall be provided to the board or Hearing Officer at no expense to the board, and upon such other terms as the board or Hearing Officer shall order.

(j) Contents of Record. The record of the proceedings shall include the Department's Report On Suitability and accompanying Record, the Department of Public Health report, if any, and shall in addition, consist of the following items appropriate to the hearing: pleadings, prehearing conference memoranda, magnetic tapes, orders, briefs, and memoranda, transcripts, exhibits and other papers or documents which the Hearing Officer has specifically designated be made part of the record.

(k) Decision.

1. Time of Decision. The board shall render its decision within 45 days of the initial date of the public hearing.

2. Standard of Decision. A board shall determine that a site is suitable for assignment as a site for a new or expanded solid waste facility unless it makes a finding, supported by the record of the hearing, that the siting thereof would constitute a danger to the public health, safety or environment, based on the siting criteria set forth and established under 310 CMR 16.40.

3. Tentative Decisions. Tentative decisions shall not be issued as a matter of routine, but shall be issued only if a Party requests a tentative decision either in writing or orally on the record, prior to the close of the hearing on the merits; or if the board determines that a tentative decision should be issued in the interest of justice. Every tentative decision shall be in writing and shall be signed by a majority of those officials of the board who rendered the decision. Every tentative decision shall contain a statement of the reasons therefor, including a determination of fact pertaining to each of the site suitability criteria listed in 310 CMR 16.40 or law necessary to the decision. If the majority of the board who must sign the final decision have personally heard or read the evidence, the board shall not be required to comply with a request to issue a tentative decision.

4. Final Decision. Every final decision shall be in writing and shall be signed by a majority of those officials of the board who rendered the decision. Every final decision shall contain a statement of the reasons therefore, including a determination of fact pertaining to each of the site suitability criteria listed in 310 CMR 16.40 or law necessary to the decision, provided that if a final decision was preceded by a tentative decision, the final decisions may incorporate by reference those determinations set forth in the tentative decision, subject to such modifications and discussion as the Hearing Officer or board may deem appropriate to respond to timely filed opposing and concurring views with the tentative decision.

(11) Selection and Qualification of Hearing Officer

(a) The Hearing Officer shall be selected by majority vote of the board of health.

(b) The person selected to be the Hearing Officer shall be impartial and have the requisite qualifications to properly perform the duties and responsibilities of a Hearing Officer. Except as agreed to by the parties and a majority of the board of health, no person shall be a Hearing Officer who:

16.20: continued

1. is related to any board member, abutting board of health member, party, abutter, or applicant;
2. is a current or former employee or agent of the applicant or of the municipality where the proposed site is located or a municipality of an abutting board of health prior to selection as Hearing Officer. Notwithstanding the aforesaid, a person who has previously served as a Hearing Officer is not excluded from subsequent service as a Hearing Officer;
3. has a personal financial interest or at the time of selection or at any time during the proceedings be employed by any person having a financial interest in the board's decision on site suitability; or
4. does not have experience by training or practice in conducting administrative or judicial proceeding's.

(c) Duties. The Hearing Officer's duties shall include:

1. opening and closing the hearing;
2. establishing the order of the proceedings;
3. ensuring that only reliable and relevant testimony is introduced;
4. assisting all those giving testimony to make a full and free statement of the facts in order to bring all information necessary to determine whether a site is suitable or not suitable;
5. ensuring that all Parties have an opportunity to present their claims orally or in writing and to present witnesses and evidence relevant to the suitability or non-suitability of the site;
6. ensuring that participants have an opportunity to present evidence, whether orally or in writing, relevant to the suitability or non-suitability of a site;
7. introducing into the record any regulations, statutes, memoranda or other materials he believes relevant to the issues at the proceeding;
8. receiving, ruling on, limiting or excluding evidence pursuant to 310 CMR 16.20(10)(f); and
9. establishing a date and time following the close of hearing until which time written evidence will be received, considered and made part of the record.

Where procedural issues arise regarding the conduct of the hearing which are not governed by 310 CMR 16.20 the Hearing Officer may rely on 801 CMR 1.00: *Standard Adjudicatory Rules of Practice and Procedure*, to resolve such issues.

(d) Powers. The Hearing Officer's powers shall include the authority to:

1. request a statement of the issue or issues and define the relevant issues;
2. regulate the presentation of the evidence and the participation of the Parties or their representatives, or the participation of other Persons, for the purpose of ensuring an adequate and comprehensible record of the proceedings. To this end the Hearing Officer may conduct his own examination of witnesses, may require that all examination or cross examination of witnesses be directed through the Hearing Officer, through some other person, or by any other means or method of examination or cross examination of witnesses as he determines is appropriate to ensure full examination of the issues; and
3. regulate the presentation of the evidence and the participation of the Parties or their representative or the participation of other Persons for the purpose of ensuring that the public hearing is concluded in a timely manner to allow the board to render a written decision within 45 days of the commencement date of the public hearing. To this end the Hearing Officer shall impose such time restrictions and limitations on oral presentations as he deems appropriate.

(12) Imposition of Conditions The board may include in any decision to grant a site assignment such limitations with respect to the extent, character and nature of the facility or expansion thereof, as may be necessary to ensure that the facility or expansion thereof will not present a threat to the public health, safety or the environment.

(13) Notice of Decision.

(a) Incorporation into the Record. Upon its issuance, the decision shall be incorporated into the Record and made available for inspection and copying as set forth in 310 CMR 16.20(8)(a).

16.20: continued

(b) Time of Notice. Within seven days of issuance of its decision the board shall publish notice of its decision in the same manner as set forth in 310 CMR 16.20(7)(b).

(c) Content of Notice. The nature of decision shall identify the applicant, briefly describe the proposed facility, including its location, and set forth the board determination. The notice shall include the following provision: "Any person aggrieved by the decision of the board of health may, within 30 days of publication of this Notice of Decision appeal under the provisions of M.G.L. c. 30A, § 14".

16.21: Alternative Use of Assigned Site

(1) Site Assignment. Where a site has been assigned as a dumping ground or a refuse disposal incinerator pursuant to St. 1955, c. 310, § 2, a different solid waste activity shall not be conducted at the site except in accordance with a new or modified site assignment established in accordance with 310 CMR 16.00, except as specified at 310 CMR 16.21(3)(a).

(2) General Use Site Assignment. Where a site assignment does not contain a condition limiting its use to a particular method of solid waste management, a new or modified site assignment is not required to obtain a permit for any solid waste management activity at the site.

(3) Specific Use Site Assignment. Where a site is assigned for a specific solid waste purpose, a different solid waste activity or any activity regulated pursuant to 310 CMR 16.03, 16.04 or 16.05 shall not be conducted at the site except in accordance with a new or modified site assignment, except as allowed at 310 CMR 16.21(3)(a), (b) or (c):

(a) Recycling, Composting or Conversion. Recycling, composting or conversion may be conducted in accordance with 310 CMR 16.03, 16.04 or 16.05, as applicable, at any assigned disposal or handling facility without requiring a new or modified site assignment; provided however, if the recycling, composting or conversion operation cannot be conducted at such assigned facility consistent with its site assignment, then the site assignment shall be modified before the owner or operator commences operation of the recycling, composting or conversion operation.

(b) Handling Facility at a Closed or Inactive Landfill or Combustion Facility Site. A site which has been assigned for use as a landfill or combustion facility, which has been closed or is in the process of imminently closing, shall not require a new or modified site assignment to obtain an approval for the storage, transfer or processing of solid waste when:

1. the facility does not receive solid waste in excess of the tonnage limits stated in the site assignment for landfilling, or combustion or processing;
2. the site assignment does not contain a condition which directly or indirectly prohibits the handling activity or establishes a date for the termination of all solid waste activities at the site which is shorter than the anticipated useful life of the handling facility; and
3. the site meets the suitability criteria at 310 CMR 16.40(3)(d), unless a waiver of one or more criteria has been granted pursuant to 310 16.40(6).

(c) Other Solid Waste Activity listed at 310 CMR 16.03(2)(a). Solid Waste Activities listed at 310 CMR 16.03(2)(a) may be conducted at any assigned disposal or handling facility without requiring a new or modified site assignment.

16.22: Modifications to and Rescissions and Suspensions of Site Assignments

(1) Modifications to Site Assignments Due to a Threat to Public Health, Safety or the Environment. In accordance with M.G.L. c.111, §150A, the assigning board of health, or the Department, may at any time rescind, suspend or modify a site assignment upon a determination that the operation or maintenance of a facility results in a threat to public health, safety or the environment after due notice and public hearing. The public hearing must satisfy the requirements of M.G.L. c.30A, §11.

(2) Major Modifications to Site Assignments at the Request of the Facility Owner or Operator. Modifications deemed to be “Major Modifications” include: modifications required to “Expand a Site”; vertical expansions beyond the limits of an approved plan; modifications as specified at 310 CMR 16.21(1) and 16.21(3), Alternative Use of An Assigned Site; or any request to waive any site assignment criterion set forth at 310 CMR 16.40(3) as it applies to the existing facility. A major modification shall require submittal of a new site assignment application that addresses all criteria affected by the modification, as determined by the Department in writing, and shall be reviewed in accordance with the requirements established at 310 CMR 16.08 through 16.20.

(3) Minor Modifications to Site Assignments at the Request of the Facility Owner or Operator. Any request to modify a site assignment that is not subject to 310 CMR 16.22(1) or (2), including any request to modify conditions established by the Board of Health in the site assignment, or to increase daily or annual tonnage limits, except as specified at 310 CMR 16.22(4), are deemed to be “Minor Modifications.” The Board of Health may modify a site assignment to address a minor modification, at the request of the facility owner or operator, without requiring the filing of a new application by the applicant or site suitability report by the Department, provided the Board of Health provides public notice and holds a public hearing in accordance with the requirements of 310 CMR 16.00 prior to deciding on the minor modification.

(4) Reserve Capacity Approvals. Notwithstanding 310 CMR 16.22(3), any facility may request, in writing to the Department, a temporary increase in the daily or annual tonnage limits to address a short-term emergency situation, as determined by the Department, without the requirement for a minor modification of the site assignment.

(5) MEPA Review. Any modifications to the site assignment may require the filing of a Notice of Project Change pursuant to 310 CMR 11.10, MEPA Regulations. Should a Notice of Project Change be required the applicant shall comply with 310 CMR 16.08(5)(d) prior to submitting a new site assignment application.

16.30: Fees

(1) Application Fees

(a) General. The Application Fee is a fee which is paid by an applicant to the board of health. The board of health may use the fee for eligible costs of reviewing technical data, obtaining technical assistance and conducting a public hearing. The Application Fee shall be assessed as two separate fees:

1. Technical Fee; and
2. Public Hearing Fee.

16.30: continued

(b) Excess Fees. The board of health shall return to the applicant any of the Application Fee in excess of the actual expenditures for allowable costs following the completion of the site assignment process.

(c) Alternative Systems. The board of health may establish, in lieu of part or all of 310 CMR 16.30, another system for the assessment and payment of an Application Fee provided such system is agreed to by the applicant.

(d) Nothing in 310 CMR 16.30 creates or modifies any rights of boards of health relative to the assessment or collection of fees under applicable statutes, by-laws, or ordinances governing municipal finance.

(2) Technical Fee.

(a) General. The Technical Fee may be used by the board of health to cover the cost of conducting a review of technical data and/or to cover a portion of the cost of other technical assistance.

(b) Assessment of Fee.

1. Assessment. The board of health, upon the receipt of an application, may assess by a written notice to the applicant a Technical Fee for said application not to exceed the maximum amount set forth in 310 CMR 16.99.

2. Form of Payment. The board shall prescribe the amount of the fee and the manner of payment in writing to the applicant within ten days of the filing of the application in accordance with 310 CMR 16.08.

3. Payment. The applicant shall pay the Technical Fee in the amount and manner prescribed by the board of health.

4. Waiver. The board of health may waive all or a portion of the Technical Fee. Any such waiver shall be made in writing to the applicant.

5. Absence of assessment or waiver. In the absence of an assessment or waiver of the Technical Fee by the board of health in accordance with 310 CMR 16.30(2)(b)1., 2. or 4., the applicant may satisfy the Technical Fee payment requirements by making a payment in the form of a certified or bank check or money order, in an amount equal to the maximum Technical Fee for the appropriate facility as specified in 310 CMR 16.99.

(c) Technical Review

1. General. The Technical Fee may be expended for 100% of the allowable cost of reviewing technical data submitted to the board of health.

2. Allowable costs. Allowable costs for technical review include the cost of hiring consultants and related technical experts to assist the board of health in reviewing the application, the Department Report on Suitability, the Department of Public Health's Report and comments, public comments and any subsequent amendments or additions to the application.

3. Allowable tasks. Allowable tasks for the consultants and related technical experts include:

- a. determining completeness and accuracy of data in the application;
- b. determining whether the correct analytical techniques were used, whether valid data were obtained, and whether the data support the proposed conclusions;
- c. determining what other data should be obtained, the means to obtain it and its potential significance;
- d. examining municipal, Department and other relevant records and consulting with Department staff;
- e. visiting the site to make a visual inspection;
- f. preparing and submitting comments to the Department on technical issues relating to the site and the site suitability criteria;
- g. reviewing the Department Report on Suitability and other data submitted prior to and during the hearing; and
- h. preparing a written report of comments and determinations.

4. Excluded Costs. Allowable costs for technical review shall not include the cost of conducting site, environmental or population sampling and analyses, otherwise generating new data, or performing independent analyses of environmental health impacts. These costs may qualify as allowable costs for technical assistance in accordance with 310 CMR 16.30(d)2.

16.30: continued

(d) Technical Assistance

1. General. The Technical Fee may cover 50% of the cost of providing expert legal, scientific or engineering assistance to the board of health to assure that all points of view are adequately presented and evaluated at the public hearing.
2. Allowable costs. Allowable costs for technical assistance include the cost of hiring consultants, technical experts or legal counsel. Allowable types of technical assistance include:
 - a. legal counsel to represent the board of health at the hearing and to examine witnesses at the hearing;
 - b. scientific and/or engineering experts to help develop evidence, question witnesses and/or testify at the hearing; and
 - c. photographic or graphic expertise.

(e) Extraordinary Expenses

1. Assessment. After commencement of the public hearing, pursuant to the requirements of 310 CMR 16.20, the board of health may assess in writing, an additional Technical Fee payment when the following conditions are satisfied:
 - a. the evidence proposed to be obtained by the expenditure of the fee is likely to be critical to the determination of site suitability; and
 - b. the applicant has failed to provide such evidence upon request by the Hearing Officer; and
 - c. the evidence cannot be acquired without the expenditure by the board of health of funds in excess of the Technical Fee; and
 - d. the evidence did not exist or was not reasonably discoverable through due diligence by the board of health prior to the request; or
 - e. the evidence is based on new scientific or technical standards or criteria which were previously unavailable.
2. Payment or Appeal. The applicant upon receipt of the written request may:
 - a. within three days appeal to the Hearing Officer for a determination as to the appropriateness and reasonableness of the fee assessment; or
 - b. make the appropriate payment as prescribed by the board of health within ten days.
3. Hearing Officer's Decision on Appeals.
 - a. Standard of Decision. The Hearing Officer shall determine that an extraordinary expense request is reasonable only if she or he finds that the conditions in 16.30(2)(e)1. are satisfied.
 - b. Decision by the Hearing Officer. The Hearing Officer shall issue a written determination to the applicant and the board of health. When the Hearing Officer determines the assessment is reasonable the applicant shall make the appropriate payment as directed by the board of health within six days. When the Hearing Officer determines the assessment is not reasonable the applicant shall not be required to make the payment.
4. Non-payment. The board of health may withhold final disposition of the site assignment application until the applicant submits the payment or issue a determination based on the available information.

(3) Public Hearing Fee.

- (a) General. The board of health may use the Public Hearing Fee to cover the cost of conducting a public hearing that meets the requirements of 310 CMR 16.20.
- (b) Assessment and Payment of the Public Hearing Fee. The board of health, upon the receipt of a Department Report on suitability that contains a finding that a site is suitable, may assess a Public Hearing Fee.
 1. Initial Public Hearing Fee Assessment.
 - a. Assessment. The board of health shall prescribe to the applicant in writing the amount and manner of payment of the initial public hearing fee assessment.
 - b. Maximum Amount. The maximum amount of the initial assessment shall be 50% of the maximum allowable Technical Fee for the appropriate size and type of facility, as set in 310 CMR 16.99.
 - c. Payment. The applicant shall pay the initial public hearing fee assessment as prescribed by the board of health within 15 days of receipt of the written request from the board.

16.30: continued

2. Additional Public Hearing Fee Assessments.
 - a. General. In the event that the initial Public Hearing Fee assessment is insufficient to cover the allowable costs described in 310 CMR 16.30(3)(d) the board of health may require additional Public Hearing Fee payments.
 - b. Assessment. The board of health shall prescribe to the applicant, in writing, the amount and manner of payment of the additional public hearing fee assessments.
 - c. Payment. The applicant shall pay the additional assessment within six days of receipt of the written request from the board of health.
 3. Fee Waiver. The board of health may waive all or a portion of the Public Hearing Fee.
- (c) Non-payment of Fees
1. Suspension of Hearings. In the event that any fee assessment is not paid as required, the board of health may suspend the public hearing, or, in the case of the initial payment, delay the opening of the public hearing.
 2. Resumption of Hearings. Any hearing delayed or suspended because of non-payment of fees shall be commenced or resumed within seven days of receipt of payment or resolution of a fee dispute in accordance with 310 CMR 16.30(6).
 3. Exception. When the applicant is the municipality itself or an agency thereof, the public hearing shall not be delayed or suspended because of non-payment of any public hearing fee assessment.
- (d) Allowable Costs. The only allowable costs that may be paid from the Public Hearing Fee are:
1. the cost of any notice required under 310 CMR 16.20;
 2. the cost of recording, through a stenographic record, tape recording, or other means as determined by the Hearing Officer the record of the proceedings;
 3. the cost of having a Hearing Officer perform the duties set forth in 310 CMR 16.20;
 4. the cost of producing any copies required under 310 CMR 16.20; and
 5. the cost of renting a hall, chairs and/or public address system when the municipality has no such facilities or equipment which are adequate for the purpose of the public hearing.
- Transcription of the proceedings shall not be paid for from the Hearing Fee except by order of the Hearing Officer prior to a final decision on site assignment by the board of health. The cost of transcribing or otherwise preparing an official transcript for appeal shall not be paid by the Public Hearing Fee.
- (4) Expenditure of the Application Fee
- (a) General. All expenditures of the Application Fee shall be reasonable. The amount paid for any service shall not exceed the usual and customary amount for such service.
 - (b) Obligation of Funds. The board of health shall not spend or enter into obligations to spend any or all of the Technical Fee without a scope of work. The scope of work shall detail proposed contractor's services and include cost estimates for each service and describe whether the proposed service is for technical review or technical assistance.
 - (c) Record Keeping. The board of health shall make and retain or require all persons paid from the Application Fee to make and retain written records which set forth:
 1. a description of each of the services performed and work products developed; and
 2. the amount expended for each such service or work product.
 - (d) Production of Records. The board of health, upon written request from the applicant, the Hearing Officer or the Department, shall provide or cause their contractor to provide, within a reasonable time not to exceed 14 days, a copy of said records.
 - (e) Cessation of Expenditures. The board of health shall not spend any additional amount of the Application Fee and shall make reasonable efforts to halt all work on any activities that would be covered by the Application Fee, when the board of health receives either:
 1. a Department Report on Suitability that finds a site not suitable; or
 2. a notice from the applicant withdrawing the application from consideration.

16.30: continued

(5) Reimbursement of Unexpended Fees

(a) Request for Reimbursement. After a final decision on the application or upon the withdrawal of an application, the applicant may submit a written request to the board of health to provide a final accounting of all funds expended or owed from the Application Fee and to return all unexpended and uncommitted funds. For the purpose of 310 CMR 16.30, a final decision shall be either:

1. the Department Report on Suitability finding a site to be not suitable; or
2. a determination by the board of health to assign a site or to refuse to assign a site after a public hearing.

(b) Accounting. The board of health shall provide a full accounting of all expenditures within 45 days of receipt of the request.

(c) Reimbursement. The board of health shall return the unencumbered funds within a reasonable time period.

(6) Fee Disputes

(a) The board of health shall expend and, if applicable, reimburse to the applicant all fees in accordance with the requirements of 310 CMR 16.30.

(b) Any claims by the applicant against the board of health for improper disposition of fees shall be adjudicated in a court of competent jurisdiction or, if mutually agreed upon by the parties, by arbitration or mediation.

Preamble

310 CMR 16.40 establishes the criteria and decision making process the Department shall utilize in determining whether a site is suitable for a proposed solid waste management facility and upon which boards of health shall base a determination to grant or refuse to grant a site assignment.

16.40: Site Suitability Criteria

(1) Determination of Suitability.

(a) Department's Determination. The Department shall determine whether a site for a new or expanded facility of the type and scope proposed is suitable or not suitable based upon the criteria set forth in 310 CMR 16.40(3), (4) and (5). In reviewing these criteria, no site shall be deemed to be suitable where the impacts from the solid waste management facility will by itself, or in combination with impacts from other sources within the affected area, constitute a danger to public health or safety or the environment. In determining whether or not a proposed facility meets the criteria, set forth in 310 CMR 16.40(3), (4) and (5);

1. the Department shall rely upon the application and information supplied by the applicant or any other information made available to the Department;
2. the applicant bears the burden of showing that the proposed facility meets the criteria set forth in 310 CMR 16.40(3), (4) and (5).
3. if the Department determines that the facility is located within a Restricted Area, the applicant shall receive a negative Site Suitability Report;
4. if the Department determines that the facility is not located within a Restricted Area, the Department shall evaluate the criteria set forth in 310 CMR 16.40(3), (4) and (5), using such existing state and federal standards, criteria, guidelines or allowable limits and technical health reports which are intended to protect the public health, safety, and the environment;
5. the Department shall consider whether the site is in a preferred municipality as defined herein; and
6. the Department shall consider whether the site use promotes integrated solid waste management in accordance with 310 CMR 16.40(5).

(b) Site Assignment by Boards of Health. The board of health shall assign a place requested by an applicant as a site for a new facility or the expansion of an existing facility which has received a positive site suitability report from the Department unless it makes a finding that the siting thereof would constitute a danger to public health, safety, or the environment. The finding shall be supported by the record of evidence and shall be based upon the relevant criteria set forth at 310 CMR 16.40(3), (4) and (5). The board of health shall not impose any condition pertaining to facility design except in accordance with conditions placed by the Department pursuant to 310 CMR 16.40(1)(c)3.

16.40: continued

(c) Facility Design Review.

1. General. All applications shall be evaluated with the presumption that the proposed facility shall be designed and constructed to meet all relevant state and federal statutory, regulatory and policy requirements.
2. Design Considerations. The review of an application shall not consider detailed facility designs or operations except where:
 - a. the Department determines that specific design or operation plans or data are necessary to determine whether potential discharges or emissions from the proposed facility could render the site not suitable and requires the applicant to submit such relevant and detailed information; or
 - b. the applicant intends to alter the site or design the facility to meet specific site suitability criteria and submits such plans or other information as the Department deems necessary to determine if the criteria are satisfied.
3. Design Conditions. When facility design or operation plans are submitted the Department may base a site suitability determination on:
 - a. the incorporation of specific facility design elements; or
 - b. compliance with performance and technical standards and criteria.

(2) Application of the Site Suitability Criteria. Facility specific site suitability criteria are set forth in 310 CMR 16.40(3) for each of the following types of solid waste management facilities:

- (a) landfill facilities;
- (b) single waste landfills (Reserved)
- (c) solid waste combustion facilities; and
- (d) solid waste handling facilities.

Generally applicable criteria are set forth in 310 CMR 16.40(4) and apply equally to all types of solid waste management facilities.

(3) Facility Specific Site Suitability Criteria.

- (a) Criteria for Landfill Facilities (Restricted Areas). No site shall be determined to be suitable or be assigned as a landfill facility where:
 1. any area of waste deposition would be within a Zone II area of an existing public water supply well;
 2. any area of waste deposition would be within the Interim Wellhead Protection Area (IWPA) of an existing public water supply provided that the proponent may conduct a preliminary Zone II study, approved of by the Department, to determine if the facility would be beyond the Zone II of the public water supply well in question;
 3. any area of waste deposition would be within a Zone II or Interim Wellhead Protection Area (IWPA) of a proposed drinking water source area, provided that the documentation necessary to obtain a source approval has been submitted prior to the earlier of either the site assignment application, or if the MEPA process does apply, the Secretary's Certificate on the Environmental Notification Form or Notice of Project Change, or where applicable, the Secretary's Certificate on the EIR or Final EIR;
 4. any area of waste deposition would be within 15,000 feet upgradient of the existing public water source well or proposed drinking water source area for which a Zone II has not been calculated; the proponent may conduct a preliminary Zone II study, approved of by the Department, to determine if the facility would be beyond the Zone II of the public water supply well or proposed drinking water source area in question;
 5. it is determined by the Department that a discharge from the facility would pose a danger to an existing or proposed drinking water source area;
 6. any area of waste deposition would be over the recharge area of a Sole Source Aquifer, unless all of the following criteria are met:
 - a. there are no existing public water supplies or proposed drinking water source areas downgradient of the site;
 - b. there are no existing or potential private water supplies downgradient of the site; however, the applicant may have the option of providing an alternative public water supply to replace all the existing or potential downgradient private groundwater supplies; and
 - c. there exists a sufficient existing public water supply or proposed drinking water source area to meet the municipality's projected needs;

16.40: continued

7. any area of waste deposition is within the zone of contribution of an existing public water supply or proposed drinking water source area, or the recharge area of a surface drinking water supply, pursuant to a municipal ordinance or by-law enacted in accordance with M.G.L. c. 40A, § 9;
 8. any area of waste deposition would be within the Zone A or Zone B of a surface drinking water supply;
 9. any area of waste deposition would be less than 400 feet upgradient, as defined by groundwater flow or surface water drainage, of a perennial water course that drains to a surface drinking water supply which is within one mile of the waste deposition area;
 10. any area of waste deposition would be within a Potentially Productive Aquifer unless:
 - a. the proponent demonstrates to the Department's satisfaction, based on hydrogeological studies, that the designation of the area as a potentially productive aquifer is incorrect;
 - b. the proponent demonstrates to the Department's satisfaction, based on hydrogeological studies, that the aquifer cannot now, nor in the reasonably foreseeable future, be used as a public water supply due to existing contamination of the aquifer; or
 - c. the area has been excluded as a "Non-Potential Drinking Water Source Area" pursuant to 310 CMR 40.0932, or as otherwise defined at 310 CMR 40.0006: *The Massachusetts Contingency Plan*.
 11. any area of waste deposition would be within 1000 feet upgradient, and where not upgradient, within 500 feet, of a private water supply well existing or established as a potential supply at the time of submittal of the application; provided, however, the applicant may show a valid option to purchase the restricted area, including the well and a guarantee not to use the well as a drinking supply, the exercise of which shall be a condition of any site assignment;
 12. the maximum high groundwater table is within four feet of the ground surface in areas where waste deposition is to occur or, where a liner is designed to the satisfaction of the Department, within four feet of the bottom of the lower-most liner;
 13. the outermost limits of waste deposition or leachate containment structures would be within a resource area protected by the Wetlands Protection Act, M.G.L. c. 131, § 40, including the 100 year floodplain;
 14. any area of waste deposition or the leachate containment structures would be less than 400 feet to a lake, or 200 feet to a Riverfront Area as defined in 310 CMR 10.00, that is not a drinking water supply;
 15. any area of waste deposition would be within 1000 feet of an occupied residential dwelling, health care facility, prison, elementary school, middle school or high school or children's pre-school, licensed day care center, senior center or youth center, excluding equipment storage or maintenance structures; provided, however, that the applicant may show a valid option to purchase the restricted area, the exercise of which shall be a condition of any site assignment; or
 16. waste deposition on the site would result in a threat of an adverse impact to groundwater through the discharge of leachate, unless it is demonstrated to the satisfaction of the Department that a groundwater protection system will be incorporated to prevent such threat.
- (b) Criteria for Single Waste Landfills (Reserved)
- (c) Criteria for Solid Waste Combustion Facilities. No site shall be determined to be suitable or be assigned as a solid waste combustion facility where:
1. the waste handling area would be within the Zone I of a public water supply;
 2. the waste handling area would be within the Interim Wellhead Protection Area (IWPA) or Zone II of an existing public water supply, or within a proposed drinking water source area, provided that the documentation necessary to obtain a source approval has been submitted prior to the earlier of either the site assignment application, or if the MEPA process does apply, the Secretary's Certificate on the Environmental Notification Form or Notice of Project Change, or where applicable, the Secretary's Certificate on the EIR or Final EIR, unless restrictions are imposed to minimize the risk of an adverse impact to the groundwater; and either
 - a. the proponent can demonstrate to the satisfaction of the Department that the facility cannot reasonably be sited outside the IWPA or Zone II; or

16.40: continued

- b. there would be a net environmental benefit to the groundwater by siting the facility within the Zone II or the IWPA where the site has been previously used for solid waste management activities.
 3. the waste handling area would be within the Zone A of a surface drinking water supply;
 4. the waste handling area would be within 500 feet upgradient, and where not upgradient, within 250 feet, of an existing or potential private water supply well existing or established as a Potential Private Water Supply at the time the application was submitted; provided however, the applicant may show a valid option to purchase the restricted area including the well and a guarantee not to use the well as a drinking water source, the exercise of which shall be a condition of any site assignment.
 5. the maximum high groundwater table is within two feet of the ground surface in areas where waste handling is to occur unless it is demonstrated that a two foot separation can be designed to the satisfaction of the Department;
 6. the waste handling area would be within 500 feet of an occupied residential dwelling, prison, health care facility, elementary school, middle school or high school, or children's preschool, excluding equipment storage or maintenance structures, licensed day care center, senior center or youth center; provided, however, that the applicant may show a valid option to purchase the restricted area, the exercise of which shall be a condition of any site assignment; or
 7. the waste handling area would be within the Riverfront Area as defined at 310 CMR 10.00.
- (d) Criteria for Solid Waste Handling Facilities. No site shall be determined to be suitable or be assigned as a solid waste handling facility where:
1. the waste handling area would be within the Zone I of a public water supply;
 2. the waste handling area would be within the Interim Wellhead Protection Area (IWPA) or a Zone II of an existing public water supply well within a proposed drinking water source area, provided that the documentation necessary to obtain a source approval has been submitted prior to the earlier of either the site assignment application, or if the MEPA process does apply, the Secretary's Certificate on the Environmental Notification Form or Notice of Project Change, or where applicable, the Secretary's Certificate on the EIR or Final EIR, unless restrictions are imposed to minimize the risk of an adverse impact to the groundwater; and either
 - a. the proponent can demonstrate to the satisfaction of the Department that the facility cannot reasonably be sited outside the IWPA or Zone II; or
 - b. there would be a net environmental benefit to the groundwater by siting the facility within the Zone II or the IWPA where the site has been previously used for solid waste management activities.
 3. the waste handling area would be within the Zone A of a surface drinking water supply;
 4. the waste handling area would be within 500 feet upgradient, and where not upgradient, within 250 feet, of an existing or potential private water supply well existing or established as a Potential Private Water Supply at the time of submittal of the application, provided however, the applicant may show a valid option to purchase the restricted area including the well and a guarantee not to use the well as a drinking water source, the exercise of which shall be a condition of any site assignment.
 5. the waste handling area of;
 - a. a transfer station that proposes to receive less than or equal to 50 tons per day of solid waste and utilizes a fully enclosed storage system such as a compactor unit, is 250 feet from;
 - i. an occupied residential dwelling; or
 - ii. a prison, health care facility, elementary school, middle school or high school, children's preschool, licensed day care center, or senior center or youth center, excluding equipment storage or maintenance structures.
 - b. any other transfer station or any handling facility is 500 feet from:
 - i. an occupied residential dwelling; or

16.40: continued

- ii. a prison, health care facility, elementary school, middle school or high school, children's preschool, licensed day care center, or senior center or youth center, excluding equipment storage or maintenance structures.
 - 6. the waste handling area would be within the Riverfront Area as defined at 310 CMR 10.00; or
 - 7. the maximum high groundwater table would be within two feet of the ground surface in areas where waste handling is to occur unless it is demonstrated that a two foot separation can be designed to the satisfaction of the Department.
- (4) General Site Suitability Criteria. The following Site Suitability Criteria shall apply to all types of solid waste management facilities.
- (a) Agricultural Lands. No site shall be determined to be suitable or be assigned as a solid waste management facility where:
 - 1. the land is classified as Prime, Unique, or of State and Local Importance by the United States Department of Agriculture, Natural Resources Conservation Service; or
 - 2. the land is deemed Land Actively Devoted to Agricultural or Horticultural Uses, except where the facility is an agricultural composting facility; and
 - 3. a 100 foot buffer would not be present between the facility and those lands classified at 310 CMR 16.40(4)(a)1. or 2.
 - (b) Traffic and Access to the Site. No site shall be determined to be suitable or be assigned as a solid waste management facility where traffic impacts from the facility operation would constitute a danger to the public health, safety, or the environment taking into consideration the following factors:
 - 1. traffic congestion;
 - 2. pedestrian and vehicular safety;
 - 3. road configurations;
 - 4. alternate routes; and
 - 5. vehicle emissions
 - (c) Wildlife and Wildlife Habitat. No site shall be determined to be suitable or be assigned as a solid waste management facility where such siting would:
 - 1. have an adverse impact on Endangered, Threatened, or Special Concern species listed by the Natural Heritage and Endangered Species Program of the Division of Fisheries and Wildlife in its database;
 - 2. have an adverse impact on an Ecologically Significant Natural Community as documented by the Natural Heritage and Endangered Species Program in its database; or
 - 3. have an adverse impact on the wildlife habitat of any state Wildlife Management Area.
 - (d) Areas of Critical Environmental Concern. No site shall be determined to be suitable or be assigned as a solid waste management facility where such siting:
 - 1. would be located within an Area of Critical Environmental Concern (ACEC), as designated by the Secretary of the Executive Office of Environmental Affairs; or
 - 2. would fail to protect the outstanding resources of an ACEC as identified in the Secretary's designation if the solid waste management facility is to be located outside, but adjacent to the ACEC.
 - (e) Protection of Open Space. No site shall be determined to be suitable or be assigned as a solid waste management facility where such siting would have an adverse impact on the physical environment of, or on the use and enjoyment of:
 - 1. state forests;
 - 2. state or municipal parklands or conservation land, or other open space held for natural resource purposes in accordance with Article 97 of the Massachusetts Constitution;
 - 3. MDC reservations;
 - 4. lands with conservation, preservation, agricultural, or watershed protection restrictions approved by the Secretary of the Executive Office of Environmental Affairs; or
 - 5. conservation land owned by private non-profit land conservation organizations and open to the public.

16.40: continued

- (f) Potential Air Quality Impacts. No site shall be determined to be suitable or be assigned as a solid waste management facility where the anticipated emissions from the facility would not meet required state and federal air quality standards or criteria or would otherwise constitute a danger to the public health, safety or the environment, taking into consideration:
1. the concentration and dispersion of emissions
 2. the number and proximity of sensitive receptors; and
 3. the attainment status of the area.
- (g) Potential for the Creation of Nuisances. No site shall be determined to be suitable or be assigned as a solid waste management facility where the establishment or operation of the facility would result in nuisance conditions which would constitute a danger to the public health, safety or the environment taking into consideration the following factors:
1. noise;
 2. litter;
 3. vermin such as rodents and insects;
 4. odors;
 5. bird hazards to air traffic; and
 6. other nuisance problems.
- (h) Size of Facility. No site shall be determined to be suitable or be assigned as a solid waste management facility if the size of the proposed site is insufficient to properly operate and maintain the proposed facility. The minimum distance between the waste handling area or deposition area and the property boundary shall be 100 feet, provided that a shorter distance may be suitable for that portion of the waste handling or deposition area which borders a separate solid waste management facility.
- (i) Areas Previously Used for Solid Waste Disposal. Where an area adjacent to the site of a proposed facility has been previously used for solid waste disposal the following factors shall be considered by the Department in determining whether a site is suitable and by the board of health in determining whether to assign a site:
1. the nature and extent to which the prior solid waste activities on the adjacent site currently adversely impact or threaten to adversely impact the proposed site;
 2. the nature and extent to which the proposed site may impact the site previously used for solid waste disposal; and
 3. the nature and extent to which the combined impacts of the proposed site and the previously used adjacent site adversely impact on the public health, safety and the environment; taking into consideration:
 - a. whether the proposed site is an expansion of or constitutes beneficial integration of the solid waste activities with the adjacent site;
 - b. whether the proposed facility is related to the closure and/or remedial activities at the adjacent site; and
 - c. the extent to which the design and operation of the proposed facility will mitigate existing or potential impacts from the adjacent site.
- (j) Existing Facilities. In evaluating proposed sites for new solid waste management facilities the Department and the board of health shall give preferential consideration to sites located in municipalities in which no existing landfill or solid waste combustion facilities are located. This preference shall be applied only to new facilities which will not be for the exclusive use of the municipality in which the site is located. The Department and the board of health shall weigh such preference against the following considerations when the proposed site is located in a community with an existing disposal facility:
1. the extent to which the municipality's or region's solid waste needs will be met by the proposed facility; and
 2. the extent to which the proposed facility incorporates recycling, composting or waste diversion activities.
- (k) Consideration of Other Sources of Contamination or Pollution. The determination of whether a site is suitable and should be assigned as a solid waste management facility shall consider whether the projected impacts of the proposed facility pose a threat to public health, safety or the environment, taking into consideration the impacts of existing sources of pollution or contamination as defined by the Department, and whether the proposed facility will mitigate or reduce those sources of pollution or contamination.

16.40: continued

(1) Regional Participation. The Department and the board of health shall give preferential consideration to sites located in municipalities not already participating in a regional disposal facility. The Department and the board of health shall weigh such preference against the following considerations when the proposed site is located in a community participating in a regional disposal facility:

1. the extent to which the proposed facility meets the municipality's and the region's solid waste management needs; and
2. the extent to which the proposed facility incorporates recycling, composting, or waste diversion activities.

(5) Promotion of Integrated Solid Waste Management.

(a) In determining whether a site is suitable for a combustion facility or a landfill, the Department shall consider the following factors:

1. The potential yearly and lifetime capacity created by the proposed site use(s) in relation to the reasonably anticipated disposal capacity requirements and reduction/diversion goals of the Commonwealth and the geographic area(s) which the site will serve.
2. The extent to which the proposed site use(s), alone or in conjunction with other sites, provides or affords feasible means to maximize diversion or processing of each component of the anticipated waste stream in order to reduce potential adverse impacts from disposal and utilize reusable materials and only thereafter extract energy from the remaining solid waste prior to final disposal.
3. The extent to which the proposed use(s) of the site, alone or in conjunction with other sites, will contribute to the establishment and maintenance of a statewide integrated solid waste management system which will protect the public health and conserve the natural resources of the Commonwealth

(b) In determining whether a site is suitable for a combustion facility or a landfill, the Department and the board of health shall consider the extent to which the proposed use of the site directly incorporates recycling and composting techniques or is otherwise integrated into recycling and composting activities for the geographic area(s) which the site will serve.

(c) A site proposed for a combustion facility or a landfill shall be reviewed to determine if the site is also suitable for a recycling or composting facility either in conjunction with or instead of the proposed facility.

(d) Site assignment applications which incorporate significant recycling or composting uses, in accordance with the goals of the statewide plan, shall receive preferred consideration

(6) Waiver

(a) General. The Commissioner may waive any of the facility specific site suitability criteria contained in 310 CMR 16.40(3) not specifically required by law, or the setback distance at 310 CMR 16.40(4)(h), when the Commissioner finds that strict compliance with such criteria would result in undue hardship and would not serve to minimize or avoid adverse impact. Hardship based on delay in compliance by the proponent, increased facility construction or operational costs or reduced facility revenue generation will not be sufficient, except in extraordinary circumstances, to invoke 310 CMR 16.40(6).

(b) Criteria. A waiver shall not be granted unless the Commissioner determines that the granting of a waiver is necessary to accommodate an overriding community, regional, or state public interest and the granting of the waiver would not diminish the level of protection to public health and safety and the environment that will exist in the absence of the waiver.

(c) Considerations. In determining whether a waiver should be granted, the Commissioner shall consider, in addition to the criteria contained in 310 CMR 16.40(6)(b) the following factors:

1. the availability of other suitable sites in the affected municipality or regional district;
2. whether the site is in a preferred municipality as defined in M.G.L. c. 111, § 150A½;
3. the minimum facility size required to reasonably meet essential waste handling activities;
4. whether the waiver will result in environmental benefits in excess of those that could be achieved in the absence of the waiver;
5. the extent to which the proposed facility is part of an integrated solid waste management activity; and
6. whether the solid waste management objectives of the proposed project could be achieved in the absence of the waiver.

(d) Filings. All requests for waivers shall be filed and documented in accordance with 310 CMR 16.08(5)(c).

16.99: APPENDIX A

TECHNICAL FEE

The board of health shall assess the Technical Fee based on the type and size of facility or site stated on the application.

The maximum allowable Technical Fee that the board of health may assess shall be computed using the appropriate table for each type of facility.

TABLE 1. MAXIMUM TECHNICAL FEE FOR LANDFILLS

The maximum amount of the Technical Fee for a landfill is computed on the basis of the total area of the site specified in the application.

<u>Size (acres)</u>	<u>Maximum Fee (\$)</u>
0-10	\$15,000
10-25	\$15,000 plus \$1,000 for each acre in excess of 10
over 25	\$30,000 plus \$ 200 for each acre in excess of 25

TABLE 2. MAXIMUM TECHNICAL FEE FOR HANDLING FACILITIES

The maximum amount of the Technical Fee for a handling facility is computed on the basis of the maximum daily volume of waste (measured in tons per day) proposed to be accepted as specified in the application as follows:

$$\text{Maximum Fee} = \$3000 + [\$20 \times \text{Daily Volume (tons/day)}]$$

TABLE 3. MAXIMUM TECHNICAL FEE FOR COMBUSTION FACILITIES

The maximum amount of the Technical Fee for a waste combustion facility is computed on the basis of the maximum daily volume of waste (measured in tons per day) proposed to be processed as specified in the application as follows:

$$\text{Maximum Fee} = \$25000 + [\$10 \times \text{Daily Volume (tons/day)}]$$

ADJUSTMENT OF TECHNICAL FEE FOR INFLATION

The maximum allowable technical fee shall be adjusted for inflation using the following procedure:

$$\text{MTF (current year)} = \text{MTF(Table)} \times [\text{BCPI(current year - 1)/BCPI(1988)}]$$

Where:

MTF(Table) = Maximum Technical Fee Computed using Table 1, 2 or 3 in this Appendix for the specific facility under consideration

MTF(current year) = Maximum Technical Fee for the current year (i.e., the MTF applicable to the Application being submitted)

BCPI(1988) = Boston Consumer Price Index for September, 1988

BCPI(current year - 1) = Boston Consumer Price Index for September for the year preceding the current year

The Index used for this inflation adjustment is the September figure for the Boston Consumer Price Index for All Urban Consumers issued by the US Department of Labor, Bureau of Labor Statistics.

REGULATORY AUTHORITY

310 CMR 17.00: PART I: RECYCLING INDUSTRIES REIMBURSEMENT CREDIT GRANT PROGRAM

Section

- 17.01: Authority
- 17.02: Purpose
- 17.03: Definitions
- 17.04: Eligibility Criteria
- 17.05: Process of Selecting Eligible Materials for the Designated List
- 17.06: Grant Application Process
- 17.07: Grant Application Review Process
- 17.08: Grant Awards
- 17.09: Grant Agreement Conditions
- 17.10: Conditions of Use
- 17.11: Reporting
- 17.12: Severability

17.01: Authority

The Department of Environmental Protection has adopted 310 CMR 17.00, the Recycling Industries Reimbursement Credit Grant Program, pursuant to St. 1997, c. 88, § 85.

17.02: Purpose

(1) 310 CMR 17.00 sets forth the Department's authority and responsibilities for the administration of the Recycling Industries Reimbursement Credit (RIRC) Grant Program. The goal of 310 CMR 17.00 is to provide the means for the Department to administer the RIRC grant program in accordance with 815 CMR 2.00 to ensure proper use of public funds.

(2) The Department shall employ 310 CMR 17.00 to administer the RIRC grant program with the intent of awarding grants to Eligible Businesses that commit to achieving the following objectives and public benefits:

- (a) to identify and target materials that face economic and technical barriers to the reclaiming process and/or the manufacturing process relative to the use of designated unprocessed materials and/or designated feedstock materials, as more particularly described in 310 CMR 17.00;
- (b) to increase the throughput of designated unprocessed materials and/or designated feedstock materials;
- (c) to create long-term market-based demand for designated unprocessed materials and/or designated feedstock materials;
- (d) to add value to designated unprocessed materials and/or designated feedstock materials collected through municipal and business recycling efforts; and
- (e) to complement the Department's solid waste policy goals and objectives.

17.03: Definitions

For the purposes of 310 CMR 17.00, the following terms shall have the meaning set forth below unless the context clearly requires otherwise:

Broker or Intermediary means a Company or Corporation that acts solely to sell, buy or trade Post-Consumer Waste Materials between Companies or Corporations engaged in the Manufacturing Process or Reclaiming Process.

Company or Corporation means: any for profit or non-profit Company, Corporation, entity, or institution duly organized or recognized by the Secretary of State pursuant to the laws of the Commonwealth.

Department means the Department of Environmental Protection.

17.03: continued

Designated Feedstock Materials means Post-Consumer Waste Materials, as listed by the Department on the Designated List, which materials may include, but are not limited to, paper, glass and plastic bottles, and tires, which have been processed through a Reclaiming Process and are ready for use as an input to a system that transforms said materials, and any other inputs, into products of economic value. Said materials shall not include Post-Industrial Waste Material or metals.

Designated List means a list as determined by the Department under which Designated Unprocessed Materials and the Designated Feedstock Materials shall be eligible for a Grant; provided, that no materials that are metals or hazardous waste under applicable state and federal environmental laws shall be eligible.

Designated Unprocessed Materials means Post-Consumer Waste Materials, as listed by the Department on the Designated List, which materials may include, but are not limited to, unprocessed loose paper, glass and plastic bottles and tires. Said materials shall not include metals.

Eligible Business means a Company or Corporation, which:

- (a) either
 - 1. uses Designated Unprocessed Materials in its Reclaiming Process; or
 - 2. uses Designated Feed Stock Materials in its Manufacturing Process; and
- (b) has at least 50% of its full-time equivalent non-salaried workforce at the site for which the grant is being utilized in the State.

A business shall not be considered eligible which:

- (c) has been convicted of violating any state or federal civil or criminal environmental law in the past three years; or
- (d) acts as an intermediary or broker between companies and Corporations engaged in the manufacturing process or reclaiming process.

Grant means funds for financial assistance provided under contractual terms between the Department and a Grantee to assist the Grantee in the achievement or continuation of a specified public purpose to benefit the general public or a segment of the general public consistent with the Department's Legislative Authorization.

Grant Agreement means a written contract between the Grantee and the Department.

Grant Application means an annual application form prescribed by the Department to be completed by an Eligible Business and reviewed by the Department to determine eligibility.

Grantee means an Eligible Business selected as a recipient of a Grant.

Manufacturing Process means those activities by which Designated Unprocessed Materials and Designated Feedstock Materials, as identified by the Department on the Designated List, are used as an input to a system that transforms them, and any other inputs, into products of added economic value and resold to a non-affiliated business or consumer.

Post-consumer Waste Material means any product generated by a business or consumer that has served its intended use, and that has been separated from solid waste for the purposes of collection and recycling or reuse and that does not include Post-industrial Waste Material.

Post-industrial Waste Material means internally generated scrap or fragments of products commonly returned to industrial or manufacturing processes, including home scrap or mill broke.

Reclaiming Process means those activities that densify, shred, bale, grind, culletize or otherwise process theretofore Designated Unprocessed Material.

Statute means St. 1997, c. 88, § 85.

Virgin Feedstock Material means those materials extracted from their natural resource base and that are prepared for input into a system that transforms them and any other inputs, into products of economic value.

17.04: Eligibility Criteria

(1) In General. To be considered for a Grant, proposed projects must satisfy all of the following eligibility requirements. The eligibility of any Grant Application shall be determined in each instance by the Department.

(a) Eligible Business. To be eligible for a Grant, an Eligible Business must, at the time of the application, be:

1. a Company or Corporation;
2. employing at least 50% of its full-time equivalent non-salaried workforce, at the site for which the grant is being utilized, in the Commonwealth; and
3. in compliance with the Commonwealth's applicable environmental laws and regulations.

(b) Ineligible Applicants. A Grant Applicant is considered ineligible if:

1. its owners have been convicted of violating any state or federal civil or criminal environmental law in the past three years; and/or,
2. the Company or Corporation is defined solely as an Intermediary and/or a Broker.

(c) Eligible Activities. For the purposes of this Grant Application, eligible activities shall include, but not be limited to, one or more of the following:

1. Reclaiming Process; and/or
2. Manufacturing Process.

(d) Eligible Materials. Only those materials on the Designated List will be considered eligible materials for Grant Funds.

17.05: Process of Selecting Eligible Materials for the Designated List

The Department shall provide public notice of the Designated List of eligible materials, the availability of grants, and the amount of grant funds the Department intends to make available, at least 30 days prior to issuing Grant Applications. The Department reserves the right to modify the Designated List prior to each grant application period. The Designated List shall remain valid during the Grant Application period for which it is issued. The selection of said materials shall be based on the following factors:

(1) the difference between market prices or price quotations for Designated Unprocessed Materials or Designated Feedstock Materials and the price paid for Virgin Feedstock Materials;

(2) the market history and price fluctuations of materials;

(3) an analysis which identifies materials with stable or mature markets and problematic materials with unstable immature markets;

(4) the potential for successful reclaiming of each material under investigation;

(5) public input; and,

(6) no materials that are metal or hazardous waste under applicable state and federal environmental laws shall be eligible.

17.06: Grant Application Process

(1) In General. The Department shall award grant funds to Eligible Businesses through an open and competitive process.

(2) Promotional Program. The Department shall develop and implement a promotional strategy to distribute the Grant Application and announce the total grant funds available.

(3) Application Filing Requirements. The Grant Applicant must comply and respond to requested information within the Grant Application.

(4) Application Period. The Department shall maintain a grant application period of at least 30 consecutive days. Grant applications must be submitted prior to the deadline. Late applications will not be considered for a grant.

17.06: continued

(5) Application Certification Process. Within 30 days after the expiration of the Grant Application period, the Department shall review each application filed during the application period to determine its compliance with 310 CMR 17.00 and for adequacy, and completeness of information contained therein, and shall notify the Grant Applicant in writing whether the Grant Application is complete. An incomplete Grant Application may be deemed ineligible for the current cycle of grant awards. Only a Grant Application determined to be complete shall be considered for a Grant.

17.07: Grant Application Review Process

(1) In General. Within 90 days of the Grant Application deadline, using the evaluation criteria in 310 CMR 17.07(2), the Department will score and rank all Grant Applications certified by the Department as complete.

(2) Evaluation Criteria. Evaluation criteria will be included in the Grant Application. Evaluation criteria will be based on: the adequacy and quality of the narrative description in relation to the purpose stated in 310 CMR 17.00 and the Grant Application; the time line of the proposed activity; and, the amount of Designated Unprocessed Material and/or Designated Feedstock Material proposed to be used in the Eligible Activities, and any other relevant information.

17.08: Grant Awards

(1) Execution. The Grant Award shall be deemed awarded when the Department and the Grantee execute the Grant Agreement. Until that time, the award is conditional.

(2) Amount of Award. The amount of the Grant Award will be incorporated into the Grant Agreement. The Department shall determine the amount of the grant to Eligible Businesses based on the following factors including, but not limited to:

- (a) the difference between market prices or price quotations for virgin feedstock materials and the price paid for Designated Feedstock Materials by an Eligible Business in the Manufacturing Process in the Commonwealth;
- (b) the amount of Designated Feedstock Material to be sold by the Eligible Business engaged in the Reclaiming Process in the Commonwealth;
- (c) the amount of Designated Feedstock Material used by the Eligible Business engaged in the Manufacturing Process in the Commonwealth; and,
- (d) the market history and price fluctuations of materials.

The Department shall provide grant funds of up to \$250,000 and may make periodic adjustments, as deemed necessary, to this amount based on market conditions.

(3) Project Scope. The funded activities shall be based on the scope provided in the Grant Application and finalized in the Grant Agreement.

(4) Payment Process. The Grantee shall submit itemized invoices detailing the use of the grant funds in accordance with the Grant Agreement. The invoice may include written information, either as part of the invoice or attached by the Grantee, for the Department to determine that the costs are eligible under the Grant Agreement.

17.09: Grant Agreement Conditions

(1) Contract. The Grantee is required to submit a signed Commonwealth Terms and Conditions from.

(2) Contract Delay. Failure of a Grantee to commence work within the timeline in the Grant Agreement may constitute sufficient cause for the Department to exercise its right to terminate the Grant Agreement.

17.09: continued

(3) Suspension of Grant Payments. The Department may temporarily suspend a grant payment whenever the Department becomes aware of allegations, evidence or appearance of illegality, corruption, or fraud associated with the award of the Grant; allegations or evidence of failure to comply with the terms of 310 CMR 17.00 or the terms of the Grant Agreement; or, allegations of improprieties with respect to the expenditure of grant funds, terms of agreement, or expenditure of grant funds.

(4) Termination of Grant. The Department shall terminate and revoke a Grant Agreement whenever the Department determines that there is substantial evidence of illegality, corruption or fraud associated with the award of the Grant Agreement; noncompliance with the terms of the Grant Agreement; or improprieties with respect to expenditures. Written notice to the Grantee shall be provided whenever a Grant is terminated and revoked, and the Grantee shall return all funds to the Department within 60 days. The Department may terminate the Grant Agreement for other good cause.

(5) Affirmative Action. Each Grantee must be in compliance with the State's Affirmative Action requirements stated within the Grant Agreement.

17.10: Conditions of Use

In General. The Department's Grant award applies only to the Grantee's eligibility to receive assistance from the Department, pursuant to these regulations, and does not constitute an approval by the Department for any other purpose, permit or otherwise.

17.11: Reporting

In General. The Grantee shall furnish periodic reports to the Department that demonstrate the status of achievement and grant effectiveness relative to the goals specified in the Grant Agreement. The Department shall use reporting and other relevant information to determine whether the Grantee has committed fraud, including but not limited to the following:

- (1) reclaiming the same batch of designated unprocessed materials multiple times; and/or,
- (2) purchasing designated feed stock materials, but not using said materials in the manufacturing process.

17.12: Severability

If any provision of 310 CMR 17.00 is found to be illegal, unenforceable or void, then the Department or Grantees shall be relieved of all obligations under that provision only and all other provisions shall remain in full force and effect.

REGULATORY AUTHORITY

310 CMR 17.00: St. 1997, c. 88, § 85.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 19.000: SOLID WASTE MANAGEMENT

PART I: GENERAL REQUIREMENTS, PROCEDURES AND PERMITS

- 19.001: Authority
- 19.002: Purpose
- 19.003: Applicability
- 19.004: Severability
- 19.005: Computation of Time
- 19.006: Definitions
- 19.007: Access Rights of the Department
- 19.008: Accurate and Timely Submittals
- 19.009: Accurate and Complete Record Keeping
- 19.010: Accurate Monitoring
- 19.011: Signatories, Certification and Engineer's Supervision
- 19.012: Determinations by the Department
- 19.013: Exemptions
- 19.014: Prohibition on Open Dumps and Dumping Grounds and Illegal Disposal of Solid Waste
- 19.015: Compliance
- 19.016: Post-closure Use
- 19.017: Waste Bans
- 19.018: Third-party Inspections
- 19.028: Requirements for Construction, Operation, Modification or Expansion of a Solid Waste Management Facility
- 19.029: Applicable Permit and Certification Procedures for Construction, Operation, Modification or Expansion of a Solid Waste Management Facility
- 19.030: Application for a Solid Waste Management Facility Permit
- 19.032: Permit Procedure for a New Facility or Expansion Permit Application
- 19.033: Permit Procedure for an Application for a Permit Modification or Other Approval
- 19.034: Presumptive Approval Procedure
- 19.035: Transfer Station Certifications
- 19.036: Department's Modification, Suspension or Revocation of a Permit
- 19.038: Review Criteria for a New or Expanded Facility Permit or Permit Modification
- 19.041: Authorization to Construct
- 19.042: Authorization to Operate
- 19.043: Conditions for Permits and Other Approvals
- 19.044: Transfer of Permits
- 19.045: Facility Closure and Post-closure
- 19.050: Private Facility Tax
- 19.051: Financial Assurance Requirements
- 19.060: Beneficial Use of Solid Wastes
- 19.061: Special Waste
- 19.062: Demonstration Projects or Facilities
- (19.070: Operator Certification Requirements: Reserved)
- 19.080: Variances
- 19.081: Enforcement Provisions
- 19.082: Penalties
- 19.083: Enforcement of Minimum Recycling Requirements

PART II: LANDFILL DESIGN AND OPERATIONAL STANDARDS

- 19.100: Preamble
- 19.101: Applicability
- 19.102: Definitions
- 19.103: Additional Requirements
- 19.104: Landfill Facility Plan
- 19.105: Equivalency Review Standards and Procedures
- 19.106: Quality Assurance and Quality Control Requirements
- 19.107: Construction Certification
- 19.110: Ground Water Protection Systems
- 19.111: Alternative Ground Water Protection System Design
- 19.112: Landfill Final Cover Systems
- 19.113: Alternative Landfill Final Cover System Design
- 19.114: Ground Water Protection System and Final Cover Waivers

Section: continued

- 19.115: Storm Water Control
- 19.116: Surface and Ground Water Protection
- 19.117: Air Quality Protection Systems
- 19.118: Ground Water, Surface Water and Gas Monitoring Systems
- 19.119: Design Requirements for Ash Landfills
- 19.120: Design Requirements for Woodwaste Landfills
- 19.121: Landfill Gas Recovery Operations
- 19.130: Operation and Maintenance Requirements
- 19.131: Additional Operation and Maintenance Requirements for Landfills that Accept Ash
- 19.132: Environmental Monitoring Requirements
- 19.133: Maintenance of Environmental Control and Monitoring Systems
- 19.140: Landfill Closure Requirements
- 19.141: Notice of Landfill Operation
- 19.142: Landfill Post-closure Requirements
- 19.143: Post-closure Use of Landfills
- 19.150: Landfill Assessment Requirements
- 19.151: Corrective Action Requirements

PART III: TRANSFER STATION DESIGN AND OPERATIONS STANDARDS

- 19.200: Preamble
- 19.201: Applicability
- 19.202: Definitions
- 19.203: Additional Requirements
- (19.204: Handling Facility Plan: Reserved)
- 19.205: Handling Facility Design Requirements
- 19.206: Construction and Demolition (C&D) Waste Processing Facilities Requirements
- 19.207: Handling Facility Operation and Maintenance Requirements

CLASS II RECYCLING PROGRAM

- 19.300: Preamble
- 19.301: Applicability
- 19.302: Definitions
- 19.303: Class II Recycling Program

19.001: Authority

310 CMR 19.000 is promulgated by the Commissioner and the Department of Environmental Protection pursuant to the authority granted by St. 1987, c. 584, M.G.L. c. 21A, §§ 2 and 8 and c. 111, § 150A.

19.002: Purpose

310 CMR 19.000 is intended to protect public health, safety and the environment by comprehensively regulating the storage, transfer, processing, treatment, disposal, use and reuse of solid waste in Massachusetts. Protection of public health, safety and the environment is primarily the prevention of pollution from the site, but also encompasses the operation of the facility within an integrated solid waste management system which maximizes material reuse and the conservation of energy.

19.003: Applicability

(1) 310 CMR 19.000 shall apply to all solid waste management activities and facilities including, without limitation, landfills, dumping grounds, transfer stations, solid waste combustion facilities, solid waste processing and handling facilities, recycling facilities, refuse composting facilities and other works or sites for the storage, transfer, treatment, processing or disposal of solid waste and the beneficial use of solid waste.

(2) 310 CMR 19.014 and 19.017 also shall apply to any person disposing or contracting for disposal or transport of solid waste or restricted materials listed in Table 310 CMR 19.017(3).

19.004: Severability

It is hereby declared that the provisions of 310 CMR 19.000 are severable, and if any provision hereof or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions of 310 CMR 19.000, and the application thereof to persons or circumstances which can be given effect without the invalid provision or application.

19.005: Computation of Time

Unless otherwise specifically provided by law or 310 CMR 19.000, any determination issued pursuant to 310 CMR 19.000, or any time period prescribed or referred to in 310 CMR 19.000 shall begin with the first day following the act which initiates the running of the time period, and shall include every calendar day, including the last day of the time period so computed. If the last day is a Saturday, Sunday, legal holiday, or any other day in which the Department's offices are closed, the deadline shall run until the end of the next business day. If the time period prescribed or referred to is six days or less, only days when the offices of the Department are open shall be included in the computation.

19.006: Definitions

For purposes of 310 CMR 19.000, the following words and phrases shall have the following meanings unless the content clearly indicates otherwise:

Abutter means the owner of land sharing a common boundary or corner with the site of the proposed activity in any direction, including, but not limited to, land located directly across a street, way, creek, river, stream, brook or canal.

Access Road means a roadway or course providing access to a facility, or areas within a site assigned area, from a public way or other road that is not under the control of the operator.

Action Leakage Rate (ALR) means the quantity of liquid collected from a the leak detection system of a double liner system over a specified period of time which, when exceeded, requires certain actions to be taken as described in a plan approved by the Department.

Active Landfill means a landfill that has an authorization to operate pursuant to 310 CMR 19.042 and for which the Department has not approved facility closure completion pursuant to 310 CMR 19.140(6).

Adverse Impact means an injurious impact which is significant in relation to the public health, safety, or environmental interest being protected.

Agricultural Material means organic materials produced from the raising and processing of plants and animals as part of agronomic, horticultural, aquacultural or silvicultural operations, including, but not limited to, animal manures, animal products and by-products (including carcasses), bedding materials and plant materials.

Airport means any air navigation facility certificated by the Massachusetts Aeronautics Commission (MAC) under provisions of M.G.L. c. 90, and airports operated by the Massachusetts Port Authority.

Airport Zone means the area surrounding an airport that is within 10,000 feet (3,048 meters) of any airport runway used by turbojet aircraft or within 5,000 feet (1,524 meters) of any airport runway used by only piston type aircraft.

Applicant means the person named in the application as the owner of a property interest in the site or the operator of the proposed facility where the owner has entered into an agreement with an operator at the time the application is filed.

Aquifer means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs.

19.006: continued

Asbestos Waste means Asbestos-containing Material and Asbestos-containing Waste Material as defined in 310 CMR 7.00: *Air Pollution Control*.

Ash means the residual by-product of a thermal combustion/reduction process, including all ash fractions (bottom, fly, boiler and economizer ash).

Asphalt Pavement, Brick and Concrete means asphalt pavement, brick and concrete from construction activities and demolition of buildings, roads and bridges and similar sources.

Bedrock means cemented or consolidated earth materials exposed on the earth's surface or underlying unconsolidated earth materials.

Beneficial Use means the use of a material as an effective substitute for a commercial product or commodity.

Bird Hazard means a hazard to aircraft created by an increase in the likelihood of bird/aircraft collisions.

Board of Health means the legally designated health authority of the city, town or other legally constituted governmental unit within the Commonwealth having the usual powers and duties of the board of health of a city or town, or its authorized agent or representative; provided, that in any case in which a waste disposal facility extends into the geographic areas of two or more boards of health, said boards may coordinate activities in effecting compliance with 310 CMR 19.000 for the management of solid wastes.

Bulky Wastes means waste items of unusually large size including but not limited to large appliances, furniture, large auto parts, stumps, trees, branches, brush.

Cathode Ray Tube (CRT) means any intact, broken, or processed glass tube used to provide the visual display in televisions, computer monitors and certain scientific instruments such as oscilloscopes.

Cell means a discrete portion of a landfill that contains or is designed to contain compacted solid waste enclosed by natural soil or other non-waste materials.

Clean Gypsum Wallboard means gypsum wallboard that is not contaminated with paint, wallpaper, joint compound, adhesives, nails, or other substances after manufacture. Gypsum wallboard means a panel (also known as drywall) with a gypsum core and faced with a heavy paper or other material on both sides.

Clean Wood means discarded material consisting of trees, stumps, and brush, including but not limited to sawdust, chips, shavings, bark, and new or used lumber. Clean wood does not include:

- (a) wood from commingled construction and demolition waste;
- (b) engineered wood products; and
- (c) wood containing or likely to contain:
 1. asbestos;
 2. chemical preservatives such as, but not limited to, chromated copper arsenate (CCA), creosote or pentachlorophenol; or
 3. paints, stains or other coatings, or adhesives.

Closed Landfill means a landfill for which the Department has determined that the facility closure has been completed or has approved a post-closure monitoring plan pursuant to 310 CMR 19.140.

Closure means the act or process of deactivating a facility in compliance with the approved facility final closure plan and applicable closure requirements.

Combustion Facility means a facility employing an enclosed system using controlled flame combustion, the primary purpose of which is to thermally break down solid wastes, producing ash that contains little or no combustible materials.

19.006: continued

Commercial Organic Material effective through October 31, 2022 means food material and vegetative material from any entity that generates more than one ton of those materials for solid waste disposal per week, but excludes material from a residence. Effective beginning November 1, 2022 commercial organic material means food material and vegetative material from any entity that generates more than one-half ton of those materials for solid waste disposal per week, but excludes material from a residence.

Commercial Products means of or relating to goods. Commercial products are often unrefined, produced and distributed in large quantities for use. A commercial product may be solid like a concrete block, or loose like aggregate drainage material. A commercial product may be manufactured or produced using solely secondary materials.

Commercial Solid Waste means all types of solid waste generated by stores, offices, institutions, restaurants, warehouses, and other non-manufacturing activities, or similar types of solid waste generated from manufacturing operations. Commercial Solid Waste does not include solid waste generated in a residence or in a manufacturing or industrial process.

Commissioner means the Commissioner of the Department of Environmental Protection or his or her designee.

Composting or Composted means a process of accelerated biodegradation of organic materials using microorganisms under controlled conditions in the presence of oxygen using windrows or piles including, but not limited to, covered aerated piles or bays. For the purposes of 310 CMR 19.000, composting is not aerobic digestion or conversion.

Composite Liner means a groundwater protection system that is composed of two or more low permeability layers where, typically, the upper layer consists of FML (flexible membrane liner) or Geomembrane in direct contact with the lower layer consisting of a low permeability soil and/or a geosynthetic clay liner (GCL).

Construction and Demolition Waste (C&D) Processing Facility means a handling facility where construction and demolition waste is brought, stored and processed (usually by sorting, crushing, shredding, screening, *etc.*) prior to reuse or transport to a solid waste disposal facility or to other types of facilities for recycling, recovery or reuse.

Construction and Demolition Waste (C&D) means the waste building materials and rubble resulting from the construction, remodeling, repair or demolition of buildings, pavements, roads or other structures. Construction and demolition waste includes, but is not limited to, concrete, bricks, asphalt pavement, masonry, plaster, gypsum wallboard, metal, lumber and wood.

Construction and Demolition Waste (C&D) Transfer Station means a transfer station permitted by the Department to accept 50 tons per day or more of construction and demolition waste. A C&D waste transfer station may accept other types of solid waste in accordance with its permit.

Cover Material means soil or other materials that can be placed in one or more layers over solid waste for control of vectors, fires, odors, percolation of water into a landfill, grading, support of vegetation and related environmental or engineering purposes.

Critical Contaminant of Concern (CCC) means contaminants identified by the Department to be of particular concern due to their toxicity, persistence, ability to bio-accumulate, or widespread occurrence.

Cumulative Receptor Cancer Risk means that risk as defined in 310 CMR 40.0000: *Massachusetts Contingency Plan*. As of October 7, 2005, Cumulative Receptor Cancer Risk is defined at 310 CMR 40.0000 as follows: the sum of the estimated excess lifetime cancer risks associated with exposure to all oil and/or hazardous material at or from a disposal site at all exposure points for a given receptor.

Cumulative Receptor Non-cancer Risk means that risk as defined in 310 CMR 40.0000: *Massachusetts Contingency Plan*. As of October 7, 2005, Cumulative Receptor Non-cancer Risk is defined at 310 CMR 40.0000 as follows: a calculation of the possibility of non-cancer health effects associated with exposure to all oil and/or hazardous material at or from a disposal site at all exposure points identified for a given receptor. The Hazard Index is a measure of the Cumulative Receptor Non-cancer Risk.

19.006: continued

Current Operations means those areas of a solid waste management facility which had been filled with refuse, were in active use for management of solid wastes or were under construction as of July 1, 1990.

Department means the Department of Environmental Protection.

Destructive Practices means any process that requires the demolition of commercial products that were manufactured using secondary materials.

Discharge means the accidental or intentional spilling, leaking, pumping, emitting, emptying, dumping or placement of any solid waste into or on any land or water so that such solid waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwater.

Disposal means the final dumping, landfilling or placement of solid waste into or on any land or water or the combustion of solid waste.

Disposal Facility means any combustion facility or any landfill.

Double Liner means a groundwater protection system that is comprised of two liners that are separated by a drainage layer that provides a leak detection function by collecting any leachate that leaks through the primary liner.

Downgradient means:

- (a) in reference to surface water, the direction perpendicular to lines of equal elevation over a distance in which elevation continuously decreases, measured from the point or area in question; or
- (b) in reference to groundwater, the direction perpendicular to lines of equipotential over a distance in which total head continuously decreases, measured from the point or area in question.

Dumping Ground means a facility or place used for the disposal of solid waste from one or more sources which is not established or maintained pursuant to a valid site assignment or permit in accordance with M.G.L. c. 111, § 150A, 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities* or 310 CMR 19.000.

Equipment means any item of machinery or implement used in the operation or maintenance of a facility.

Expansion means:

- (a) For a landfill, a horizontal or vertical increase in the size of the landfill beyond the horizontal or vertical limits specified or approved in the permit; and
- (b) For a transfer station:
 - 1. In the case of a transfer station permitted by the Department to accept less than 50 tons per day (TPD), an increase in the tonnage acceptance limits approved in the permit that would result in the facility accepting 50 TPD or more; and
 - 2. In the case of a transfer station permitted by the Department to accept 50 TPD or more, an increase in the tonnage acceptance limits of more than 25% beyond the limits approved in the permit, determined on a cumulative basis since the last new or expanded transfer-station permit was issued to the facility.
- (c) For any other handling facility or combustion facility, an increase in the tonnage acceptance limits beyond the tonnage limits approved in the facility permit.

Exposure means exposure as defined in 310 CMR 40.0000: *Massachusetts Contingency Plan*. As of October 7, 2005 Exposure is defined at 310 CMR 40.0000 as follows: any contact with or ingestion, inhalation or assimilation of oil and/or hazardous material, including, without limitation, irradiation.

Exposure Pathway means exposure as defined in 310 CMR 40.0000: *Massachusetts Contingency Plan*. As of October 7, 2005 Exposure is defined at 310 CMR 40.0000 as follows: The mechanism by which human or environmental receptors inhale, consume, absorb, or otherwise take in oil and/or hazardous material at an exposure point.

19.006: continued

Exposure Point means that point as defined in 310 CMR 40.0000: *Massachusetts Contingency Plan*. As of October 7, 2005 Exposure Point is defined at 310 CMR 40.0000 as follows: a location of potential contact between a human or environmental receptor and a release of oil and/or hazardous material. An Exposure Point may describe an area or zone of potential exposure, as well as a single discrete point.

Exposure Point Concentration means that concentration as defined in 310 CMR 40.0000: *Massachusetts Contingency Plan*. As of October 7, 2005 Exposure Point Concentration is defined at 310 CMR 40.0000 as follows: the concentration of oil or hazardous material in a specific medium which a human or environmental receptor may contact at an Exposure Point.

Facility means a site or works, and other appurtenances thereto, which is, has been or will be used for the handling storage, transfer, processing, treatment or disposal of solid waste including all land, structures and improvements which are directly related to solid waste activities.

Factor of Safety means the ratio of the breaking stress of a structure to the estimated maximum stress in ordinary use.

Fault means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to those on the other side.

Flexible Membrane Liner (FML) or Geomembrane Liner means a continuous layer of low-permeability flexible polymeric material beneath, on the sides and/or on the top of a landfill or landfill cell.

Floodplain means an area which floods from a rise in a bordering waterway or waterbody and is the maximum lateral extent of flood water which will result from the statistical 100 year frequency storm. This boundary shall be determined using the data available through the National Flood Insurance Program (NFIP) as administered by the Federal Emergency Management Agency (FEMA), except where the Department determines that more accurate information is available.

Food Material means material produced from human or animal food production, preparation and consumption activities and which consists of, but is not limited to, fruits, vegetables, grains, and fish and animal products and byproducts.

Geologic Formation means the basic stratigraphic unit which is a mappable lithologic entity characterized by a particular rock type or types.

Geonet or Geocomposite means a synthetic material with its primary function designed to facilitate drainage.

Geosynthetic Clay Liner (GCL) means a liner material that is comprised of a layer of sodium bentonite clay (or similar low permeability clay) either sandwiched and mechanically secured between two materials (typically synthetic) or chemically bonded to a synthetic material to create a continuous low permeability layer or liner.

Geotextile means a permeable synthetic material that can be a woven, nonwoven, composite, or knitted product, *etc.* that fulfills several functions in civil engineering, especially separation, filtration, drainage and protection.

Ground Water means water below the land surface in a saturated zone.

Groundwater Protection System means an engineered system that may include without limitation, liners and barrier structures; leachate collection, storage and disposal systems; drainage systems and/or other technologies intended to prevent the migration of leachate into and contamination of the groundwater.

19.006: continued

Handling means storing, transferring, processing or treating of a material or solid waste.

Handling Area means an area used for the transfer, storage, processing or treatment of solid waste, excluding weigh stations or access roads.

Handling Facility means any facility that is not a disposal facility and that is used for the storage, processing or treatment of solid waste.

Hazardous Material means that material as defined in 310 CMR 40.000: *Massachusetts Contingency Plan*. As of October 7, 2005 Hazardous Material is defined at 310 CMR 40.0000 as follows: material, including, but not limited to, any material in whatever form which, because of its quantity, concentration, chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare, or to the environment, when improperly stored, treated, transported, disposed of, used, or otherwise managed. The term shall not include oil, but shall include waste oil and all those substances which are included under 42 U.S.C. § 9601(14), but it is not limited to those substances. The term shall also include, but is not limited to, material regulated as hazardous waste or recyclable material under 310 CMR 30.000: *Hazardous Waste*.

Hazardous Waste means any waste that is defined and regulated under 310 CMR 30.000: *Hazardous Waste*.

Holocene means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch to the present.

Household Hazardous Waste means hazardous waste generated by households but which is not subject to the Hazardous Waste Regulations pursuant to 310 CMR 30.104: *Wastes Subject to Exemption From 310 CMR 30.000* except as provided in 310 CMR 30.390: *Special Provisions for Accumulation of Household Hazardous Waste and/or Hazardous Waste Generated by Very Small Quantity Generators*.

Hydrogeologic Study means a detailed study designed to define and assess the geologic and hydrologic character of a given area focusing on existing or potential water quality impacts.

Interim Wellhead Protection Area (IWPA) means that area defined by 310 CMR 22.00: *Drinking Water*. As of October 7, 2005 Interim Wellhead Protection Area is defined at 310 CMR 22.00 as follows: for public water systems using wells or wellfields that lack a Department approved Zone II, the Department will apply an interim wellhead protection area. This interim wellhead protection area shall be a ½ mile radius measured from the well or wellfield for sources whose approved pumping rate is 100,000 gpd or greater. For wells or wellfields that pump less than 100,000 gpd, the IWPA radius is proportional to the approved pumping rate which may be calculated according to the following equation: IWPA radius in feet = (32 x pumping rate in gallons per minute) + 400. A default IWPA radius or an IWPA radius otherwise computed and determined by the Department shall be applied to transient non-community (TNC) and non-transient non-community (NTNC) wells when there is no metered rate of withdrawal or no approved pumping rate.

Landfill means a facility or part of a facility established in accordance with a valid site assignment for the disposal of solid waste into or on land.

Leachate means a liquid that has passed through or emerged from solid waste and which may contain soluble or suspended material from such waste.

Leak Detection System means a secondary leachate collection system or other means that can both detect the presence of leachate which has leaked through the primary liner and identify the area of the primary liner through which the leachate has leaked.

19.006: continued

Liner means an engineered layer or layers of recompacted soils and/or synthetic materials designed to restrict the movement of leachate into ground water and to facilitate the collection of leachate. "Liner" may refer to one or more low permeability layers in a ground water protection system.

Lithified Earth Material means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock formed by crystallization of magma or by induration of loose sediments. Lithified Earth Material does not include man-made materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil or regolith lying at or near the earth surface.

Lower Explosive Limit (LEL) means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at 25°C and atmospheric pressure.

Maintain means to establish, keep or sustain the presence of a facility on a site, whether or not such facility is in operation or has been closed.

Mattress means any resilient material or combination of materials that is enclosed by ticking, used alone or in combination with other products, that is intended for sleeping upon, except for mattresses that are contaminated with mold, bodily fluids, insects, oil, or hazardous substances. Mattress includes any foundation or box-spring. Mattress does not include any mattress pad, mattress topper, sleeping bag, pillow, car bed, carriage, basket, dressing table, stroller, playpen, infant carrier, lounge pad, crib bumper, liquid or gaseous filled ticking, including any water bed and any air mattress that does not contain upholstery material between the ticking and the mattress core, and mattresses in futons and sofa beds.

Maximum High Groundwater Table means the highest seasonal elevation of the surface of the Zone of Saturation that has been historically documented or calculated.

Maximum Horizontal Acceleration in Lithified Earth Material means the maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90% or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

Medical or Biological Waste means Medical or Biological Waste as defined in 105 CMR 480.000: *Minimum Requirements for the Management of Medical or Biological Waste (State Sanitary Code Chapter VIII)*.

MEPA means the Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61 through 62H.

MEPA Process means an environmental review process required for projects subject to 301 CMR 11.00: *MEPA Regulations*.

Mercury-added Product means a product to which the manufacturer intentionally introduces mercury including, but not limited to, electric lamps, thermostats, automotive devices, electric switches, medical or scientific instruments, electric relays or other electrical devices, but not including products made with coal ash or other products that are incorporated into equipment used to manufacture semiconductor devices, elemental mercury in pre-capsulated form that is sold, distributed or provided to a dental practitioner for use in compliance with the department's regulations concerning amalgam wastewater and recycling for dental facilities, or mercury-added formulated products. Mercury-added Product includes mercury-added components that are incorporated into larger products.

Metal means ferrous and non-ferrous metals derived from used appliances, building materials, industrial equipment, transportation vehicles, and manufacturing processes.

Monitor means to systematically measure, inspect and/or collect data on the performance of a facility or on its existing or potential impact on the land, air, ground and surface waters.

19.006: continued

Monitoring Well means a well designed to facilitate the down-hole measurement of groundwater and/or gas levels and the collection of groundwater and/or gas samples.

Municipal Solid Waste means any residential or commercial solid waste.

No Significant Risk means that risk as defined in 310 CMR 40.000: *Massachusetts Contingency Plan*. As of October 7, 2005, No Significant Risk is defined at 310 CMR 40.0000 as follows: a level of control of each identified substance of concern at a site or in the surrounding environment such that no such substance of concern shall present a significant risk of harm to health, safety, public welfare or the environment during any foreseeable period of time.

Open Burning means burning under such conditions that the products of combustion are emitted directly to the ambient air space and are not conducted thereto through a stack, chimney, duct, or pipe. Open burning includes above or underground smoldering fires.

Open Dump means a facility which is operated or maintained in violation of the Resource Conservation and Recovery Act (42 U.S.C. 4004(a)(b)), or the regulations and criteria promulgated thereunder relative to solid waste disposal.

Operator means any person who has care, charge or control of a facility subject to 310 CMR 19.000, including without limitation, an agent or lessee of the owner or an independent contractor.

Opportunity to Recycle or Compost means financial or operational participation in a coordinated recycling or composting program between the applicant and the applicant's waste sources.

Owner means any person who alone or in conjunction with others has legal ownership, a leasehold interest, or effective control over the real property upon which a facility is located, or the airspace above said real property; "owner" does not mean persons holding bare legal title for the purpose of providing security for financing.

Person(s) means any individual, partnership, association, firm, company, corporation, department, agency, group, public body (including a city, town, district, county, authority, state, federal, or other governmental unit) or any other entity responsible in any way for an activity subject to 310 CMR 19.000.

Pollution means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing of any material which, because of its quantity, concentration or other characteristics, does or may result in an adverse impact to human, plant or animal life or to property, or may unreasonably interfere with the comfortable enjoyment of life or property.

Post-closure means a finite period of time commencing after the closure of a facility has been completed and approved by the Department, during which the Department may require site monitoring, care and maintenance.

Post-consumer Recyclables means the following materials which have served their intended end use and have been pre-sorted:

- (a) containers, films and wraps and other forms of packaging made from metal, glass, plastic or paper; and
- (b) newspaper, office paper, cardboard and other grades of paper.

Potential Private Water Supply means a portable water supply as defined in 314 CMR 5.11: *Ground Water Standards*, capable of yielding water of sufficient quality and quantity which is located under a parcel of land that at the time of the earlier of the following two filings, the Site Assignment Application or, where applicable, the Massachusetts Environmental Policy Act Environmental Notification Form, is:

- (a) zoned residential or commercial;
- (b) not served by a public water supply; and
- (c) subject to a subdivision plan or a building permit application approved by the appropriate municipal authority.

19.006: continued

Potential Public Water Supply means a drinking water source which, at the time of the earlier of the following two filings, the Site Assignment Application, or where applicable, the Massachusetts Environmental Policy Act Environmental Notification Form, has been determined to be capable of yielding water of sufficient quality and quantity for future development as a public water supply, and either:

- (a) has been designated and received Departmental approval under the *Guidelines and Policies for Public Water Systems*; or
- (b) has had the necessary documentation submitted on its behalf for determination as a Potential Public Water Supply as defined by the Department's Division of Water Supply.

NON-TEXT PAGE

19.006: continued

Pre-sort means to separate from solid waste and to keep separate from solid waste. Pre-sorting does not require the separation of components that are integral to that material (e.g. insulation or electronic components in white goods).

Primary Composite Liner means a composite liner that is the uppermost liner in a double liner system.

Primary Leachate Collection System means the uppermost leachate collection system.

Primary Liner means the uppermost liner in a ground water protection system composed of two or more liners.

Private Water Supply means a well used as a source of drinking water supplying a non-public water system with any volume of groundwater from any source.

Processing means the use of any method, technique or process to alter the physical characteristics of a material or solid waste through any means, including, without limitation, separating, baling, shredding, crushing or reworking. Storage alone does not constitute processing.

Public Water Supply means a source of drinking water supplying a public water system as defined in 310 CMR 22.00: *Drinking Water*.

QA/QC means quality assurance/quality control.

Recharge Area means an area through which water enters an aquifer. *See "Zone II"*.

Recyclable or Recyclable Material means a material that has the potential to be recycled and which is pre-sorted. Recyclable material includes biodegradable paper, but does not include:

- (a) organic materials that will be composted or converted; or
- (b) construction and demolition waste unless it has been separated, and kept separate, into at least the following categories: asphalt, brick and concrete; wood; metals; plaster and wallboard; roofing materials; and carpet.

Recycle means to recover materials or by-products which will be:

- (a) Reused; or
- (b) Used as an ingredient or a feedstock in an industrial or manufacturing process to make a marketable product; or
- (c) Used in a particular function or application as an effective substitute for a commercial product or commodity.

Recycle does not mean to recover energy from the combustion of a material or to create a fuel. Recycle does not include composting or conversion.

Refuse means solid waste.

Residence or Residential means a single, multi-family, or group home, or apartment complex. For purposes of 310 CMR 19.000, a group home means an establishment, usually resembling a private home, for providing a small group of persons with special needs, such as handicapped or elderly persons or children, with lodging and supervised care. Residence does not include any centralized dining facility.

Residual means all waste remaining after treatment or processing. Residual remaining after treatment or processing is not pre-sorted material. Air and water discharges managed in accordance with applicable regulations are not residuals.

Responsible Official means an individual who is duly authorized to bind the entity (e.g., but not limited to, a corporation, limited liability company, partnership, public entity, sole proprietorship or trust) which is subject to 310 CMR 19.000.

Restricted Material means any material subject to a waste restriction at a solid waste management facility pursuant to 310 CMR 19.017(3).

19.006: continued

Saturated Zone or Zone of Saturation means the area beneath the land surface in which the voids in the rock or soil are filled with water.

Secondary Composite Liner means a composite liner that is the lowest liner in a double liner system.

Secondary Leachate Collection System means the leachate collection system lying between the uppermost or primary liner and the secondary liner and is designed to collect leachate which has leaked through the primary liner.

Secondary Liner means the liner that is below the uppermost or primary liner and is separated from the primary liner by a leachate collection system in a ground water protection system composed of two or more liners.

Secondary Material means a waste material that has characteristics that make it an effective substitute for an ingredient in an existing or new product or commodity.

Secretary means the Secretary of the Executive Office of Environmental Affairs.

Seismic Impact Zone means an area with a 10% or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull, will exceed 0.10g in 250 years.

Site means any building, structure, place or area where solid waste is or will be stored, transferred, processed, treated, disposed, or otherwise come to be located.

Site Assignment means a determination by a board of health or by the Department as specified in M.G.L. c. 111, § 150A that:

- (a) designates an area of land for one or more solid waste uses subject to conditions with respect to the extent, character and nature of the facility that may be imposed by the assigning agency after a public hearing in accordance with M.G.L. c.111, § 150A; or
- (b) establishes that an area of land was utilized as a site for the disposal onto land of solid waste or as a site for a refuse disposal incinerator prior to July 25, 1955, as provided in St. 1955, c. 310, § 2. The area of land assigned under 310 CMR 19.006: Site Assignment(b) shall be limited to the lateral limits of the waste deposition area ("the footprint"), or the area occupied by the incinerator, as they existed on July 25, 1955, except as otherwise approved by the Department in approved plans. Said assignment shall apply only to uninterrupted solid waste disposal activities within the footprint or plan approved area and shall have no legal force or effect at any time after the cessation of disposal activities except as otherwise provided at 310 CMR 16.21: *Alternative Use of Assigned Site*.

Sludge means the accumulated solids and/or semisolids deposited or removed by the processing and/or treatment of gasses, water or other fluids.

Sole Source Aquifer means an aquifer so designated by the U.S. Environmental Protection Agency, or by the Department under the authority of a state program as may be established, that supplies 50% or more of the drinking water for the aquifer service area, and the volume of water which could be supplied by alternative sources is insufficient to replace the petitioned aquifer should it become contaminated.

Solid Waste or Waste means useless, unwanted or discarded solid, liquid or contained gaseous material resulting from industrial, commercial, mining, agricultural, municipal or household activities that is disposed or is stored, treated, processed or transferred pending such disposal, but does not include:

- (a) hazardous wastes as defined and regulated pursuant to 310 CMR 30.000: *Hazardous Waste*;
- (b) sludge or septage which is land applied in compliance with 310 CMR 32.00: *Land Application of Sludge and Septage*;
- (c) wastewater treatment facility residuals and sludge ash from either publicly or privately owned wastewater treatment facilities that treat only sewage and which is treated and/or disposed at a site regulated pursuant to M.G.L. c. 83, §§ 6 and 7 and/or M.G.L. c. 21, §§ 26

19.006: continued

- through 53 and the regulations promulgated thereunder, unless the wastewater treatment residuals and/or sludge ash are co-disposed with solid waste;
- (d) septage and sewage as defined and regulated pursuant 314 CMR 5.00: *Ground Water Discharge Permit Program*, and regulated pursuant to either M.G.L. c. 21, §§ 26 through 53 or 310 CMR 15.00: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*, provided that 310 CMR 19.000 does apply to solid waste management facilities which co-dispose septage and sewage with solid waste;
 - (e) ash produced from the combustion of coal when reused as prescribed pursuant to M.G.L. c. 111, § 150A;
 - (f) solid or dissolved materials in irrigation return flows;
 - (g) source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954;
 - (h) those materials and by-products generated from and reused within an original manufacturing process;
 - (i) materials which are recycled, composted, or converted in compliance with 310 CMR 16.03: *Exemptions From Site Assignment*, 310 CMR 16.04: *General Permit for Recycling, Composting or Aerobic and Anaerobic Digestion Operations*; or 310 CMR 16.05: *Permit for Recycling, Composting or Conversion (RCC) Operations*; and
 - (j) organic material when handled at a Publicly Owned Treatment Works as defined in 314 CMR 12.00: *Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Dischargers* and as approved by the Department pursuant to 314 CMR 12.00: *Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Dischargers*.

Solid Waste Management Facility (*See Facility*).

Special Waste means any solid waste that is determined not to be a hazardous waste pursuant to 310 CMR 30.000: *Hazardous Waste* and that exists in such quantity or in such chemical or physical state, or any combination thereof, so that particular management controls are required to prevent an adverse impact to the public health, safety or the environment from the collection, transport, transfer, storage, processing, treatment or disposal of the solid waste.

Storage means temporary containment of a material or solid waste in a manner which does not constitute disposal.

Storage Facility means a handling facility where solid waste is stored.

Surface Water means all bodies of water natural or artificial, inland or coastal, fresh or salt, public or private within the territorial limits of the Commonwealth of Massachusetts.

Textiles means clothing, footwear, bedding, towels, curtains, fabric, and similar products, except for textiles that are contaminated with mold, bodily fluids, insects, oil, or hazardous substances.

Third-party Inspection means an inspection conducted by a third-party inspector in accordance with 310 CMR 19.018.

Third-party Inspector means an individual registered with the Department to conduct third-party inspections in accordance with 310 CMR 19.018.

Tires means a continuous solid or pneumatic rubber covering intended for use on a motor vehicle.

Transfer Station means a handling facility where solid waste is brought, stored and transferred from one vehicle or container to another vehicle or container for transport off-site to a solid waste treatment, processing or disposal facility.

Treatment means the use of any method, technique or process to change the chemical, or biological character or composition of any solid waste; to neutralize such waste; to render such waste safer to transport, store or dispose; or make such waste amenable to recovery, storage or volume reduction.

19.006: continued

Upgradient means:

- (a) in reference to surface water, the direction perpendicular to lines of equal elevation over a distance in which elevation continuously increases, measured from the point or area in question; or
- (b) in reference to groundwater, the direction perpendicular to lines of equipotential over a distance in which total head continuously increases, measured from the point or area in question.

Upper Concentration Limits means ceiling concentrations established for hazardous materials when contained in secondary material intended for beneficial use.

Unsaturated Zone means the zone between the land surface and the nearest saturated zone.

Unstable Area means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas include, but are not limited to, areas providing inadequate foundation support and areas of mass movement including landslides, avalanches, debris slides and flows, block sliding and rock fall.

Vector means an organism that is capable of transmitting a pathogen from one organism to another including, but not limited to, flies and other insects, rodents, birds, and vermin.

Vegetative Material means plant material.

Water Table means the upper elevation of the surface of the saturated zone.

Watershed means that area defined by 310 CMR 22.00: *Drinking Water*. As of October 7, 2005 Watershed is defined at 310 CMR 22.00 as follows: the area contained within geomorphic or topographic boundaries of higher elevations which cause surface water and/or groundwater to drain or flow to lower elevations into water used as a public water system source.

Wetlands means any land or water area subject to M.G.L. c. 131, § 40 or resource areas regulated pursuant to 310 CMR 10.00: *Wetlands Protection*.

White Goods means appliances employing electricity, oil, natural gas or liquified petroleum gas to preserve or cook food; wash or dry clothing, cooking or kitchen utensils or related items; or cool or heat air or water.

Wood means treated and untreated wood, including woodwaste.

Yard Waste means deciduous and coniferous seasonal deposition (e.g., leaves), grass clippings, weeds, hedge clippings, garden materials and brush.

Zone A means that area defined by 310 CMR 22.00: *Drinking Water*. As of October 7, 2005 Zone A is defined at 310 CMR 22.00 as follows:

- (a) the land area between the surface water source and the upper boundary of the bank;
- (b) the land area within a 400 foot lateral distance from the upper boundary of the bank of a Class A surface water source, as defined in 314 CMR 4.05: Classes and Criteria(3)(a); and
- (c) the land area within a 200 foot lateral distance from the upper boundary of the bank of a tributary or associated surface water body.

Zone B means that area defined by 310 CMR 22.00: *Drinking Water*. As of October 7, 2005 Zone B is defined at 310 CMR 22.00 as follows: the land area within ½ mile of the upper boundary of the bank of a Class A surface water source, as defined in 314 CMR 4.05(3)(a), or edge of watershed, whichever is less. However, Zone B shall always include the land area within a 400-foot lateral distance from the upper boundary of the bank of the Class A surface water source.

Zone C means that area defined by 310 CMR 22.00: *Drinking Water*. As of October 7, 2005 Zone C is defined at 310 CMR 22.00 as follows: the land area not designated as Zone A or B within the watershed of a Class A surface water source as defined at 314 CMR 4.05(3)(a).

Zone of Contribution means the recharge area that provides water to a well.

19.006: continued

Zone I means that area defined by 310 CMR 22.00: *Drinking Water*. As of October 7, 2005 Zone I is defined at 310 CMR 22.00 as follows: the protective radius required around a public water supply well or wellfield. For public water system wells with approved yields of 100,000 gpd or greater, the protective radius is 400 feet. Tubular wellfields require a 250-foot protective radius. Protective radii for all other public water system wells are determined by the following equation: Zone I radius in feet = $(150 \times \log \text{ of pumping rate in gpd}) - 350$. This equation is equivalent to the chart in the Guidelines and Policies for Public Water Systems. A default Zone I radius or a Zone I radius otherwise computed and determined by the Department shall be applied to transient non-community (TNC) and non-transient non-community (NTNC) wells when there is no metered rate of withdrawal or no approved pumping rate.

Zone II means that area defined by 310 CMR 22.00: *Drinking Water*. As of October 7, 2005 Zone II is defined at 310 CMR 22.00 as follows: that area of an aquifer which contributes water to a well under the most severe recharge and pumping conditions that can be realistically anticipated (*i.e.*, pumping at the safe yield of the well for 180 days without any natural recharge occurring); it is bounded by the groundwater divides which result from pumping the well and by contact of the edge of the aquifer with less permeable materials such as till and bedrock. At some locations, streams and lakes may form recharge boundaries. For the purposes of 310 CMR 19.000, a Zone II area is one which has been defined and delineated in accordance with the Department's Division of Water Supply *Guidelines for Public Water Systems*, September, 1984 Supplement to the 1979 edition.

19.007: Access Rights of the Department

310 CMR 19.007 relates to the rights of the Department to enter properties and to obtain and review information to verify compliance with M.G.L. c. 21A, §§ 2 and 8, St. 1987, c. 584, M.G.L. c. 21H, M.G.L. c. 111, §§ 150A and 150A½, and/or 310 CMR 19.000, in the handling, management, transfer, processing, storage, treatment, disposal, use or reuse of solid waste.

(1) Access to Facilities and Properties. At all reasonable times and without prior notice, personnel or authorized representatives of the Department may enter any facility or other property where solid waste has been, is being, or may be, placed, disposed, stored, transferred, handled, managed, processed, treated, used or reused, for the purposes of: protecting the public health, safety or the environment; preventing or abating nuisances; assessing, preventing or remediating damage to the environment; or determining or enforcing compliance; provided that personnel or authorized representatives of the Department present Department-issued identification and receive the consent of the owner, operator or person in control of said facility or property. Notwithstanding the foregoing, personnel or authorized representatives of the Department may enter a facility or property without such consent as authorized by the conditions of any authorization, determination, modification, permit, or other approval, by the conditions of any consent order or other consented to enforcement document, if emergency conditions require immediate entry, or as otherwise authorized by law.

(2) During Inspection. After entry, personnel or authorized representatives of the Department may investigate, sample, photograph, or inspect any records, condition, equipment, practice, operation or property and make examinations and evaluations of a facility or other property specified in 310 CMR 19.007(1) to determine and enforce compliance with M.G.L. c. 21A, §§ 2 and 8, St. 1987, c. 584, M.G.L. c. 21H, M.G.L. c. 111, §§ 150A and 150A½ and/or 310 CMR 19.000 or take or arrange for actions authorized by M.G.L. c. 21H, § 4.

(3) Access to Information. Where necessary to ascertain facts relevant to compliance or to actual or potential harm to public health or safety, actual or potential nuisances, or actual or potential damage to the environment that may be caused by the handling, management, transfer, processing, storage, treatment, disposal, use or reuse of solid waste or relevant to the truth, accuracy and completeness of any submittals to the Department, including but not limited to, the authority of any responsible official, the Department may request and any person shall, within a reasonable time, furnish the requested information and shall permit said Department personnel or authorized representatives to have access to and to copy or to take images of, all records relating thereto.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

19.007: continued

(4) Duty to Cooperate. The owner and operator of a facility or other property and the person possessing information as specified in 310 CMR 19.007(3) shall in no way restrict, impede, or delay an inspection or requests for information by personnel or authorized representatives of the Department where such inspection and requests are made pursuant to a reasonable request in accordance with 310 CMR 19.007 or with the conditions of any authorization, consent determination, modification, permit, or other approval, or pursuant to the conditions of any order or other consented to enforcement document, or as otherwise authorized by law.

(5) Warrants. Upon denial of access or if the Department cannot locate with reasonable efforts the owner, operator or person in control of a facility or property, or upon refusal of a person to provide information requested, the Department may seek, from a court, judge, justice or magistrate, a warrant authorizing personnel or authorized representatives of the Department to conduct a reasonable search of the facility or property, or to obtain the information requested. 310 CMR 19.007(5) shall not preclude the Department from gaining access through other legal means, including, but not limited to, a court order or injunctive relief.

19.008: Accurate and Timely Submittals

(1) Accurate Submittals. No person shall make any false, inaccurate, or misleading statement in any application, document, information or statement which that person submits or is required to submit to the Department pursuant to 310 CMR 19.000, or any permit, order or approval issued by the Department.

(2) Timely Submittals. Any application, document, information or statement which any person is required to submit to the Department shall be submitted within the time period prescribed in 310 CMR 19.000, or any permit, order or approval issued by the Department unless otherwise specified by the Department.

19.009: Accurate and Complete Record Keeping

No person shall make any false or misleading statement in any record, report, plan, file, log, or register which that person keeps or is required to keep, pursuant to 310 CMR 19.000, or any permit, order, or approval issued by the Department. Any record keeping which any person is required to perform shall be promptly, fully, and accurately performed and shall otherwise be in compliance with 310 CMR 19.000, and any permit, order or approval issued by the Department.

19.010: Accurate Monitoring

No person shall falsify, tamper, or render inaccurate any monitoring device or method which any person maintains, or which is required to be maintained pursuant to 310 CMR 19.000, or any permit, approval or order issued by the Department. Any monitoring which any person is required to perform shall be promptly, fully and accurately performed and shall otherwise be in compliance with 310 CMR 19.000, and any order, permit or approval issued by the Department.

19.011: Signatories, Certification and Engineer's Supervision

(1) Signatories and General Certification. Any application for a permit, authorization to construct, authorization to operate, permit modification, and any determination, certification, report and any other document submitted to the Department pursuant to 310 CMR 19.000, shall be signed by the appropriate responsible official. Any person required by 310 CMR 19.000 or any order or other enforcement document issued by the Department, to submit any document to the Department shall identify himself or herself by name, profession, and relationship to the applicant and legal interest in the facility, and make the following statements:

I, [name of responsible official], attest under the pains and penalties of perjury that:

- (a) I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification statement;
- (b) based on my inquiry of those persons responsible for obtaining the information, the information contained in this submittal is, to the best of my knowledge, true, accurate, and complete;
- (c) I am fully authorized to bind the entity required to submit these documents and to make this attestation on behalf of such entity; and

19.011: continued

(d) I am aware that there are significant penalties, including, but not limited to, possible administrative and civil penalties for submitting false, inaccurate, or incomplete information and possible fines and imprisonment for knowingly submitting false, inaccurate, or incomplete information; and

(e) (for a responsible official submitting a third-party inspection report pursuant to 310 CMR 19.018(8)(b)1.) The facility [name of facility] provided any information required by 310 CMR 19.018 and requested by the third-party inspector in a timely fashion and any employee or contractor of [name of facility] did not unduly influence the third-party inspector; and

(f) (for a responsible official submitting a transfer station certification pursuant to 19.035(4)):

1. I have accurately stated whether the transfer station is in compliance with its permit and all other applicable requirements in 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities* and 19.000 including, but not limited to, 310 CMR 19.043;

2. I have accurately identified any and all violations of 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities* or 19.000 or the terms and conditions of any permits or other approvals issued thereunder by the Department;

3. If the transfer station is not in compliance, I have stated what the owner and operator will do to return the transfer station to compliance and the date by which compliance will be achieved; and,

4. Plans and procedures to maintain compliance are in place at the transfer station and will be maintained even if processes or operating procedures are changed.

(2) Engineering Supervision. 310 CMR 19.011(2) does not apply to any documents submitted to the Department pursuant to 310 CMR 19.018. All papers pertaining to design, construction, operation, maintenance, or engineering of a site or a facility shall be completed under the supervision of a Massachusetts registered professional engineer knowledgeable in solid waste facility design, construction and operation and shall bear the seal, signature and discipline of said engineer. The soils, geology, air modeling, air monitoring and groundwater sections of an application or monitoring report shall be completed by competent professionals experienced in the fields of soil science and soil engineering, geology, air modeling, air monitoring and groundwater, respectively, under the supervision of a Massachusetts registered professional engineer. All mapping and surveying shall be completed by a registered surveyor.

19.012: Determinations by the Department

(1) Burden. Where an applicant is seeking a permit, determination, authorization or approval from the Department the applicant has the burden of establishing, on the basis of credible evidence from a competent source, such facts as are necessary to meet the conditions and criteria set forth in the applicable provisions of 310 CMR 19.000.

(2) Additional Information. In addition to such submissions as the applicant may make, the Department may accept and rely upon credible evidence from other competent sources.

19.013: Exemptions

(1) Facilities and Operations Not Subject to 310 CMR 19.000. Any facility or operation exempt from site assignment by 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities*, is exempt from the requirements of 310 CMR 19.000, with the exception of 310 CMR 19.017, which applies to any person disposing or contracting for disposal or transport of solid waste or restricted materials listed in Table 310 CMR 19.017(3).

(2) Permit Exemptions for Facilities Undertaking Actions Pursuant to M.G.L. c. 21E. Solid waste management facilities undertaking an emergency action or remedial action pursuant to M.G.L. c. 21E, and the regulations promulgated thereunder, shall not be required to obtain any additional permits or authorizations pursuant to 310 CMR 19.000, in order to carry out the actions ordered or directed by the Department pursuant to M.G.L. c. 21E and any regulations or policies promulgated thereunder.

19.014: Prohibition on Open Dumps and Dumping Grounds and Illegal Disposal of Solid Waste

- (1) No person shall establish, construct, operate or maintain a dumping ground or operate or maintain a landfill in Massachusetts in such manner as to constitute an open dump. For the purpose of 310 CMR 19.014, the phrase "establish, construct, operate or maintain" shall include without limitation, disposing or contracting for the disposal of refuse in a dumping ground or open dump.
- (2) No person shall dispose or contract for the disposal of solid waste at any place in Massachusetts which has not been approved by the Department pursuant to M.G.L. c.111, § 150A, 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities* or 310 CMR 19.000.
- (3) No person shall dispose or contract for the disposal of solid waste at any facility in Massachusetts that is not approved to manage the particular type of solid waste being disposed.

19.015: Compliance

No person shall construct, modify, operate or maintain a facility except in compliance with a site assignment, permit or plan approved by the board of health or the Department, as applicable, and any authorizations issued by the Department and all conditions included in a permit, approval or authorization for said facility.

19.016: Post-closure Use

No person shall use a solid waste management facility site for any purpose after closure without:

- (a) obtaining a written approval from the Department for any post-closure use on a landfill's final cover or affecting an appurtenance to said landfill, including but not limited to, appurtenances required for the management of leachate, landfill gas and stormwater; or
- (b) submitting a valid certification in accordance with 310 CMR 19.035 for a post-closure use at a transfer station which is not a C&D transfer station; or
- (c) obtaining a presumptive approval in accordance with 310 CMR 19.034 for any other type of post-closure use at a solid waste facility not subject to 310 CMR 19.016(1)(a) or (b).

19.017: Waste Bans

- (1) Purpose. The Department may restrict or prohibit the disposal, or transfer for disposal, of certain components of the solid waste stream when it determines that:
 - (a) disposal of the material presents a potential adverse impact to public health, safety or the environment; or
 - (b) a restriction or prohibition will result in the extension of the useful life or capacity of a facility or class of facilities or reduce its environmental impact; or
 - (c) a restriction or prohibition will promote reuse, waste reduction, or recycling.
- (2) General and Specific Restrictions. Where the Department makes a determination to restrict or prohibit the disposal, or transfer for disposal, of a particular material it may:
 - (a) require as a condition of issuance of a permit that a facility prohibit or limit the disposal, or transfer for disposal, of particular types of material.
 - (b) require as a condition of continued operation under an existing plan approval or permit that a facility or a class of facilities prohibit or limit the disposal, or transfer for disposal, of particular types of material; or
 - (c) determine that a specific facility or class of facilities are not approved for the disposal of particular types of material and may not contract for the disposal of particular types of material. For the purpose of 310 CMR 19.017 disposal or contract for disposal shall include, but not be limited to:
 1. entering into an agreement to dispose or transport for disposal of materials restricted from disposal in violation of 310 CMR 19.000;
 2. depositing restricted materials for collection, contracting for the collection of such materials or collecting or transporting such materials in a manner which results in the disposal of materials in violation of 310 CMR 19.000; or
 3. intentionally contaminating or co-mingling with solid waste pre-sorted material restricted from disposal which would result in the need to dispose of said material in violation of 310 CMR 19.000.

19.017: continued

(3) Compliance with Waste Restrictions.

(a) Effective on the dates specified in 310 CMR 19.017(3): *Table* restrictions on the disposal or transfer for disposal of the materials listed therein shall apply as specified. No person shall dispose, transfer for disposal, or contract for disposal or transport of the restricted material, except in accordance with the restriction established in 310 CMR 19.017(3): *Table*. Any person who disposes, transfers for disposal or contracts for disposal or transport of restricted material may be subject to enforcement by the Department pursuant to 310 CMR 19.081.

(b) No landfill, transfer facility or combustion facility shall accept the restricted material except to handle, recycle or compost the material in accordance with a plan submitted pursuant to 310 CMR 19.017(6) and approved by the Department.

(c) On the effective date of the restrictions on Cathode Ray Tubes (CRTs), specified in 310 CMR 19.017(3): *Table*, all persons shall segregate CRTs from the solid waste stream.

Table 310 CMR 19.017(3)

Restricted Material	Effective Date of Restriction for Landfills or Combustion Facilities	Effective Date of Restriction for Transfer Facilities	Restriction
Lead Batteries	December 31, 1990	April 1, 2000	Ban on disposal or incineration or transfer for disposal at a solid waste disposal facility
Leaves	December 31, 1991	April 1, 2000	Ban on disposal or incineration or transfer for disposal at a solid waste disposal facility
Tires	December 31, 1991	April 1, 2000	Ban on disposal or transfer for disposal of whole tires only at landfills. Tires must be shredded prior to disposal in landfills.
White Goods	December 31, 1991	April 1, 2000	Ban on disposal or incineration or transfer for disposal at a solid waste disposal facility
Other Yard Waste	December 31, 1992	April 1, 2000	Ban on disposal or incineration or transfer for disposal at a solid waste disposal facility
Aluminum Containers	December 31, 1992	April 1, 2000	Ban on disposal or incineration or transfer for disposal at a solid waste disposal facility
Metal or Glass Containers	December 31, 1992	April 1, 2000	Ban on disposal or incineration or transfer for disposal at a solid waste disposal facility
Single Polymer Plastics	December 31, 1994	April 1, 2000	Ban on disposal or incineration or transfer for disposal at a solid waste disposal facility
Recyclable Paper	December 31, 1994	April 1, 2000	Ban on disposal or incineration or transfer for disposal at a solid waste disposal facility
Cathode Ray Tubes	April 1, 2000	April 1, 2000	Ban on disposal, incineration, or transfer for disposal, at a solid waste disposal facility

19.017: continued

Table 310 CMR 19.017(3) (continued)

Restricted Material	Effective Date of Restriction for Landfills or Combustion Facilities	Effective Date of Restriction for Transfer Facilities	Restriction
Asphalt Pavement, Brick and Concrete	July 1, 2006	July 1, 2006	Ban on disposal or incineration or transfer for disposal at a solid waste disposal facility
Metal	July 1, 2006	July 1, 2006	Ban on disposal or incineration or transfer for disposal at a solid waste disposal facility
Wood	July 1, 2006	July 1, 2006	Ban on disposal or transfer for disposal at landfills
Clean Gypsum Wallboard	July 1, 2011	July 1, 2011	Ban on disposal or incineration or transfer for disposal at a solid waste disposal facility
Commercial Organic Material (>1 ton per week)	October 1, 2014	October 1, 2014	Ban on disposal or incineration or transfer for disposal at a solid waste disposal facility
Commercial Organic Material (> ½ ton per week)	November 1, 2022	November 1, 2022	Ban for disposal or incineration or transfer for disposal at a solid waste disposal facility
Mattresses	November 1, 2022	November 1, 2022	Ban for disposal or incineration or transfer for disposal at a solid waste disposal facility
Textiles	November 1, 2022	November 1, 2022	Ban for disposal or incineration or transfer for disposal at a solid waste disposal facility

(4) Criteria for Determinations of Waste Restrictions on Other Materials. In determining whether to restrict or prohibit the disposal of other materials the Department may consider:

- (a) the nature and degree of potential adverse impacts;
- (b) the quantities of restricted materials generated;
- (c) the availability of non-disposal management options for the restricted materials;
- (d) the economic impact on the facility, class of facilities or generators subject to the restriction;
- (e) such other factors as the Department deems relevant to such a determination.

(5) Exceptions. The Department may allow a facility or person to temporarily dispose or temporarily contract for the disposal of restricted materials, with prior notification and approval of the Department, under the following circumstances:

- (a) the material is contaminated or is otherwise not acceptable for recycling or composting, provided that the person who contaminated or rendered the material unfit for recycling or composting takes any action necessary to prevent a recurrence of the conditions which contaminated or rendered the material unfit; or
- (b) the recycling or composting operation or end user to which the restricted material is normally sent declines to accept the material or is prohibited from accepting the material as a result of an administrative or judicial order, provided that an alternative recycling or composting operation or storage facility which will accept the material cannot be found within a reasonable time.

(6) Waste Ban Plan Submissions.

- (a) The permittee or operator shall submit a plan, or modify an existing approved plan to include newly banned materials, which describes the actions to be taken to comply with the restrictions imposed at 310 CMR 19.017(3). The plan shall be submitted to the appropriate regional office of the Department.

19.017: continued

- (b) The waste ban plan shall address the following:
 - 1. Ongoing waste stream monitoring of all incoming loads, including:
 - a. monitoring procedures;
 - b. unacceptable quantities and *de minimus* acceptable quantities; and
 - c. record keeping.
 - 2. Comprehensive load inspections, including:
 - a. loads not subject to comprehensive load inspections;
 - b. load selection;
 - c. inspection procedures;
 - d. unacceptable quantities and *de minimus* acceptable quantities; and
 - e. record keeping.

NON-TEXT PAGE

19.017: continued

3. Facility response to failed loads, including:
 - a. communication; and
 - b. failed load disposition.
4. Other compliance plan elements, including:
 - a. training;
 - b. signage; and
 - c. annual waste ban report.

(c) In determining the adequacy of a plan the Department may consider, without limitation: the anticipated quantities and sources of restricted materials; the contractual terms which affect the delivery of said materials; the expected maximum and minimum percentages of diversion of said materials prior to delivery to the facility and capture of said materials at the facility; the design, operational, educational, informational, financial and marketing mechanisms to be employed to achieve compliance with the restriction; and the weighing and record keeping systems by which the Department can verify compliance with the restriction.

(d) Facilities shall submit such plans at least 90 days prior to the effective date of the ban. The schedule shall not limit the Department from requiring submission of a plan as part of an application for a new or existing facility permit or modification of a permit or plan approval.

(7) Compliance with Waste Ban Plan. Failure to comply with approved plans submitted pursuant to 310 CMR 19.017(6) or applicable permit conditions shall constitute a violation of 310 CMR 19.000. The Department may allow *de minimis* quantities of restricted materials, as determined by the Department, to be disposed by the facility. The Department may require, in lieu of an enforcement action described in 310 CMR 19.081, a modified plan to be submitted when restricted materials are being disposed of in excess of approved amounts.

19.018: Third-party Inspections

(1) Purpose. 310 CMR 19.018 sets forth third-party inspection requirements for specific types of facilities.

(2) Applicability.

(a) The third-party inspection requirements at 310 CMR 19.018 shall apply to the following types of facilities and to individuals who conduct third-party inspections at such facilities:

1. active landfills;
2. closed landfills;
3. handling facilities;
4. combustion facilities; and
5. other solid waste activities or facilities, as determined by the Department.

(b) Effective Date. The third-party inspection requirements of 310 CMR 19.018 shall be effective 180 days from February 14, 2014.

(c) Existing Third party Inspection Requirements. Where a facility has an existing third-party inspection requirement established in a permit or enforcement document issued prior to February 14, 2014 the facility shall use that inspection frequency (in the existing permit or enforcement document) if it is more frequent than the frequency specified in 310 CMR 19.018. All other requirements of 310 CMR 19.018 shall apply to such third-party inspections.

(d) Nothing in 310 CMR 19.000 shall be construed to limit the Department from determining that more frequent third-party inspections or more stringent requirements for third-party inspections are required for a facility. When deemed necessary by the Department, such alternate inspection frequency or more stringent requirements shall be set forth in the facility's permit, authorization to operate, or other written approval, order or other document issued by the Department.

(3) Types of Inspections. The owner and operator of a facility listed at 310 CMR 19.018(2)(a) shall have the following types of third-party inspections conducted at the facility in accordance with the performance standards and other requirements of 310 CMR 19.018:

- (a) facility operation and maintenance inspections;
- (b) waste ban inspections at any facility with a waste ban compliance plan approved by the Department in accordance with 310 CMR 19.017; and
- (c) any other third-party inspection as directed by the Department.

19.018: continued

(4) General Requirements for Owners and Operators.

- (a) Each owner and operator of a facility shall ensure that the facility:
 - 1. is inspected by a third-party inspector who is registered with the Department pursuant to 310 CMR 19.018(5);
 - 2. is inspected according to the frequency and the performance standards set forth in 310 CMR 19.018(6) and (7); and
 - 3. submits copies of all third-party inspection reports to the Department in accordance with 310 CMR 19.018(8).
- (b) The owner and operator shall not conduct their own third-party inspections and shall not retain any of the following individuals to conduct such third-party inspection:
 - 1. a person with daily on-site responsibility for the operation or management of the facility to be inspected;
 - 2. a person with a financial interest in such facility;
 - 3. a spouse, parent, child, or sibling of the owner or operator;
 - 4. the spouse, parent, child, or sibling of any employee of the owner or operator;
 - 5. an employee of the owner or operator; provided that a municipal owner or operator may retain as a third-party inspector a municipal employee from a department, board or office of the municipality that is separate from the department, board or office of the municipality that owns or operates the facility (*e.g.*, a municipal engineer or board of health agent may inspect a transfer station managed by the municipality's department of public works).
- (c) The owner and operator shall allow the third-party inspector full access to the facility and its records related to any solid waste activities carried out at the facility, for the purpose of performing any activity related to conducting the third-party inspection or preparing the third-party inspection report, provided that the owner and operator may deny the third-party inspector access to confidential or proprietary business information. The owner and operator shall in no way restrict, impede, or delay a third-party inspection.
- (d) The owner and operator shall inform the third-party inspector when the owner or operator or any of his or her employees learns of the date of the third-party inspection in advance of the third-party inspection.
- (e) The owner and operator shall provide true, accurate and complete information which is not misleading to the third-party inspector.

(5) General Requirements, Registration and Qualifications for Third Party Inspectors.

- (a) Third-party Inspector Requirements. Each individual performing inspections pursuant to 310 CMR 19.018 shall have the continuing duty to meet the following performance standards to ensure that his or her registration is maintained pursuant to 310 CMR 19.018(5):
 - 1. be registered according to the process set forth in 310 CMR 19.018(5)(b) prior to conducting any third-party inspection pursuant to 310 CMR 19.018;
 - 2. file with the Department an updated qualifications statement every two years that is signed and certified in accordance with 310 CMR 19.011(1);
 - 3. file with the Department an updated qualifications statement within 30 days when there is a change in the individual's licensure status or professional standing;
 - 4. complete all training requirements required under 310 CMR 19.018;
 - 5. personally conduct and complete third-party inspections in accordance with the performance standards in 310 CMR 19.018(6) and (7);
 - 6. prepare accurate and complete third-party inspection reports in accordance with the performance standards in 310 CMR 19.018(6) and (7) and submit third-party inspection reports to facility owners and operators in accordance with the requirements of 310 CMR 19.018(8);
 - 7. not make any false, inaccurate, incomplete or misleading statements in any third-party inspection report; and
 - 8. provide any information regarding third-party inspections to the Department upon request as soon as possible but in no event more than seven business days following receipt of the request.

19.018: continued

(b) Registration. To be eligible to conduct a third-party inspection required by 310 CMR 19.018, an individual shall register with the Department in advance by filing a qualifications statement. The qualifications statement is a self-certification by an individual, on a form provided by the Department, documenting that he or she meets or exceeds the minimum qualification requirements set forth at 310 CMR 19.018(5)(c) for the specific type or types of third-party inspection that said individual may be retained to conduct. The qualifications statement shall include:

1. all relevant professional licenses and certifications that the individual currently holds, including but not limited to:
 - a. Registered professional engineer (PE);
 - b. Registered sanitarian (RS);
 - c. Solid waste operator license(s);
 - d. Solid Waste Association of North America (SWANA) certification(s);
 - e. Licensed site professional (LSP); or
 - f. Asbestos inspector licensure and certification by the Massachusetts Department of Labor Standards;
2. specific academic degrees that the individual has received;
3. specific solid waste training that the individual has successfully completed, such as SWANA training or Department waste ban training; and
4. relevant experience in the solid waste management field.

(c) Third-party Inspector Qualifications. An individual may qualify to conduct one or more types of third-party inspection, as follows:

1. General Qualifications. In order to be qualified to conduct any type of third-party inspections pursuant to 310 CMR 19.018, a third-party inspector shall have in-depth knowledge and understanding of solid waste management laws, regulations and requirements applicable to the specific type or types of third-party inspections that said individual may be retained to inspect;
2. Waste Ban Inspector Qualifications. In order to be qualified to conduct a waste ban inspection at a facility pursuant to 310 CMR 19.018(7), the third-party inspector shall have successfully completed the Department's waste ban training course and any subsequent training required by the Department.
3. Facility Operation and Maintenance Inspector Qualifications. In order to be qualified to conduct a facility operation and maintenance inspection pursuant to 310 CMR 19.018(6), a third-party inspector shall, at a minimum, have the following combination of credentials, experience and training:
 - a. Credentials.
 - i. be a registered Massachusetts professional engineer in good standing, or a registered Massachusetts sanitarian in good standing, or a Massachusetts licensed site professional in good standing, each of which must have three or more years of full-time professional experience, or part-time equivalent, as set forth 310 CMR 19.018(5)(c)3.b.; or
 - ii. have a Bachelor's degree in engineering or in a physical or biological science with three or more years of full-time professional experience, or part-time equivalent, as set forth in 310 CMR 19.018(5)(c)3.b.; or
 - iii. have a Bachelor's degree with five or more years of full-time professional experience, or part-time equivalent, as set forth in 310 CMR 19.018(5)(c)3.b.
 - b. Experience. The third-party inspector shall have full-time professional experience, or part-time equivalent experience, of the following type(s) in the solid waste management field:
 - i. managing a solid waste facility;
 - ii. designing or engineering solid waste facilities;
 - iii. inspecting solid waste facilities; or
 - iv. other solid waste experience regarding the operation or management of solid waste facilities.
 - c. Training. The third-party inspector shall have successfully completed any training required by the Department.

19.018: continued

4. C&D Processing Facility Operation and Maintenance Inspector Qualifications. In order to conduct a facility operation and maintenance inspection of a C&D waste processing facility or C&D waster transfer facility, a third-party inspector shall, at a minimum, have all of the credentials, training and experience set forth in 310 CMR 19.018(5)(c)1. and 3. and either shall have an Asbestos Inspector certification from the Massachusetts Department of Labor Standards or sub-contract with an individual who has such certification for conducting asbestos-related inspection activities.
- (d) List of Registered Third-party Inspectors.
 1. The Department shall create and maintain a list of those individuals who have registered as third-party inspectors.
 2. After the first submittal of a qualifications statement by an individual for the purpose of being listed as a third-party inspector pursuant to 310 CMR 19.018(5), the Department may make a written determination, including the reasons therefore, not to list that individual if the Department determines in its sole discretion that the qualifications statement:
 - a. is incomplete;
 - b. does not contain information sufficient to demonstrate that the individual meets the minimum qualifications set forth at 310 CMR 19.018(5) to conduct at least one of the types of third-party inspections required therein; or
 - c. contains information that is not true, accurate or otherwise contains false or misleading information.
 - (e) Removal from List or Change in Listed Qualification Status.
 1. The Department may make a written determination, including the reasons therefore, to remove an individual from the list of third-party inspectors or to change the status of the third-party inspector's qualifications (*e.g.*, to reflect a change in status from qualified for all inspection types to qualified for certain types of third-party inspections), if the Department determines in its sole discretion that the third-party inspector:
 - a. has submitted a qualifications statement that is not true, accurate or otherwise contains false or misleading information;
 - b. has failed to meet one or more of the requirements listed at 310 CMR 19.018(5)(a);
 - c. is no longer qualified to conduct one or more types of third-party inspections;
 - d. has a pattern of conducting inspections that do not meet the regulatory requirements; or
 - e. has a pattern of submitting reports that do not meet the required standards.
 2. Any determination by the Department pursuant to 310 CMR 19.018(5) shall be in writing and shall state the reason(s) for removing the individual from the list of third-party inspectors or changing the status of the individual's qualifications.
 3. A third-party inspector may at any time notify the Department that he or she wants to be removed from the list of registered third-party inspectors or change his or her status.
 - (f) Reconsideration and Appeal Rights.
 1. Any individual who is omitted or removed from the list of registered third-party inspectors by the Department, or whose status on the list the Department has changed, may submit a written request to the Department for reconsideration of its determination. Said request shall be postmarked within 21 days of the issuance of the Department's determination. The Department may request a meeting with the individual. The Department shall respond in writing to the reconsideration request and shall state the reasons for omitting or removing the individual. Such determination on the request for reconsideration shall not become effective until 22 days after issuance or after issuance of a final decision in an adjudicatory hearing, whichever is later. Failure to submit a written request for reconsideration in a timely manner shall be deemed to be a waiver of the individual's right to request an adjudicatory hearing.

19.018: continued

2. Any individual who receives a determination on reconsideration pursuant to 310 CMR 19.018(5)(f)1. has the right to request an adjudicatory hearing from the Department. Any such individual shall be deemed to have waived such right unless the individual delivers, within 21 days of the date of issuance of the Department's written determination on reconsideration, a request for an adjudicatory hearing that complies with the requirements of 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection*. Any individual who is aggrieved by a final decision in an adjudicatory hearing regarding a determination on reconsideration issued pursuant to 310 CMR 19.018(5)(f)1. may obtain judicial review thereof in accordance with the provisions of M.G.L. c. 30A, § 14.

(6) Performance Standards for a Third-party Facility Operation and Maintenance Inspection.

(a) General Performance Standards.

1. During a facility operation and maintenance inspection, a third-party inspector shall assess a facility's operation and maintenance practices and procedures to determine whether the facility is in compliance with all applicable requirements, including, but not limited to, requirements set forth in:

- a. 310 CMR 19.000;
- b. the facility's operation and maintenance plan;
- c. orders or other enforcement documents issued to the facility; and
- d. other solid waste permits, approvals, determinations and authorizations issued to the facility by the Department.

2. Prior to conducting a third-party facility operation and maintenance inspection, the third-party inspector shall identify and review all solid waste requirements applicable to the operation and maintenance of the facility, including but not limited to those requirements identified in 310 CMR 19.018(6)(a)1.

3. During each third-party inspection, in order to complete an assessment of the facility's compliance with all applicable requirements as set forth in 310 CMR 19.018(6)(a)1., the third-party inspector shall examine and evaluate the facility's solid waste activities, equipment, operations, practices, procedures, and records relevant to the type of third-party inspection being conducted, including without limitation:

- a. the status and condition of operating and monitoring equipment, structures, appurtenances and devices related to the solid waste activities carried out at the facility;
- b. each operational aspect of the facility related to solid waste handling, processing, recycling, storage and disposal, including but not limited to:
 - i. vehicle weighing and recording of scale data;
 - ii. tipping areas and the unloading of incoming materials;
 - iii. inspection and handling of incoming and outgoing waste, recyclable materials and other materials regulated by the Department; and
 - iv. types and quantities of waste and materials received or stored at the facility;
- c. status of all facility record-keeping required by:
 - i. 310 CMR 19.000;
 - ii. the facility's operation and maintenance plan;
 - iii. orders or other enforcement documents issued to the facility; and
 - iv. other solid waste permits, approvals, determinations and authorizations issued to the facility by the Department;
 - v. provided that the owner and operator may deny the third-party inspector access only to confidential or proprietary business information;
- d. material or waste handling areas and equipment including storage areas for recyclable materials, waste or residue; and
- e. the condition of the facility, including evidence of dust, litter, odors, and other nuisance conditions, security measures such as fencing and gates, access roads marked and maintained, storm water management controls and any management system(s).

4. Where a third-party inspector observes that the operation or maintenance of the facility deviates from the aforementioned applicable requirements, he or she shall document all such deviations and recommend corrective actions for the facility to take to return to compliance with such requirements.

5. Third-party inspections shall be unannounced and randomly timed during the facility's normal operating hours, as follows:

19.018: continued

- a. Inspection days shall be determined randomly from among the planned operating days of the facility during the inspection period specified in 310 CMR 19.018(6)(b).
 - b. The third-party inspector shall keep the selected dates of third-party inspections confidential and shall not notify the owner or operator, or any employee or individual affiliated with or related to the owner or operator, of such dates prior to arriving at the facility to conduct a third-party inspection.
 - c. The third-party inspector shall postpone any inspection for which the owner or operator or any of his or her employees learns of the date of inspection in advance.
- (b) Frequency. The owner and operator of a facility shall ensure that a third-party inspector conducts a facility operation and maintenance inspection in accordance with the following frequency and time intervals:
- 1. at an active landfill at least once in every two-month period, with at least 20 days between consecutive inspections;
 - 2. at a closed landfill at least once every two calendar years, with at least six months between consecutive inspections;
 - 3. at a handling facility, other than a C&D waste processing facility or C&D waste transfer station;
 - a. At a facility permitted to accept less than 50 tons, per day at least once every calendar year, with at least four months between consecutive inspections; and
 - b. At a facility permitted to accept 50 tons or more per day at least twice every calendar year, with at least two months between consecutive inspections;
 - 4. at a C&D waste processing facility or a C&D waste transfer station at least once in each quarter (three-month period), with at least 20 days between consecutive inspections; and
 - 5. at a combustion facility at least once in each quarter (three-month period), with at least 20 days between consecutive inspections.
- (c) Additional Performance Standards for a Third-party Facility Operation and Maintenance Inspection of an Active Landfill.
- 1. In addition to complying with the general performance standards set forth in 310 CMR 19.018(6)(a), a third-party inspector shall examine and evaluate an active landfill's compliance with:
 - a. the operation and maintenance requirements set forth at 310 CMR 19.130 and 310 CMR 19.131, as applicable;
 - b. the environmental monitoring requirements (including, but not limited to, reporting frequencies) set forth at 310 CMR 19.132;
 - c. the requirements for maintenance of environmental control and monitoring systems set forth at 310 CMR 19.133;
 - d. the landfill gas recovery facility operation and maintenance requirements set forth at 310 CMR 19.121, if applicable; and
 - e. the applicable requirements of any beneficial use determination(s) governing the beneficial use of solid waste at the facility.
- (d) Additional Performance Standards for a Third-party Facility Operation and Maintenance Inspection of Closed Landfill.
- 1. In addition to complying with the general performance standards described in 310 CMR 19.018(6)(a), a third-party inspector shall examine and evaluate a closed landfill's compliance with:
 - a. the landfill post-closure requirements set forth at 310 CMR 19.142;
 - b. the conditions set forth in the facility's closure permit(s);
 - c. the conditions of any post-closure use permit(s); and
 - d. the requirements set forth at 310 CMR 19.016 and 310 CMR 19.143, as applicable, governing post-closure use activities.
- (e) Additional Performance Standards for a Third-party Facility Operation and Maintenance Inspection of Handling Facility, Except C&D Waste Processing Facility or a C&D Waste Transfer Station.
- 1. The performance standards in 310 CMR 19.018 apply to a handling facility that is not a C&D waste processing facility or a C&D waste transfer station, which is addressed in 310 CMR 19.018(6)(f).
 - 2. In addition to complying with the general performance standards described in 310 CMR 19.018(6)(a), a third-party inspector shall examine and evaluate the compliance of a handling facility with:

19.018: continued

- a. the requirements for stormwater controls, equipment and weighing facilities set forth at 310 CMR 19.205;
- b. the operation and maintenance requirements set forth at 310 CMR 19.207;
- c. the applicable requirements of any beneficial use determination(s) governing the beneficial use of solid waste at the facility.

(f) Additional Performance Standards for a Third-party Facility Operation and Maintenance Inspection of a C&D Waste Processing Facility or a C&D Waste Transfer Station.

1. The performance standards in 310 CMR 19.018(6)(f) only apply to a C&D waste processing facility or a C&D waste transfer station. They do not apply to other types of handling facilities, which are addressed in 310 CMR 19.018(6)(e).
2. In addition to complying with the general performance standards described in 310 CMR 19.018(6)(a), a third-party inspector shall examine and evaluate the compliance of a C&D waste processing facility or a C&D waste transfer station with:
 - a. the requirements for stormwater controls, equipment and weighing facilities set forth at 310 CMR 19.205;
 - b. the operation and maintenance requirements set forth at 310 CMR 19.206, if applicable, and 310 CMR 19.207;
 - c. the facility's suspect asbestos-containing material (ACM) inspection and management protocol; and
 - d. the applicable requirements of any beneficial use determination(s) governing the beneficial use of solid waste at the facility.
3. The third-party inspector shall observe random incoming waste loads and collect ACM samples from suspect materials and send those sample(s) for analysis in accordance with the facility's approved ACM inspection and management protocol, if any.

(g) Additional Performance Standards for a Third-party Facility Operation and Maintenance Inspection of a Combustion Facility. In addition to complying with the general performance standards described in 310 CMR 19.018(6)(a), a third-party inspector shall examine and evaluate the compliance of a combustion facility with:

- (a) the operation and maintenance requirements set forth at 310 CMR 19.207;
- (b) the ash handling and disposal conditions set forth in the combustion facility's permit and its operation and maintenance plan;
- (c) the applicable requirements of any beneficial use determination(s) governing the beneficial use of solid waste at the facility.

(7) Performance Standards for Third-party Waste Ban Inspections.

(a) General. The owner and operator of a facility that has an approved waste ban compliance plan pursuant to 310 CMR 19.017 shall have the facility inspected by a qualified third-party waste ban inspector to assess compliance with the waste bans at 310 CMR 19.017 by the facility and by the haulers and generators delivering waste to the facility.

(b) Exemptions.

1. An owner and operator of a handling facility that does not accept loads greater than five cubic yards is exempt from 310 CMR 19.018(7); and
2. An owner and operator of a facility that participates in the Class II Recycling Program in accordance with the terms of 310 CMR 19.300 is exempt from 310 CMR 19.018(7).

(c) Performance Standards.

1. Prior to conducting each third-party waste ban inspection, the third-party inspector shall identify and review all requirements applicable to waste ban compliance at the facility, including but not limited to, the facility waste ban compliance plan and the requirements of 310 CMR 19.017.
2. During an inspection and for the minimum number of loads as required pursuant to 310 CMR 19.018(7)(e), a third-party inspector shall examine and evaluate the compliance of the facility with its approved waste ban compliance plan, as follows:
 - a. Visually monitor all incoming loads received at the facility during the waste ban inspection;
 - b. Identify all failed loads received during the waste ban inspection;

19.018: continued

- c. Record all identified failed loads using photographs, weigh slips, and standardized waste tracking forms provided by the Department. Such forms may include, but are not limited to, hauler and generator information (to the extent known) and the percentage of the load that is comprised of waste ban material(s); and
 - d. Conduct a comparative analysis of the percentage of failed loads identified by the third-party inspector with the percentage of failed loads documented pursuant to the facility's on-going load inspections conducted over the immediately preceding inspection period.
 - 3. A third-party waste ban inspection shall be unannounced and randomly timed during the facility's normal operating hours, as follows:
 - a. Inspection days shall be selected in accordance with 310 CMR 19.018(7)(d).
 - b. The third-party inspector shall keep the selected dates of third-party inspections confidential and not notify the owner or operator, or any employee or individual affiliated with or related to the owner or operator, of such dates prior to arriving at the facility to conduct a third-party inspection.
 - 4. Where a third-party inspector observes that waste ban compliance at the facility deviates from the applicable requirements set forth at 310 CMR 19.018(7)(c)1., the third-party inspector shall document all such deviations and recommend corrective actions for the facility to take to return to compliance with such requirements.
 - (d) Frequency. The owner and operator of a facility shall ensure that a third-party inspector conducts a waste ban inspection in accordance with the following frequency and time intervals:
 - 1. at an active solid waste landfill: at least once in every two-month period, with at least 20 days between consecutive inspections;
 - 2. at a handling facility other than a C&D processing facility or C&D waste transfer station:
 - a. at a facility permitted to accept less than 50 tons of waste per day, at least once every calendar year, with at least four months between consecutive inspections;
 - b. at a facility permitted to accept 50 tons or more of waste per day, at least twice every calendar year, with at least two months between consecutive inspections;
 - 3. at a C&D waste processing facility or a C&D waste transfer station at least once in each quarter (three-month period), with at least 20 days between consecutive inspections; and
 - 4. at a combustion facility at least once in each quarter (three-month period), with at least 20 days between consecutive inspections.
 - (e) Minimum Loads.
 - 1. Once the third-party inspector begins a waste ban inspection, the third-party inspector shall observe and document each and every load, until the following minimum number of loads, containing at least five cubic yards of material each, have been observed:
 - a. For a facility permitted to accept from 1 to 99 tons of waste per day, four vehicle loads;
 - b. For a facility permitted to accept greater than 99 but less than or equal to 299 tons per day, eight vehicle loads;
 - c. For a facility permitted to accept greater than 299 but less than or equal to 499 tons per day, 12 vehicle loads;
 - e. For a facility permitted to accept greater than 499 but less than or equal to 999 tons per day, 16 vehicle loads; or
 - f. For a facility permitted to accept more than 999 tons per day, 20 vehicle loads.
 - 2. As an alternative to the minimum loads set forth at 310 CMR 19.018(7)(e)1., for a facility that has operated below the facility's permitted capacity for the previous year, the third-party inspector may apply the average actual daily receipt of waste (in tons) over the preceding year (instead of the permitted tonnage amount) to the minimum load criteria set forth above at 310 CMR 19.018(7)(e)1.
- (8) Third-party Inspection Reports, Record-keeping Requirements and Procedures.
- (a) Third-party Inspector Report Submittal and Certification Requirements. A third-party inspector who has performed a third-party inspection pursuant to 310 CMR 19.018 shall:
 - 1. prepare an accurate and complete third-party inspection report which presents the results of his or her inspection in accordance with the performance standards set forth at 310 CMR 19.018(6) and (7) and which meets the requirements set forth at 310 CMR 19.018(8)(b);

19.018: continued

2. sign and certify his or her inspection report on a form or forms provided by the Department, and include the following statements in the report;
 - I, [name of third-party inspector], attest under the pains and penalties of perjury that:
 - (a) I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification statement;
 - (b) based on my inquiry of those persons responsible for obtaining the information, the information contained in this submittal is, to the best of my knowledge, true, accurate, and complete;
 - (c) have been able to conduct the third-party inspection and prepare the third-party inspection report without being influenced by the facility owner or operator and, [if the third-party inspector is a municipal employee,] by his or her municipal employer, by any co-worker or by any elected or appointed official of the municipality; and
 - (d) I am aware that there are significant penalties, including, but not limited to, possible administrative and civil penalties for submitting false, inaccurate, or incomplete information and possible fines and imprisonment for knowingly submitting false, inaccurate, or incomplete information; and
 3. submit to the owner and operator such third-party inspection report.
- (b) Third-party Inspector Report Content Requirements.
1. Facility Operation and Maintenance Inspection Report. For each facility operation and maintenance inspection, the third-party inspector shall prepare a third-party inspection report that describes and reports in detail the results of his or her inspection of the facility's compliance with all applicable requirements, including, but not limited to:
 - a. any deviation from compliance with the operation and maintenance requirements contained in the applicable requirements set forth at 310 CMR 19.018(6) through (7);
 - b. the status and condition of operating and monitoring equipment, structures, appurtenances and devices;
 - c. the status and condition of each operational aspect of the facility, including but not limited to, waste handling, processing, recycling, storage and disposal of waste and materials;
 - d. a summary of all waste and materials received by and handled at the facility, including all loads identified and rejected during the applicable inspection period specified at 310 CMR 19.018(6)(b) or (7)(d);
 - e. the status of the facility's compliance with applicable record-keeping requirements;
 - f. the estimated volumes of all materials and wastes stored at the facility at the time of the inspection;
 - g. the analytical results of all sample(s) collected by the third-party inspector during the inspection, including chain of custody documentation (*e.g.*, for suspect ACM sampling at C&D waste processing facilities);
 - h. the condition of the facility, including but not limited to evidence of dust, litter, odors, and other nuisance conditions, security measures such as fencing and gates, property marked and maintained, access roads, and storm water management controls and leachate management systems;
 - i. any corrective action(s) proposed by the third-party inspector to be taken by the owner or operator, with recommended schedules for implementing the corrective action(s); and
 - j. any additional information as required by the Department on a facility-specific basis.
 2. Waste Ban Compliance Inspection Report. For a waste ban compliance inspection conducted pursuant to 310 CMR 19.018(7), the third-party inspector shall prepare a third-party inspection report that describes and reports in detail the results of his or her inspection, including but not limited to:

19.018: continued

- a. any deviation from compliance with the waste bans at 310 CMR 19.017 by the facility or haulers and generators delivering waste to the facility; and
 - b. a comparative analysis of the percentage of failed loads identified by the third-party inspector and the percentage of failed loads documented pursuant to the on-going load inspections conducted over the immediately preceding inspection period in accordance with the facility's approved waste ban compliance plan.
3. Report Format. Each third-party inspection report shall be submitted in the format specified by the Department.
 4. Duty of Third-party Inspectors to Provide Information. Upon request of the Department, a third-party inspector shall provide a copy of any third-party inspection report prepared by him or her to the Department within seven business days. Upon request, a third-party inspector shall furnish any other information, documents or records associated with such inspection and allow the Department access to and to copy all records relating to the facility within seven business days.
- (c) Owner and Operator Requirements.
1. Reports and Certifications. The owner and operator of a facility shall submit each third-party inspection report to the Department and the board of health of the municipality in which the facility is located no later than 30 days following the date of the inspection. A responsible official of the inspected facility shall sign and certify such report in accordance with 310 CMR 19.011(1). Notwithstanding the foregoing, nothing in 310 CMR 19.018 relieves any person of any duty to report or provide notice of any information that such person is required to report in a shorter timeframe pursuant to any statute, regulation, permit, approval, determination, authorization, order or other requirement.
 2. Corrective Actions. In the event that a third-party inspection report contains a recommendation for corrective action(s), the owner or operator shall submit, along with the inspection report, the following:
 - a. a written report documenting the completion of the corrective action(s);
 - b. documentation or explanation why corrective action is not needed; or
 - c. a plan and schedule for completing the corrective action(s), on a form provided by the Department. The owner or operator may elect to correct deviations identified in the third-party inspection report in a manner that is different than that recommended by the third-party inspector, so long as the facility is brought back into compliance with applicable requirements.
 3. Deficiency Notice. In the event that the Department issues a written deficiency notice to the owner or operator regarding any submittal required by 310 CMR 19.018, the owner or operator shall, within 21 days of the date of issuance of the Department's notice, provide a written response to the Department that describes how the facility intends to correct the deficiencies identified by the Department and provides a compliance schedule.
 4. Records. A copy of each third-party inspection report shall be maintained at the facility in accordance with the record-keeping requirements of 310 CMR 19.000. The owner and operator shall make third-party inspection reports available to personnel or authorized representatives of the Department for review at the facility upon request.

19.028: Requirements for Construction, Operation, Modification or Expansion of a Solid Waste Management Facility

No person shall construct, operate, maintain, expand or modify a facility to store, process, transfer, treat or dispose of solid waste except in accordance with:

- (1) a valid site assignment;
- (2) a solid waste management facility permit ("permit") and any applicable facility expansion permit issued in accordance with 310 CMR 19.032;
- (3) an authorization to construct the facility issued by the Department in accordance with 310 CMR 19.041;

19.028: continued

(4) an authorization to operate the facility issued by the Department in accordance with 310 CMR 19.042 or, for a transfer station which is not a C&D waste transfer station, a certification in accordance with 310 CMR 19.035; and

(5) any applicable modification permit pursuant to 310 CMR 19.033 or 19.034.

19.029: Applicable Permit and Certification Procedures for Construction, Operation, Modification or Expansion of a Solid Waste Management Facility

(1) Use of Permit Procedure at 310 CMR 19.032. The permit procedure set forth at 310 CMR 19.032 shall be used to review the following:

- (a) an application for a new facility;
- (b) an application for expansion of a handling facility, including a transfer station;
- (c) an application for expansion of a combustion facility;
- (d) an application for lateral expansion of a landfill;
- (e) an application for vertical expansion of a landfill; or
- (f) any other application the Department deems appropriate.

(2) Use of Permit Procedure at 310 CMR 19.033. Except as specified at 310 CMR 19.029(3) or (4) the permit procedure set forth at 310 CMR 19.033 shall be used to review the following:

- (a) an application for a permit modification;
- (b) an application for corrective action (including but not limited to assessment);
- (c) a closure plan;
- (d) a post-closure plan;
- (e) an application for post-closure use on the final cover of a landfill or affecting an appurtenance of a facility;
- (f) an application for a Beneficial Use Determination; or
- (g) any other application the Department deems appropriate.

(3) Use of Presumptive Approval Procedure at 310 CMR 19.034. Except as specified at 310 CMR 19.029(2) and (4) the presumptive approval procedure set forth at 310 CMR 19.034 shall apply to the following proposed activities or modifications:

- (a) any administrative change at a facility;
- (b) a post-closure use that:
 1. does not affect the facility's appurtenances, or
 2. is not located on the final cover of a landfill;
- (c) acceptance of a special waste pursuant to 310 CMR 19.061;
- (d) a minor operational or equipment change, such as, but not limited to, a change, substitution, or addition of processing equipment (*e.g.* diesel to electric) or a change in the facility's layout; and
- (e) any other activity or modification the Department deems appropriate.

(4) Use of Certification Procedure at 310 CMR 19.035 for Transfer Station (That Is Not a C&D Waste Transfer Station). The certification procedure at 310 CMR 19.035 shall be used for:

- (a) the operation of a new or expanded transfer station;
- (b) the acquisition of a transfer station (in addition to the certification required pursuant to 310 CMR 19.044);
- (c) the modification in the design, construction, operation, maintenance, closure, or post-closure use of a transfer station;
- (d) when a certification has not been submitted within the previous five years; or
- (e) a transfer station with a valid permit or approval issued prior to February 14, 2014.

19.030: Application for a Solid Waste Management Facility Permit

(1) General. Any person intending to construct, operate or maintain a solid waste management facility shall file an application for a permit.

(2) Application. An application for a permit shall contain sufficient information so that the Department can evaluate whether the application meets the applicable review criteria at 310 CMR 19.038 and at a minimum shall include:

19.030: continued

- (a) a completed application on a form as may be provided by the Department;
- (b) such additional or alternative information as required in other parts of 310 CMR 19.000 governing the permitting of specific types of solid waste management facilities.
- (c) applicant identification which shall include such information and documentation as the Department deems necessary to fully identify all persons having a legal or financial interest in, or operational responsibility for, the site or facility; those persons' legal status; those persons' prior ownership or operating history of solid waste facilities; and other relevant information regarding the applicant's competency to own and/or operate a facility;
- (d) a solid waste management facility plan ("Plan") for the particular type of solid waste management facility that includes such maps, data, information and documents as required in the applicable facility specific regulations. The Plan shall, at a minimum, be comprised of the following components:
 - 1. a site plan which shall include such maps, diagrams, reports and other information the Department deems necessary to accurately locate the proposed site and facility, identify its geographical characteristics, identify the zoning of the site, and evaluate the potential impact of the construction and operation of the proposed facility on surrounding land uses, traffic flow, surface water bodies, wetlands, water supplies, and flood zones;
 - 2. a waste ban plan as required at 310 CMR 19.017(5);
 - 3. a facility design plan which shall provide such diagrams, reports, studies and other information as the Department deems necessary to evaluate the feasibility and potential impacts of the facility on public health, safety and the environment. The facility design plan shall address all aspects of the facility design and shall include:
 - a. a detailed description of the type and size of the proposed facility;
 - b. the nature and amount of refuse to be handled on a daily and weekly basis;
 - c. a detailed description of the design of the facility, including recycling and composting components, site improvements and all systems and other appurtenances thereto necessary to comply with:
 - i. the operation and maintenance requirements;
 - ii. the closure and post-closure requirements; and
 - iii. permit approval criteria;
 - d. provision to minimize the impacts of site and facility construction; and
 - e. other design provisions the Department deems necessary on a site or facility specific basis to ensure proper design;
 - 4. an operation and maintenance plan which shall provide such diagrams, reports, studies, and other information as the Department deems necessary to evaluate the ability of the proposed operation and maintenance procedures to ensure good solid waste management practices and to protect public health and safety and the environment. The operation and maintenance plan shall include:
 - a. a detailed description of the proposed waste handling methods and techniques, and sequence of operations for the facility;
 - b. a description of the procedures to be employed to comply with the operation and maintenance requirements for the specific type of facility and the permit approval criteria;
 - c. a detailed description of the environmental monitoring and sampling protocols and procedures and inspection and maintenance of the environmental monitoring systems;
 - d. a tracking and reporting system by which the Department can verify compliance with recycling requirements and with bans on acceptance of certain types of solid waste or recyclable materials which have been imposed pursuant to 310 CMR 19.017 and are in effect at the time the permit is granted;
 - e. a compliance and inspection plan to ensure operation of the facility is in compliance with the permit and all applicable regulations; and
 - f. other operation and maintenance provisions that the Department deems necessary on a site or facility specific basis to ensure proper operation and maintenance;
 - 5. a closure and post-closure plan which shall provide such diagrams, reports, studies and other information as the Department deems necessary to describe and evaluate the procedures the applicant proposes to use to close the facility and maintain and care for the site during the post-closure period in a manner that minimizes the impacts to public health and safety and the environment. A closure and post-closure plan shall include:

19.030: continued

- a. a description of the activities, and the sequence of activities necessary to close the facility;
 - b. a description of measures to be utilized to comply with the closure and post-closure requirements set forth in 310 CMR 19.045 and other applicable sections of 310 CMR 19.000 ;
 - c. a description of proposed subsequent use of the site and/or facility, if any; and
 - d. other provisions that the Department deems necessary on a site or facility specific basis to ensure proper closure of the facility.
- (e) a public health report, if any, as submitted by the Department of Public Health pursuant to the Site Assignment Regulations, 310 CMR 16.17: *Application Review by the Department of Public Health*;
- (f) sufficient documentation that the proposed facility will be located within the boundaries of a valid site assignment;
- (g) sufficient documentation that:
- 1. the MEPA process does not apply;
 - 2. the MEPA process does apply and the Secretary has determined that an Environmental Impact Report is required; or
 - 3. the MEPA process has already been completed and the Secretary has issued a certificate or a determination that no EIR is required.
- (3) Filing and Confidentiality.
- (a) The applicant shall file one copy of the application or registration with the Department in the appropriate Regional Office.
- (b) Any information submitted pursuant to 310 CMR 19.000 may be claimed as confidential by the applicant in accordance with the provisions of 310 CMR 3.00: *Access to and Confidentiality of Department Records and Files*, except information regarding the name and address of the permittee and data related to the potential impact of the proposed activity on public health, safety and the environment.
- (4) Variance. The application shall clearly state whether a variance is requested, as provided in 310 CMR 19.080.
- (5) Presentation of Information. Information set forth in the application for a permit shall be current, presented clearly and concisely using forms, as may be provided by the Department, and supported by appropriate references to technical and other documents made available to the Department. The application shall contain sufficient data and other relevant information to allow the Department to determine, independent of additional information, whether to issue the Permit.
- (6) Signatory. An application shall be signed and certified in accordance with 310 CMR 19.011(1).
- (7) Engineering Supervision. All papers pertaining to design, construction, operation, maintenance, or engineering of a site or a facility shall bear the seal and signature of a Massachusetts registered supervising engineer or other applicable person as required at 310 CMR 19.011(2).

19.032: Permit Procedure for a New Facility or Expansion Permit Application

- (1) General. 310 CMR 19.032 describes the permit procedure for a permit application for a new facility, an expansion of an existing facility, or for any other application the Department deems appropriate as specified in 310 CMR 19.029(1).
- (2) Draft Decision.
- (a) The Department shall prepare a draft decision. A draft decision for granting a permit shall include all appropriate conditions, standards, and requirements necessary to establish a new facility or to conduct approved activities at an existing facility.
- (b) Each draft decision shall be accompanied by a fact sheet briefly describing:
- 1. the facility or activity which is the subject of the draft decision;
 - 2. the type and quantity of wastes which are to be handled;
 - 3. the reasons for the terms and conditions set forth therein; and

19.032: continued

4. the reasons why requested variances or alternatives to required standards are or are not proposed to be approved.
 - (c) Distribution of the Draft Decision. The Department shall send a copy of the draft decision and the accompanying fact sheet to the applicant, the local board of health, abutting board of health, if any, and, on written request, to any other person.
 - (d) Description of Procedures. A description of the procedures for reaching a final decision on the permit application shall accompany the copy of the draft decision and shall include:
 1. the beginning and ending dates of the comment period and the address where comments will be received;
 2. any other procedures by which the public may participate in the process leading to a final permit decision; and
 3. the name and telephone number of an individual to contact for additional information.
- (3) Public Notice.
- (a) The Department shall cause public notice to be given when:
 1. a draft decision on a facility permit application has been prepared; or
 2. a public hearing on a draft decision has been scheduled. Public notice in this case shall be given at least 21 days prior to the hearing date.
 - (b) Notice of More than One Permit. A public notices may describe more than one permit or permit action.
 - (c) Method of Notice. Public notice shall be given by the following methods:
 1. By mailing notice to:
 - a. the applicant;
 - b. the board of health of the municipality in which the facility is to be located or the permitted activity is proposed;
 - c. the board of health of any municipality within ½ mile of the proposed facility ("abutting board of health"); and
 - d. abutters of the facility site.
 2. By publication, paid for by the applicant, in a daily or weekly newspaper of general circulation in the locality affected by the facility.
 - (d) Content of Notice. A public notices shall, at a minimum, contain the following information:
 1. a description of the proposed facility including the type of facility, proposed tonnage, location and hours of operation;
 2. the identity and mailing address of the applicant;
 3. the public location where the application can be inspected; and
 4. the time period for written comments on the application and the address to which comments should be mailed, and, if a public hearing is to be held, the public hearing information set forth at 310 CMR 19.032(5).
- (4) Comment Period.
- (a) A public notice issued pursuant to 310 CMR 19.032(3) for a draft decision shall allow at least 30 days for public comment. The comment period shall begin on the date the public notice is first published in a newspaper as specified at 310 CMR 19.032(3)(c)2. or on a later date specified in the public notice.
 - (b) Written Comments. During the public comment period, any interested person may submit written comments on the draft decision to the office of the Department processing the permit request.
 - (c) Extending or Reopening the Public Comment Period. The Department may extend or reopen the public comment period to allow for the issuance of a modified draft decision or to give interested persons an opportunity to comment on the information or arguments submitted. If the Department gives such an extension, public notice thereof shall be given in the manner prescribed in 310 CMR 19.032(3). Such notice shall specify any new issues to be considered.
- (5) Public Hearing.
- (a) Circumstances Requiring Hearing. The Department shall schedule a public hearing within the municipality wherein the proposed facility is to be located when:
 1. the applicant requests a public hearing;

19.032: continued

2. the Commissioner determines that there is sufficient public interest in unresolved issues of concern; or
 3. the Department prepares a modified draft decision with substantial revisions from the original draft decision as a result of comments received pursuant to 310 CMR 19.032(4). Copies of the modified draft decision shall be distributed in accordance with 310 CMR 19.032(2)(c).
- (b) Content of Public Hearing Notice. Public notice of the public hearing shall be given in the manner described in 310 CMR 19.032(3) and shall include:
1. the date, time, and place of the public hearing; and
 2. the nature and purpose of the public hearing.
- (c) Public Hearing Procedures.
1. Hearing Officer. The Department shall designate a representative to conduct the public hearing. The Hearing Officer shall have authority to ensure an orderly presentation of issues, comments, data, and arguments, and to ensure an adequate and comprehensible record of the proceedings. The Hearing Officer may, at his or her discretion, without limitation of the foregoing:
 - a. define relevant issues, receive and consider relevant matter and exclude irrelevant or unduly repetitive matter;
 - b. determine the order in which persons wishing to do so may present oral comments;
 - c. conduct appropriate examination of persons offering oral comments;
 - d. establish a reasonable time limit for all persons wishing to offer oral comments;
 - e. require the applicant or any other person intending to present studies or exhibits for consideration at the hearing to file such material within a reasonable time in advance of the hearing;
 - f. require any person who refers to or relies upon written information or expert opinion in offering comments to provide copies of such material within a reasonable time after the hearing;
 - g. permit an opportunity for oral rebuttal of comments received;
 - h. allow a reasonable time after the hearing for providing written comment or rebuttal; and
 - i. order adjournment, recess, or rescheduling of the hearing.
 2. Participation in the Hearing. Any person may attend and observe the public hearing. Any person wishing to offer oral comments may do so upon filing a written statement containing the name, address, and telephone number of an authorized representative to whom correspondence may be addressed for purposes of the hearing.
 3. Authorized Representative. An individual may appear on his or her own behalf. A duly authorized officer or employee may represent a corporation; a duly authorized member may represent a partnership, joint venture or association; and an authorized trustee may represent a trust. Any person shall have the right to be accompanied, represented and advised by an authorized agent or attorney.
 4. Conduct of Hearings. The hearings shall be as informal as may be reasonable and appropriate under the circumstances. The Hearing Officer shall ensure that the conduct of persons at the hearing will at all times be orderly.
 5. Withdrawal of Request for Hearing. The applicant or any other person who requested a hearing may withdraw the request, or may elect to submit any comments or documents without a hearing, by filing with the Department a written withdrawal. If notice of a hearing has already been published pursuant to 310 CMR 19.032(3), such withdrawal shall be filed at least ten days prior to the scheduled hearing, and notice of the withdrawal shall be provided in the same manner specified in 310 CMR 19.032(3).
 6. Recordings and Transcripts. The proceedings at the hearing shall be recorded either electronically or stenographically. Transcripts or electronic copies shall be supplied to any person, upon request, at his or her own expense. Any person, upon request, may order a stenographer to transcribe the proceedings or the Department's electronic recording at his or her own expense. In such event, a transcription shall be provided to the Department at no expense to the Department, and upon such other terms as the Hearing Officer shall order.

19.032: continued

(6) Issuance of the Final Decision on a Permit Application.

(a) Issuance and Public Notice. After the close of the public comment period, or, if applicable, the close of the public hearing, whichever is later, the Department shall issue a final decision on the permit application. Notice of the Department's final decision and summary response to comments shall be given to the applicant by electronic transmission upon agreement by the applicant, or, if not, by first class mail. Notice shall also be provided to the board of health, any abutting board of health and each person who has requested notice of the final decision.

(b) Effective Date. Unless otherwise stated in the permit, the permit shall be effective upon issuance.

(c) Summary Response to Comments. At the time the decision is issued, the Department shall prepare a summary of the major comments on the draft decision and a response to comments and shall describe any major changes made to the draft decision as a result of comments received.

(d) Legal Challenges.

1. Appeal. Any person aggrieved by the final permit decision may file an appeal for judicial review of said decision in accordance with the provisions of M.G.L. c. 111, § 150A and c. 30A not later than 30 days following the date of issuance of the final permit decision to the applicant. The standing of a person to file an appeal and the procedures for filing such appeal shall be governed by the provisions of M.G.L. c. 30A. Unless the person requesting an appeal requests and is granted a stay of the terms and conditions of the final permit decision by a court of competent jurisdiction, the final permit decision shall be effective in accordance with 310 CMR 19.032(6)(b).

2. Notice of Action. Any aggrieved person intending to appeal a final permit decision to the Superior Court shall first provide notice of intention to commence such action. Said notices of intention shall include the Department file number and shall identify with particularity the issues and reason why it is believed the final permit decision was not proper. Such notice shall be provided to the Office of General Counsel of the Department and the Regional Director for the regional office which processed the permit application, if applicable, at least five days prior to the filing of an appeal.

3. No allegation shall be made in any judicial appeal of a final permit decision unless the matter complained of was raised at the appropriate point in the administrative review procedures established in 310 CMR 19.000, provided that a matter may be raised upon a showing that it is material and that it was not reasonably possible with due diligence to have been raised during such procedures or that matter sought to be raised is of critical importance to the environmental impact of the permitted activity.

19.033: Permit Procedure for an Application for a Permit Modification or Other Approval

(1) General. 310 CMR 19.033 describes the permit procedure for a permit application for certain modifications to a facility or other permit application as specified in 310 CMR 19.029(2).

(2) Issuance of Permit Decision. The Department shall mail a copy of its permit decision on an application to the applicant, the board of health of the municipality in which the facility is located, the board of health of any municipality within ½ mile of the proposed facility and any other person who has requested in writing that the Department provide a copy of the permit decision.

(3) Effective Date. Unless otherwise stated in the permit decision, the permit decision shall be effective upon its issuance.

(4) Review of Decision.

(a) Provisional Decision. The Department may defer the effective date of a permit decision for the purpose of obtaining comments by issuing a provisional permit decision. Such a provisional decision shall be accompanied by a notice stating that written comments may be submitted to the Department for a period of at least 21 days after the date of issuance of the provisional decision. Prior to the effective date established therein, the Department shall issue a final permit decision at the end of the comment period.

19.033: continued

(b) Where no provisional decision is issued, an applicant aggrieved by the Department's permit decision, within 21 days of the issuance of the Department's permit decision to the applicant, may file a written request, with the appropriate regional office of the Department, that the permit decision be deemed a provisional decision, and a written statement of the basis on which the applicant believes it is aggrieved, together with any supporting materials. Upon timely filing of such a request, the permit decision shall be deemed a provisional decision. Such a request shall reopen the administrative record, and the Department shall issue a final permit decision after the end of the comment period. Failure by an applicant to exercise the right provided in 310 CMR 19.033(4)(b) shall constitute a waiver of the applicant's right to appeal.

(5) Legal Challenges.

(a) Appeal. Any person aggrieved by the final permit decision, except as provided for under 310 CMR 19.033(4)(b), may file an appeal for judicial review of said permit decision in accordance with the provisions of M.G.L. c. 111, § 150A and M.G.L. c. 30A no later than 30 days following the date of issuance of the final permit decision to the applicant. The standing of a person to file an appeal and the procedures for filing such appeal shall be governed by the provisions of M.G.L. c. 30A. Unless the person requesting an appeal requests and is granted a stay of the terms and conditions of the final permit decision by a court of competent jurisdiction, the final permit decision shall be effective in accordance with 310 CMR 19.033(3).

(b) Notice of Action. Any aggrieved person intending to appeal a final permit decision to the Superior Court shall first provide notice of intention to commence such action. Said notices of intention shall include the Department file number and shall identify with particularity the issues and reason why it is believed the final permit decision was not proper. Such notice shall be provided to the Office of General Counsel of the Department and the Regional Director for the regional office which processed the permit application, if applicable, at least five days prior to the filing of an appeal.

(c) No allegation shall be made in any judicial appeal of a final permit decision unless the matter complained of was raised at the appropriate point in the administrative review procedures established in 310 CMR 19.000, provided that a matter may be raised upon a showing that it is material and that it was not reasonably possible with due diligence to have been raised during such procedures or that matter sought to be raised is of critical importance to the environmental impact of the permitted activity.

19.034: Presumptive Approval Procedure

310 CMR 19.034 describes the procedure for the Department's presumptive approval of certain activities at or modifications to a facility. Any activity or modification specified in 310 CMR 19.029(3) may be made without prior written approval from the Department provided that:

(1) at least 45 days prior to commencing such activity or modification, the owner or operator submits to the Department and the board of health a written description of the proposed activity or modification on an application form provided by the Department;

(2) within 45 days of receipt of the form, the Department has not determined, in a letter to the owner and operator, that 310 CMR 19.034 does not apply to the proposed activity or modification or that additional information is needed to make that determination; and

(3) within 45 days of completion of the modification, the owner or operator submits to the Department as-built plans and/or a report describing the modification, provided that no additional documentation is necessary where there was no physical modification to the facility.

19.035: Transfer Station Certifications

(1) Qualifications for Transfer Station Certification. To be eligible to submit a transfer station certification, a transfer station must have a valid facility permit. Any expiration date contained in the transfer station permit shall have no force and effect after the owner or operator of the transfer station submits a valid certification pursuant to 310 CMR 19.035.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

19.035: continued

(2) Certification Filing Schedule. The responsible official for a transfer station that is not a C&D waste transfer station shall submit a certification to the Department in accordance with 310 CMR 19.035 by the earliest of the following applicable deadlines:

- (a) 30 days prior to the operation of a new transfer station;
- (b) 30 days prior to the operation of a transfer station in accordance with its permit for an expansion;
- (c) 30 days prior to a modification in the design, construction, operation, maintenance, closure, or post-closure use of the transfer station;
- (d) when a certification has not been submitted within the previous five years;
- (e) 30 days after the acquisition of a transfer station; or
- (f) 120 days after February 14, 2014 for operation of a transfer station with a valid permit or approval issued prior to February 14, 2014 that does not have a certification.

(3) Form. The certification shall be submitted on a form supplied by the Department. The certification shall address compliance with the permit(s) issued to the transfer station, the applicable requirements of 310 CMR 19.000, including but not limited to the review criteria at 310 CMR 19.038(2)(a)1. through 11. and shall include all information regarding any changes at the transfer station relating to the design, construction, operation, maintenance, closure and post-closure use of the transfer station since the last certification was submitted.

(4) Certification Statement. The responsible official for the transfer station shall submit a certification in accordance with 310 CMR 19.011(1).

19.036: Department's Modification, Suspension or Revocation of a Permit

(1) General. The Department may rescind, suspend, or modify a permit when it determines that the operation or maintenance of a facility results in a threat to the public health, safety or the environment in accordance with the provisions of M.G.L. c.111, § 150A and after a hearing in accordance with M.G.L. c. 30A, § 11.

(2) Scope of Determination of Threat. In considering whether the continued operation of a facility presents a threat to the public health and safety or the environment the Department may consider:

- (a) the likelihood of a discharge or release of pollutants from the facility;
- (b) the actual or potential impacts from a discharge or release of pollutants from the facility;
- or
- (c) the potential adverse impacts on the Commonwealth's natural resources from the disposal of restricted materials pursuant to 310 CMR 19.017.

19.038: Review Criteria for a New or Expanded Facility Permit or Permit Modification

(1) Applicability of Permitting Criteria. The criteria the Department shall apply when reviewing a permit application or an application for a permit modification are as follows:

- (a) New or Expanding Landfills. A permit application for a new landfill or landfill expansion submitted pursuant to 310 CMR 19.032 shall comply with the criteria set forth at 310 CMR 19.038(2)(a), (c) and (d).
- (b) New or Expanding Combustion Facility. A permit application for a new or expanding combustion facility submitted pursuant to 310 CMR 19.032 shall comply with the criteria set forth at 310 CMR 19.038(2)(a) and (b).
- (c) New or Expanding Handling Facility. A permit application for a new or expanding handling facility submitted pursuant to 310 CMR 19.032 shall comply with the criteria set forth at 310 CMR 19.038(2)(a)1. through 11., 13. and 14., and (b).
- (d) Modification of a Landfill, Combustion Facility and or Handling Facility. An application submitted pursuant to 310 MR 19.033 or 19.034. as applicable, for a modification of a landfill, combustion facility or handling facility not addressed at 310 CMR 19.038(1)(a), (b), (c), or (e) shall comply with the criteria set forth at 310 CMR 19.038(2)(a)1. through 12., except 310 CMR 19.038(2)(a)12. does not apply to a handling facility.
- (e) Post-closure Use. A permit application submitted pursuant to 310 CMR 19.033 or 19.034, as applicable, for the post-closure use of a facility shall comply with the criteria set forth at 310 CMR 19.038(2)(a)1., 3., 4., 6., 8., and 10.

19.038: continued

(2) Criteria for Review of Applications for a Permit or Permit Modification.

(a) General Criteria. In accordance with the provisions of 310 CMR 19.038(1) the Department shall consider whether the following criteria are met when reviewing an application for a permit or permit modification:

1. the applicant has received certification from the Secretary of Environmental Affairs that the applicant has complied with M.G.L. c. 30, §§ 61 through 62H (MEPA) process;
2. the facility is located within the boundaries of a valid site assignment and is proposed to be constructed, operated and maintained in accordance with the terms and conditions of that site assignment;
3. the design, construction, operation, and maintenance of the facility and its environmental monitoring systems are in compliance with requirements set forth in 310 CMR 19.000, and such policies as the Department establishes governing solid waste management facilities;
4. the design, construction, operation, and maintenance of the facility constitutes a threat to the public health, safety or the environment;
5. on a site on which the Department determines it infeasible to adequately conduct appropriate environmental monitoring, no leachate or contaminated surface run off shall enter ground or surface waters;
6. the facility design and operation includes components and measures which will assure compliance with other applicable state and federal laws, regulations and policies, including without limitation, 314 CMR 3.00 through 12.00 (water pollution control); 310 CMR 22.00: *Drinking Water* and 27.00: *Underground Water Source Protection* (water supply); 310 CMR 7.00: *Air Pollution Control* (air quality); and 40 CFR 257 and 258;
7. the facility is in compliance with the waste bans established at 310 CMR 19.017;
8. violations of applicable statutes and regulations, judicial orders or administrative order or conditions of a prior plan approval/permit issued by the Department are corrected, and any fines and penalties associated with any of the above, which are related to the site or facility have been paid or are pending administrative or judicial appeal;
9. the construction, operation and maintenance of the facility does not represent a bird hazard;
10. the ground support for the structural components of the facility is adequate;
11. whether the construction, operation, and maintenance of the facility:
 - a. will have an adverse impact on Endangered, Threatened, or Special Concern species listed by the Natural Heritage and Endangered Species Program of the Division of Fisheries and Wildlife in its database;
 - b. will have an adverse impact on an Ecologically Significant Natural Community as documented by the Natural Heritage and Endangered Species Program in its database; or
 - c. will have an adverse impact on the wildlife habitat of any state Wildlife Management Area.
12. the yearly and lifetime capacity potentially created by the proposed facility or expansion in relation to the reasonably anticipated disposal capacity requirements and reduction/diversion goals of the Commonwealth and the geographic area(s) which the site will serve;
13. the extent to which the facility operations, alone or in conjunction with other facilities, maximizes diversion or processing of each component of the anticipated waste stream in order to first reduce adverse impacts and utilize materials and only thereafter to extract energy from the remaining solid waste prior to final disposal; and
14. the extent to which the facility operations, alone or in conjunction with other facilities, will contribute to the establishment and maintenance of a statewide integrated solid waste management system which will protect the public health and environment and conserve the natural resources of the Commonwealth.

(b) Combustion Facilities and Handling Facilities. In addition to the criteria set forth under 310 CMR 19.038(2)(a), the Department shall consider whether the following criteria are met when reviewing an application for a permit or permit modification for combustion facilities and handling facilities site assigned before June 8, 2001. Facilities or expansions of facilities site assigned in accordance with the criteria at 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities* that were promulgated on or after June 8, 2001 shall comply with the siting criteria of that site assignment:

19.038: continued

1. the construction, operation and maintenance of the facility, if located or proposed to be located in a Zone II area or Interim Wellhead Protection Area does not result in an adverse impact to an existing or potential public or private water supply well;
 2. the waste handling areas are not within the following distances unless, as applicable, a waiver has been obtained under 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities* or a variance is obtained under 310 CMR 19.080:
 - a. 100 feet of the nearest edge of the property boundary, provided that a shorter distance consistent with the necessary operating and maintenance requirements of the facility may be approved for that portion of the waste handling area which borders a solid waste management facility;
 - b. 250 feet of an existing or potential private water supply well;
 - c. 250 feet of an occupied residential dwelling, prison, bedded health care facility, lower educational institution or children's pre-school, excluding equipment storage or maintenance structures, if a solid waste handling facility, and 500 feet if a solid waste combustion facility;
 - d. a resource area protected by the Wetlands Protection Act, M.G.L. c. 131, § 40, and the regulations promulgated thereunder at 310 CMR 10.00: *Wetlands Protection*, including the 100 year floodplain;
 - e. 500 feet upgradient or 250 feet downgradient of a surface drinking water supply.
- (c) Landfills. In addition to the criteria set forth under 310 CMR 19.038(2)(a) the Department shall consider whether the following criteria are met when reviewing an application for a permit or permit modification for a landfill site assigned before June 8, 2001. Facilities or expansions of facilities site assigned in accordance with the criteria at 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities* that were promulgated on or after June 8, 2001 shall comply with the siting criteria of that site assignment:
1. the landfill is not located:
 - a. in the Zone II area of an existing or potential public water supply well;
 - b. within 15,000 feet upgradient of an existing public water supply well unless a preliminary Zone II determination has been completed and approved by the Department and the Department determines that the landfill is not located in the Zone II area;
 - c. in the Interim Wellhead Protection Area of an existing or potential public water supply well, unless a preliminary Zone II delineation has been approved by the Department and the Department determines that the landfill is not located in the Zone II area;
 - d. in the recharge area for a sole source aquifer, unless:
 - i. there are no existing or potential public ground water supplies downgradient of the site;
 - ii. there are no existing or potential private ground water supplies downgradient of the site; however, the applicant may have the option of providing an alternative public water supply to replace all the existing or potential downgradient private groundwater supplies; and
 - iii. there is a sufficient existing or potential public water supply to meet the municipality's projected needs.
 2. the leachate containment structure of a landfill shall not be located within a resource area protected by the Wetlands Protection Act, M.G.L. c. 131, § 40, including the 100 year floodplain;
 3. the outermost limits of the waste deposition area for new landfills or expansions of landfills shall not be within the following distances unless, as applicable, a waiver has been obtained under 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities* or a variance has been obtained under 310 CMR 19.080:
 - a. 100 feet of the nearest edge of the property boundary, provided that a shorter distance consistent with the necessary operating and maintenance requirements of the facility may be approved for that portion of the waste deposition area which borders a solid waste management facility;
 - b. 500 feet of a private water supply well;
 - c. 500 feet of an occupied residential dwelling, bedded health care facility, prison or lower educational institution or children's pre-school, excluding equipment storage or maintenance structures;

19.038: continued

- d. a resource area protected by the Wetlands Protection Act, M.G.L. c. 131, § 40, and the regulations promulgated thereunder at 310 CMR 10.00: *Wetlands Protection*, including the 100 year floodplain;
 - e. 2500 feet upgradient or 500 feet downgradient of a surface drinking water supply;
 - f. 250 feet upgradient of a perennial watercourse that drains to a surface drinking water supply where the landfill is within one mile of the surface drinking water supply; or
 - g. 250 feet of a lake, pond or river (not including a stream) as defined in 310 CMR 10.00: *Wetlands Protection*, other than a drinking water supply; or
- (d) Additional Landfill Criteria. In addition to the criteria set forth at 310 CMR 19.038(2)(a) and (c), the Department shall consider whether the following criteria, in reviewing an application for a permit or a modification for a landfill, have been met:
- 1. the landfill does not represent a threat to public health, safety or the environment due to concentration or migration of explosive gases, excluding gas control or recovery system components, at the facility or beyond the facility property boundary;
 - 2. the landfill is not located in a seismic impact zone unless all containment structures are designed to resist the maximum horizontal acceleration in lithified earth material for the site;
 - 3. the landfill is not located in an unstable area unless engineering measures have been incorporated into the landfill's design to ensure the integrity of structural components, including but not limited to liners, leachate collection systems and final covers, will not be disrupted. The owner or operator shall consider the following factors, at a minimum, when determining whether an area is unstable:
 - a. on-site or local soil conditions that may result in significant differential settling;
 - b. on-site or local geologic or geomorphologic features; and
 - c. on-site or local human-made features or events (both surface and subsurface); and
 - 4. the landfill is not located within 200 feet (60 meters) of a fault that has had displacement in Holocene time unless the owner or operator demonstrates that an alternative setback of less than 200 feet will prevent damage to the structural integrity of the landfill.

19.041: Authorization to Construct

- (1) General. The following shall not be constructed except in accordance with a valid authorization to construct issued by the Department in writing:
- (a) a new or expanded facility for which a permit has been issued;
 - (b) modifications to a facility for which a permit modification has been issued, except for a transfer station that is not a C&D waste transfer station; or
 - (c) a new phase in the case of a landfill being developed in phases.
- (2) Filing. The owner or operator shall file a request for an authorization to construct in writing with the Department in the appropriate Regional Office. However, unless otherwise indicated, the Department shall consider an application for a solid waste management facility permit or an application to modify a permit to constitute a request for an authorization to construct.
- (3) Issuance. In general, the Department shall issue an authorization to construct when the solid waste management facility permit or permit modification is issued, except in the case of phased construction of a landfill where an authorization to construct may be required for each phase and except where the Department determines that any of the following permits has not been applied for, as applicable, or granted at the time the solid waste management facility permit is to be granted:
- (a) Massachusetts Surface Water Discharge Permit for point source discharges to surface waters pursuant to M.G.L. c. 21, § 43 and 314 CMR 3.00: *Surface Water Discharge Permit Program*;
 - (b) ground water discharge permit pursuant to M.G.L. c. 21, § 43 and 314 CMR 5.00: *Ground Water Discharge Permit Program*;
 - (c) storm water discharge permit pursuant to M.G.L. c. 21, § 43, and 40 CFR 122 and 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*;

19.041: continued

(d) sewer connection permit for the discharge of collected and or pre-treated leachate into a municipal sewer system as required by 314 CMR 7.00: *Sewer System Extension and Connection Permit Program*;

(e) Federal Water Pollution Control Act section 404 dredge and fill permit relative to surface water pursuant to the Federal Water Pollution Control Act; and

(f) other local, state and federal permits, approvals or authorizations that are required for the construction of the facility.

(4) Sunset. If construction of the facility or first phase thereof has not been completed or no solid waste has been processed or disposed at the facility within three years of the date of issuance of an authorization to construct the authorization shall expire. The owner or operator may apply to the Department for an extension of the authorization at any time prior to or after it expires.

(5) Enforcement. The issuance of an authorization to construct shall not limit the Department's right to take enforcement action, including, without limitation, the suspension, revocation or modification of the permit or revocation of the authorization to construct if 310 CMR 19.000 or any condition of the permit or authorization to construct is violated.

(6) Deed Notice. In accordance with M.G.L. c. 111, § 150A, the owner or operator of a facility shall record a notice of the authorization to construct permit in the registry of deeds or, if the site is registered land, in the registry section of the land court for the district wherein the land lies. The notice shall be captioned "Notice of Authorization to Construct a Solid Waste Facility" and shall contain a title reference citing the source of title of the land on which the facility is to be constructed (*i.e.*, the deed with book and page number if recorded land; probate number if acquired through a probate proceeding; and certificate of title number if registered land).

19.042: Authorization to Operate

(1) General. No person shall operate a facility, or if a new or existing facility is developed in phases, operate in any new phase of a facility, without a valid authorization to operate issued by the Department in writing.

(2) Transfer Station Exclusion. 310 CMR 19.042(1) does not apply to a transfer station, except a C&D waste transfer station.

(3) Filing. The applicant shall file a request for an authorization to operate in writing with the Department in the appropriate Regional Office.

(4) Issuance. An authorization to operate shall only be issued after the Department is persuaded by the applicant that:

(a) appropriate financial assurance has been secured in accordance with 310 CMR 19.051;

(b) as-built plans, signed and stamped by a registered professional engineer, have been submitted where required by the Department;

(c) the deed notice regarding the authorization to construct a solid waste facility has been recorded or registered as required pursuant to 310 CMR 19.041(6); and

(d) the construction of the facility or phase thereof is complete and the facility is operational. For the purposes of 310 CMR 19.042 a facility shall be considered complete when:

1. the facility has been constructed and prepared in conformance with the approved design plan required under 310 CMR 19.030(3), including the recycling and composting components of that plan;

2. the ditches, drains, roads, fences, water lines, collection systems, and other appurtenances shown on the approved plans are complete and functional;

3. all equipment needed for normal operation of the facility is available and fully operational;

4. all site preparation for the first six months of operation of a new facility or appropriate period for the phase, if applicable, is completed;

5. sufficient number of qualified staff and supervision is available to carry out the normal operation and maintenance of the facility in accordance with approved plans;

19.042: continued

6. approved recycling and composting activities will be implemented as approved in accordance with an implementation schedule approved by the Department;
7. the applicant has provided proof of receipt of all applicable other state, local and federal permits that are required for the operation of the facility; and
8. the facility is otherwise in compliance with all applicable portions of 310 CMR 19.000.

(5) Renewal of an Authorization to Operate.

(a) General. An operator planning to continue to use a facility after the expiration date, if any, of the authorization to operate established pursuant to 310 CMR 19.042 shall:

1. submit an application for renewal of an authorization to operate, at least 180 days prior to the date of expiration, which shall include all appropriate information relating to the operation of the facility including, without limitation,
 - a. a discussion of any changes in operation and monitoring of the facility during the previous authorization period;
 - b. a narrative summary of the monitoring data for the prior five years of operation;
 - c. a report covering the entire monitoring history of the facility including a detailed outline of the facility's monitoring program, all monitoring results organized in a clear and concise table with an explanation of any missing or non-representative data, an analysis of any trends, any proposals for upgrading the monitoring program, and a discussion of monitoring results;
 - d. a report containing information on leachate generation rates and the management or fate of that leachate, changes in operation and equipment, operational problems and proposed solutions, and plans to upgrade or improve facility operations to better comply with environmental laws and regulations and a record of all violations of requirements of 310 CMR 19.000 or permit conditions during the authorization period;
 - e. a determination, with documentation, of the remaining approved capacity or life expectancy of the facility;
 - f. documentation that the facility has been and will continue to be meeting its recycling and waste restriction requirements;
 - g. adequate financial assurance has been established; and
 - h. a demonstration that the facility is operating in compliance with all applicable requirements of 310 CMR 19.000.
2. notify the municipality in which the facility is located as well as the municipalities that are under contract to the facility.

(b) Issuance. The Department, upon review of a renewal application, shall determine whether the applicant has satisfactorily complied with all terms, conditions and requirements of the facility permit, the expiring authorization to operate and 310 CMR 19.000.

1. If the Department determines that the applicant has complied hereunder, the authorization to operate may be reissued.
2. If the Department determines that the applicant has not complied hereunder, or other circumstances exist which indicate noncompliance with any provisions of 310 CMR 19.000 or the permit or any authorizations, the Department shall take appropriate action to secure compliance including, but not limited to, a denial of reissuance. If the Department refuses to renew the authorization the permittee shall have a right to a hearing in accordance with M.G.L. c. 30A, § 13.

(c) Conditions and Terms of a Renewal. The Department may include all conditions of the original authorization to operate and pursuant to 310 CMR 19.036 may establish new conditions for the authorization to operate based on the owner's and operator's record of compliance with applicable laws and regulations, the site assignment, plan submissions, public health and environmental impacts of the facility, revisions of 310 CMR 19.000, the facility financing requirements and remaining capacity of the facility.

(6) Enforcement. The issuance of an authorization to operate shall not limit the Department's right to take enforcement actions, including, without limitation, the suspension, revocation or modification of the permit or revocation of the authorization to operate, if any provision of 310 CMR 19.000 or any condition of the permit, authorization to operate or any order issued by the Department is violated.

19.043: Conditions for Permits and Other Approvals

- (1) Items Subject to Conditions. The Department may grant a permit or an authorization subject to such conditions as are necessary to ensure compliance with 310 CMR 19.000 or to protect the public health, safety, or the environment including, without limitation: the period of time for which a permit or authorization is valid, phased development of construction or operations, minimum recycling or composting requirements, the kind or type of waste allowed, site assignment conditions, inspection, financial assurance, technical data gathering, data analysis, quality control, quality assurance, sampling, monitoring, reporting and verification.
- (2) Condition(s) on Amount of Solid Waste Accepted. Every permit or authorization to operate shall contain one or more limits on the amount of solid waste which the facility can accept during a fixed period of time, not to exceed one year.
- (3) Liability. No permit shall be issued except upon the condition that the holder shall be liable jointly and severally with the owner or operator for any civil or administrative penalties assessed or orders entered by the Department arising from any improper facility operation, maintenance, closure, post-closure or other activities performed in violation of the Department's regulations and applicable statutes. The Department may, in its sole discretion, enforce said condition against the holder in any enforcement action taken pursuant to applicable statutes or regulations. Nothing in 310 CMR 19.043 shall:
 - (a) limit the liability of owners or otherwise legally responsible parties from these or any other applicable statutes or regulations;
 - (b) limit the right of the Department to issue notices, orders, or levy penalties for violations of these and other applicable regulations or permit conditions, to facility owners, holders, or otherwise legally responsible parties;
 - (c) bar any otherwise valid agreement to insure, hold harmless or indemnify the holder for any liability arising out of operation of the facility;
 - (d) limit the liability of owners or otherwise legally responsible parties for damages to natural resources of the Commonwealth or reimbursement of the Commonwealth for any cleanup costs for the facility site incurred by the Commonwealth; or
 - (e) affect the right of the holder to seek contribution from any joint wrongdoer.
- (4) Financial Conditions. The Department may condition a permit or authorization on the applicant submitting such proof as the Department deems necessary to establish that at the time of permit and during the projected operating period the applicant shall have adequate funds to operate and maintain the facility in compliance with applicable statutes and regulations and permit conditions. Such financial conditions may require, without limitation, the periodic submission to the Department of approved operating budgets and fee schedules and may compel the cessation of operations and closure of the facility in the absence of adequate financial ability.
- (5) Standard Conditions. The following conditions shall apply to all owners and operators:
 - (a) Duty to Comply. The owner and operator shall comply at all times with the terms and conditions of the permit or other approval, 310 CMR 19.000, M.G.L. c. 111, § 150A, and all other applicable state and federal statutes and regulations, including, but not limited to, the permit review criteria at 310 CMR 19.038(2)(a)1. through 10.
 - (b) Duty to Maintain. The owner and operator shall always operate and maintain all facilities, environmental control and monitoring systems, vehicles and equipment as required by 310 CMR 19.000 or by the facility permit or other approval.
 - (c) Duty to Halt or Reduce Activity. The owner and operator shall halt or reduce activity whenever necessary to maintain compliance with 310 CMR 19.000 or the conditions of the permit or other approval, or to prevent an actual or potential threat to the public health, safety or the environment.
 - (d) Duty to Mitigate. The owner and operator shall remedy and shall act to prevent all potential and actual adverse impacts to persons or the environment resulting from non-compliance with 310 CMR 19.000 or terms or conditions of the permit or other approval. The owner and operator shall repair at his own expense all damages caused by such non-compliance.
 - (e) Duty to Provide Information. The owner and operator shall furnish to the Department, within a reasonable time, any information which the Department may request and which is deemed by the Department to be relevant in determining whether cause exists to modify, revoke, or suspend a permit or other approval, or to determine if the owner and operator are complying with 310 CMR 19.000 or the permit or other approval.

19.043: continued

- (f) Entries and Inspections. The owner and operator shall allow personnel or authorized representatives of the Department, without warrant, upon presentation of Department- issued identification to enter the facility to:
1. investigate, sample and inspect any records, condition, equipment, operation, practice or property at the facility relating to regulated activities;
 2. to determine and enforce compliance with M.G.L. c. 21A, §§ 2 and 8, St. 1987, c. 584, M.G.L. c. 21H, M.G.L. c. 111, §§ 150A and 150A½ and/or 310 CMR 19.000.
- (g) Records. All records and copies of all reports required by 310 CMR 19.000 shall be kept by the owner or operator for at least three years. This period shall be automatically extended for the duration of any enforcement action. This period also may be extended by order of the Department. All recordkeeping shall be in compliance with 310 CMR 19.009.
- (h) Signatory Requirement. All reports, and information requested or ordered by the Department, shall be signed by a responsible official of the owner or operator in accordance with 310 CMR 19.011(1).
- (i) Duty to Inform. The owner and operator shall have a continuing duty to immediately:
1. correct any incorrect facts in an application, report or other document submitted to the Department;
 2. report or provide to the Department any omitted facts which should have been submitted to the Department at any time;
 3. report to the Department, in advance, each planned change in the facility or activity which might result in non-compliance with a term or condition or a permit or approval;
 4. report to the Department each change in the information listed in the application filed pursuant to 310 CMR 19.030;
 5. report by the next business day any emergency condition (such as, but not limited to, a fire) that will have an extended impact on facility operations or pollution control, unless required to notify on a different schedule in accordance with 310 CMR 19.132 or 310 CMR 40.0000: *Massachusetts Contingency Plan*; and
 6. notify the Department of any change in the owner's or operator's name or mailing address.
- (j) Notification of Bankruptcy. The owner and operator shall notify the Department by certified mail of the commencement of a voluntary or involuntary proceeding pursuant to Title 11 (Bankruptcy) of the United States Code in which the owner or operator is named as debtor within ten days after commencement of the proceeding.

NON-TEXT PAGE

19.044: Transfer of Permits

General. No sale, assignment, or transfer of the rights or privileges, or effective control of such rights or privileges, granted under a permit to establish, expand, construct, operate or maintain a facility shall be valid until a responsible official of the transferee submits a transfer certification (on a form prepared by the Department) in accordance with 310 CMR 19.011(1) to the Department indicating:

- (a) proof that notice that the facility is operating or was operated has been recorded in the registry of deeds, or if the site is registered land, in the registry section of the land court for the district wherein the land lies. The notice shall be captioned "Notice of Solid Waste Facility" and shall contain a title reference citing the source of title of the land on which the facility is to be constructed (*i.e.*, the deed with book and page number if recorded land; probate number if acquired through a probate proceeding; and certificate of title number if registered land). This notice shall be incorporated either in full or by reference into all future deeds, and any other instrument of transfer, which convey an interest in and/or a right to use the land on which the facility or a portion thereof, is located;
- (b) the agreement provides that the transferee is responsible to correct any and all conditions at the site or facility which result in a threat to public health, safety or the environment or constitute violations of the site assignment, laws, regulations or conditions of the permit, approvals, or authorizations existing at the time of transfer whether or not such conditions are the subject of a Department enforcement action prior to the date of the transfer. A transfer of a permit shall not relieve previous owners of liability for the site under M.G.L. c. 21E or c. 21H; and
- (c) the transferee has obtained financial assurance as required under 310 CMR 19.051. Where financial assurance is required no transferee shall operate without said financial assurance.

19.045: Facility Closure and Post-closure

- (1) General. Any facility that stops accepting solid waste voluntarily or in accordance with any permit, authorization or order issued by the Department or a court of competent jurisdiction or under any other circumstances shall comply with the requirements of 310 CMR 19.045.
- (2) Notification of Voluntary Closure. The owner and/or operator shall notify the Department no later than six months prior to the date that the facility will stop accepting solid waste.
- (3) Compliance with Regulations. Closure activities shall be carried out in compliance with all applicable regulations and the permit. Landfills shall meet the specific closure requirements established at 310 CMR 19.140: *Landfill Closure Requirements*.
- (4) Completion of Closure. A facility shall be deemed closed on the date of the Department's written determination that the closure of the facility has been completed in accordance with the final closure/post-closure plan.

19.050: Private Facility Tax

- (1) Authority. 310 CMR 19.050 is promulgated pursuant to M.G.L. c. 16, § 24A, and St. 1987, c. 584.

19.050: continued

(2) Resource Recovery Facilities. The operator of a privately owned or operated resource recovery facility shall pay a tax in accordance with 310 CMR 19.050(5) and M.G.L. c. 16, § 24A to the municipality in which the facility is located. This tax shall be in lieu of all taxes, fees, charges or assessments imposed by the municipality in which the facility is located, except for real estate taxes imposed solely upon the land on which the facility is located. For purposes of 310 CMR 19.050, "resource recovery facility" means a facility utilizing processes for reclaiming the material or energy value from solid wastes.

(3) Landfills. The owner or operator of a landfill, where that person is other than a town or agency of the commonwealth, shall pay a tax in accordance with 310 CMR 19.050(5) and M.G.L. c. 16, § 24A to the municipality in which the facility is located. This tax shall be in lieu of all taxes, fees, charges or assessments imposed by the municipality in which the facility is located, except for real estate taxes imposed solely upon the land on which the facility is located. Where the owner and operator are both private and separate entities the operator shall pay said tax.

(4) Exceptions. The owners or operators of the following facilities are not subject to the provisions of 310 CMR 19.050:

- (a) landfills used by the owner for the sole disposal of solid waste generated from the owner's premises; and
- (b) the combustion facility located in Saugus pursuant to St. 1985, c. 84 for which there is a pre-existing agreement.

(5) Amount of the Tax.

(a) Base Rate. The tax rate shall be \$1.00 per ton of solid waste processed. For the purposes of 310 CMR 19.050 the term "processed" means the acceptance or handling of solid waste or other discarded materials subject to 310 CMR 19.000 at a combustion facility or landfill.

(b) Annual Inflation Adjustment. The tax rate shall be adjusted each January 1st by the percentage change of the Boston Consumer Price Index for all urban consumers (BCPI) for the previous 12 months computed using the September to September figures for the BCPI. The first adjustment shall be made on January 1, 1981 and further adjustments shall be made every succeeding January 1.

(6) Reporting and Payment.

(a) General. All persons subject to the requirements of 310 CMR 19.050 shall file a tonnage report on a form as may be supplied by the Department on or before the 20th of each month.

(b) Content. The tonnage report shall indicate the total tons of solid waste processed at the facility in the preceding calendar month and the amount of tax owed.

(c) Filing. The tonnage report shall be signed and certified in accordance with 310 CMR 19.011 and submitted to the board of health in the municipality in which the facility is located.

(d) Payment. The payment of any tax owed pursuant to the requirements of 310 CMR 19.050 is due on the due date of the tonnage report.

19.051: Financial Assurance Requirements

(1) Applicability. The provisions of 310 CMR 19.051 apply to:

- (a) landfills; and
- (b) other facilities which the Department determines on a facility specific base should provide such financial assurance.

19.051: continued

(2) Financial Responsibility for Closure, Post-Closure and Corrective Action.

(a) The owner or operator of a facility identified in 310 CMR 19.051(1) shall establish or obtain, and continuously maintain, financial assurance that is adequate to assure the Department that the owner or operator is at all times financially capable of complying with the provisions of 310 CMR 19.00 governing the closure of the facility and its post-closure maintenance. An owner or operator of a facility shall meet this financial assurance obligation by using any of the methods authorized in 310 CMR 19.051 (an approved financial assurance mechanism) and shall file with the Department and maintain in current form approved documents constituting or evidencing compliance with this obligation. Where the Department establishes a form for a financial assurance instrument the instruments submitted must be identical to the approved form. Where the Department does not establish a form the applicant shall submit a draft of the proposed financial assurance mechanism for Department approval.

(b) An approved financial assurance mechanism shall be in full effect on or before the date that an owner or operator of a facility receives an authorization to operate under 310 CMR 19.042 and shall remain in full force and effect until the owner or operator obtains a release from this obligation pursuant to the provisions of 310 CMR 19.051(11). The Department shall not issue or renew an authorization to operate unless an owner or operator first complies with the provisions of 310 CMR 19.051 and may, pursuant to 310 CMR 19.081, revoke an approval, permit or authorization previously issued or take other appropriate enforcement should an owner or operator fail to remain in compliance with the provisions of 310 CMR 19.051.

(c) The initial and revised amounts of an approved financial assurance mechanism shall be no less than the estimate of the cost of closure and post-closure maintenance of the facility submitted to and approved by the Department according to the provisions of 310 CMR 19.051(5). No financial assurance mechanism shall be terminated by an owner or operator without the approval of the Department.

(d) An approved financial assurance mechanism shall be structured so that the Department shall be a party to said mechanism to the extent that it shall have the right to obtain, without the consent of the owner or operator, exclusive direction and control over the transfer, use and disbursement of the secured funds or performance benefits to perform approved closure and post-closure maintenance or secure reimbursement for costs incurred for so performing upon its determination that an owner or operator has failed in whole or in part to carry out closure or post-closure requirements in accordance with 310 CMR 19.000 or any plan or permit conditions or orders issued hereunder.

(e) Effective April 9, 1994, the Department may order the owner or operator of a municipal solid waste landfill required to perform corrective action under 310 CMR 19.151 to establish or obtain, no later than 120 days after the corrective action remedy has been selected, and continuously maintain financial assurance which is adequate to assure the Department that the owner or operator is at all times capable of complying with the provisions of 310 CMR 19.000 governing the performance of corrective actions. Except as may be expressly provided herein or in an order of the Department, the provisions of 310 CMR 19.000 governing the estimation, establishment, revision, release and approved mechanisms of closure and post closure financial assurance shall also apply to corrective action financial assurance.

(3) Transfer of Permit, Authorization, or Other Interest. No person may transfer or obtain by any form of transfer any permit, authorization, or interest in the ownership, possession, or operation of a facility without first complying with the applicable provisions of 310 CMR 19.051.(4) Demonstration of Compliance with Financial Assurance Requirements.(a) Existing Landfills. An owner or operator of an existing landfill shall:

1. as a condition of continued operation under a prior plan approval or approval of an application for a permit, modification or authorization to operate provide to the Department documents constituting or evidencing an approved financial assurance mechanism adequate to defray the cost of closure of any portion of the facility which has received waste but has not been closed in accordance with an approved plan as well as the post-closure maintenance of any such area and the closure and post-closure maintenance costs of the area currently approved to accept waste; and

19.051: continued

2. as a pre-condition to obtaining subsequent authorization to operate or expansion modifications provide the Department with documents constituting or evidencing an approved financial assurance mechanism adequate to defray the cost of the closure and post-closure maintenance of each subsequent operating phase.
 3. The Department may allow an existing facility owner or operator a conditional grace period to meet the financial assurance requirements described in 310 CMR 19.051(4)(a)1. for inactive areas of the facility provided the owner or operator demonstrates that during the time the applicant owned or operated the facility a closure performance bond or another approved financial assurance mechanism in accordance with 310 CMR 19.25(4): *Completion of Landfill* (1971 Landfill Regulations) was maintained, and that an approved closure and post-closure trust fund or Enterprise fund is established and is fully funded over a pay-in period which is not greater than the approved life of the current operating phase of the facility minus one year or the life of the facility minus one year if it does not operate in phases. For the purpose of 310 CMR 19.051 an inactive area is an area on which waste has been disposed, which has not closed in accordance with Department approved plans and which has not been approved for further waste disposal.
 4. A private owner or operator of an existing landfill, shall make the submission described in 310 CMR 19.051(4)(a) upon the earlier of filing an application for a solid waste management facility permit in accordance with the schedule set forth at 310 CMR 19.020(3), an application to operate or an application for a permit or modification to expand facility capacity.
 5. A public owner or operator of an existing landfill shall make the submissions described in 310 CMR 19.051(4)(a) upon written notice or order from the Department.
 6. In lieu of submitting all or part of the financial assurance mechanism the owner or operator may, no later than the dates set forth at 310 CMR 19.051(4)(a)4. or 5. submit plans for final closure of the inactive portions of the facility and complete closure of said areas in accordance with approved plans on an expedited schedule to be determined by the Department.
- (b) New Landfills. An applicant for a permit to construct and operate a landfill shall:
1. in addition to the submission required by 310 CMR 19.030, provide to the Department documents constituting or evidencing an approved financial assurance mechanism adequate to defray the cost of closure and post-closure maintenance of the first operating phase of the proposed landfill and, if additional costs are involved, of the entire facility; and
 2. as a pre-condition to obtaining an authorization to operate under 310 CMR 19.042 for each subsequent phase, provide to the Department documents constituting or evidencing an approved financial assurance mechanism adequate to defray the cost of closure and post-closure maintenance of each subsequent operating phase of the proposed landfill and, if additional costs are involved, of the entire facility.
- (c) Other Solid Waste Management Facilities. A person seeking authorization to operate a solid waste management facility other than a landfill shall, where required by the Department and as a pre-condition to obtaining an authorization to operate under 310 CMR 19.042, provide to the Department documents constituting or evidencing approved financial assurance mechanisms adequate to defray the cost of closure and post-closure maintenance of the facility.
- (5) Estimation of Costs for Closure and Post-Closure Maintenance.
- (a) An owner or operator of a proposed solid waste management facility required to provide an approved financial assurance mechanism shall prepare and submit to the Department, as a part of the permit application required under 310 CMR 19.030 a written estimate, unadjusted for time, inflation, return on invested funds, or other purely financial factors, of the cost of a third party closing and performing post-closure maintenance of the facility. This estimate shall be based upon the closure and post-closure plans for the facility required under 310 CMR 19.000 and equal the cost of closing the facility and providing post-closure maintenance at that point in the facility's active life when the manner and extent of its operations would make closure and post-closure most expensive.

19.051: continued

(b) An owner or operator of an existing facility required to provide an approved financial assurance mechanism shall prepare and submit to the Department, as a part of the permit application required under 310 CMR 19.030(4), an application to operate or application for a modification to expand capacity, a written estimate, unadjusted for time, inflation, return on invested funds, or other purely financial factors, of the cost of closing and providing post-closure maintenance of those portions of the facility in which waste has been disposed and not closed in accordance with an approved plan, the area in which it is currently authorized to operate and, if appropriate, the proposed expansion area. This estimate shall be based upon the closure and post-closure plans for the facility required under 310 CMR 19.000 and equal the cost of closing the facility and providing post-closure maintenance at that point in the facility's active life when the manner and extent of its operations would make closure and post-closure most expensive.

(c) A written estimate which conforms to the requirements set forth in 310 CMR 19.051(5)(a) or (b) shall be submitted with each application for authorization to operate in a subsequent operating phase or application for an expansion of capacity.

(d) Where a facility is operated or is to be operated in phases an owner or operator may allocate proportions of the estimate of the cost of closure and post-closure maintenance to each such phase for the purpose of complying with the requirements of 310 CMR 19.051(4)(a) or (b). Such an allocation may not result in the under-estimation of the cost of closure and post-closure of any such phase or of the entire facility at that point in the facility's active life when the manner and extent of its operations would make closure and post-closure maintenance most expensive. Where the facility is to be developed in phases the estimate shall include in the estimate the cost of integrating the closed phases into prospective phases.

(e) The Department shall review the estimate submitted and notify the applicant if it determines the estimate to be adequate. The Department may determine upon review of an estimate that its amount is inadequate to defray either or both the cost of closure or post-closure maintenance of the facility. Upon such a determination, the Department may require the applicant to submit a revised estimate or it may adjust the estimate and use the adjusted estimated cost rather than the estimated cost to establish the minimum amount of the financial assurance mechanism. If the Department determines to adjust the estimate and it increases the amount of the estimate by 10% or more, the provisions of 310 CMR 19.051(7) apply to the estimate as if it were a revised estimate determined pursuant to the provisions of that sub-section.

(f) An owner or operator of a facility may propose that the estimate of the cost of closing the facility or of providing post-closure maintenance prepared and submitted to the Department in accordance with the provisions of 310 CMR 19.051(5)(a), (b) or (c) be adjusted by the consideration or application of such financial factors as may reasonably affect the determination of the amount of money required to assure the Department that the owner or operator is at all times financially capable of complying with the provisions of 310 CMR 19.000 governing the closure of the facility and its post-closure maintenance. If the Department determines to adjust the estimated cost, the adjusted estimated cost, rather than the estimated cost shall be the minimum amount of the financial assurance mechanism.

(g) All submitted estimates shall be certified by a Massachusetts registered professional engineer except as otherwise approved by the Department.

(6) Revision of Estimates of Closure and Post-Closure Costs.

(a) An owner or operator of a facility shall revise the estimate of the cost of closure and post-closure maintenance submitted to the Department pursuant to 310 CMR 19.051(5) every year and every second year shall submit the revised estimate in written form, accompanied by a detailed explanation of its method of calculation, to the Department on or before June 1 of the year to which the revised estimate relates.

(b) Unless otherwise approved by the Department, a revision of the estimate of the cost of closure and post-closure maintenance of a facility shall be computed using the following formula:

19.051: continued

Revised Present Estimate of Cost: $C_p = C_o \times I_p/I_o + C_oC$ where:

- C_p = (present) revised cost estimate
 C_o = (original) cost estimate as filed pursuant to 310 CMR 19.051(5)
 I_p = (present) index value
 I_o = (original) index value at time of filing pursuant to 310 CMR 19.051(5) and where the index is the so-called "Construction Cost Index" published in the periodical Engineering News Record.
 C_oC = Change in compliance costs as a result of changes in site conditions, changes in law, regulations, permit conditions, judicial or administrative orders or other significant changes.

(c) An owner or operator of a facility shall, in addition to submitting to the Department the adjustment pursuant to 310 CMR 19.051(6)(a), revise the estimate of the cost of closure and post-closure maintenance of a facility and submit such revised estimate to the Department within 30 days of the date that the Department approves a modification of the facility permit pursuant to 310 CMR 19.039 or 310 CMR 19.040 which would affect said closure or maintenance costs.

(d) An owner or operator of a facility shall maintain records of the calculation and determination of the original and all revisions of the estimate of the cost of closure and post-closure maintenance of a solid waste management facility until such time as the owner or operator obtains a release from the obligation imposed by 310 CMR 19.051(2).

(7) Increase in the Amount of Financial Assurance.

(a) An owner or operator of a facility shall, upon determining a revised estimate of the cost of closure or post-closure maintenance of the facility exceeds by 10% the amount of the applicable approved financial assurance mechanism, promptly notify the Department of the determination and either:

1. increase the amount of the applicable financial assurance mechanism to an amount equal to the full amount of the revised estimate of the cost of closure or post-closure maintenance of the facility; or
2. secure and maintain in compliance with the requirements of 310 CMR 19.051 an additional approved financial assurance mechanism in an amount equal to the difference between the amount of the existing applicable approved financial assurance mechanism and the full amount of the revised estimate of the cost of closure or post-closure maintenance of the facility.

An owner or operator of a facility shall file with the Department and maintain in current form those documents constituting or evidencing compliance with this requirement within 60 days of determining a revised estimate of the cost of closure or post-closure maintenance of the facility that exceeds by 10% the amount of the applicable approved financial assurance mechanism. In the event that the revised estimate is a biennial estimate determined pursuant to the provisions of 310 CMR 19.051(6), an owner or operator shall make such filing no later than June 1 of the year to which the revised estimate applies.

(b) The Department may review the estimate submitted and notify the applicant if it determines the estimate to be adequate. The Department may determine upon review of an estimate that its amount is inadequate to defray either or both the cost of closure or post-closure maintenance of the facility. Upon such a determination, the Department may require the applicant to submit a revised estimate or it may adjust the estimate and use the adjusted estimated cost rather than the estimated cost to establish the minimum amount of the financial assurance mechanism.

(8) Decrease in the Amount of Financial Assurance. An owner or operator of a solid waste management facility may, upon determining a revised estimate of the cost of closure or post-closure maintenance of the facility, decrease the amount of the applicable financial assurance mechanism to an amount equal to the full amount of the revised estimate of the cost of closure or post-closure maintenance of the facility, having first requested and received the written approval of the Department. The Department shall approve the decrease upon its determination that the proposed decreased amount of the financial assurance mechanisms equals or exceeds the necessary cost of closure or post-closure maintenance.

19.051: continued

(9) Procedure Governing the Use of Assured Funds.

(a) The Department shall notify the owner, operator and persons who are parties to the financial assurance mechanism whenever the Department has determined that the owner or operator is not in compliance due to a failure to close or conduct post-closure maintenance in accordance with the applicable regulations, permits or orders. No less than 21 days after such notification the Department may exercise its rights under the financial assurance mechanism to secure control over and direct the transfer, use and disbursement of the security for the purpose of effecting closure and post-closure maintenance including but not limited to:

1. directing the holder of the financial assurance mechanism to perform actions intended to bring the facility into compliance; and
2. directing the holder of the financial assurance mechanism to reimburse the Department for actions it or its agents has performed to bring the facility into compliance.

(b) After beginning final closure, an owner or operator or any other person authorized by the Department to perform closure may request reimbursement for closure expenditures by submitting itemized bills or other adequate proof of the performance of the work in accordance with the approved closure or post-closure plans. After making a determination that the work has been performed in compliance with the plan(s) the Department may direct the holder of the funds under the financial assurance mechanism to reimburse the party performing the work or release a proportionate amount of the secured funds. The Department may withhold reimbursement or release of such amounts it deems prudent until it determines, in accordance with 310 CMR 19.051(11) that the owner or operator is not required to maintain financial assurance for closure or post-closure.

(10) Cancellation or Termination of an Approved Financial Assurance Mechanism. An owner or operator of a facility may apply to the Department for reduction, cancellation or termination of an outstanding financial assurance mechanism established pursuant to 310 CMR 19.051(2). The application shall detail one of the following reasons in support of the application: the substitution of an alternative assurance mechanism, transfer of an interest in the facility in accordance with 310 CMR 19.044, an approved decrease in the amount of required financial assurance in accordance with 310 CMR 19.051(8), activities which have taken place under 310 CMR 19.051(9)(b) or the Department's termination of the financial assurance obligation by granting a release to the owner or operator pursuant to the provisions of 310 CMR 19.051(11).

(11) Release from Financial Assurance Requirements.

(a) Closure. The owner or operator of a facility shall be released in whole or in part from the requirement to provide financial assurance for closure upon receiving written notification from the Department that closure has been completed in accordance with the closure plan and permit conditions and in compliance with 310 CMR 19.000. An owner or operator of a facility may subsequently submit to the Department such documents as may be necessary to cancel or terminate the approved financial assurance mechanism that the owner or operator is no longer obligated to maintain.

(b) Post-Closure. The owner or operator of a facility shall be released in whole or in part from the obligation to provide and maintain a financial assurance mechanism for post-closure maintenance of the facility upon receiving written notification from the Department that the post-closure period has expired and that post-closure maintenance of the facility has been completed in compliance with 310 CMR 19.000. An owner or operator of a facility may subsequently submit to the Department such documents as may be necessary to cancel or terminate a financial assurance mechanism that the owner or operator is no longer obligated to maintain.

(12) Approved Financial Assurance Mechanisms. The owner or operator of a facility may meet the obligation to maintain financial assurance that is adequate to assure the Department that the owner or operator is at all times financially capable of complying with the provisions of 310 CMR 19.000 governing the closure of the facility and its post-closure maintenance through the use of one or more of the approved financial assurance mechanisms specified in 310 CMR 19.051(12).

19.051: continued

(a) Closure, Post-Closure or Corrective Action Trust Fund.

1. An owner or operator may satisfy the requirements of 310 CMR 19.051(2) by establishing a closure or post-closure trust fund that conforms to 310 CMR 19.051(12)(a) and by sending an originally signed duplicate of the trust agreement to the Department within the applicable time period set forth at 310 CMR 19.051(4).
2. The trustee shall be a bank or other financial institution that has the authority to act as a trustee and whose trust operations are regulated and examined by the Massachusetts Commissioner of Banking.
3. The schedule of assets in the trust agreement shall be updated within 60 days after a change in the amount of the current closure or post-closure maintenance estimate which is the subject of the trust agreement.
4. Payments into the trust fund shall be made as follows:
 - a. The first payment shall be made prior to obtaining an authorization to operate as set forth in 310 CMR 19.042. The owner or operator shall submit a receipt from the trustee for this payment to the Department as evidence of payment.
 - b. The private owner or operator of a facility shall make a first payment in an amount equal to the approved closure and post-closure estimate for the facility submitted pursuant to 310 CMR 19.051(5). Payments to the trust as a condition of approval of subsequent permits or authorizations to operate shall be made in amount(s) equal to the approved closure and post-closure maintenance estimates submitted pursuant to 310 CMR 19.051(5).
 - c. A municipal owner of a facility shall make a first payment which shall at least be equal to either the total current closure and post-closure maintenance cost or the current closure or post-closure maintenance cost estimate, divided by the number of years in the pay-in period. The pay-in period may not be greater than the authorized operating life of the current phase minus one year. Payments to the trust as a condition to approval of subsequent authorizations to operate shall be made in amount(s) equal to the approved closure and post-closure maintenance estimates submitted pursuant to 310 CMR 19.051(5).
 - d. Subsequent payments by a municipal owner shall be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment is calculated by the formula:

$$\text{Next Payment} = \frac{\text{CE} - \text{CV}}{\text{Y}}$$

where:

- CE = current closure or post-closure cost estimate
 CV = current value of the trust fund
 Y = number of years remaining in the pay-in period.

5. For an owner or operator making payments into a trust fund used to demonstrate financial assurance for corrective action, the first payment into the trust fund shall be at least equal to one half of the current cost estimate for corrective action, divided by the number of years in the corrective action program in case of corrective action for known releases. This latter period of time is known as the pay-in-period. The amount of subsequent payments shall be determined by the following formula:

$$\text{Next payment} = (\text{RB} - \text{CV}) / \text{Y}$$

where RB is the most recent estimate of the required trust fund balance for corrective action [*i.e.* total costs that will be incurred during the second half of the corrective action period], CV is the current value of the trust fund, and Y is number of years remaining on the pay-in-period.

19.051: continued

6. Notwithstanding the provisions of 310 CMR 19.051(2)(d), a trust fund for a facility owned by a municipality shall be an approved financial assurance mechanism without providing to the Department the right to obtain exclusive direction and control over the trust fund assets provided that the documents establishing the trust require that the funds paid into the trust cannot be withdrawn, transferred, encumbered or disbursed for any purpose other than to meet Department approved closure and post-closure obligations without the prior written consent of the Department.

7. If the owner or operator establishes a trust fund after having used one or more alternate mechanisms specified in 310 CMR 19.051(12) the owner's or operator's first payment must equal the amount that the trust fund would contain if the trust fund had been established initially and payments made in compliance with 310 CMR 19.051(12)(a).

(b) Enterprise Fund

1. A municipal owner may satisfy the requirements of 310 CMR 19.051(2) by establishing a separate account which qualifies as an "Enterprise Fund" pursuant to M.G.L. c. 44, § 53F½ for the purpose of reserving funds to meet its obligation to conduct approved closure and post-closure maintenance and by sending an originally signed duplicate of the documents establishing the fund to the Department within the applicable time period set forth at 310 CMR 19.051(4).

2. Payments shall be made into the reserve fund in accordance with procedure set forth at 310 CMR 19.051(12)(a)4.c. and d.

3. Notwithstanding the provisions of 310 CMR 19.051(2)(d), an Enterprise Fund Account shall be an approved financial assurance mechanism without providing to the Department the right to obtain exclusive control over the Fund provided that the documents establishing the account require that the funds paid into the closure reserve account cannot be withdrawn, transferred, encumbered or disbursed for any purpose other than to meet Department approved closure and post-closure obligations without the prior written consent of the Department.

(c) Surety Bond Guaranteeing Payment.

1. An owner or operator may satisfy the requirements of 310 CMR 19.051(2) by obtaining and filing a surety bond that conforms to 310 CMR 19.051(12)(c) and by sending an originally signed duplicate of the bond to the Department within the applicable time period set forth at 310 CMR 19.051(4).

2. The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the United States Department of the Treasury, or licensed, approved or authorized by the Massachusetts Division of Insurance to secure such risks.

3. An owner or operator who uses a surety bond to satisfy the requirements of 310 CMR 19.051 shall also establish a standby trust fund. Under the terms of the surety bond, all payments made thereunder are deposited by the surety directly into the standby trust fund in accordance with instructions from the Department. This standby trust fund shall meet the requirements in 310 CMR 19.051(12)(a), except that:

- a. an originally signed duplicate of the trust agreement must be submitted to the Department with the surety bond; and
- b. until the standby trust fund is funded pursuant to the requirements of 310 CMR 19.051, the following are not required:
 - i. payment into the trust fund as specified in 310 CMR 19.051(12)(a);
 - ii. annual valuations as required by the trust agreement; and
 - iii. notices of nonpayment as may be required by the trust agreement.

4. The surety bond shall provide the owner or operator shall be in default if the responsible party:

- a. fails to fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of closure of the applicable phase; or
- b. fails to fund the standby trust fund in an amount equal to the penal sum within 21 days after the Department or a court of competent jurisdiction issues an order to begin closure; or
- c. fails to provide an alternate financial assurance mechanism as specified in 310 CMR 19.051(12), and obtain the Department's written approval of the financial assurance mechanism provided, within 90 days after receipt by the owner or operator of a notice of cancellation of the surety bond from the surety.

19.051: continued

5. Under the terms of the bond, the surety shall become liable on the bond obligation when the owner or operator is in default as defined by the bond.

6. The penal sum of the bond shall equal the current approved closure and post-closure cost estimate.

7. Under the terms of the bond, the surety may cancel the bond by sending written notice of cancellation by certified mail to the owner or operator and to the Department. Cancellation may not take effect, however, until at least 120 days after the date of receipt of the notice of cancellation by both the owner or operator and the Department, as shown by the later return receipt.

(d) Surety Bond Guaranteeing Performance.

1. An owner or operator may satisfy the requirements of 310 CMR 19.051(2) by obtaining and filing a surety bond that conforms to 310 CMR 19.051(12)(d) and by sending an originally signed duplicate of the bond to the Department within the applicable time period set forth at 310 CMR 19.051(4).

2. The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the United States Department of the Treasury, or licensed, approved or authorized by the Massachusetts Division of Insurance to secure such risks.

3. The Department may require a surety to establish a standby trust under the terms and conditions set forth at 310 CMR 19.051(12)(c)3.

4. The surety bond shall provide the owner or operator shall be in default if the responsible party:

a. fails to perform closure in accordance with the closure/post-closure plan and other requirements of the permit for the facility whenever required to do so, and perform post-closure maintenance in accordance with the closure/post-closure plan and other requirements of the permit for the facility; or

b. fails to provide an alternate financial assurance mechanism pursuant to 310 CMR 19.051(12), and obtain the Department's written approval of the financial assurance mechanism provided, within 90 days after receipt by the owner or operator of a notice of cancellation of the surety bond from the surety.

5. Under the terms of the bond, the surety shall become liable on the bond obligation when the owner or operator is in default as defined by the bond. When the owner or operator does not perform closure or post-closure maintenance in accordance with approved closure/post-closure plans or applicable permit conditions, the surety shall become liable on the bond obligation to perform closure and post-closure maintenance as guaranteed by the bond and deposit the amount of the penal sum of the bond into the standby trust if one is required to be established.

6. The penal sum of the bond must equal the current closure and post-closure maintenance cost estimates.

7. Under the terms of the bond, the surety may cancel the bond by sending written notice of cancellation by certified mail to the owner or operator and to the Department. Cancellation may not take effect, however, until at least 120 days after the date of receipt of the notice of cancellation by both the owner or operator and the Department, as shown by later return receipt.

8. The surety need not be liable for deficiencies in the performance of closure by the owner or operator for which the Department has released the owner or operator from the requirements of closure and post-closure maintenance, or portions thereof, pursuant to 310 CMR 19.051(11).

(e) Closure and Post-Closure Insurance.

1. An owner or operator may satisfy the requirements of 310 CMR 19.051 by obtaining closure insurance that conforms to the requirements of 310 CMR 19.051(12)(e) and by submitting a certificate of such insurance to the Department within the applicable time period set forth at 310 CMR 19.051(4). The Department may require submission of a duplicate of the complete insurance policy.

2. At minimum, the insurer shall be licensed to transact the business of insurance or authorized or approved to provide insurance as an excess or surplus lines insurer in the Commonwealth of Massachusetts.

19.051: continued

3. The insurance policy shall be issued for a face amount at least equal to the current approved closure and post-closure cost estimate. The term "face amount" means the total amount the insurer is obligated to pay pursuant to the policy. Actual payments by the insurer shall not change the face amount, although the insurer's future liability may be lowered by the amount of such payments.
 4. The insurance policy shall guarantee that funds in an amount equal to the face amount of the insurance policy shall be available to close a phase or facility whenever final closure of a phase or facility occurs and to conduct post-closure maintenance. The policy shall also guarantee that once final closure or post-closure maintenance begins, the insurer shall be responsible for paying out funds up to an amount equal to the face amount of the insurance policy, upon the direction of the Department, to such persons as the Department may specify in writing.
 5. The insurance policy shall provide that the insurer may not cancel, terminate, or fail to renew the closure or post-closure maintenance insurance policy except for the insured's failure to pay the premium or the insurer's refusal to write solid waste management facility closure or post-closure maintenance insurance coverage in Massachusetts. The automatic renewal of the policy shall, at a minimum, provide the insured with the option of renewal at the face amount of the expiring closure insurance policy except in the event of a refusal to write such coverage. If there is a failure to pay the premium or a refusal to write such coverage, the insurer may elect to cancel, terminate, or fail to renew the closure or post-closure maintenance insurance policy by sending notice by certified mail to the owner or operator to the Department. No cancellation shall occur until at least 120 days after the date of receipt of the notice of cancellation by both the owner or operator and the Department, as shown by later return receipt. No cancellation, termination, or failure to renew may occur, and the closure insurance policy shall remain in full force and effect, in the event that on or before the date of expiration:
 - a. the Department deems the facility abandoned;
 - b. the permit is suspended or revoked and application for a new permit or authorization is denied;
 - c. closure is ordered by the Department or a court of competent jurisdiction; or
 - d. the owner or operator is named a debtor in a voluntary or involuntary bankruptcy proceeding; or
 - e. the premium due is paid prior to the effective date of cancellation if the cancellation was based on failure to pay the premium; or
 - f. the insurer continues to write solid waste management facility closure or post-closure maintenance coverage in Massachusetts if the cancellation was based on refusal to write said coverage.
 6. Each policy shall contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided that such consent shall not be unreasonably withheld.
 7. For insurance policies providing coverage for post-closure care, commencing on the date that liability to make payments pursuant to the policy accrues, the insurer will thereafter annually increase the face amount of the policy. Such increase shall be equivalent to the face amount of the policy, less any payments made, multiplied by an amount equivalent to 85% of the most recent investment rate of the equivalent coupon-issue yield announced by the U.S. Treasury for 26 week Treasury certificates.
- (f) Closure and post-closure letter of credit.
1. An owner or operator may satisfy the requirement of 310 CMR 19.051(2) by obtaining an irrevocable standby letter of credit that conforms to the requirements of 310 CMR 19.051(12)(f) and by submitting an executed copy of the letter of credit to the Department within the applicable time period set forth at 310 CMR 19.051(4). The institution issuing the letter of credit shall be an entity which has the authority to issue letter of credit and whose letter-of-credit operations are regulated and examined by the Massachusetts Commissioner of Banking or other institution approved by the Department.

19.051: continued

2. An owner or operator who uses a letter of credit shall also establish a standby trust fund. Under the terms of the letter of credit, all payments made thereunder shall be deposited by the issuing institution directly in the standby trust fund in accordance with instruction from the Department. The standby trust shall meet the requirements of 310 CMR 19.051(12)(a) except that:
 - a. an originally signed duplicate of the trust agreement shall be submitted to the Department with the letter of credit; and
 - b. until the standby trust is funded pursuant to the requirements of 310 CMR 19.051 the following are not required:
 - i. payment into the trust fund as specified in 310 CMR 19.051(12)(a);
 - ii. annual valuations as required by the trust agreement; and
 - iii. notices of nonpayment as may be required by the trust agreement.
3. The letter of credit shall be accompanied by a letter from the owner or operator which shall state:
 - a. the letter of credit number;
 - b. the name of the issuing institution;
 - c. the date of issuance of the letter of credit;
 - d. the name and address of the facility; and
 - e. the amount of funds assured by the letter of credit for closure of the facility.
4. The letter of credit shall be irrevocable and shall be issued for a period at least equal to the sum of one year plus:
 - a. the estimated period of time required to complete closure of any unclosed inactive areas and the current operating phase; or
 - b. the term of the permit if the facility is not operated in approved phases.

The letter of credit shall provide that the expiration will be automatically extended for a period of at least one year unless, not later than 120 days before the current expiration date pursuant to the terms of the letter of credit, the issuing institution notifies both the owner or operator and the Department by certified mail of the decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days shall not begin before the date when both the owner and operator and the Department have received notice, as shown by the later return receipt.
5. The letter of credit shall be issued in an amount at least equal to the current closure and post-closure cost estimate except as provided in 310 CMR 19.051(8).

(13) Use of Multiple Financial Assurance Mechanisms. An owner or operator may with Department approval satisfy the requirements of 310 CMR 19.051, by establishing more than one financial assurance mechanism per Massachusetts facility. These financial assurance mechanisms shall be limited to the mechanisms set forth at 310 CMR 19.051(12). These mechanisms shall be in compliance with 310 CMR 19.051(12) except that the combination of mechanisms, rather than each mechanism, which provide for an amount equal to the required financial assurance. If an owner or operator uses a trust fund in combination with any other financial assurance mechanism, it shall use the trust fund for those financial assurance mechanisms for which the establishment of a trust fund is required. A single standby trust fund may be used for two or more mechanisms. The Department may use any or all of the mechanisms to provide for closure of the facility.

(14) Use of a Financial Assurance Mechanism for Multiple Facilities.

- (a) An owner or operator may use a financial assurance mechanism specified in 310 CMR 19.051 to meet the requirements of said section for more than one Massachusetts facility.
- (b) The amount of funds available through the financial assurance mechanism shall be no less than the sum of funds that would be available if a separate mechanism has been established and maintained for each facility. In directing funds available through the financial assurance mechanism for closure or post-closure maintenance of any facility covered by the mechanism, the Department may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

19.060: Beneficial Use of Solid Waste

(1) Summary. 310 CMR 19.060 establishes the Department's rules for the beneficial use of solid waste and classification of a solid waste as a secondary material. Included in this subsection are general standards and permit procedures for beneficial use activities. In order to identify specific standards and permit procedures, proposed uses of secondary materials are divided into four categories:

- (a) Category 1 - Commercial Products;
- (b) Category 2 - Regulated Systems;
- (c) Category 3 - Restricted Applications; and,
- (d) Category 4 - Unrestricted Applications.

(2) Burden of Proof.

(a) The applicant must demonstrate to the Department's satisfaction that the proposed secondary materials and uses are beneficial and pose an insignificant potential hazard to public health, safety or the environment.

(b) The Department may grant a beneficial use determination, and may allow a beneficial use determination to remain in effect, only to the extent, and only while, the Department is satisfied that such secondary materials and uses are beneficial and pose an insignificant potential hazard to public health, safety or the environment.

(3) Determination of Applicability.

(a) Any person who desires a determination whether 310 CMR 19.060 applies to a facility or operation that proposes to store, process or use a secondary material may submit to the Department a request for a determination of applicability. The applicant shall provide the following forms and information to the Department:

1. Submit a Request for Determination of Applicability to the Department using the appropriate forms provided by the Department.
2. Provide a detailed description of the facility that proposes to store, process, or otherwise handle the secondary material. In the case of a manufacturing facility, a general description of the facility's manufacturing system shall be submitted, including process flow diagrams. The complexity and degree of detail of the description will vary depending on the magnitude and complexity of the process.
3. Describe the feedstock or product the proposed secondary material is replacing.
4. Provide a detailed description of similar products currently and historically produced by the facility.
5. Provide a characterization of the proposed secondary material. The scope of the characterization shall be sufficient for the Department to adequately determine adverse impacts and risks to public health, safety and the environment, including, but not limited to, nuisance conditions. This shall include:
 - a. A physical characterization of the proposed secondary material including, but not limited to, matrix and gradation, where applicable.
 - b. Chemical characterization of the proposed secondary material including the results of analytical testing for those hazardous materials that reasonably may be thought to be present.
6. Describe any previous licenses, permits, authorizations, or other approvals for recycling or beneficial use of the proposed secondary material.

(b) The Department shall issue a determination of applicability within 45 days of the receipt of the request.

(4) Processing of Secondary Materials. When the processing of a proposed secondary material is necessary for its beneficial use the Department shall determine the type and amount of processing allowable which does not constitute a solid waste processing activity. If the Department determines that processing of the secondary material constitutes a solid waste processing activity then the processing shall be subject to the provisions of 310 CMR 16.00 and 19.000.

19.060: continued

(5) General Application Requirements. A copy of the beneficial use permit application shall be filed with the Department. In addition, a copy shall be filed with the board of health of jurisdiction when the proposed use is limited to a specific location. The application shall be filed on a form supplied by the Department and contain the following information as determined or modified at the pre-application meeting where a pre-application meeting has been held. Items in 310 CMR 19.060(4)(a) through (i) must be included as part of the pre-application package. The final permit application package must include the data as required in 310 CMR 19.060(4)(j):

- (a) A description of the proposed secondary material and its proposed use;
- (b) A description of how the proposed utilization will result in a viable and beneficial substitution for a commercial product or commodity;
- (c) A detailed physical and chemical characterization plan of both the secondary material proposed for beneficial use and of the final product including:
 - 1. A detailed list of the chemical constituents found in the product(s) from which the proposed secondary material is derived;
 - 2. A statistically valid, representative sampling plan consistent with guidance in “Test Methods for Evaluating Solid Waste: Physical/Chemical Methods,” SW-846, U.S. Environmental Protection Agency, Office of Solid Waste, Washington, D.C. 20460, and other applicable guidance as may be stipulated by the Department. The sampling plan shall include all hazardous materials including Critical Contaminants of Concern (CCCs) that reasonably may be thought to be present in the proposed secondary material. CCCs shall be separately listed.
 - 3. A quality assurance and quality control plan, ensuring that appropriate procedures are followed and documented, using guidance contained in [EPA/600/R-02/009](#), December 2002, Guidance on Quality Assurance Project Plans and other applicable guidance as may be provided by the Department.
- (d) A detailed description of the proposed facility that will store, process, or otherwise handle the proposed secondary material. In the case of a manufacturing facility, a general description of the facility’s manufacturing system related to the proposed use of secondary material shall be submitted, including process flow diagrams. The complexity and degree of detail of the description will vary depending on the magnitude and complexity of the process generating the proposed secondary material. Any interim handling facilities or collection centers not located at the site of processing and not otherwise approved to store or handle the proposed secondary material pursuant to 310 CMR 16.00 and 19.000 shall be identified and described pursuant to this section;
- (e) Information indicating the annual quantities, by weight and/or volume, of the secondary material proposed for beneficial use;
- (f) A description of any risk management techniques being considered, including any deed or other use limitations, location restrictions, best management practices or engineering controls;
- (g) Identification of the proposed location of use, if applicable, or types of locations where the proposed secondary material will be used (*e.g.* highway rights-of-way, industrial zoned properties, *etc.*);
- (h) Identification of storage requirements necessary for maintaining sufficient inventory to meet market demand;
- (i) If hazardous materials, including CCCs, are identified during the pre-application or application process the project proponent shall prepare and submit a Toxics Reduction Plan (TRP) that details options to minimize the concentration of hazardous material that could be released to the environment. The TRP shall document steps that will be taken to implement economically and technologically feasible options; and,
- (j) Submission of all appropriate data derived from the sampling plan required in accordance with 310 CMR 19.060(4)(c)3. The Applicant must include a statistically valid analysis of the concentration and distribution of all hazardous materials that may be contained in the proposed secondary material.

(6) Demonstration Projects. The Department may grant temporary approval for a pilot project or demonstration project pursuant to 310 CMR 19.062: *Demonstration Projects or Facilities*. The application requirements for a pilot project or demonstration project will be determined on a case-by-case basis by the Department.

19.060: continued

(7) Record Keeping. The permittee shall maintain records and shall submit reports to the Department as required in the permittee's Beneficial Use Determination permit. Reports shall summarize beneficial use activities during the past year, including the quantity of secondary material received or distributed for beneficial use, the sources of the secondary material received, and the results of any required testing or on-going characterization and any other information required as a condition of the permit.

(8) Public Participation. The Department shall accept comments from Boards of Health and other interested parties regarding the application for a period not less than 21 days before issuing a final determination.

(9) General Beneficial Use Determinations. The Department may issue general beneficial use determinations, as general permits, that apply to a specific beneficial use of a secondary material, providing the reuse complies with the Reuse Criteria listed in 310 CMR 19.060(12). Any person or entity may use the secondary material as identified in the general beneficial use determination as long as the person or entity adheres to the requirements and conditions contained therein.

(10) Effect of Determinations. A determination of beneficial use means the secondary material is not classified as a solid waste only when used in accordance with the Department's determination of beneficial use.

(11) Pre-application.

(a) Applicants for a Beneficial Use Determination may request a pre-application meeting with the Department, the purpose of which is for the Applicant to describe the proposed beneficial use activity and obtain guidance on the application process and content from the Department.

(b) The Applicant shall submit general application information, as described in General Application Requirements, 310 CMR 19.060(4), to the Department at least ten business days prior to the pre-application meeting. Information submitted for purposes of pre-application shall be sufficient to assign the application to the appropriate beneficial use category as described in section 310 CMR 19.060(12) through (15).

(12) General Standards.

(a) If the applicant intends to use the proposed secondary material as a substitute for a virgin material in manufacturing, the proposed secondary material shall conform to industry specifications for the virgin material it is replacing or impart properties that result in the product meeting applicable industry performance specifications.

(b) If the applicant intends to use the proposed secondary material as a product, it shall meet or exceed the applicable industry-accepted specifications or performance standards for that product. Where no industry-accepted specifications or performance standards exist, the mixing of proposed secondary materials with other materials to produce a product must be a necessary component of the product.

(c) Any proposed processing and beneficial use shall not cause an adverse impact or significant risk to public health, safety and the environment, including, but not limited to, nuisance conditions. All beneficial use applications must demonstrate that the proposed reuse meets all of the criteria identified in 310 CMR 19.060(13): *Reuse Criteria*.

(d) The proposed secondary material shall not be handled or utilized in a manner that will result in the proposed secondary material becoming a solid waste;

(e) The proposed beneficial use shall be successfully completed in compliance with applicable rules and regulations.

(13) Reuse Criteria.

(a) No significant risk to public health shall be created.

(b) No significant adverse environmental impacts shall be created.

(c) No condition shall be treated that adversely impacts public health, safety, or the environment.

(d) Reuse may not result in increases in the environmental concentrations of any critical contaminants of concern (CCCs), including persistent, bioaccumulative toxins (PBT) and other priority chemical pollutants as may be identified by the Department.

(e) Reuse shall be in compliance with all applicable requirements of the Department.

19.060: continued

(14) Category 1 -- Use of Secondary Materials in Commercial Products.

(a) Applicability. Products manufactured from secondary materials or secondary materials that are directly used as products are considered commercial products when: the product is used in a manner that is consistent with industry accepted product specifications or performance standards; and is controlled and managed throughout its lifecycle in a manner that effectively limits potential for illegal or inadvertent disposal or releases of hazardous material to the environment and exposure to people. Products intended for uncontrolled land-application may not be reviewed in accordance with this category. Adverse impact or significant risk to public health, safety and the environment, including, but not limited to, nuisance conditions can be evaluated by demonstrating compliance with the reuse criteria as outlined at 310 CMR 19.060(12)(b).

(b) Demonstrating Compliance with the Reuse Criteria. The use and processing of the proposed secondary material must comply with the Reuse Criteria specified in 310 CMR 19.060(13). This determination shall be based upon a comparative analysis of the product manufactured using the proposed secondary material as compared to the traditionally used feedstock or product it is replacing. If the nature and concentration of hazardous materials, including CCCs, are comparable, further assessment will not be required. Uses of proposed secondary materials that reasonably may be anticipated to significantly increase risks to public health, safety and the environment, above that of the traditional feedstock or the product in the same application, cannot be reviewed in accordance with 310 CMR 19.030(14)(b).

(c) Application Requirements. In addition to the general application requirements cited at 310 CMR 19.060(5), the applicant shall submit the following information:

1. A physical characterization of the commercial product;
2. A list of constituents (including hazardous materials) contained in the product manufactured using traditional materials or products;
3. A comparative analysis of the product manufactured using the proposed secondary material versus the traditionally used material it is replacing for the following:
 - a. Hazardous materials, including CCCs (on a weight and concentration basis);
 - b. Processing required for use;
 - c. Actual use, including, but not limited to, storage and handling prior to the actual use;
 - d. Location(s) used; and,
 - e. Management or processing during its lifecycle, including, but not limited to, any destructive practices that reasonably may be expected to be employed in recycling or disposing of the proposed secondary material;

(15) Category 2 -- Use of Secondary Materials in Regulated Systems.

(a) Applicability. Beneficial use of secondary materials at facilities permitted, approved or ordered by the Department shall be deemed adequately regulated for purposes of 310 CMR 19.000, provided the person does so in compliance with the terms and conditions of any such permit, order or approval and the following:

1. Any aspect of the use of proposed secondary materials not covered by the permit, order, or approval shall be reviewed in accordance with M.G.L. c. 111, § 150A, 310 CMR 19.000, and 310 CMR 16.00;
2. The storage, transfer, processing, treatment, use and disposal of the proposed secondary material shall be achieved using best management practices that prevent adverse impacts and significant risks to public health, safety and the environment, including, but not limited to, nuisance conditions.

(b) Demonstrating Compliance with the Reuse Criteria. Compliance with the Reuse Criteria can be demonstrated by meeting appropriate numerical standards, risk management criteria and other applicable requirements as identified by the Department.

(c) Application Requirements. In addition to the general application requirements cited at 310 CMR 19.060(5), the applicant shall provide sufficient information to evaluate the potential for significant proposed risks from the storage, transfer, processing, treatment activities, use and final disposal of the secondary material not governed by the existing approval.

19.060: continued

(16) Category 3 -- Use of Secondary Materials in Restricted Applications.

(a) Applicability. Secondary materials that are beneficially used in applications that utilize risk management techniques in order to prevent adverse impact or significant risks to public health, safety and the environment, including, but not limited to, nuisance conditions shall be reviewed in accordance with 310 CMR 19.060(16).

(b) Demonstrating Compliance With the Reuse Criteria. Compliance with the Reuse Criteria can be achieved by demonstrating that release and exposure pathways are adequately controlled through the use of risk management procedures (*e.g.* engineering controls; use limitations, *etc.*) If adequate control of such pathways cannot be demonstrated, a reuse specific assessment is required, as described at 310 CMR 19.060(16)(b)1. or 2. Compliance with the Reuse Criteria has been achieved if no concentration of any hazardous material is greater than the Upper Concentration Limit as described in 310 CMR 40.0996 and conditions specified in either 310 CMR 19.060(16)(b)1. or 2. are met:

1. The concentrations of all hazardous materials are at or below background, as determined by a statistically valid and appropriate background concentration sample data set of Massachusetts soils; or,

2. No concentration of a Hazardous Material contained in, or release resulting from the use of, a proposed secondary material, as appropriate, exceeds acceptable limits as demonstrated using one of the following approaches:

a. Numerical Standards Approach. Hazardous material concentrations may not exceed applicable standards and guidelines as stipulated by DEP. If an appropriate DEP standard or guideline does not exist for all constituents in all relevant media, then a guideline may be proposed by the applicant developed using protocols consistent with those used in the derivation of existing DEP standards and guidelines for that medium. In addition to the standards and guidelines, the applicant shall demonstrate that the reuse will not lead to exceedences of the Massachusetts Drinking Water Quality Standards at 310 CMR 22.00; Massachusetts Air Quality Standards at 310 CMR 7.00; Massachusetts Contingency Plan Method 1 Standards at 310 CMR 40.0970; and, Massachusetts Surface Water Quality Standards at 314 CMR 4.00.

b. Total Waste Reuse Risk Approach. Using this approach, Total Waste Reuse cancer and non-cancer risks shall be determined as follows:

i. Total cancer risks and non-cancer risks shall be calculated for all appropriate exposure pathways and receptors.

ii. The assessment shall be performed in a manner consistent with scientifically acceptable risk assessment practices as detailed in guidance published by the Department.

iii. A condition of no significant risk to human health has been achieved if:

- No Exposure Point Concentration of any hazardous material is greater than applicable public health or environmental standards; and,

- Total Waste Reuse Risk (the aggregate risk attributable to all hazardous materials) results in excess lifetime cancer risk of less than five-in-one million and a non-cancer cumulative hazard index of less than 0.5.

3. Public Health and Safety. A level of no significant risk to public health and safety exists or has been achieved if the use of the proposed secondary material will not pose a threat of physical harm or bodily injury to people and will not create nuisance conditions, including, but not limited, to noxious odors and noise, in the foreseeable future.

4. Environment. A level of no significant risk of harm to the environment exists, or has been achieved, if there is no indication of the potential for biologically significant harm (at the subpopulation, community, or system-wide level), either currently or for any foreseeable period of time, to Environmental Receptors as described at 310 CMR 40.0000 considering their potential exposures to the proposed secondary material.

(c) Application Requirements. In addition to the general application requirements cited at 310 CMR 19.060(5), the applicant shall submit the following:

1. Characterization. The application shall include risk characterization information, the scope and level of effort of which shall depend on the proposed secondary material, the beneficial use, and the specific exposure assumptions identified. The characterization shall be of sufficient scope and adequately documented to demonstrate compliance with the Reuse Criteria at 310 CMR 19.060(13).

19.060: continued

2. Location. If the Department determines during the pre-application review that the location of the beneficial use activity must be identified in order to manage risks posed by the beneficial use activity, a U.S.G.S. 7.5 minute topographic map or smaller scale equivalent map clearly marking the location(s) of the beneficial use activities.
 3. End of Use Management. A description of how the proposed secondary material may be managed when removed or processed during its lifecycle.
- (d) Property Owner Notification. The Applicant shall prepare and record, when required by permit term or condition, a record in the Registry of Deeds, Land Court, or other permanent record approved by the Department that shall:
1. Provide notice to holders of any interest(s) in a property or a portion thereof (including without limitation, owners, lessees, tenants, mortgagee, and holders of easement rights) of the existence and location of the secondary material at such property and the conditions for continued beneficial use and ultimate disposal, if applicable;
 2. Outline management options if removed, modified, or processed during its lifecycle to prevent adverse impacts and significant risks to public health, safety and the environment, including, but not limited to, nuisance conditions; and
 3. Provide reference to the Department beneficial use application file by including the permit application transmittal number and file location.
- (17) Category 4 – Use of Secondary Material in Unrestricted Applications.
- (a) Applicability. Secondary materials that are beneficially used in applications that do not limit exposure to potential human or environmental receptors from secondary material constituents are reviewed in accordance with 310 CMR 19.060(17) when constituents have the potential to adversely impact or create a risk to public health, safety, or the environment including, but not limited to, nuisance conditions when improperly stored, treated, transported, disposed of, used, or otherwise managed.
 - (b) Demonstrating Compliance with the Reuse Criteria. Compliance with the Reuse Criteria shall be made on the basis of provisions detailed in 310 CMR 19.060(16)(b), using conservative, unrestricted general exposure assumptions (*e.g.* residential exposures including sensitive receptors) in order to protect public health, safety and the environment.
 - (c) Application Requirements. In addition to the general permit application requirements identified at 310 CMR 19.060(5) the application shall include characterization information, the scope and level of effort of which shall depend on the proposed secondary material, the beneficial use, and the general exposure assumptions identified with this category of use. The characterization shall be of sufficient scope and adequately documented to demonstrate compliance with 310 CMR 19.060(13): *Reuse Criteria*.

19.061: Special Waste

- (1) General. The management of special waste shall not result in adverse impacts to the public health, safety or the environment or result in nuisance conditions. Management of a special waste comprises the receipt, handling, storage, processing, treatment and/or disposal of such special waste.
 - (a) Except as provided at 310 CMR 19.061(3) and (4), the owner and operator of a facility may manage a special waste without prior written approval from the Department.
 - (b) The owner and operator of a facility with an existing special waste(s) approval issued before February 14, 2014 may continue to manage such special waste in accordance with the existing approval(s) or, alternatively, may manage special waste in accordance with 310 CMR 19.061 provided that:
 1. an owner or operator of a transfer station that is not a C&D waste transfer station submits a certification in accordance with 310 CMR 19.035; or
 2. an owner or operator of any other type of facility makes a submission in accordance with 310 CMR 19.034.
- (2) Exclusions. The following special wastes are not subject to the management requirements of 310 CMR 19.061(3):
 - (a) Asbestos waste that consists of:
 1. intact and unbroken vinyl asbestos tile (VAT);

19.061: continued

2. asphaltic asbestos-containing siding products and asphaltic asbestos-containing roofing materials such as roofing felts and roofing shingles¹; or
 3. other asbestos waste excluded by the Department in writing from the management requirements of 310 CMR 19.061(3).
- (b) Medical or biological waste that has been rendered non-infectious in accordance with 105 CMR 480.000: *Minimum Requirements for the Management of Medical or Biological Waste (State Sanitary Code Chapter VIII)*, and is packaged, labeled and otherwise managed in accordance with 105 CMR 480.000.
- (3) Management Requirements for Asbestos Waste, Medical or Biological Waste, and Sludge.
- (a) General Requirements. The following requirements shall apply to any facility handling or disposing asbestos waste, medical or biological waste, or sludge unless such material has been excluded pursuant to 310 CMR 19.061(2) or is managed in accordance with 19.061(4):
1. at least 45 days prior to accepting asbestos waste, medical or biological waste, or sludge, the facility owner or operator submits to the appropriate Regional Office of the Department and the board of health of the municipality where the facility is located:
 - a. a certification in accordance with 310 CMR 19.035 for a transfer station which is not a C&D waste transfer station; or
 - b. a presumptive approval application in accordance with 310 CMR 19.034 for any other type of facility.
 2. The submission shall include:
 - a. the type and quantity of asbestos waste, medical or biological waste, or sludge intended to be managed on a daily, weekly, monthly and yearly basis; and
 - b. the intended methods to be employed for managing the asbestos waste, medical or biological waste or sludge.
- (b) Specific Requirements for Managing Asbestos Waste. In addition to the requirements at 310 CMR 19.061(1) and (3)a., asbestos waste shall be managed as follows:
1. Asbestos waste shall not be accepted for disposal at a solid waste combustion facility;
 2. Asbestos waste that has not been properly wetted, containerized and labeled according to 310 CMR 7.15: *U Asbestos* shall not be accepted at any facility;
 3. Asbestos waste that has been properly wetted, containerized and labeled shall be managed so as to maintain the integrity of the containers and to prevent emissions of asbestos fibers to the ambient air; and
 4. Landfill Specific Requirements. In addition to the above requirements, any owner and operator of a landfill that receives asbestos waste shall observe the following requirements:
 - a. Asbestos waste shall be immediately disposed in the landfill and shall not be stored at the landfill prior to placement in the landfill;
 - b. Asbestos waste shall be placed in the landfill in such manner as to prevent the release of asbestos fibers to the ambient air during placement;
 - c. Asbestos waste placed in the landfill shall immediately be covered by sufficient amounts of either solid waste that does not contain asbestos or daily cover material, to assure that no asbestos fibers are released to the ambient air during or subsequent to compaction;
 - d. Accurate records shall be maintained of the surveyed location(s) in the landfill of all asbestos waste. Locations of asbestos waste deposition shall be noted in the Notice of Landfill Operation required pursuant to 310 CMR 19.141. Locations of asbestos waste deposition shall also be included whenever information regarding the facility is recorded in the chain of title for the property on which the landfill operates pursuant to M.G.L. c. 111, § 150A;
 - e. Areas of the landfill containing asbestos waste shall be clearly marked by the operator;
 - f. Areas of the landfill containing asbestos waste shall not be excavated unless written approval is issued by the Department; and
 - g. Compliance with the applicable requirements of 40 CFR 61.154.

¹ Other asbestos-containing roofing shingles and siding products such as those containing a cementitious binding characterized as being hard and brittle are subject to the management requirements of 310 CMR 19.061(3).

19.061: continued

(c) Requirements for Managing Medical or Biological Waste. In addition to the requirements at 310 CMR 19.061(1) and (3)a., except as otherwise provided in 310 CMR 19.061(4), any owner and operator of a facility managing medical or biological waste shall manage such waste as follows:

1. Combustion Facilities. For disposal at a Combustion Facility, Medical or biological waste shall be treated, packaged, labeled and disposed of in accordance with 105 CMR 480.000: *Minimum Requirements for the Management of Medical or Biological Waste (State Sanitary Code Chapter VIII)*.
2. Landfills. Medical or biological waste shall not be disposed in a landfill unless the waste is rendered non-infectious in accordance with 105 CMR 480.000: *Minimum Requirements for the Management of Medical or Biological Waste (State Sanitary Code Chapter VIII)*.

(d) Requirements for Managing Sludge. In addition to the requirements at 310 CMR 19.061(1) and (3)a., any owner and operator of a facility shall manage sludge as follows:

1. General Requirements. Disposal of any sludge shall comply with the following requirements:
 - a. a sludge may be accepted at a disposal facility only after recycling or other reuse options, such as land application, conversion and composting, have been investigated by the applicant or by the generator of such sludge;
 - b. a sludge accepted at a facility shall not contain free draining liquids; and
 - c. a sludge disposed at a landfill shall contain a minimum of 20% solids.
2. Landfill Requirements for Sewage Treatment and Water Treatment Sludges. In addition to the requirements set forth at 310 CMR 19.061(3)(d)1., any owner or operator of a landfill shall ensure that sewage treatment and water treatment sludge disposed at a landfill shall be incorporated into the active face of a landfill in a 3:1 mixture of solid waste to sludge or placed in a designated area and covered immediately.

(4) Management of Medical or Biological Waste During Outbreaks of Infectious Disease in Animals. In cases of an outbreak of an infectious disease in animals, as determined by an order of the Director of the Division of Animal Health at the Department of Agricultural Resources regarding diseased domestic animals or the Director of the Division of Fisheries and Wildlife regarding diseased wild animals, the Department, in consultation with the Department of Public Health concerning disposal methodology, may approve, in writing, any combustion facility(ies) or ash landfill, or other facility to accept infectious animal carcasses, contaminated animal waste (as defined at 105 CMR 480.010: *Definitions*), and associated waste materials for disposal without the facility(ies) meeting the requirements at 310 CMR 19.061(3)(a) or (c) for as long as such approval remains in effect.

19.062: Demonstration Projects or Facilities

(1) Applicability. Any person who wishes to establish a demonstration project at a permitted solid waste management facility or establish a demonstration solid waste management facility for the purpose of demonstrating the effectiveness and utility of a new or innovative solid waste management technology shall submit an application to the Department for a demonstration project permit and notify the board of health of jurisdiction.

(2) Application Requirements. An application for a demonstration project permit shall include:

- (a) a detailed description of the proposed activity, including:
 1. a discussion of the objectives of the project;
 2. a discussion of the purposes for undertaking the project;
 3. an analysis indicating the benefits of the proposed new technology;
 4. a description of the applicability of the new technology to solid waste management in general;
 5. a description of how the applicant intends to provide for the receipt and treatment or disposal of those types and quantities of solid waste proposed to be necessary for purposes of determining the efficiency and performance capabilities of the technology or process; and
 6. a technical analysis indicating environmental, public health and safety benefits and risks from the proposed new technology;

19.062: continued

- (b) a set of plans which shall include:
 - 1. a site plan indicating the location of the project or facility;
 - 2. an operational plan outlining operational details of the project or facility, the particular types of equipment required for proper operation and a discussion of measures to be taken to ensure the protection of public health, safety or the environment;
 - 3. a corrective action plan which indicates how conventional solid waste management technology shall be utilized in the event of failure of the proposed technology; and
 - 4. a data collection and analysis plan which outlines all data collection and analysis procedures, protocols and reporting formats required to document and evaluate whether the demonstration project has achieved its objectives.
- (c) a project timetable; and
- (d) such other descriptions, plans or information as the Department deems necessary to review the demonstration project.

(3) Department Review of an Application. The Department shall not grant a permit for a demonstration project unless:

- (a) the application is complete and accurate;
- (b) the facility has a valid site assignment where required pursuant to the Site Assignment Regulations at 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities*;
- (c) the facility has a valid permit and necessary authorizations issued by the Department, if applicable;
- (d) the project can be adequately accommodated at a permitted facility without interfering with or disrupting normal operations of the facility, where the project is to be located at a permitted facility;
- (e) the demonstration project or facility has merit and seeks to improve operational aspects of a facility, produce significant cost savings or serve to increase protection of human health and the environment;
- (f) the proposed demonstration project will not cause or contribute to pollution of the air, water or other natural resources of the Commonwealth; and
- (g) the applicant has provided adequate proof of financial assurance as specified in 310 CMR 19.062(5).

NON-TEXT PAGE

19.062: continued

- (4) Department Evaluation of Demonstration Projects. The Department shall review all data and reports submitted by the applicant and other relevant information to determine if the demonstration project has satisfactorily achieved its objectives and if the project has adequately protected public health, safety and the environment.
- (5) Financial Assurance. Applicants proposing demonstration facilities may be required to provide proof of financial assurance to the Department prior to receiving a demonstration facility permit. If financial assurance is required the applicant must comply with the financial assurance requirements set forth in 310 CMR 19.051 and:
 - (a) provide sufficient financial assurance to cover costs of removing solid wastes, residuals and storage piles and to properly close the demonstration project site; and
 - (b) provide sufficient financial assurance to ensure completion of all aspects of the proposed study in a manner acceptable to the Department including all monitoring costs, should the applicant default on the completion of the demonstration project.
- (6) Demonstration Project Permit Limitations. The following permit limitations shall apply to any demonstration project permit:
 - (a) a demonstration project permit shall be valid for no more than two years from the date of issuance, unless renewed as provided for in 310 CMR 19.062(7); and
 - (b) the permit shall be valid only for the site approved by the Department and subject to the conditions established by the Department in the demonstration project permit.
- (7) Renewal of Permit. The Department may renew a demonstration project permit for a maximum of two one year periods upon request by the applicant.
- (8) Termination of the Permit. A demonstration project permit shall terminate:
 - (a) automatically at the end of the period specified in the demonstration project permit unless the applicant has requested a renewal of the permit and said renewal has been granted by the Department; or
 - (b) automatically at the end of the renewal period should the applicant have received a renewal of the permit from the Department in accordance with 310 CMR 19.062(7); or
 - (c) at any time the Department has determined that the project does not adequately protect public health, safety or the environment.

(19.070: Operator Certification Requirements: Reserved)

19.080: Variances

- (1) General. The Department recognizes that the literal application of 310 CMR 19.000 to all persons and activities may impose significant hardships in individual situations, frustrate the underlying legislative and regulatory purposes, or adversely affect the public interest. Therefore, in the exercise of the Department's discretion and upon a proper and timely demonstration, a variance from the application of specific provisions of 310 CMR 19.000, other than those that embody statutory requirements, may be available in an individual case to a person whose activities are governed by them.
- (2) Required Demonstration. A variance request shall include, at a minimum, the following information demonstrating, to the Department's satisfaction, that:
 - (a) compliance with the provision would, on the basis of conditions unique to the applicant's particular situation, impose unreasonable economic, technological or safety burdens on the applicant or the public;
 - (b) substitute measures will provide the same or greater degree of protection to public health, safety and the environment as the application of the regulation(s) from which a variance is requested; and
 - (c) the desired relief may be granted without substantial detriment to the public interest and without nullifying or substantially derogating from the intent of 310 CMR 19.000.
- (3) Reasonable or Necessary. Where circumstances are appropriate, the Department may request the applicant to establish, in addition to the criteria listed in 310 CMR 19.080(2), either or both of the following:

19.080: continued

- (a) that no reasonable conditions or alternatives exist that would allow the project to proceed without the requested variance; and/or
- (b) the variance is necessary to accommodate an overriding community, regional, state, or national public interest.

(4) Request for Variance. A request for a variance may be made only by or on behalf of a person whose activities are governed by 310 CMR 19.000 and who seeks relief from their application prior to taking any action subject to and in conflict with them and does so in a timely manner. The request shall be made in writing and must contain, at a minimum, the information necessary to establish the showing required by 310 CMR 19.080(2) and, where required by 310 CMR 19.080(3), in the form prescribed in 310 CMR 19.080(4)(a) through (d):

- (a) specific reference, by citation to Code of Massachusetts Regulations, to each regulatory provision from which relief is sought;
- (b) an analysis and evaluation, prepared by a qualified professional, of all known technically accepted alternative methods of pursuing the activity in compliance with 310 CMR 19.000 including a detailed explanation as to each such alternative of the factual circumstances that render it unreasonable within the meaning of 310 CMR 19.080(1);
- (c) a detailed description, prepared by a qualified professional, of the substitute measures intended to provide the same or greater degree of protection to the public health, safety and the environment as the application of the regulation(s) from which a variance is requested would provide, accompanied by an opinion, including the basis on which that opinion was formed, that the substitute measures will in fact perform their intended function; and
- (d) evidence that an overriding public interest is associated with the project which justifies a variance from the regulation(s) if required by the Department pursuant to 310 CMR 19.080(3)(b).

(5) Filings. A person requesting a variance from 310 CMR 19.000 must file a request with the Regional Director of the appropriate regional office and contemporaneously serve copies of it upon the board of health and all abutters of the property upon which the activity is or may be located. Filing and service may be made by hand or by using a suitable form of mail addressed to the person to be served and requiring the return of a signed receipt.

(6) Initial Action. The Regional Director, after considering a request for a variance, requesting and receiving such additional information as may be required, and holding a public hearing should public interest in the matter or the technical complexity or uniqueness of the issues warrant doing so, shall grant or refuse the request in whole or in part. Should the Regional Director determine to grant the request in whole or in part, the determination will include a specific finding that the request makes the showing required by 310 CMR 19.080(2); a specific statement that the application of certain specified regulation(s) is altered or waived; and a specification of the requirements or conditions imposed, if any. The determination of the Regional Director is final unless, within 21 days, an appeal is taken to the Commissioner pursuant to the provisions of 310 CMR 19.080(7). The Regional Director shall notify by mail the person requesting the variance, the board of health, and any abutter who has requested notice of the determination of the action taken upon the request.

(7) Appeal to the Commissioner.

- (a) A person requesting a variance from the application of 310 CMR 19.000, the board of health where the affected property is located, or any aggrieved party may appeal the determination of the Regional Director to the Commissioner.
- (b) An appeal is taken by delivering a request for a hearing to the Commissioner within the time period established by 310 CMR 19.080(6) that identifies the request for a variance, states the determination of the Director upon it, specifies why the party is aggrieved and the grounds for the appeal. The Department shall hold a hearing upon and determine the appeal pursuant to the provisions of 310 CMR 1.00. In any such proceeding it shall be the burden of the person requesting the variance to demonstrate how the criteria are met.
- (c) Notice of an appeal shall be given to the applicant by the party appealing the decision concurrently with filing the appeal.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

19.080: continued

(8) Expiration, Modification or Suspension of a Variance. Any variance or other modification made pursuant to 310 CMR 19.080 may be subject to such qualification, revocation, suspension, or expiration as the Department expresses in the variance. A variance or other modification made pursuant to 310 CMR 19.080 may otherwise be revoked, modified, or suspended pursuant to 310 CMR 19.039 or 19.040.

19.081: Enforcement Provisions

(1) Wherever 310 CMR 19.000, or any approvals or orders issued pursuant thereto, requires that the owner and/or operator shall take action or refrain from taking action, the owner and operator shall be jointly and severally liable such that the Department may take action for any violations of 310 CMR 19.000 against the owner, the operator or both.

(2) General. No standard, requirement or condition established in 310 CMR 19.000 or provision of any permit, authorization, modification, determination, or other approval or order or other enforcement document issued pursuant to 310 CMR 19.000, shall be construed to limit any right of the Department to take enforcement action pursuant to any other authority. Any failure by any person whose activities are governed by M.G.L. c. 111, § 150A and 310 CMR 19.000, to comply fully with the provisions thereunder or the terms and conditions of any order, permit, authorization, modification, determination, or other approval or order or other enforcement document issued pursuant to 310 CMR 19.000, or with the terms of a site assignment, shall constitute a violation of M.G.L. c. 111, § 150A and 310 CMR 19.000. It shall also be a violation of 310 CMR 19.000 for any person to:

- (a) Fail to submit a certification, log, application for a permit or permit modification, plan, report, third-party inspection report, or any other document within the time period specified in 310 CMR 19.000 or in any approval, order, or permit issued by the Department;
- (b) Provide or cause to be provided any false, inaccurate, incomplete or misleading information, in any certification, log, application for a permit or permit modification, plan, report, third-party inspection report, third-party inspector qualifications statement, or any other document which that person is required to submit to the Department pursuant to 310 CMR 19.000;
- (c) Provide any false, inaccurate, incomplete or misleading information to a third-party inspector or influence a third-party inspector to provide any false, inaccurate, incomplete or misleading information in any certification, third-party inspection report or other submittal to the Department pursuant to 310 CMR 19.000;
- (d) Alter or misrepresent the findings or recommendations made by a third-party inspector in a third-party inspection report submitted to the Department pursuant to 310 CMR 19.018;
- (e) Hold himself or herself out as a responsible official when he or she is not fully authorized to bind the entity he or she claims to bind;
- (f) Fail to comply fully with the applicable standards, requirements or conditions established in 310 CMR 19.000 or with the provisions of any permit, authorization, modification, determination, or other approval or order issued, or with the terms and conditions of any certification submitted, pursuant to 310 CMR 19.000;
- (g) Act without submitting a certification in accordance with 310 CMR 19.000 or without a permit or other approval issued pursuant to 310 CMR 19.000 or site assignment where one is required; or
- (h) Violate any other provision of 310 CMR 19.000.

(3) Action by the Department. Whenever the Department has cause to believe that a violation has occurred, it may without limitation:

- (a) order the owner or operator of the site or facility, or any other person responsible for the violation, to cease operations until the violation is corrected to the satisfaction of the Department, or until such person obtains a site assignment, solid waste facility permit, and any other applicable approval pursuant to 310 CMR 19.000, or other applicable permit pursuant to 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities*;
- (b) order the owner or operator of the site or facility, or any other person responsible for the violation, to cease immediately or at a specified date all illegal activity, and to comply fully with M.G.L. c. 21A, §§ 2 and 8, St. 1987, c. 584, M.G.L. c. 21H, M.G.L. c. 111, §§ 150A and 150A½, 310 CMR 19.000, or any permit, authorization, certification, determination, or approval submitted or issued pursuant to 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities* or 310 CMR 19.000;

19.081: continued

- (c) order the owner or operator of the site or facility, or other person responsible for the violation, to take appropriate remedial measures, immediately or by a specified date, to bring the site or facility into compliance to the satisfaction of the Department or to protect public health or safety or the environmental resources of the Commonwealth, including without limitation, closure of the site or facility;
- (d) commence proceedings pursuant to 310 CMR 19.036 to rescind, suspend, revoke, or modify a permit;
- (e) commence proceedings pursuant to M.G.L. c. 111, § 150A to rescind, suspend, or modify a site assignment;
- (f) issue a notice of non-compliance or assess a civil administrative penalty pursuant to M.G.L. c. 21A, § 16 and 310 CMR 5.00: *Administrative Penalty* or initiate an enforcement action in accordance with applicable statutes and regulations;
- (g) refer the matter to the Attorney General for civil or criminal action pursuant to any applicable statute; or
- (h) take such other action as provided by 310 CMR 19.000 or other applicable statutory or regulatory authority as the Commissioner deems appropriate.

(4) Service of Notices and Orders. Service in all civil administrative penalty actions is governed by 310 CMR 5.00: *Administrative Penalty*. The Department serves an order according to the following procedure except for processes, notices, and orders issued in the course of an adjudicatory hearing, which are governed by the provisions of 310 CMR 1.00: *Adjudicatory Proceedings*:

- (a) Service of an order may be made via hand delivery or mail. Service of an order when made by any form of mail requiring the return of a receipt signed by the person to be served is complete upon receipt by the person or by any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service. The fact and date of service is established by the returned receipt or by affidavit of the person who hand delivery the order.
- (b) The Department may make service of an order in any other manner, including any form of telecommunications or publication, that is reasonably calculated to give actual notice of the order to the person to be served. The Department may use such alternative or substitute methods of service when the recipient refuses to accept service by the means set forth in 310 CMR 19.081(4)(a) or when exigent circumstances require its doing so. The fact and date of service in such cases is established by such records as may be available.

(5) Right to Adjudicatory Hearing. Subject to the provisions of 310 CMR 19.081(6), a person who is the subject of an order issued pursuant to 310 CMR 19.081(3) shall have the right to an adjudicatory hearing on such order pursuant to 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection*. Any right to an adjudicatory hearing concerning assessment of a civil administrative penalty shall be determined in accordance with the provisions of 310 CMR 5.00: *Administrative Penalty*.

(6) Waiver of Right to Adjudicatory Hearing. Any person who is the subject of an order issued pursuant to 310 CMR 19.081(3) shall be deemed to have waived the right to an adjudicatory hearing, unless, within 21 days of the date of service of the order, the Department receives a written statement setting forth the basis for the request, subject to and in compliance with the applicable provisions of 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection*.

(7) Burden of Persuasion. In an adjudicatory hearing under 310 CMR 19.081(5), the burden shall be on the person conducting the solid waste activities regulated pursuant to 310 CMR 19.000 to persuade the Department that:

- (a) the solid waste activity does not create public nuisance conditions and does not pose a threat to public health, safety or the environment; and
- (b) the person conducting the solid waste activities is and will continue to be in compliance with M.G.L. c. 111, § 150A and 310 CMR 19.000.

19.082: Penalties

(1) General. A person who or which violates the provisions of M.G.L. c. 111, § 150A or 310 CMR 19.000 is subject to judicially imposed criminal and civil penalties as well as civil administrative penalties imposed by the Department. Each day that a violation occurs or continues constitutes a separate violation.

(2) Penalties.

(a) A violation may be punished under the statute by the imposition of a penalty that does not exceed \$25,000 for each day of violation.

(b) A violation may be punished pursuant to the provisions of M.G.L. c. 21A, § 16, and 310 CMR 5.00: *Administrative Penalty*, by the administrative imposition of a penalty of no less than \$100 and not more than \$25,000 for each day of violation.

(c) A violation may be punished under the statute by a fine of not more than \$25,000, or by imprisonment for not more than two years in a house of correction.

(3) Punishment. Punishment imposed under the statute is in addition to any other penalty prescribed by law.

19.083: Enforcement of Minimum Recycling Requirements

(1) The Department may allow the acceptance of recyclable or compostable materials where such acceptance will result in the facility not meeting the 25% recycling requirement established at 310 CMR 19.038(2)(d), with prior notification and approval of the Department, under the following circumstances:

(a) the material is contaminated or is otherwise not acceptable for recycling or composting because it is commingled with solid waste, provided that the person(s) who contaminated or commingled the material with solid waste is promptly notified and take(s) necessary actions to prevent a reoccurrence of the conditions which caused the disposal; or

(b) the recycling or composting operation or end user to which the restricted material is normally sent declines to accept the material or is prohibited from accepting the material as a result of an administrative or judicial order, provided that an alternative recycling or composting operation or storage facility or end user which will accept the material cannot be found within a reasonable period of time.

(2) Failure to comply with approved plans submitted pursuant to 310 CMR 19.030(3) or (4) or applicable permit conditions shall constitute a violation of 310 CMR 19.000. The Department may require a modified plan to be submitted where the minimum requirement is not being achieved.

NON-TEXT PAGE

19.100: Preamble

310 CMR 19.100 through 19.151 establishes minimum performance and design standards; operation and maintenance standards; and closure/post-closure requirements for solid waste landfills by supplementing, modifying or expanding upon the provisions of 310 CMR 19.000 through 19.099. Combined, these two sets of regulations govern all solid waste disposal activities at landfills. The procedures for application, approvals, authorizations, and transfers of such rights and interests are set forth in 310 CMR 19.100 through 19.151.

19.101: Applicability

Except as expressly exempted in 310 CMR 19.060: *Beneficial Use of Solid Waste*, all solid waste disposed by placement into or onto land shall be done in a manner consistent with 310 CMR 19.000 and the requirements of 310 CMR 19.100 through 19.151.

19.102: Definitions

All terms used herein shall have the meanings set forth in 310 CMR 19.006 unless the context clearly implies or indicates another meaning.

19.103: Additional Requirements

Nothing in 310 CMR 19.000 shall be construed to limit the Department from determining on a facility or site specific basis that additional design or operation and maintenance components are required where conditions warrant such additional design or operation and maintenance measures in order to protect public health, safety and the environment or to mitigate potential adverse impacts.

Notwithstanding any provision in 310 CMR 19.000, the Department may approve or modify a permit or authorization or issue an order requiring the operator or owner of a landfill disposing municipal solid waste to comply with the Solid Waste Disposal Facility Criteria, 40 CFR Parts 257 and 258, as may be amended, promulgated pursuant to sections 1008, 2002, 4004, and 4010 of the Resource Conservation and Recovery Act and section 405 of the Clean Water Act.

19.104: Landfill Facility Plan

(1) General. In addition to the general application requirements established in 310 CMR 19.001 through 19.099, 310 CMR 19.030: *Application for a Solid Waste Management Facility Permit*, an application for a landfill permit shall include the following components:

- (a) landfill site plan;
- (b) hydrogeological study;
- (c) landfill design plan;
- (d) landfill operation and maintenance plan; and
- (e) conceptual landfill closure/post-closure plan.

(2) Landfill Site Plan. The landfill site plan shall include:

- (a) the locations of permanent on-site bench marks used as a reference point or plane;
- (b) the acreage and boundaries of the site, the boundaries of the landfilling operations and designation of other land uses within the site;
- (c) the location and elevations of all proposed and existing environmental monitoring devices;
- (d) the location of all proposed and existing soil borings, excavations and test pits;
- (e) the location of all proposed and existing on-site borrow sources;
- (f) the location of all proposed and existing utilities, structures and roads;
- (g) the distance to any airport runway if less than 10,000 feet;
- (h) all Areas of Critical Environmental Concern as determined by the Executive Office of Environmental Affairs (EOEA), where applicable; and
- (i) other information concerning the site which the Department may require for review of plans.

19.104: continued

(3) Hydrogeological Study. A hydrogeological study shall provide the data, maps, cross-sections, schematics and numerical parameters which the Department reasonably deems necessary to accurately determine the physical and chemical characteristics of the overburden material and bedrock present at the site, the directions, pathways and velocities of ground and surface water flows and the physical and chemical characteristics of the ground and surface waters.

(a) Submission of a Scope of Work for a Hydrogeological Study.

1. The applicant shall submit the proposed scope of work for a hydrogeological study to the Department not less than 60 days prior to the commencement of the hydrogeological study.
2. The applicant shall incorporate all Departmental modifications, additions, changes or deletions into the final scope of work for the hydrogeological study.

(b) The hydrogeological study shall include without limitation:

1. a narrative summary of the regional and local geological and hydrogeological setting including a brief description of the major geological formations present (bedrock and overburden);
2. a description of the general geomorphology of the site;
3. a summary of all relevant environmental and geological studies that have been performed at the site;
4. a set of maps that depict:
 - a. the topography of the site;
 - b. the areal extent of the overburden and/or bedrock on the site, together with appropriate cross-sections to provide a three-dimensional picture of the site;
 - c. within a ½ mile of the proposed area of waste deposition, the location of:
 - i. all water supply wells;
 - ii. all aquifer and/or groundwater protection zones including Zone II's and/or Interim Wellhead Protection Areas;
 - iii. all water sheds and their associated drainage patterns; and
 - iv. all surface water bodies (indicate designated classifications).
 - d. within 500 feet of the perimeter of the site, the location of:
 - i. all wetlands; and
 - ii. 100 year flood plains.
 - e. all environmental monitoring points, test borings, test pits, and piezometers on the site;
 - f. ground water contours, piezometric heads, hydraulic gradients (horizontal and vertical), and ground water flow directions, together with the appropriate cross-sections to provide a three dimensional picture of the site for both the seasonal high and low ground water periods.
5. sufficient data and information to adequately describe:
 - a. the physical and chemical characteristics of the major overburden units and bedrock formations present on the site;
 - b. the hydraulic connection between the major overburden units and the overburden units that are in contact with bedrock and the bedrock;
 - c. the hydraulic conductivity of all major overburden units on the site;
 - d. the nature and characteristics of any hydrogeologic boundary that exists on the site;
 - e. the maximum ground water fluctuations and maximum high ground water level of the ground water elevation measurement locations;
 - f. sufficient precipitation data to enable a calculation of the maximum ground water high;
 - g. the as-built design of all monitoring wells and piezometers;
 - h. grain size gradation curves for the overburden material in which the screened interval of a monitoring well resides;
 - i. the existing and/or background quality of the ground and surface waters on the site as regulated in 310 CMR 19.132(1); and
 - j. the hydrogeologic flow conditions.
6. the following information, if it is determined that there is a component of ground water flow from the overburden into the bedrock:
 - a. a bedrock contour map;
 - b. a fracture trace analysis; and
 - c. the hydraulic conductivity of the bedrock.

19.104: continued

7. a clear and concise presentation of any form of geophysical methods used during field investigations of the site; and
8. a clear and concise presentation of any computer model that is utilized in the investigation.

(4) Landfill Design Plan. The landfill design plan shall include:

- (a) a ground water protection system design plan which details the configuration of the liner system, leachate collection system(s), leachate pumping, storage, treatment and disposal systems, and efficiency of the liner in terms of leachate removal;
- (b) schematic drawings, maps and/or plans which delineate in plane view and in detailed cross-sectional view (at initial, interim and final phases) the elevations of the proposed landfill, excavations, berms, dikes, ditches, liners, leachate collection system, swales, storm water detention systems or other drainage features;
- (c) design and construction specifications of the landfill, including, but not limited to the ground water protection system, the environmental monitoring systems, the cap and final cover, recycling and composting operations and other appurtenances associated with the facility;
- (d) a construction plan that includes a description of the installation methods and procedures for construction of the liner, leachate collection system, monitoring systems and other parts of the facility including materials required and scheduling of construction events and phases;
- (e) a quality assurance, quality control (QA/QC) plan for the construction of the landfill including the ground water protection system, the environmental monitoring systems, the cap and final cover and other appurtenances associated with the facility. The QA/QC plan shall specify the qualifications of the QA/QC officers, the qualifications of the installers of the ground water protection systems and specify the testing and monitoring protocols which shall form the basis of the engineering certification that the facility was built according to the approved specifications. The plan shall provide a description of the criteria to be utilized in detecting and evaluating deficiencies, selecting corrective action methodology and implementing corrective measures to achieve conformity with the approved plans; and
- (f) the location and design of convenience and recycling drop-off areas, if applicable.

(5) Landfill Operation and Maintenance Plan. The landfill operation and maintenance plan shall include:

- (a) a narrative description, with appropriate references to operation and maintenance requirements specified under 310 CMR 19.130, the site and design plans, of the solid waste landfill activities proposed to be conducted during the life of the landfill, including the sequence and direction of cell, lift and phase development; capacity and life expectancy for each phase; and the sequence of placement of interim and final cover;
- (b) a plan for compliance with wastes banned pursuant to 310 CMR 19.017: *Waste Bans*;
- (c) a leachate management plan;
- (d) a staffing plan;
- (e) an inspection and maintenance plan that includes a proposed schedule for regular inspections and maintenance of the landfill, including standard operating procedures for:
 1. the leachate collection, handling, treatment and disposal system; and
 2. landfill equipment.
- (f) a facility safety plan, including:
 1. a fire control plan developed in conjunction with and certified by the local fire department or independent licensed fire consultant, including a contingency plan for containing and suppressing a landfill fire anywhere on the site;
 2. a hazardous waste contingency plan for inspecting loads of solid waste and handling and ensuring that any regulated hazardous wastes are properly transported off-site and disposed at hazardous waste facilities; and
- (g) an environmental monitoring plan that includes:
 1. a surface and ground water sampling and analysis plan, based upon the results of the hydrogeological study specified in 310 CMR 19.105(4), which will ensure the accurate representation of surface and ground water quality at the upgradient and downgradient sampling points. At a minimum, this plan shall address:
 - a. sample collection;
 - b. sample preservation and shipment;
 - c. analytical procedures;

19.104: continued

- d. chain of custody control; and
 - e. sample collection and analytical QA/QC.
2. an air monitoring plan which establishes the frequency and extent of sampling and analysis for explosive gasses and air quality; and
- (h) other information concerning the operation and maintenance of the facility which the Department may require for review of plans.

(6) Conceptual Landfill Closure/Post-Closure Plans. The conceptual landfill closure/post-closure plan shall include:

- (a) a narrative description, with appropriate references to the site and design plans, of the activities necessary to close the landfill pursuant to 310 CMR 19.140 at any point during its operating life including the site preparation and closure activities necessary to cap and secure the landfill and activities necessary to maintain and monitor the landfill during the 30 year post-closure period defined at 310 CMR 19.142(2);
- (b) closure and post closure estimates pursuant to 310 CMR 19.051(5): *Financial Assurance Requirements*.

19.105: Equivalency Review Standards and Procedures

(1) Where specific sections of 310 CMR 19.100 through 19.204 permit the submission of design alternatives, the following equivalency review standards and procedures apply.

(2) A person requesting an alternative under 310 CMR 19.105 shall submit a request to the Department in writing. The request shall:

- (a) identify the specific regulation for which the equivalent alternative is sought; and
- (b) demonstrate, through supporting technical documentation, site specific analysis and quality assurance/quality control procedures, that the requested alternative to the design requirements in a section of the regulations will, for the life of facility operations, closure and post-closure maintenance achieve the performance standards in that section, and will do so in a manner that is equivalent or superior to the design requirements in that section.

(3) No equivalency alternative will be approved unless the Department determines that:

- (a) the application is complete and accurate;
- (b) the proposed alternative will, for the life of facility operations, closure and post-closure maintenance achieve the performance standards of the appropriate section of the regulations and will do so in a manner that is equivalent or superior to the design standards in that section;
- (c) the proposed alternative will ensure protection of public health, safety or the environment;
- (d) utilizes materials, technologies or methodologies that are clearly demonstrated to have been successful in similar applications; and
- (e) can utilize acceptable quality assurance and quality control (QA/QC) methods to monitor construction and performance as approved by the Department.

(4) In lieu of approving an equivalency alternative for the entire facility where the equivalency alternative does not meet the criterion established at 310 CMR 19.105(3)(d), the Department may approve an equivalent alternative for a part of the site as a demonstration project as provided for in 310 CMR 19.062: *Demonstration Projects or Facilities*.

19.106: Quality Assurance and Quality Control Requirements

(1) All components used in the construction of the landfill shall be evaluated through a Quality Assurance and Quality Control (QA/QC) program to ensure that the completed landfill is constructed and will operate in accordance with its approved plans.

(2) All materials, including but not limited to, soils and synthetic materials used in the construction of the landfill shall be subject to quantifiable and reproducible manufacturing and/or QA/QC methods that ensure that the material has been prepared, manufactured, handled and installed in accordance with the material's design and operating specifications. All such methods shall be identified by the applicant;

19.106: continued

(3) The QA/QC program shall address requirements for evaluating the prepared or as-manufactured material, handling, storage, installation, corrective or remedial actions to correct deficiencies, and the final or completed function of all landfill components or systems.

(4) QA/QC methods for base liners shall include a method, where a technically proven and economically viable test method is identified, to test the actual final performance and/or integrity of the completed groundwater protection system, at the discretion of the Department.

19.107 Construction Certification

(1) The construction of a permitted landfill shall be accomplished in compliance with a quality assurance/quality control (QA/QC) plan approved by the Department.

(2) The owner or operator shall hire an independent professional Massachusetts registered engineer, knowledgeable and experienced in matters of landfill construction who shall oversee all construction activities. The engineer shall:

(a) determine and certify that all materials and construction of the landfill adheres to approved design plans and specifications, including:

1. determining the initial and final grades of the landfill;
2. overseeing the installation and construction of all components of the liner or final cover;
3. overseeing the installation and completion of run-on and run-off controls, pumps, monitoring devices and other appurtenances.

(b) oversee material and equipment QA/QC testing and verify all data generated through the testing program;

(c) ensure that as-built plans, where required, accurately reflect the constructed facility; and

(d) document all construction and QA/QC activities.

(3) Liners and final covers shall be constructed under the direction of a person with extensive experience in the installation of liners and final caps. Each phase of construction of a liner or cap shall be carried out and inspected under the direction of the independent professional engineer who shall certify that each phase of construction was completed in accordance with approved plans and specifications.

(4) The owner or operator shall submit a copy of the engineer's certification, as required at 310 CMR 19.011 on all construction and QA/QC activities to the Department.

19.110: Ground Water Protection Systems

(1) General Performance Standard. Landfills shall contain and collect leachate and minimize the migration of leachate out of the landfill into the underlying ground water to the maximum practicable extent and prevent the pollution of ground water during the active life of the facility and the closure and post- closure periods.

(2) General Design Standards. Landfill ground water protection systems shall:

(a) be constructed of materials that are compatible with the leachate and gases expected to be generated within the landfill;

(b) be constructed with a system to collect and contain leachate prior to treatment and/or disposal;

(c) provide coverage of all areas to be filled with solid waste and all base perimeters likely to be in contact with leachate;

(d) have a minimum slope of 2% over the entire ground water protection system;

(e) be constructed so that the slope of the liner provides positive drainage to those locations along the perimeter of the landfill where the collection and removal is achieved;

(f) be constructed such that any liner, where the slope of the liner will be less steep than four horizontal to one vertical (4:1) runs at least five feet (vertically) or to the top of side slopes or berms if applicable;

(g) be capable of withstanding the physical and mechanical stresses associated with the site and landfill development, operation and maintenance activities.

(h) be sufficiently strong and stable enough to withstand the static and seismic loads at the site under all expected operating conditions; and

19.110: continued

(i) be designed with a factor of safety (FS) appropriate for the structure and situation being evaluated. All factors of safety shall be identified and justified.

(3) Ground Water Protection System Components. Except as provided in 310 CMR 19.111: *Alternative Groundwater Protection System Design*, and 310 CMR 19.114: *Ground Water Protection System and Final Cover Waivers*, ground water protection systems shall consist, at a minimum, of:

- (a) a sub-grade layer;
- (b) a secondary composite liner;
- (c) a leak detection and secondary collection system;
- (d) a primary liner;
- (e) a drainage layer or layers;
- (f) a leachate collection system; and
- (g) a leachate storage system unless the leachate collection system is to be directly connected to a sewer system.

(4) Minimum Liner Configuration.

(a) For any area where the slope of the liner will be less steep than four horizontal to one vertical (<4:1) and for the first five feet vertically on perimeter berms or side slopes, if any, the landfill liner shall, at a minimum, be comprised of a double composite liner consisting of:

1. a primary composite liner consisting of:
 - a. one foot of a low permeability compacted soil layer or admixture overlain by a flexible membrane liner (FML); or,
 - b. a geosynthetic clay liner (GCL) overlain by a flexible membrane liner (FML);
2. a leak detection and secondary collection system located between the primary and secondary liner; and
3. a secondary composite liner consisting of:
 - a. two feet of a low permeability compacted soil layer or admixture overlain by a flexible membrane liner (FML); or,
 - b. one foot of a low permeability compacted soil layer overlain by a geosynthetic clay liner (GCL) and a flexible membrane liner (FML).

(b) For any area where the slope of the liner will be steeper than or equal to four horizontal to one vertical ($\geq 4:1$) the landfill liner shall, at a minimum, be comprised of a double liner consisting of:

1. a liner configuration that conforms to 310 CMR 19.110(4)(a); or
2. a double composite liner consisting of:
 - a. a primary composite liner consisting of a geosynthetic clay liner (GCL) overlain by a flexible membrane liner (FML)
 - b. a leak detection and secondary collection system located between the primary and secondary liner; and
 - c. a secondary composite liner consisting of one foot of a low permeability compacted soil layer or admixture overlain by a flexible membrane liner (FML); or
3. a double liner consisting of:
 - a. a primary liner consisting of a FML;
 - b. a leak detection and secondary collection system located between the primary and secondary liner; and
 - c. a secondary composite liner consisting of:
 - i. two feet of a low permeability compacted soil layer or admixture overlain by a flexible membrane liner (FML); or
 - ii. one foot of a low permeability compacted soil layer overlain by a geosynthetic clay liner (GCL) overlain by a FML.

(c) Any FML layer shall be constructed so that the FML material is in direct contact with the low permeability soil layer or GCL layer directly below it. Where the GCL layer is to be used in conjunction with a low permeability soil layer, the GCL layer shall be constructed so that the GCL material is in direct contact with the low permeability soil layer. Liner components shall meet the design and performance criteria specified at 310 CMR 19.110(6) through (11).

19.110: continued

(5) Vertical Expansions over Existing Fill. The following requirements apply when a permit review and approval is needed from the Department prior to placing additional waste vertically (hydraulically upgradient) over previously landfilled areas with an existing liner system (or where there is no liner) that does not comply with the groundwater protection system requirements at 310 CMR 19.110(3) and (4). Waste that is being placed in areas under an existing valid Authorization to Operate permit are not subject to 310 CMR 19.110(5) until the capacity represented by that approval is exhausted.

(a) Areas Where there is no Existing Liner. Vertical expansions that will place waste over an area that has no underlying groundwater protection system will be required to construct a liner system in full compliance with 310 CMR 19.110(3) and (4).

(b) Areas Where there is an Existing Single Liner. Vertical expansions that will place waste over an area that has an existing single liner (such as a soil only or FML only liner) will be required to construct a liner system in full compliance with 310 CMR 19.110(3) and (4).

(c) Areas Where there is an Existing Single Composite Liner or a Double Liner that is not a Double Composite Liner.

1. Performance Standard. A hydraulic separation layer shall be constructed using technologies or components that will result in a system that prevents, to the maximum extent possible, leachate generated in areas approved after the effective date of these regulations from mixing with leachate collected in areas approved prior to these regulations. In general, such systems shall use combinations of low permeability barriers and high capacity drainage systems. All leachate intercepted by the hydraulic separation layer shall be directed to and collected in a lined area designed in accordance with the requirements of 310 CMR 19.110(4).

2. Design Standard. For facilities disposing of municipal solid waste (MSW) over an existing single composite liner functioning as designed, where the expansion area will operate for approximately two years or longer before installing a cap, and where the slope of the hydraulic separation layer will be equal to or steeper than 4:1, the presumptive design standard to meet the performance standard above shall be a single liner consisting of:

- a. a FML; or
- b. a GCL; or
- c. 18 inches of soil with a maximum permeability of 1×10^{-7} cm/sec; and
- d. a high performance drainage layer consisting of 12 inches of soil with a permeability no less than 1×10^{-3} cm/sec or 12 inches of less permeable soil in combination with a synthetic drainage layer such as a geonet.

In situations where the slope of the liner to be constructed over an existing composite liner is less steep than 4:1, the presumptive design standard shall be a liner in accordance with 310 CMR 19.110(4).

3. Further Considerations. In situations where the assumptions listed above at 310 CMR 19.110(5)(c)2. do not apply, the Department may approve alternative designs that have different requirements than the presumptive design standard. The Department will not approve an alternative design unless the applicant provides sufficient information to the Department's satisfaction that an alternative design will be as protective of the public health, safety and the environment as the presumptive design.

a. More Stringent Requirements. Examples of when more stringent liner requirements, such as double liners with leak detection, will be the presumed requirement:

- i. where an existing liner is not operating properly;
- ii. where the slope of the separation layer will be less steep than 4:1;
- iii. where the landfill is located in a sensitive environmental location such as a sole source aquifer.

b. Less Stringent Requirements. Examples of when less stringent requirements may be considered by the Department:

- i. where MSW ash, C&D waste or other single source waste types are being disposed and characteristics of the waste such as permeability, leachate quality or other characteristics of the waste are considered;
- ii. where the operating time in an area, before capping, will be less than two years (segmentation of project length is not allowed);
- iii. where an existing double liner underlines the affected area.

19.110: continued

(d) Areas Where there is an Existing Double Composite Liner. The Department may require the installation of a hydraulic separation layer between vertical or horizontal sections or phases of a double composite lined landfill to isolate such areas for purposes of separately monitoring the performance of the groundwater protection systems in those discrete areas.

(e) Notwithstanding the requirements at 310 CMR 19.111(1), alternative designs may be reviewed subject to the equivalency review requirements at 310 CMR 19.105 or other requirements as determined by the Department.

(6) Subgrade Layer Standards.

(a) Performance Standard. The subgrade layer shall provide adequate structural support for the ground water protection system and the solid waste disposed in the landfill;

(b) Design Standards. The subgrade layer shall:

1. be compacted, uniform and free of debris, angular rocks, plant materials and other foreign materials that may damage low permeability liner materials; and
2. be of sufficient thickness to ensure a minimum of four foot separation between the top of bedrock or the maximum high ground water table, as determined using acceptable methods, and the bottom of the lowermost low permeability layer.

(7) Low Permeability Layer (Liner) Standards.

(a) Performance Standards. A low permeability layer shall:

1. minimize to the greatest practicable extent the movement of leachate through the liner;
2. be designed and constructed to meet the permeability design standard for the expected life and post-closure period of the facility; and
3. be constructed in accordance with the quality assurance and quality control requirements of 310 CMR 19.106.

(b) Design Standards.

1. Low Permeability Soil/Admixture Layer Standards. Compacted low permeability soil or admixture layers shall:

- a. have a minimum thickness of one foot when used in the primary composite liner or have a minimum thickness of two feet when used in the secondary composite liner unless a GCL is used in the secondary liner, or the secondary liner slope is greater than or equal to a 4:1 slope, then only one foot is required;
- b. have a maximum in-place saturated hydraulic conductivity of 1×10^{-7} cm/sec. throughout the entire thickness of the layer;
- c. have a minimum post-settlement slope of two percent;
- d. be free of materials that because of their physical, chemical or biological characteristics may cause or contribute to an increase in the permeability of the liner or otherwise cause a failure of the liner; and
- e. be compacted to minimize void spaces and support the weight imposed by the waste disposal operations without settling so as to cause or contribute to the failure of the liner or leachate collection system.

2. Flexible Membrane Liner Standards. Flexible membrane liners shall:

- a. be of sufficient thickness as determined by the Department;
- b. be constructed to ensure that the seams connecting FML panels are of equal or greater strength than the panels or manufacturer's seams within panels and are oriented, as much as is practical, parallel to the slope and not across the slope;
- c. have sufficient flexibility and strength for the proposed application, taking into consideration tensile strength, puncturability, stress cracking and chemical compatibility; and
- d. be capable of being seamed to produce leak-tight, high-strength seams that retain their integrity during liner installation, operating life and the post-closure period.

3. Geosynthetic Clay Liners (GCLs) Standards. Geosynthetic clay liners shall:

- a. have sufficient bentonite (or similar low permeability clay) to provide an effective low permeability layer;
- b. be constructed to ensure that the bentonite (or similar low permeability clay) will be distributed and retained uniformly and securely throughout the GCL during the operating life and the post-closure period;
- c. have sufficient durability for the proposed application, taking into consideration hydration, chemical compatibility, desiccation and other considerations that may affect initial or long term performance; and

19.110: continued

d. be capable of being seamed or joined per standard industry practice to produce leak-tight connections that retain their integrity during the operating life and the post-closure period.

(8) Drainage/Protection Layers.

(a) Performance Standard. Drainage/protection layers shall:

1. provide continuous and freeflowing drainage over the entire liner; and
2. provide adequate protection to the liner from equipment and solid waste disposed in the landfill.

(b) General Design Standards. The drainage/protection layer shall use materials and be designed and constructed so that:

1. the drainage layer will not become clogged or in any other way be impaired from allowing free-flowing drainage of leachate;
2. when used as a part of the primary leachate collection system the layer shall:
 - a. have a minimum thickness of 18 inches;
 - b. when a soil is used, the lower 12 inches has a minimum in-place hydraulic conductivity of 1×10^{-2} cm/sec and the upper six inches has a minimum hydraulic conductivity of 1×10^{-3} cm/sec; or
 - c. when a synthetic drainage layer is used, it shall be designed in accordance with 310 CMR 19.110(8)(c); and
 - d. be designed in accordance with 310 CMR 19.110(9).
3. when used as a part of a secondary leachate collection or leak detection system the layer shall:
 - a. have a minimum thickness of 12 inches with a minimum in-place hydraulic conductivity of 1×10^{-2} cm/sec when a soil is used; or
 - b. be a synthetic drainage layer designed in accordance with 310 CMR 19.110(8)(c); and
 - c. be designed in accordance with the 310 CMR 19.110(8).
4. the integrity of the layer is maintained by preventing the infiltration of fine material by being bound, as necessary, on its upper and/or lower surfaces with filter material, such as a geotextile filter fabric.

(c) Synthetic Drainage Material (Geonet) Design Standards. In addition to the standards specified at 310 CMR 19.110(7)(a) and (b), geonets used as a part of a drainage /protection layer shall:

1. be of sufficient strength to prevent deformation and impairment of function by the weight of vehicles and the solid waste to be disposed;
2. have sufficient flow capability;
3. be designed and evaluated for its effective long-term flow capacity using reasonable and acceptable evaluation methods that consider factors that may reduce (reduction factors) the design flow capacity caused by, but not limited to, overburden forces, (deformation, creep, *etc.*), intrusion by overlying materials such as filter fabrics or soil, and chemical or biological clogging; and
4. be designed with an overall safety factor (for flow capacity) appropriate to ensure the effective long-term performance of the drainage layer.

(9) Leak Detection and Secondary Collection Systems Between Liners.

(a) Performance Standards. Leak detection and secondary leachate collection systems shall provide for detection of leakage of leachate through the primary or uppermost liner and the collection and removal of leachate from the secondary liner.

(b) Design Standards. A leak detection and secondary collection system shall be designed:

1. to collect and remove leachate discharged into a drainage layer between the primary and secondary liners with an efficiency so that a leakage rate of ten gallons per day/per acre, or greater, will be detected within 24 hours of initial saturation;
2. to the extent feasible, identify the general location of the leak;
3. to allow the quantity and quality of leachate, or any liquid, in the leak detection system, to be measured and analyzed separately from the leachate in the primary leachate collection system;
4. with an Action Leakage Rate (ALR) which shall be reasonable and appropriate based upon the design and components of the double liner system;
5. so that the head in the secondary collection system will not, in general, exceed the thickness of the drainage layer between the liners; and

19.110: continued

6. with a leak response plan that details the actions to be taken to evaluate and, when required, eliminate the cause of the leak.
- (c) Action Leakage Rate (ALR).
1. The maximum action leakage rate shall be 100 gallons per acre/day, based on a 30-day rolling average (any consecutive 30 day period), unless the Department has established another action leakage rate for that facility, phase or operational period;
 2. An ALR shall be identified for each stage of the operational life of the liner system;
 3. Where leakage into the leak detection system is occurring at a rate greater than one half the ALR, the owner or operator of the facility shall notify the Department in writing within 72 hours. Such notification needs only to be made once in any 30 day period.
 4. Where a single day leakage rate exceeds twice the ALR, the owner or operator of the facility shall notify the Department, in writing, within 48 hours.
 5. In the event of leakage through the primary liner the facility shall take appropriate corrective action based on the quality and quantity of leachate collected or detected as determined by the Department.
- (10) Primary Leachate Collection and Removal Systems.
- (a) Performance Standards. Leachate collection and removal systems shall:
1. collect and remove the leachate generated by the landfill as quickly and efficiently as is practicable;
 2. provide for the drainage of leachate from the liner into appropriate storage, treatment or transfer facilities;
 3. be designed to ensure that the hydraulic head of leachate can be maintained at less than one foot at the expected flow except during storm events and be designed to drop below one foot within seven days of a 25-year storm for the primary operational phase of the landfill.
- (b) Design Standards. The following design standards shall apply to primary leachate collection systems:
1. pipes shall be placed within a drainage layer in material which meets the standards set forth at 310 CMR 19.110(7);
 2. pipes shall have sufficient diameter and spacing to be capable of freely draining the maximum expected leachate flow from the liner;
 3. trunk lines shall have a minimum slope of 1%;
 4. lateral lines shall have a minimum slope of ½%;
 5. pipes shall be of sufficient thickness and strength to support the maximum static and dynamic loads of vehicles and overlying solid waste without failing;
 6. piping systems shall be designed with sufficient access points to permit maintenance cleaning as necessary;
 7. the number of penetrations of the liner shall be minimized. Penetrations of the liner shall be properly sealed to prevent leakage and wherever possible be designed with access so as to repair damaged seals; and
 8. all sump areas shall be designed to allow access for maintenance of pumps and, at a minimum, provide for remote inspection.
- (11) Leachate Storage Facilities.
- (a) Performance Standard. Leachate storage facilities shall provide for leak-tight storage of the leachate reasonably expected to be generated by the landfill.
- (b) Design Standards. Leachate storage facilities shall:
1. conform to the criteria established by the Department's regulations for industrial wastewater holding facilities, 314 CMR 18.00: *Industrial Wastewater Holding Tank and Container Construction Operation and Recordkeeping Requirements*;
 2. have sufficient strength to ensure that the tank does not collapse or rupture;
 3. be located outside the landfill liner system;
 4. have sufficient capacity to store the leachate generated by the landfill;
 5. be designed with a monitoring device to accurately monitor the volume of liquid collected within the storage facility and be equipped with a system capable of warning the operator when the tank requires pumping; and
 6. incorporate secondary containment or a leak detection system.

19.111: Alternative Ground Water Protection System Design

Landfill ground water protection systems designed using materials, technologies or methodologies other than those expressly provided for under 310 CMR 19.110: *Ground Water Protection Systems*, may be permitted by the Department provided the proponent affirmatively demonstrates to the Department's satisfaction that the alternative ground water protection system design meets the standards established under 310 CMR 19.105: *Equivalency Review Standards and Procedures*.

19.112: Landfill Final Cover Systems

- (1) General Performance Standards. The final cover system shall:
 - (a) minimize the percolation of water through the final cover system into the landfill to the greatest extent practicable;
 - (b) promote proper drainage of precipitation ;
 - (c) minimize erosion of the final cover;
 - (d) facilitate the venting and control of landfill gas;
 - (e) ensure isolation of landfill wastes from the environment; and
 - (f) accommodate settling and subsidence of the landfill such that the above performance standards will continue to be met.

- (2) General Design Standards. The final cover system shall:
 - (a) have a final top slope of not less than 5% and side slopes no greater than three horizontal to one vertical (3:1);
 - (b) be constructed of material(s) that are compatible with gases and leachate expected to be generated;
 - (c) be constructed so as to minimize erosion of all layers of the final cover by using terraces or other appropriate stormwater controls;
 - (d) be constructed so that the low permeability layer is protected from the adverse affects of frost and/or freeze/thaw cycles;
 - (e) be constructed to maintain slope stability;
 - (f) be sufficiently strong and stable enough to withstand the static and seismic loads at the site under all expected operating conditions; and
 - (g) be designed with a factor of safety (FS) appropriate for the site-specific closure being evaluated. All factors of safety shall be identified and justified.

- (3) Final Cover System Components. Except as provided in 310 CMR 19.113: *Alternative Landfill Final Cover System Design*, or 19.114: *Ground Water Protection System and Final Cover Waivers*, the final cover system shall, at a minimum, consist of:
 - (a) the subgrade layer;
 - (b) a landfill gas venting layer unless the the subgrade layer is designed to function as a gas venting layer, or there is an active gas collection and extraction system and it is demonstrated that a gas venting layer is not needed;
 - (c) a low permeability layer or layers;
 - (d) a drainage layer;
 - (e) filter material (when required);
 - (f) a layer capable of supporting vegetation;
 - (g) the vegetative cover; and
 - (h) other components as may be required by the Department.

- (4) Subgrade Layer Standards.
 - (a) Performance Standards. The subgrade layer shall provide adequate structural support for the final cover system and be capable of accommodating any anticipated subsidence or settling without impairing its ability to provide structural support;
 - (b) Design Standards. The subgrade shall:

19.112: continued

1. be free of materials that may damage or abrade the low permeability layer or venting layer; and
2. be of sufficient thickness to cover all solid waste.

(5) Landfill Gas Venting Layer.

- (a) Performance Standard. A landfill gas venting layer shall provide for the free movement of landfill gas out of the landfill to gas control devices or vents.
- (b) Design Standard. Landfill gas venting layers shall:
 1. be placed below the low permeability layer to facilitate the collection and control of landfill gases;
 2. be of sufficient thickness and hydraulic conductivity to facilitate venting of landfill gases from below the low permeability layer;
 3. be composed of either:
 - a. soil material that has:
 - i. a minimum thickness of six inches; and
 - ii. a hydraulic conductivity equal to or greater than 1×10^{-3} cm/second; or
 - b. synthetic material (geonet) which shall:
 - i. be of sufficient strength to prevent deformation and impairment of function by the weight of vehicles or the final cover; and
 - ii. have sufficient flow capability.
 4. be bound on its upper and/or lower surface with filter material where needed to prevent the infiltration of fine material and to maintain the integrity of the layer.

(6) Low Permeability Layer Standards.

- (a) Performance Standard. A low permeability layer shall:
 1. to the greatest extent practicable, minimize the movement or percolation of water into the landfill;
 2. promote positive drainage of the landfill final cover system and prevent erosion; and
 3. be designed and constructed to remain impervious for the expected life and post-closure period of the facility; and
 4. be constructed in accordance with the quality assurance and quality control requirements of 310 CMR 19.106.
- (b) Design Standards.
 1. Low Permeability Soil/Admixture Layer Standards. Compacted low permeability soil or admixture layers shall:
 - a. have a minimum compacted thickness of 18 inches;
 - b. be constructed using materials that have a maximum in-place saturated hydraulic conductivity of 1×10^{-7} cm/sec throughout the entire thickness of the layer;
 - c. be compacted to minimize void spaces;
 - d. be capable of supporting the weight imposed by the post-closure use without settling or causing or contributing to the failure of the low permeability layer; and
 - e. be free of materials that, because of their physical, chemical or biological characteristics, may cause or contribute to an increase in the permeability of the low permeability layer or otherwise cause a failure of the low permeability layer.
 2. Flexible Membrane Liner Standards. Flexible membrane liners shall:
 - a. be of sufficient thickness as determined by the Department;
 - b. be constructed to ensure that the seams connecting FML panels are of equal or greater strength than the panels or manufacturers's seams within panels and are oriented parallel, as much as is practical, to the slope and not across the slope;
 - c. have sufficient flexibility and strength for the proposed application, taking into consideration tensile strength, puncturability, stress cracking and chemical compatibility; and
 - d. be capable of being seamed to produce leak-tight, high-strength seams that retain their integrity during final cover installation and the post-closure period.
 3. Geosynthetic Clay Liners (GCLs) Standards. Geosynthetic clay liners shall:
 - a. have sufficient bentonite (or similar low permeability clay) to provide an effective low permeability layer;
 - b. be constructed to ensure that the bentonite (or similar low permeability clay) will be distributed and retained uniformly and securely throughout the GCL during the operating life and the post-closure period;

19.112: continued

- c. have sufficient durability for the proposed application, taking into consideration hydration, desiccation and other considerations that may affect initial or long term performance; and
- d. be capable of being seamed or joined to produce leak-tight connections that retain their integrity during the operating life and the post-closure period.

(7) Drainage Layers.

(a) Performance Standard. Drainage layers shall provide continuous and freeflowing drainage over the entire low permeability layer.

(b) Design Standards. The drainage layer or system shall:

1. be placed above the low permeability layer;
2. be of sufficient thickness and hydraulic conductivity to drain the immediate and up-gradient areas of the final cover;
3. be designed so that the head in the drainage layer will not exceed the thickness of the drainage layer;
4. be designed based on the hydraulic loadings resulting from the actual materials used in the final cover system, such as the vegetative support layer infiltration rate;
5. be composed of either:
 - a. soil material that has:
 - i. a minimum thickness of six inches; and
 - ii. a hydraulic conductivity equal to or greater than 1×10^{-3} cm/second; or
 - b. synthetic drainage material (geonet) that shall:
 - i. be of sufficient strength to prevent deformation and impairment of function by the weight of vehicles or the final cover;
 - ii. have sufficient flow capability;
 - iii. be designed and evaluated for its effective long-term flow capacity using reasonable and acceptable evaluation methods that consider factors that may reduce (reduction factors) the design flow capacity caused by, but not limited to, overburden forces, (deformation, creep, *etc.*), intrusion by overlying materials such as filter fabrics or soil, and chemical or biological clogging; and
 - iv. be designed with an overall factor of safety appropriate for the effective long-term performance of the drainage layer.
6. be bound on its upper and/or lower surface with filter material where needed to prevent the infiltration of fine material and to maintain the integrity of the layer; and
7. be maintained to prevent conditions that could compromise the integrity of the landfill or cause erosion.

(8) Filter Material Standards. Filter material, where placed, shall be capable of preventing the migration of fine soil particles into the drainage or venting layer.

(9) Vegetative Support/Protection Layer Standards.

(a) Performance Standards. The vegetative support/protection layer shall:

1. be of sufficient thickness and composition to support the selected vegetation;
2. protect underlying layers from the adverse effects of desiccation, extremes of temperature, including frost effects, and erosion;

(b) Design Standards. There shall be at least 18 inches of soil material above the low permeability layer (310 CMR 19.112(6)). This 18 inches may be composed of soil in the vegetative support/protective layer (310 CMR 19.112(9)) and soil in the drainage layer (310 CMR 19.112(7)). The vegetative support/protection layer shall:

1. consist of a topsoil, loam or equivalent type of soil-based vegetative support material with a minimum organic content of 3%;
2. consist of at least 12 inches of soil capable of supporting the selected vegetation and any additional soil material needed to create the required total thickness; or
3. consist of at least eight-nine inches of soil with an organic content of 8-10% capable of supporting the selected vegetation in conjunction with a 12-inch thick drainage layer for a total vegetative/protection layer depth of 20-21 inches.

(10) Vegetative Cover Standards.

(a) Performance Standards. The vegetative cover shall:

1. provide complete coverage of the landfill;
2. minimize erosion of underlying material;

19.112: continued

3. promote evapotranspiration of water to the maximum practicable extent;
4. provide for an effective and permanent cover compatible with the site;
5. have root systems that shall not compromise the drainage layer or low permeability layer; and
6. be composed of plants which shall be capable of self propagation.

19.113: Alternative Landfill Final Cover System Design

Landfill final cover systems designed using components, materials, technologies or methodologies other than those expressly provided for under 310 CMR 19.112: *Landfill Final Cover Systems*, may be approved by the Department provided that either the proponent affirmatively demonstrates to the Department's satisfaction that the alternative final cover system design meets the standards established under 310 CMR 19.105: *Equivalency Review Standards and Procedures*, or, as a result of a site-specific assessment, performed pursuant to 310 CMR 19.150: *Landfill Assessment Requirements*, the Department determines that an alternative design would adequately protect public health, safety and the environment. The final cover material used in an alternative final cover designed for a landfill that accepted waste after October 9, 1991, shall have a maximum hydraulic conductivity of 1×10^{-5} cm/sec.

19.114: Ground Water Protection System and Final Cover Waivers

(1) Applicability. 310 CMR 19.114 is not applicable to landfills handling municipal solid wastes or solid waste combustion facility ash. The owner or operator of other types of landfills may apply for a waiver from one or more of the ground water protection system or final cover requirements pursuant to 310 CMR 19.114(2).

(2) Waiver Criteria. The Department, upon written request, may waive or modify one or more of the ground water protection system or final cover system design components specified under 310 CMR 19.110(4) or 19.112(3), respectively, when the operator satisfies the Department that components of a ground water protection system or final cover are not necessary to adequately protect ground and surface waters due to the characteristics of solid waste disposed in the landfill, the nature of the leachate likely to be produced by the landfill and the physical or hydrogeological characteristics of the site.

19.115: Storm Water Controls

(1) Performance Standard. Storm water controls shall prevent erosion, discharge of pollutants, protect the physical integrity of the landfill and be managed according to applicable standards established by the Department, including but not limited to, wetlands protection regulations at 310 CMR 10.05(6)(b), and the Department's Storm Water Policy. For purposes of meeting stormwater standards established by the Department, recharge shall be permitted at the landfill only where the recharge will not adversely impact the quality of groundwater leaving the site. Peak rate attenuation shall be in accordance with that described in 310 CMR 19.115(2): *Design Standards*, and source controls and pollution prevention measures (including design of the landfill) shall be implemented to prevent discharge of pollutants. This standard applies to the construction, operational and post-operational phases of the landfill.

(2) Design Standards. Storm water controls shall be designed to:

- (a) prevent flow onto the active portion of the landfill (*i.e.*, any area without intermediate or final cover) during the peak discharge from a 24 hour, 100-year storm;
- (b) control the peak rate of run-off from the entire landfill resulting from a 24 hour, 25-year storm; and
- (c) control the peak rate of run-off from the landfill resulting from a 24 hour, 100-year storm, to the extent practicable, if an evaluation of the peak rate of run-off resulting from a 24-hour, 100-year storm indicates there will be flooding up or downstream of the site using the most recent precipitation atlas approved for use by the United States National Weather Service, or their predecessor the U. S. Weather Bureau to determine the rainfall depth associated with the 100-year storm (currently Technical Paper-40, published May, 1961).

19.116: Surface and Ground Water Protection

Landfills shall prevent direct discharge of contaminated run-off or leachate from the landfill to any surface water bodies or to ground water, except in accordance with a Massachusetts Surface Water Discharge Permit or Ground Water Discharge Permit issued by the Department pursuant to 314 CMR 5.00 or 7.00, respectively, and a National Pollution Discharge Elimination System permit issued by the U.S. Environmental Protection Agency.

19.117: Air Quality Protection Systems

(1) General Performance Standard. Landfills shall control the concentration levels of explosive and malodorous gases and other air pollutants as necessary in order to maintain air quality and to prevent the occurrence of nuisance conditions or public health or safety problems.

(2) General Design Standard. Air quality protection systems shall be designed to control the concentration of explosive gases to no greater than 25% of the Lower Explosive Limit (LEL) at the property boundary at any time, excluding gas control or recovery system components or any leachate collection components, or 10% of the LEL in any building, structure, or underground utility conduit.

(3) Gas Vents. At a minimum, passive gas vents shall be provided at all facilities in all areas of the landfill over which final cover has been applied.

(a) Performance Standard. Landfill gas vents shall allow for the movement and adequate venting of landfill gases in order to prevent the buildup of explosive concentrations of gas and prevent the lateral migration of gases beyond the boundaries of the landfill.

(b) Design Standards. Landfill gas vents shall be designed:

1. to maintain the integrity of the low permeability cap at the penetration of the cap;
2. to provide adequate venting of landfill gases;
3. with 'T's, goosenecks or other equivalent cap at the top of the riser pipe to allow effective venting;
4. to allow for retrofitting for active gas recovery or treatment at a later time if required;
5. to operate without clogging; and
6. to remain secure from vandalization.

(4) Installation. Gas vents shall be installed concurrently with the phased construction of a facility and in accordance with any permits or orders issued by the Department.

(5) Landfills shall demonstrate that they are in compliance with the State and Federal air quality regulations, including but not limited to, New Source Performance Standards (NSPS) and Maximum Achievable Control Technology (MACT) requirements. In general a facility must document:

- (a) which federal air quality regulations are applicable to the facility, either initially or at full build-out; and,
- (b) how the facility will comply with all applicable state and federal air quality regulations.

19.118: Ground Water, Surface Water and Gas Monitoring Systems

(1) General Performance Standard. Any person conducting landfill activities shall install, operate and maintain a ground water monitoring system, surface water monitoring system and landfill gas monitoring system capable of detecting and quantifying the release of contaminants into the ground, ground water, surface water or the air.

(2) Ground Water Monitoring Systems.

(a) Performance Standard. A ground water monitoring system shall:

1. be capable of yielding representative ground water samples for analysis; and
2. consist of a sufficient number of wells properly located and screened at appropriate depths to detect the release of contaminants from the landfill into the ground water.

(b) Design Standards. A ground water monitoring system shall:

1. at a minimum be composed of one monitoring well or cluster of wells installed hydraulically upgradient from the limit of the filled or proposed fill area capable of yielding ground water samples which are representative of background ground water quality;

19.118: continued

2. at a minimum be composed of three monitoring wells, or clusters of wells, installed within 150 meters of filled areas proposed to be filled or at the property boundary, whichever is less, and located hydraulically downgradient from the limit of the filled areas or areas proposed to be filled and capable of detecting contaminants that migrate from the landfill to the ground water.
 3. be composed of wells drilled by a person licensed under Well Driller Regulations, 313 CMR 3.00:
 4. be composed of wells constructed in a manner, approved by the Department, that ensures the integrity of the monitoring well and facilitates the collection of samples;
 5. be composed of wells readily accessible to sampling equipment and located so that they do not interfere with routine facility operations; and
 6. be composed of wells designed with locking caps and secured to prevent tampering with or vandalism.
- (3) Surface Water Monitoring Systems
- (a) Performance Standard. Where required by the Department, permanent surface water sampling location markers shall be established upstream and downstream of the solid waste landfill facility in sufficient numbers and locations to adequately represent surface waters flowing through or past the facility.
 - (b) Design Standard. All surface water sampling locations shall be readily accessible to sampling equipment and located so that they do not interfere with routine facility operations.
- (4) Gas Monitoring Systems
- (a) Performance Standard. Gas monitoring wells for the monitoring of explosive and other landfill gases shall be provided at all landfills to determine if gas is migrating beyond the boundaries of the landfill and shall:
 1. be capable of yielding representative air samples for analysis; and
 2. consist of a sufficient number of wells properly located to detect the presence and migration of landfill gases.

19.119: Design Requirements for Ash Landfills

- (1) Applicability. In addition to the regulations set forth in 310 CMR 19.100 *et seq.*, 310 CMR 19.119 shall apply to all new landfills or upgrades and expansions of existing landfills, or parts thereof, in which ash and/or residues from solid waste combustion facilities burning municipal solid wastes are disposed. For the purposes of 310 CMR 19.000, such facilities shall be termed "ash landfills".
- (2) Plans for Ash Landfills. Plans for ash landfills shall include all components and be submitted in accordance with the requirements of 310 CMR 19.104. In addition to the submittal requirements specified in 310 CMR 19.104, the plans for an ash landfill shall include:
 - (a) a discussion of how ash will be transported to and handled at the landfill, including any ash stabilization procedures; and
 - (b) a description of the means by which fugitive emissions of ash will be controlled.
- (3) Ash Landfill Design.
 - (a) Ash landfills shall incorporate the design requirements for landfills set forth at 310 CMR 19.110 through 19.118, including ground water protection systems and final cover systems, except that ash landfills that will not co-dispose MSW and are not located on top of existing solid waste landfills may not be required to comply with 310 CMR 19.112(5) and 19.117 for installation of a gas collection system.
 - (b) Ash landfills shall be designed to ensure that:
 1. the ash is underlain by a ground water protection system meeting the performance and design standards for liners set forth in 310 CMR 19.110. Where an ash landfill expansion is proposed over a previously landfilled area with an existing liner, a ground water protection system in accordance with 310 CMR 19.111: *Alternative Ground Water Protection System Design*, shall be required; and
 2. fugitive emissions of ash are minimized.

19.120: Design Requirements for Woodwaste Landfills

(1) Applicability.

(a) Landfills that accept only woodwastes, as defined herein, may be permitted by the Department using designs, materials, technologies or methodologies other than those specified in 310 CMR 19.110 and 19.112, provided that the operation of the woodwaste landfill will accept only woodwastes and will not present a threat to public health, safety or the environment. Specifically, woodwaste landfill applications may include an application for a ground water protection system waiver and/or final cover waiver as specified in 310 CMR 19.114.

(b) The following woodwaste disposal areas are exempt from regulation under this part, provided the operation incorporates good management practice and is done in a manner to minimize pollution to air, water or other natural resources of the Commonwealth:

1. woodwaste disposal areas exempted from site assignment pursuant to 310 CMR 16.05(5)(d) (single family residence or farm); and
2. other woodwaste disposal areas which will contain a total volume of less than 200 cubic yards.

(2) Plans for Woodwaste Landfills. Plans for woodwaste landfills shall be submitted in accordance with the requirements of 310 CMR 19.104. The Department may waive some of the landfill facility design requirements specified at 310 CMR 19.104 as it deems appropriate for woodwaste landfills.

19.121: Landfill Gas Recovery Operations

(1) General. Landfills conducting gas recovery operations shall conduct such operations and monitoring in accordance with 310 CMR 19.121 and the approved design, operation and maintenance plans and in a manner to prevent interference with on-going site activities or other control measures.

(2) Submittal of Landfill Gas Recovery Plans. All persons proposing to construct a landfill gas recovery facility shall submit an application for a permit to construct and operate that facility pursuant to 310 CMR 19.121. An application shall consist of:

(a) a site plan containing the information and documentation required at 310 CMR 19.104(2)(a) through (c) and (i);

(b) a design plan consisting of:

1. a description of all machinery, equipment, and materials used at the facility, including the equipment's make, model, manufacturer, design capacity, and performance data;
2. plan views and cross-sectional views of the location and grades of all landfill gas collection lines showing all critical elevations of the collection pipe inverts, clean outs, and valves; layout of the facility structure including equipment locations and sampling locations; on-site drainage structures; and extraction well locations, depth of placement and construction materials;
3. a description of how construction of the facility's gas recovery extraction wells, piping and other appurtenances will ensure the integrity of the final cover system is maintained; and
4. a description of the facility's landfill gas condensate collection, storage, and treatment systems. The design capacity for these systems must be based on the engineering report's estimate of the amount of landfill gas condensate produced.

(c) an operation and maintenance plan consisting of the information and documentation required at 310 CMR 19.104(5)(b) through (d) and (f); and

(d) an engineering report consisting of:

1. a description of the operation of the facility and how the recovered gas will be used;
2. an estimate of the quantities of condensate currently generated or expected to be generated and a description of how the condensate will be disposed;
3. an estimate of the cost to properly close the gas recovery operation at the end of its useful life;
4. a description of how the landfill gas recovery system relates to the landfill's overall gas venting and control system;
5. a description of the procedures for taking, analyzing, and reporting data from condensate sampling; and

19.121: continued

6. a contingency plan that discusses an organized and planned method of responding to unexpected events during the construction and during the operation of a gas recovery operation.

(3) Permit Criteria. A permit to construct a landfill gas recovery facility shall be reviewed and granted pursuant to the review procedures specified under 310 CMR 19.001 through 19.099. In addition, all gas recovery facilities that use combustion of any type shall be permitted, designed and operated in accordance with all applicable requirements of the Air Pollution Control regulations, 310 CMR 6.00: *Ambient Air Quality Standards for the Commonwealth of Massachusetts* through 8.00: *Prevention and/or Abatement of Air Pollution Incident Emergencies*.

(4) Landfill Gas Recovery Facility Operation and Maintenance Requirements. Landfill gas recovery facilities shall conform to the operational requirements established in 310 CMR 19.121, including:

- (a) condensate generation shall be kept to a minimum and condensate recirculation, if proposed, shall be done in accordance with the permit;
- (b) condensate shall be sampled and results reported in accordance with the permit;
- (c) gas monitoring shall occur in accordance with 310 CMR 19.132(4); and
- (d) an annual report on the operation of the landfill gas recovery facility shall be submitted to the Department as specified in the permit. This report shall contain the following information, compiled on a monthly basis:
 1. quantity of landfill gas recovered;
 2. quantity of condensate generated and recirculated or treated;
 3. quantity of steam generated, electricity generated, or low Btu or pipeline quality gas produced, as applicable; and
 4. summary of sampling data.

19.130: Operation and Maintenance Requirements

(1) General. An operator shall incorporate procedures and practices, in accordance with approved plans and permit conditions, such as proper sequencing of landfill operations, proper grading of the site, proper maintenance of drainage and collection systems, and the application of adequate amounts and appropriate types of cover materials, which will prevent pollution of ground water, surface water and air quality and prevent nuisance conditions from developing.

(2) Operator Supervision. The overall care, maintenance and management for a landfill shall be under the direction of a qualified operator.

(3) Special Wastes. No solid waste that is a special waste shall be received or disposed at any landfill unless the provisions of 310 CMR 19.061 are satisfied and the special waste is managed in accordance with any conditions specified by the Department in any approval to manage the special waste.

(4) Banned or Restricted Solid Wastes. Any solid waste which has been banned or restricted from disposal pursuant to 310 CMR 19.017 shall be managed at a landfill in accordance with the facility's waste ban compliance plan prepared and approved in accordance with 310 CMR 19.017(5) unless an exception has been granted under 310 CMR 19.017(6).

(5) Hazardous Waste.

- (a) No operator shall dispose of any material subject to the Hazardous Waste Regulations, 310 CMR 30.000, at a solid waste landfill permitted pursuant to M.G.L. c. 111, § 150A.
- (b) The operator shall implement a program, approved by the Department, for detection and exclusion of hazardous wastes.
- (c) The operator shall immediately notify the Department and the board of health of the discovery of any material subject to 310 CMR 30.000: *Hazardous Waste*.

(6) Bulky Wastes.

- (a) An operator may accept bulky wastes where:
 1. the handling of such wastes is consistent with the facility's permit or site assignment;and

19.130: continued

2. the handling and/or disposal of such wastes can be carried out in a manner which is manageable and compatible with the facility's operation and maintenance plan and environmental control systems.
 - (b) The Department may disallow or place conditions on the handling or disposal of bulky waste at a landfill in order to protect the engineering or operational integrity of the facility.
- (7) Liquid Wastes.
- (a) No liquid wastes shall be disposed at landfills. Contained liquid wastes generated by and produced in the normal operation of a household, excluding septage, shall not be considered to be liquid wastes unless expressly excluded through 310 CMR 19.017: *Waste Bans*.
 - (b) For the purpose of 310 CMR 19.130 liquid wastes means any material that drains freely or contains free draining liquids, as determined by the Department using the Paint Filter Liquids Test, Method 9095 as described in USEPA Publication SW-846, as may be amended.
- (8) Solid Waste Handling.
- (a) Solid waste shall not be deposited in, or be allowed to enter surface or ground waters of the Commonwealth.
 - (b) Solid waste or other discarded materials shall not be unloaded unless the operation is under the direct supervision of the operator.
 - (c) The operator shall post, using appropriate signs or other means, where vehicles are to unload solid waste at the landfill.
 - (d) The deposition of solid waste shall be confined to the smallest area feasible.
- (9) Bird Hazards. The operator of facilities located in the proximity of airports shall operate and maintain the facility in a manner so as to ensure that the facility shall not pose a bird hazard to aircraft.
- (10) Equipment and Equipment Shelter.
- (a) The operator shall provide equipment in adequate numbers and of appropriate type and size to ensure adequate compaction of solid waste and the proper operation and maintenance of the facility.
 - (b) Equipment shall not be in direct contact with the drainage/protection layer during landfilling activities.
 - (c) The operator shall make provisions for and ensure that backup equipment is obtained within 24 hours should the equipment used in daily operations become disabled for more than 24 hours. The facility shall cease operations should equipment not be available until such time as it becomes available to properly operate the facility.
 - (d) The operator shall provide suitable shelter or protection as necessary for all equipment and necessary service supplies used in connection with facility operations.
- (11) Staffing.
- (a) The operator shall provide an adequate number of trained staff to ensure that the facility is operated and maintained as designed and in accordance with good solid waste management practices.
 - (b) During posted hours of operation the operator shall be continuously present at the landfill.
- (12) Employee Facilities.
- (a) The operator shall provide proper shelter and facilities for employees working at the facility. The shelter and facilities shall contain:
 1. sufficient light and heat;
 2. a safe drinking water supply;
 3. sanitary handwashing and toilet facilities;
 4. an operational telephone or two-way radio system; and
 5. other equipment or appurtenances necessary for full compliance with OSHA and Department of Labor and Industries regulations.

19.130: continued

(13) Accident Prevention and Safety.

- (a) All employees shall be instructed in the principles of first-aid and safety and in the specific operational procedure necessary to prevent accidents.
- (b) The operator shall provide for the availability and maintenance of adequate first-aid supplies at the site at all times.
- (c) The operator shall provide for two-way radios or telephones and ensure that the numbers for emergency medical care and ambulances are posted at the site.

(14) Spreading and Compacting of Solid Waste.

- (a) All solid waste shall be evenly spread in shallow layers not exceeding three feet in thickness prior to compaction.
- (b) Each layer shall be thoroughly compacted prior to the spreading and compaction of each additional layer.

(15) Cover Material.(a) General. All cover material shall:

- 1. control fires, vectors, the occurrence of nuisance conditions such as odors, dust or litter, and be placed in a manner so as to minimize erosion by wind and/or water;
- 2. maintain a physical separation of the solid waste from the surface environment.
- 3. be substantially odor free;
- 4. consist of materials suitable for carrying out the geotechnical and other functions of the cover material; and
- 5. be free of substances which would attract vectors and free of large objects which would hinder spreading and compaction or otherwise interfere with the proper functions of cover material.

(b) Effective Use. The Department reserves the right to limit the types and quantities of cover material used at a facility to meet the engineering function of that use, maximize capacity allocation or to otherwise address the waste management needs of the Commonwealth.

(c) Daily Cover.

- 1. Daily cover material shall be workable under all weather and operational conditions.
- 2. A minimum of six inches of compacted soil shall be applied:
 - a. over all exposed solid waste at the end of each working day; or
 - b. more frequently and/or at greater depth, if necessary, to prevent fire and control vectors, odors, or blowing litter and to ensure that there is no exposed refuse.
- 3. A minimum quantity of daily cover material sufficient for 14 working days operations shall be stockpiled at the landfill site at all times.
- 4. Daily cover shall not be used in quantities greater than are necessary to achieve compliance with the requirements at 310 CMR 19.130(15)(a). Any quantity of daily cover used above this amount, except where stipulated, is considered disposal.
- 5. Upon written request, the Department may approve in writing, the use of alternative daily cover materials and/or different thicknesses of daily cover pursuant to 310 CMR 19.105: *Equivalency Review Standards and Procedures*. Where non-soil cover materials are proposed the material must meet or exceed the standards established at 310 CMR 19.130(15)(a) and (b).

(d) Intermediate Cover.

- 1. Intermediate cover material shall be used to prevent or minimize the infiltration and percolation of water into the landfill.
- 2. Intermediate cover shall be applied under the following circumstances:
 - a. a minimum of six inches of uniformly compacted intermediate cover, in addition to the daily cover, shall be applied on the exterior top and side slopes of any filled areas of a landfill which has not received or will not receive solid waste for 30 days or other time period as approved by the Department; or
 - b. a minimum of one foot of uniformly compacted intermediate cover in addition to the daily cover, shall be applied on the exterior top and side slopes of any filled areas of a landfill which has not or will not receive solid waste for six months or longer or other time period as approved by the Department.
- 3. Acceptable Materials.
 - a. The following soils, classified pursuant to the Unified Soil Classification System, may be used without prior Departmental approval: G.C., S.C., C.H., C.L. and O.H.

19.130: continued

- b. All other soils proposed for use as intermediate cover at a landfill shall be tested by a qualified laboratory and be approved as intermediate cover by the Department prior to placement.
4. Other Materials. Upon written request, the Department, pursuant to 310 CMR 19.105: *Equivalency Review Standards and Procedures*, may approve, in writing, the use of synthetic covers or other alternatives if such materials provide equivalent or greater protection than the materials listed in 310 CMR 19.130(15)(c)3.a.
- (e) Final Cover.
1. The application of final cover, or alternate in accordance with 310 CMR 19.112, 19.113 or 19.114, shall begin to be applied to a section of the landfill as soon as possible, but no later than 90 days, or other schedule as approved by the Department, after the circumstances specified in 310 CMR 19.130(15)(e)1.a. and b. When greater than 30 days of the 90 day period falls between November 1st and March 1st, final cover shall begin to be applied no later than the following April 1st.
 - a. Active landfills:
 - i. whenever a new lift has not or will not be applied within a one year period unless the area is permitted to accept additional waste;
 - ii. upon reaching final approved elevations;
 - iii. whenever a phase of the landfill has been completed; or
 - iv. whenever the permit expires or terminates for any reason, or is revoked.
 - b. Inactive landfills:
 - i. in accordance with schedules established pursuant to 310 CMR 19.150, *Landfill Assessment Requirements*, and 310 CMR 19.151: *Corrective Action Requirements*.
 2. The final cover shall be designed and constructed in accordance with the requirements established in 310 CMR 19.112, 19.113 or 19.114.
 3. Final cover shall be maintained to prevent erosion and ensure the integrity of the cap.
- (f) Maintenance of Intermediate or Final Cover.
1. The final cover system shall be repaired immediately upon the detection of any failure which may result in the release of pollutants to the environment and shall be maintained and repaired during the active life of the landfill, the closure period and the post-closure period.
 2. Operators shall repair the intermediate cover, including cover vegetation if used, of all areas on which intermediate cover has been applied.
- (16) Vector, Dust and Odor Control.
- (a) The operator shall prevent vectors, dust, odors and other nuisance conditions from developing at the landfill and any other areas related to the general facility operations.
 - (b) No pesticides shall be utilized at the landfill except:
 1. under the direct supervision of a pesticide operator licensed by the Massachusetts Department of Food and Agriculture; and
 2. upon written notification to the appropriate Department Regional Office and board of health of such application.
 - (c) Water shall not be used for dust control in amounts which produce excessive infiltration, ponding or erosion.
- (17) Litter Control.
- (a) Landfill operations shall be conducted so as to minimize blowing litter.
 - (b) The operator shall incorporate litter fencing, natural barriers or other devices to prevent the scattering of solid waste beyond the working area.
 - (c) The operator shall maintain the general cleanliness of the facility and surrounding areas impacted by blown litter from the facility or the access roads.
- (18) Top Slope and Side Slopes.
- (a) The operator shall ensure that the final top slope has a minimum grade of 5%.
 - (b) The operator shall ensure that no top slope or side slope grade shall result in excessive erosion.
 - (c) The operator shall ensure that final exterior side slopes shall not exceed a slope of three horizontal to one vertical (3:1).
 - (d) The operator shall ensure that in no case shall an unstable slope be created or a slope that could result in abnormal stress on the liner system.

19.130: continued

(19) Storm Water Drainage.

- (a) The operator shall provide sufficient storm water drainage controls and diversion structures, channels or ditches to promote drainage off of the landfill, minimize run-on onto the landfill, prevent uncontrolled ponding on the landfill or uncontrolled ponding adjacent to the filled area.
- (b) Storm water drainage structures shall be designed, constructed and maintained so as to ensure integrity of the drainage structures and so as to prevent erosion of the landfill.

(20) Erosion Control.

- (a) The operator shall institute such soil erosion control measures as are necessary to ensure the retention and integrity of the daily, intermediate or final cover.
- (b) The operator shall ensure that no solid waste or leachate are carried off-site due to erosion.
- (c) The operator shall ensure that siltation due to erosion shall not migrate off-site.
- (d) In a situation where significant settlement, uncontrolled ponding of waters or erosion of the landfill or cover material placed over the landfill occurs during the operation, closure or the post-closure period the operator or owner shall immediately institute corrective measures.

(21) Boundary and Elevation Markers.

- (a) The operator shall establish and maintain boundary markers at the outermost boundaries of waste deposition and at the property boundaries. Markers shall, at a minimum, be established at every change in direction of the boundary.
- (b) The operator shall establish and maintain at least one reference elevation marker on an area of the site that does not contain solid waste.

(22) Access Roads. The access roads shall be constructed, graded and maintained to ensure that traffic flow will not be interrupted by inclement weather or traffic patterns.

(23) Security.

- (a) The operator shall provide sufficient fences or other barriers to prevent access to the facility except at designated points of entry or exit.
- (b) A gate shall be provided at all access points and shall be locked at all times when the operator or his agent is not on site or during hours when the facility is not operating.

(24) Posting of the Landfill.

The operator of a landfill shall post signs at all access points to the landfill which, at minimum, include the following information:

- (a) the name of the owner and operator of the facility;
- (b) a 24 hour emergency telephone number for the facility;
- (c) the hours of operation;
- (d) a list of solid wastes banned or restricted pursuant to 310 CMR 19.017;
- (e) other limitations and conditions of access to the facility; and
- (f) penalties for unauthorized use.

(25) Open Burning. The operator shall not cause, suffer, allow or permit the open burning of any combustible material at the facility except as may be expressly permitted by the Department pursuant to 310 CMR 7.07: *U Open Burning.*

(26) Fire Protection and Control.

- (a) The operator shall ensure that no materials are stored, held, maintained or placed at a landfill in such a manner as to pose a fire hazard.
- (b) A separate area shall be provided, located away from combustible materials, uncovered refuse and buildings, for quick dumping and quenching or snuffing of hot loads.
- (c) The operator shall immediately notify the fire departments having jurisdiction, and the appropriate Regional Office of the Department whenever smoldering, smoking or burning has occurred or is occurring at the landfill.
- (d) The operator shall be responsible for seeking fire-fighting assistance, initiating and providing assistance and/or resources for fire-fighting actions until all smoldering, smoking and burning cease.

19.130: continued

(e) The operator shall not conduct disposal activities in the vicinity of any smoldering, smoking or burning area. Precautions shall be taken to prevent disposal activities from interfering with fire-fighting activities.

(f) Any disruption of the finished grade or covered surfaces as a result of fire fighting activities shall be repaired or replaced immediately upon termination of fire-fighting activities.

(27) Convenience and Recycling Drop-off Areas at landfills.

(a) The operator may provide one or more containers of sufficient capacity within a designated secure area under the landfill's control and with the approval of the Department either for the unloading of solid wastes from private vehicles prior to transport of the solid waste to the active area of the landfill (convenience areas), or for the collection and temporary storage of recyclable materials.

(b) Convenience areas and recycling drop-off areas shall be operated in an orderly, safe and environmentally sound manner.

(c) The convenience or recycling drop-off area shall be located a safe distance from the active working face and the movement of associated landfill equipment and commercial vehicles.

(d) The convenience or recycling drop-off area shall be maintained so as to prevent nuisance conditions from developing and to ensure the sanitary condition and orderly appearance of the areas.

(e) Solid waste shall be removed from the containers used in the convenience area and deposited in the working face at such frequency so as not to exceed the capacity of the containers. The containers shall be emptied, at a minimum, at the end of each day of operations.

(f) Containers provided for the collection and storage of recyclable materials for transport off-site shall be emptied whenever filled or every 60 days, whichever is less, or as otherwise determined by the Department.

(28) Waste Oil Collection at Landfills. Waste oil other than the waste oil generated by the operator during normal maintenance of equipment used on-site may be collected and stored at landfills only with the approval of the Department.

(29) Household Hazardous Waste Collections at Landfills. Household hazardous waste shall be collected at landfills only with the approval of the Department and consistent with 310 CMR 30.000: *Hazardous Waste*.

(30) Leachate Collection, Treatment and Disposal.

(a) Leachate shall be collected, stored, handled, treated on or off-site and disposed in accordance with approved plans and the permit.

(b) The storage of leachate should not exceed one foot of hydraulic head on the liner except during storm events and be designed to drop below one foot within seven days of a 25-year storm for the primary operational phase of the landfill.

(c) Leachate shall not be discharged directly to waters of the Commonwealth except in accordance with a discharge permit issued by the Department pursuant to 314 CMR 5.00 *Ground Water Discharge Permit Program* or 314 CMR 7.00: *Sewer System Extension and Connection Permit Program*.

(d) Leachate shall not be discharged to a sewer except in accordance with a sewer connection permit issued pursuant to 314 CMR 12.00.

(e) Leachate shall only be stored at the landfill pursuant to the requirements of 314 CMR 18.00: *Industrial Wastewater Holding Tank and Container Construction, Operation, and Record Keeping Requirements*.

(f) Leachate shall be removed from a landfill leachate storage facility for off-site treatment or disposal only by a licensed liquid waste hauler and only when there is a contractual or otherwise appropriate guarantee for disposal of the leachate.

(g) The operator shall have contracts or otherwise appropriate plans for back-up handling, treatment and disposal for leachate expected to be generated by the landfill in the case of interrupted service of the primary handling, treatment and disposal option.

(h) Inspection reports, as required under 310 CMR 19.130(35), shall include the quantity of leachate generated, the leachate disposal location, results of leachate tank testing and monitoring and other routine maintenance performed.

19.130: continued

(i) Leachate collection, storage, treatment, and disposal shall continue during the entire active life of the landfill, and during the closure and the post-closure periods.

(31) Phase Completion of the Landfill.

(a) Landfill operations shall be conducted in phases in accordance with approved plans to reduce the amount of active area exposed.

(b) Final cover shall be placed on completed phases and shall be maintained to prevent erosion and ensure the integrity of the cap.

(c) Construction of the Final Cover. Construction of the final cover shall consist of the construction of the final cover and all associated appurtenances. Construction of the final cover shall be carried out in conformance with 310 CMR 19.107: *Construction Certification*. The independent professional engineer shall:

1. notify the Department in writing two weeks prior to the start of construction of the low permeability cap;
2. ensure that:
 - a. the completed phase is graded in a manner that facilitates surface drainage and is consistent with the surrounding topography;
 - b. the completed phase is completely covered by a final cover in accordance with 310 CMR 19.112;
 - c. the construction of the final cover does not in any way interfere with proper drainage of adjacent lands or concentrate run-off waters on adjacent areas;
 - d. the phase has an air quality protection system designed and constructed in accordance with 310 CMR 19.117; and
 - e. the phase has an operative environmental monitoring system designed and implemented in accordance with 310 CMR 19.118.
3. notify the Department in writing two weeks prior to the completion of construction of the final cover; and
4. submit a copy of the engineer's certification to the Department.

(d) Letter of Compliance.

1. Following receipt of the engineer's certification specified at 310 CMR 19.130(31)(c)4. the Department shall inspect the landfill and shall:
 - a. issue a letter of compliance certifying that the landfill or phase thereof has received final cover in accordance with approved plans; or
 - b. issue a letter citing deficiencies and requiring corrective action.

(32) Disruption of Landfilled Areas.

(a) No person shall excavate, disrupt or remove deposited material from either an active, inactive or closed landfill without prior written approval from the department.

(b) All requests for approval shall include a plan describing the area involved, depth of such excavated material, where material is to be re-deposited and estimated time required for completion of excavation procedures.

(c) All excavations shall be confined to an area consistent with the number of pieces of digging equipment and/or trucks used for haulage.

(d) Adequate measures shall be taken during excavation to control dust, odors, fires, potential for release of gas and explosions, rodents, insects and blowing litter.

(e) The re-deposition of all excavated solid wastes shall be in conformity with all requirements of 310 CMR 19.000.

(33) Construction of Buildings. Construction of permanent buildings on top of landfilled areas shall be prohibited during the operational phase except for buildings associated with landfill gas recovery operations.

(34) Records for Operational and Plan Execution.

(a) The operator shall maintain a daily log to record operational information, including but not limited to the type and quantity of solid waste received and the status of all environmental control or monitoring systems.

(b) The operator of existing or new landfills receiving 100 tons or more per day shall weigh all incoming solid waste.

(c) Operators of landfills that receive less than 100 tons per day shall, on a daily basis, estimate the total weight and volume of waste delivered based upon the capacity of the vehicles which delivered solid waste to the facility.

19.130: continued

(d) The operator shall submit to the Department, no later than February 15th of each calendar year, an annual report summarizing the facility's operations for the previous calendar year or portion of a calendar year that waste is handled at the facility. The report shall describe and summarize:

1. the amount of solid waste handled during that year with the quantity reported in tons;
2. the filled capacity of the facility in cubic yards and the estimated density of the landfilled solid waste;
3. the amount of capacity remaining in the landfill in cubic yards;
4. the volume of daily and intermediate cover material applied to the landfill during that year;
5. all environmental monitoring and sampling data trends from ground water, surface water and gas monitoring systems; and
6. a demonstration of how the landfill's operations during the year complied with the provisions of the recycling and composting plan contained as part of the facility's solid waste management permit.

(35) Inspections. The facility shall be inspected by a third-party inspector in accordance with 310 CMR 19.018.

(36) Re-circulation of Leachate. The Department may allow the re-circulation of leachate if it is demonstrated to the Department that such a procedure will be conducted to achieve a reasonable environmental goal and the operation will not compromise the integrity of the landfill, including the liner and leachate collection systems, or result in unacceptable adverse impacts to the public health, safety or the environment, or result in nuisance conditions. A request for leachate re-circulation shall include:

- (a) the goals and expectations of the re-circulation activity;
- (b) a report detailing the engineering considerations that need to be addressed by the re-circulation activity including, but not limited to, stability of the landfill, leachate collection system performance, odor concerns and landfill gas issues (generation rate and controls, *etc.*);
- (c) identification of potential adverse impacts (odors *etc.*) resulting from the re-circulation activity and a contingency plan to address any potential adverse impacts should they occur;
- (d) methods used to monitor the performance of the re-circulation operations to ensure they are within safe operating parameters and achieving project goals;
- (e) amount and rate of leachate to be recirculated, how leachate will be distributed, and storage needs and methods; and,
- (f) an evaluation of financial assurance mechanisms to ensure the availability of adequate funds to address corrective actions that may result if there are problems with the re-circulation system.

(37) End-of-life Mercury-added Products. Mercury-added products that are hazardous waste pursuant to 310 CMR 30.000: *Hazardous Waste* shall be handled in accordance with 310 CMR 30.000: *Hazardous Waste*. Mercury-added products that are not hazardous waste shall be handled in accordance with 310 CMR 76.05(2).

19.131: Additional Operation and Maintenance Requirements for Landfills that Accept Ash

(1) General. In addition to the operation and maintenance requirements set forth in 310 CMR 19.130, operators of landfills that accept ash shall comply with the operation and maintenance requirements set forth in 310 CMR 19.131.

(2) Fugitive Emissions. Ash landfills shall minimize the generation of fugitive emissions resulting from the delivery, dumping and compacting of ash.

(3) Ash Moisture Content. Ash shall be transported and delivered to an ash landfill in a damp state, sufficient to prevent emissions of fugitive dust during the dumping, spreading, compacting and covering of the ash.

(4) Spreading and Compacting of the Ash.

- (a) Ash shall not be deposited in an ash landfill unless it is completely extinguished.
- (b) Ash shall be evenly spread in layers and thoroughly compacted.

19.131: continued

(5) Vehicle Washdown or Wheelwash or Other Alternative Measures. Ash landfills may be required to be equipped with an ash vehicle washdown area or wheelwash or other alternative method for the cleaning of ash from the vehicle prior to leaving the landfill where the vehicle will need to travel on public roads. The design of the washdown facility or wheelwash or alternative method, if required, shall ensure that washdown water is adequately collected for treatment and disposal.

19.132: Environmental Monitoring Requirements

(1) General. The owner or operator shall conduct monitoring of surface water, ground water, landfill gas and any other media as determined by the Department, including without limitation soil and sediment, on a schedule established in the permit or as otherwise required by Department. The owner or operator of facility that submits environmental monitoring results under the provisions of 310 CMR 19.132 shall ensure that analytical and environmental monitoring data submitted to the Department is scientifically valid and defensible, and of a level of precision and accuracy commensurate with its stated or intended use. Compliance with this performance standard includes, but is not limited to:

- (a) employing procedures and methodologies for the collection and analysis of soil, sediment, water (or other liquids), vapor, air, and/or waste samples that consist of:
 1. methods published by the Department, the U.S. Environmental Protection Agency, the American Society for Testing and Materials (ASTM), the American Public Health Association (APHA), the National Institute for Occupational Safety and Health (NIOSH), the American Water Works Association (AWWA), and other organizations with expertise in the development of standardized analytical testing methods; or
 2. other methods approved by the Department.
- (b) retaining a person who is qualified by education, training and experience to perform sample collection and analysis.

(2) Surface and Ground Water Monitoring.

- (a) The owner and operator shall ensure that surface and ground water monitoring are conducted at any active landfill and during the facility's post-closure period set forth in 310 CMR 19.142.
- (b) The owner or operator of a facility shall conduct surface and ground water monitoring at sampling points established in the permit and/or as required by the Department. The groundwater point of compliance for a landfill shall be no more than 150 meters from the edge of the waste disposal area (as delineated in the facility's current permit specified in the engineering plans referenced in the permit, or as otherwise delineated by the Department), or the property line, whichever is less.
- (c) The owner or operator shall establish background surface water and ground water quality at sampling points hydraulically upgradient of the landfill. Background water quality shall be determined by a minimum of four quarterly rounds of samples for each of the monitoring parameters or constituents listed in 310 CMR 19.132(2)(h).
- (d) The owner or operator shall conduct surface and ground water monitoring on a schedule established in the permit or as required by the Department. At a minimum, monitoring shall be performed semi-annually except as required pursuant to 310 CMR 19.132(2)(c), unless the Department approves or orders, in writing, a different frequency of sampling.
- (e) The Department may refuse to accept monitoring data where:
 1. the sample was taken from a ground water monitoring well for which the Department has not received and approved as-built construction plans, boring logs and well locations;
 2. the sample was taken from a ground water monitoring well constructed in a manner not approved by the Department;
 3. the analyses were performed by a laboratory other than a Massachusetts certified laboratory, unless the sample is accompanied by a complete QA/QC submittal;
 4. the sample was not handled in accordance with the sampling and preservation requirements (*e.g.*, sample container, holding time and sample volume) specified by the testing method;

19.132: continued

5. the sample was taken from a monitoring device or location that is damaged or has not been maintained in accordance with 310 CMR 19.133;
 6. the sample does not contain sufficient documentation regarding chain of custody;
 7. the sample was not collected or analyzed in accordance with 310 CMR 19.132(1); or
 8. the Department has reason to believe the sampling data is false, inaccurate, incomplete or misleading.
- (f) The owner or operator shall submit all analytical results to the Department within 60 days after the date of sample collection or as specified in the permit or as otherwise required by the Department. The analytical results shall be summarized in tables with a discussion of the results including a trend analysis. Where the Department provides a form for environmental monitoring reports, the report shall be submitted on that form and shall contain all information as requested by that form. If no form is provided by the Department, the report shall include, unless otherwise approved by the Department, the following information:
1. site plans or maps showing sampling locations, distribution of contaminants, groundwater contours and groundwater flow direction;
 2. a letter report briefly summarizing the data and identifying any issues of concern;
 3. all field Quality Assurance/Quality Control information; and
 4. chain of custody forms.
- (g) The owner or operator shall record static ground water elevations and total well depth prior to collecting a ground water sample whenever a monitoring well is to be sampled.
- (h) At a minimum, the owner or operator shall analyze surface and ground water samples for the following parameters, unless otherwise approved by the Department based on review of past monitoring results or other relevant information:
1. Indicator parameters:
 - a. pH (*in situ*);
 - b. Alkalinity;
 - c. Temperature (*in situ*);
 - d. Specific Conductance (*in situ*);
 - e. Nitrate Nitrogen (as Nitrogen);
 - f. Total Dissolved Solids;
 - g. Chloride;
 - h. Calcium;
 - i. Sodium;
 - j. Iron;
 - k. Manganese; and
 - l. Sulfate
 - m. Chemical Oxygen Demand (COD)
 - n. Dissolved Oxygen
 2. Inorganics:
 - a. Arsenic;
 - b. Barium;
 - c. Cadmium;
 - d. Chromium
 - e. Copper
 - f. Cyanide;
 - g. Lead;
 - h. Mercury;
 - i. Selenium;
 - j. Silver; and
 - k. Zinc.
 3. all of the compounds included in EPA Method 8260, and methyl ethyl ketone, methyl isobutyl ketone, acetone and 1,4 dioxane. In addition, unknown peaks having intensities greater than five times the background intensity shall be identified (Method 8260 is detailed in the EPA publication SW-846, entitled *Test Methods for Evaluating Solid Waste*); and
 4. any additional parameters required by the Department.

19.132: continued

(i) The owner or operator shall ensure that practical quantitation limits (or laboratory reporting limits) meet or are below the Maximum Contaminant Level (MCL) or applicable standard for each analyte tested. If not, the Department will not accept the data.

(j) If the concentrations of any of the parameters listed in 310 CMR 19.132(2)(h) exceed the state or federal drinking water standards, Maximum Contaminant Levels (MCLs), Ambient Water Quality Standards for surface water samples established at 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*, or alternative standards established in a permit, or guidelines or standards established by a permit, order or authorization issued by the Department for contaminants for which no federal or state standard exists, at any sampling point, the owner or operator shall:

1. notify the Department within 14 days of the finding; and
2. collect, analyze and submit to the Department another round of samples within 60 days of the prior date of sample collection and determine the concentration of all parameters identified in 310 CMR 19.132(2)(h) that were exceeded unless otherwise specified by the Department.

(k) Where the Department determines, at any time, based upon the ground and surface water analyses from the facility, upgradient water quality and baseline water quality, that assessment and corrective actions shall be required, the owner or operator shall undertake the assessment and/or corrective actions as determined by the Department. Such assessment shall characterize the full nature and extent of contamination, and the risks of harm to public health, safety and the environment in accordance with the requirements of 310 CMR 19.150 and 310 CMR 40.0114: *Solid Waste Management Facilities*. In establishing the applicable standards for groundwater down-gradient of the point(s) of compliance the Department shall consider the factors and procedures contained in 310 CMR 40.0900: *Procedures and Standards for the Characterization of the Risk of Harm to Health, Safety, Public Welfare and the Environment* and 310 CMR 40.1000: *Response Action Outcomes*.

(l) Nothing in 310 CMR 19.132 shall limit the responsibility of the owner or operator to comply with the provisions of M.G.L. c. 21H, § 4, M.G.L. c. 111, § 150A, 310 CMR 19.150, M.G.L. c. 21E, and 310 CMR 40.0000: *Massachusetts Contingency Plan* at all locations down-gradient of the point(s) of compliance.

(3) Monitoring of the Secondary Leachate Collection or Leak Detection System.

(a) The owner or operator shall monitor the quantity and quality of leachate collected by the secondary leachate collection system or leak detection system, where such a system has been constructed. Monitoring shall be accomplished as specified in the solid waste management facility permit, the leachate discharge permit or as deemed necessary by the Department.

(b) The owner or operator shall submit, in addition to permit requirements, the results of the leachate monitoring from the secondary leachate collection system or leak detection system to the Department with third-party inspection reports.

(c) Where leachate is determined by the Department to have entered the secondary leachate collection system or leak detection system in excess of design standards, the owner or operator shall undertake the actions specified under 310 CMR 19.150 and 310 CMR 19.151 as required by the Department.

(4) Leachate Monitoring.

(a) The owner or operator shall monitor the quantity and quality of leachate as deemed necessary by the Department or as specified in the leachate discharge permit.

(b) The owner or operator shall submit, in addition to permit requirements, the results of the leachate monitoring to the Department with the inspection reports required pursuant to 310 CMR 19.130(35).

(5) Gas Monitoring.

(a) The owner or operator shall sample and physically and chemically characterize the recovered gas, condensates, or any other residues generated, and submit a copy of such analyses to the Department.

(b) The owner or operator shall conduct gas monitoring as follows:

1. Sampling and analysis of landfill gas shall be done in accordance with methods approved by the Department.

19.132: continued

2. The owner or operator shall conduct landfill gas monitoring at sampling points established in the permit and/or as required by the Department.
 3. The owner or operator shall conduct landfill gas monitoring on a schedule established in the permit or as required by Department. Monitoring shall be performed quarterly unless otherwise approved by the Department.
- (c) The Department may not accept landfill gas monitoring data where:
1. the sample was taken from a gas monitoring device for which the Department has not received and approved as-built construction plans and locations; or
 2. the sample was taken from a gas monitoring device constructed in a manner not approved by the Department;
 3. the analyses were performed by a laboratory other than an approved laboratory, unless the sample is accompanied by a complete QA/QC submittal;
 4. the sample was taken from a monitoring device or location that is damaged or has not been maintained in accordance with the requirements of 310 CMR 19.133;
 5. the sample was taken from a monitoring device or location that is damaged or has not been maintained in accordance with 310 CMR 19.133;
 6. the sample does not contain sufficient documentation regarding chain of custody;
 7. the sample was not collected or analyzed in accordance with 310 CMR 19.132(1); or
 8. the Department has reason to believe the sampling data is false, inaccurate, incomplete or misleading.
- (d) The owner or operator shall submit all analytical results to the Department within 60 days after the date of sample collection or as specified in the permit. The analytical results shall be summarized in tables with a discussion of the results, and shall include an analysis of pertinent trends. Where the Department provides a form for environmental monitoring reports, the report shall be made submitted on that form and shall contain all information as requested by that form. If no form is provided by the Department, the report shall include, unless otherwise approved by the Department, the following information:
1. site plans or maps showing sampling locations, concentrations and gas exceedences;
 2. a letter report briefly summarizing the data and identifying any issues of concern;
 3. all field Quality assurance/Quality control information; and
 4. chain of custody forms.
- (e) The owner or operator shall conduct gas monitoring at any active landfill and for the post-closure period set forth in 310 CMR 19.142(2).
- (f) Landfill gas samples shall be analyzed for volumes and concentrations of explosive gases. In addition, the Department may require monitoring for the following:
1. hydrogen sulfide;
 2. volatile organic compounds; and
 3. any additional parameters required by the Department.
- (g) When, at any time, the concentration of explosive gasses exceeds 10% of the lower explosive limit (LEL) in any building, structure, or underground utility conduit, excluding gas control, gas recovery and leachate collection system components, the owner or operator shall:
1. take immediate action to protect human health and safety;
 2. notify the Department's Regional Office that covers the municipality in which the facility is located within two hours of the finding; and
 3. undertake the actions specified under 310 CMR 19.150: *Landfill Assessment Requirements* and 19.151: *Corrective Action Requirements* as required by the Department.
- (h) Except in buildings, structures and underground utility conduits for which 310 CMR 19.132(5)(g) applies, when, at any time, the concentration of explosive gasses exceeds 25% of the lower explosive limit (LEL) at the property boundary or beyond, excluding gas control, gas recovery and leachate collection system components, the owner/operator shall:
1. take immediate action to protect human health and safety;
 2. notify the Department's Regional Office that covers the municipality in which the facility is located within 24 hours of the finding; and
 3. undertake the actions specified under 310 CMR 19.150: *Landfill Assessment Requirements* and 19.151: *Corrective Action Requirements* as required by the Department.

19.132: continued

- (i) When the concentration of any of the parameters for which monitoring is required at 310 CMR 19.132(5)(f)1., 2. or 3. exceeds any permit standards or federal or state regulations the owner or operator shall notify the Department within 14 days of the finding and undertake the actions specified under 310 CMR 19.150: *Landfill Assessment Requirements* and 19.151: *Corrective Action Requirements* as required by the Department.

19.133: Maintenance of Environmental Control and Monitoring Systems

- (1) Landfill environmental control and monitoring systems shall be maintained and repaired or replaced as provided for in 310 CMR 19.133:
 - (a) The landfill shall be operated in a manner which will protect all environmental control systems as approved in the Operation and Maintenance plan and monitoring systems as approved in the Operation and Maintenance plan or permit.
 - (b) The operator shall ensure the regular maintenance of all landfill environmental control systems as approved in the Operation and Maintenance plan or permit.
 - (c) The operator shall notify the Department of the existence of damaged or destroyed environmental control systems or monitoring devices and the extent of the damage. The operator shall submit such notification, in writing, within 14 days of discovery and shall provide a schedule for repair or replacement for approval by the Department. Repair or replacement of monitoring devices shall be completed prior to the next scheduled sampling round.
 - (d) Surface water, ground water and gas monitoring locations shall be maintained so as to meet the requirements set forth in 310 CMR 19.118.
 - (e) The operator shall notify the Department of the existence of a damaged or destroyed surface water sampling location marker and the extent of the damage. The operator shall submit such notification, in writing, within 14 days of discovery and shall provide for repair or replacement of the location marker prior to the next scheduled sampling round.

19.140: Landfill Closure Requirements

- (1) General. Any facility that must stop accepting solid waste in accordance with 310 CMR 19.000, any permit, authorization or order issued by the Department or a court of competent jurisdiction or under any other circumstances shall comply with the requirements of 310 CMR 19.140.
- (2) Notification of Voluntary Closure. The owner and/or operator shall notify the Department no later than six months prior to the date that the facility will stop accepting solid waste.
- (3) Closure Assessment. The owner or operator of a landfill shall initiate an assessment in accordance with 310 CMR 19.150 prior to landfill closure to determine and evaluate the extent of any adverse impact(s) of the landfill on the environment as a result of the construction or operation and maintenance of the facility and develop a corrective action design in accordance with 310 CMR 19.151.
- (4) Preparation and Submittal of Final Closure/Post-closure Plans. The operator shall submit the final closure/post-closure plan prior to undertaking any closure construction activities. In addition to the information provided in the conceptual closure/post-closure plan developed in accordance with 310 CMR 19.104(6), the final closure/post-closure plan shall include:
 - (a) a report containing the findings of the site assessment required under 310 CMR 19.150;
 - (b) a proposed schedule of remedial or corrective actions, as required based on the assessment or other information, in accordance with 310 CMR 19.150 and 19.151;
 - (c) modified design plans, if necessary, based upon deviations from the conceptual closure plans and/or the actions required under 310 CMR 19.150 and 19.151; and
 - (d) a description and schedule of proposed post-closure maintenance, monitoring and assessment activities necessary to protect the public health, safety and the environment.
- (5) Department Review. The Department may approve the final closure and post-closure plans if the Department is persuaded by the applicant that the provisions in the plan would ensure that:
 - (a) solid waste disposal activities shall be terminated upon the facility stop date;

19.140: continued

- (b) no conditions exist that could attract vectors or cause nuisance conditions;
- (c) the facility will be deactivated or closed; and
- (d) all practicable measures shall be taken to prevent pollution of the environment or a threat to public health or safety from the site.

(6) Completion of Closure. A facility shall be deemed closed on the date of the Department's written determination that the closure of the facility has been completed in accordance with the permit.

(a) A facility shall be deemed to be closed for the purposes of 310 CMR 19.000 on the date of the Department's determination. A facility shall be deemed to be closed only after the applicant has documented that the Notice of Landfill Operation has been recorded or registered as required pursuant to 310 CMR 19.141 and the Department has issued its determination of closure.

(b) The post-closure period shall begin on the date of the Department's determination.

19.141: Notice of Landfill Operation

Prior to obtaining a determination from the Department that closure of a landfill has been completed or an approval from the Department for a post-closure use of a landfill, the owner or operator of a landfill shall record a notice that a landfill has been operated on a site in the registry of deeds or in the registry section of the land court for the district wherein the landfill lies in accordance with M.G.L. c. 111, § 150A. The notice shall be captioned "Notice of Landfill Operation" and shall contain a title reference citing the source of title of the land on which the facility was constructed (*i.e.*, the deed with book and page number if recorded land; probate number if acquired through a probate proceeding; and certificate of title number if registered land). This Notice shall be incorporated either in full or by reference into all future deeds, and any other instrument of transfer, which conveys an interest in and/or a right to use the land on which the facility or a portion thereof, is located. The Notice shall contain the following:

- (a) identification of record owners of the property;
- (b) a description of the landfill site, by metes and bounds and by reference to an appropriate map or plan to be recorded therewith, signed by a qualified professional engineer or a land surveyor, depicting the boundaries of the filled area and the location of any and all leachate collection devices, gas and ground water monitoring wells associated with the site;
- (c) a detailed description of the type and extent of the final cap and cover on the landfill;
- (d) a description of the nature and duration of post-closure maintenance and monitoring requirements for the site and the amount and form of the financial assurance requirements pursuant to 310 CMR 19.000;
- (e) reference to the Department file number or other Department means for identifying the landfill file; and
- (f) the following statement:

"The premises described herein are subject to the provisions of M.G.L. c. 111, § 150A and 310 CMR 19.000. Said premises shall not be used for any purpose other than as a landfill without the approval of the Department of Environmental Protection. Transfer of the facility requires the transfer of the permit in accordance with 310 CMR 19.044. The procedure for Department approval for any use other than as a landfill is set forth at 310 CMR 19.143. Such Department approval of other use is transferable or assignable only upon approval of the Department."

19.142: Landfill Post-closure Requirements

(1) General. The owner, successors or assigns shall maintain, care for and monitor the site during the post-closure period in order to ensure the integrity of the closure measures and to detect and prevent any adverse impacts of the site on public health, safety or the environment.

(2) Post-closure Period. For the purposes of 310 CMR 19.142 the post-closure period shall extend for a minimum of a 30 year period.

19.142: continued

(3) Post-closure Period Waiver. The Department may, upon request, reduce the post-closure period to less than 30 years if it finds that a shorter period will be sufficient to protect public health, safety, and the environment. The Department's review will include, but not be limited to, a consideration of the quantity and quality of leachate generated by the landfill, ground water monitoring results, characteristics of the waste disposed, stability of the waste, design of the facility and location of the site.

(4) Post-closure Period Extension. The post-closure period may be extended by the Department at any time prior to the time that the post-closure period is due to expire where the Department finds an extension is necessary in order to ensure protection of public health, safety or the environment or to mitigate adverse impacts.

(5) Post-closure Requirements. During the post-closure period the owner or operator (or successors or assigns thereto) shall perform the following activities on any closed portion of the facility:

- (a) take corrective actions to remediate and/or mitigate conditions that would compromise the integrity and purpose for the final cover;
- (b) maintain the integrity of the liner system and the final cover system;
- (c) collect leachate from and monitor and maintain leachate collection system(s);
- (d) monitor and maintain the environmental monitoring systems for surface water, ground water and air quality;
- (e) maintain access roads;
- (f) maintain landfill gas control systems;

19.142: continued

- (g) protect and maintain surveyed benchmarks; and
- (h) have the landfill inspected by a third-party inspector in accordance with 310 CMR 19.018 and such third-party inspection shall be conducted in accordance with the frequency and other requirements of 310 CMR 19.018, unless more frequent inspections or more stringent requirements are contained in the terms of any approval, order or other document issued by the Department pursuant to 310 CMR 19.000.

(6) Inspection Requirements. The owner, operator, successor or assigns shall have the facility inspected by a third-party inspector in accordance with 310 CMR 19.018.

(7) Additional Measures. The owner, successors or assigns shall institute such additional measures during the post-closure period as the Department deems necessary for the protection of public health or safety or the environment.

(8) Termination of the Post-closure Period. The post-closure period shall end on the date of the Department's written determination that the post-closure care, maintenance and monitoring of the site are no longer required. Said written determination in no way limits or absolves the owner of liability for the site in the future.

19.143: Post-closure Use of Landfills

(1) Applicability. Pursuant to M.G.L. c. 111, § 150A no site on which a facility was operated shall be used for any other purpose without:

- (a) a written approval for any post-closure use on a landfill's final cover or affecting an appurtenance to a landfill, including but not limited to appurtenances required for the management of leachate, landfill gas and stormwater; or
- (b) a presumptive approval in accordance with 310 CMR 19.034 for any other type of post-closure use at a landfill facility.

(2) Submission of Post-closure Use Plans. Any person proposing to use a landfill for any purpose following closure of a facility shall submit plans for the post-closure use to the Department for review.

(3) Criteria for Approval of Post-closure Use. Any post-closure use of a landfill shall be accomplished such that:

- (a) the final contours of the landfill are not altered, unless the Department determines:
 - 1. the disturbance is necessary to the proposed use and that it will not result in an adverse impact to public health, safety or the environment; or
 - 2. the disturbance is necessary to reduce threats to public health, safety or the environment;
- (b) the integrity of the final cover, the components of any containment system and the function of the facility's monitoring systems are not impaired;
- (c) drainage facilities, ponds, swales, ditches and other erosion/sedimentation controls are maintained.

(4) Post-closure Construction. Construction during the post-closure phase shall be accomplished in accordance with the following:

- (a) buildings shall be above-grade structures. Any penetration of the landfill final cover shall be designed and constructed to ensure that the integrity of the final cover is maintained. Construction of basements which penetrate the low permeability layer is prohibited;
- (b) buildings shall be constructed to prevent accumulation of gas within the structure. Buildings shall include gas monitoring and warning systems and may be required to include an active gas venting system; and
- (c) all utility connections shall be designed and constructed with flexible connections.

19.150: Landfill Assessment Requirements(1) Applicability.

(a) General. An assessment shall consist of all activities, as determined by the Department, required to identify the existence, source, nature and extent of pollution or threat of pollution, the extent of the adverse impact from any pollution and the feasible cost-effective alternatives available to correct or reduce the impacts of pollution. This shall include, but is not limited to, the identification and evaluation of all potential and actual migration pathways and receptors including the determination of exposure point concentrations.

(b) When an Assessment is Required. A landfill assessment shall be conducted:

1. when required by the Department pursuant to 310 CMR 19.132(2)(j);
2. when required by the Department pursuant to 310 CMR 19.132(5) when explosive gases exceed concentrations as specified in 310 CMR 19.132(5) or landfill gases present a threat of pollution as specified in 310 CMR 19.132(5);
3. where a secondary leachate collection system or leak detection system exists at the landfill, the quantity of leachate detected in the secondary leachate collection system or leak detection system exceeds the design leakage, as specified in 310 CMR 19.132(3);
4. prior to final closure of the landfill as specified in 310 CMR 19.140(3); or
5. such other time as the Department determines that a landfill or dumping ground presents a threat to public health, safety or the environment.

(2) Department Determinations. Upon submittal of an Assessment or Corrective Action Alternatives Analysis, the Department shall make one of the following determinations:

(a) The Assessment or Corrective Action Alternatives Analysis is approved. The Department may impose terms and conditions on its approval, including a schedule and sequence for submission of further data and implementation of the response actions; or

(b) The Assessment or Corrective Action Alternatives Analysis is incomplete, inadequate or inconsistent with 310 CMR 19.000 or other applicable laws or regulations and further activities are required.

(3) Assessment Process. An assessment shall be conducted in three phases: initial site assessment; comprehensive site assessment; and corrective action alternatives analysis. At the end of each phase, based on the results of the analyses provided in accordance with approved plans, the Department shall determine if a subsequent phase shall be conducted and specify the scope of work. The Department may consider such factors as the potential threat to public health and the environment, costs and benefits of further study, comparative implementation and maintenance costs and other relevant factors in making its determination on subsequent phases of assessment or corrective action.

(4) Initial Site Assessment.

(a) General. The owner or operator shall obtain and submit such data as the Department determines is necessary to adequately describe the physical characteristics of the landfill and the surrounding environment, document the operational history of the landfill, and develop the scope for the comprehensive site assessment.

(b) Content of Initial Assessment. The initial site assessment shall consist of a number of site-specific tasks as determined by the Department.

(5) Comprehensive Site Assessment.

(a) General. The owner or operator shall obtain and submit such data as the Department determines is necessary to characterize the impact of the landfill on public health, safety and the surrounding environment and develop the scope for any further study.

(b) Content of Comprehensive Assessment. The comprehensive assessment shall consist of a number of site-specific tasks as determined by the Department.

(6) Corrective Action Alternatives Analysis.

(a) General. The Corrective Action Alternatives Analysis shall analyze options for corrective actions to eliminate or mitigate the potential adverse impact caused by conditions at the facility and to complete final closure in accordance with 310 CMR 19.140: *Landfill Closure Requirements*. In considering an alternative for corrective action, the owner or operator shall consider those actions that are necessary to comply with the provisions of 310 CMR 40.0114 and to minimize to the extent feasible the potential for adverse future impacts from the landfill.

19.150: continued

(b) Content of Alternatives Analysis. A corrective action alternatives analysis shall consist of the following three components:

1. Corrective Action Objectives. 310 CMR 19.150(6) shall identify the environmental and public health impacts of the landfill. The analysis shall include at a minimum the specific objectives each alternative is intended to achieve and the means that may be employed to achieve those objectives.
2. Alternatives Analysis. 310 CMR 19.150(6) shall present and analyze at least two options for site corrective action, one of which shall consist of a no-action alternative. At a minimum, each option's likely effectiveness in achieving the corrective action objectives outlined in 310 CMR 19.150(6)(b)1., its overall cost, and implementability must be considered.
3. Recommended Option. 310 CMR 19.150(6) shall specify which of the options discussed in the alternatives analysis is recommended. The owner or operator shall provide a detailed justification for recommending a particular option above the others considered.

(7) Assessment Schedule. Except as may be allowed pursuant to 310 CMR 19.150(7)(d), the following schedule shall be adhered to in conducting the above three phases of site assessment.

(a) The Initial Site Assessment shall be initiated within 30 days of notification by the Department of the need to conduct the Initial Site Assessment. The initial Site Assessment shall be completed in accordance with the schedule established by the Department.

(b) A scope of work for the Comprehensive Site Assessment shall be developed and submitted to the Department for approval within 30 days of completion of the Initial Site Assessment, unless the Department determines, pursuant to 310 CMR 19.150(2), that a Comprehensive Site Assessment is not required. The Comprehensive Site Assessment shall be initiated within 30 days of the Department's approval of the scope of work and completed in accordance with the schedule established by the Department.

(c) A scope of work for the Corrective Action Alternatives Analysis shall be developed and submitted to the Department for approval within 90 days of the completion of the final round of environmental sampling at the landfill, unless the Department determines, pursuant to 310 CMR 19.150(2), that a Corrective Action Alternatives Analysis is not required. The Corrective Action Alternatives Analysis shall be initiated within 60 days of the Department's approval of the scope of work and completed in accordance with the schedule established by the Department.

(d) The Department may modify, in writing, the time periods of the assessment schedule for a public body which owns and operates its landfill to comply with the laws governing public finance and public bidding where the public body establishes that no funds are available to conduct those assessment activities within the regulatory time frames.

(8) Applicability of M.G.L. c. 21E. Nothing in 310 CMR 19.150 shall limit or restrict the Department from exercising its authority in accordance with the provisions of M.G.L. c. 21E and 310 CMR 40.000.

19.151: Corrective Action Requirements

(1) General. Corrective action shall consist of all measures necessary to address existing and potential impacts of the landfill on public health, safety and the environment as determined by the corrective action alternatives analysis and approved by the Department and to comply with the requirements of 310 CMR 40.0114.

(2) Content. Corrective action shall be conducted in two phases:

(a) Corrective Action Design. In this phase further engineering analyses shall be undertaken by the owner or operator to complete the design of the Department's approved corrective action alternative. Final design plans and an implementation schedule shall be submitted to the Department for approval.

(b) Corrective Action Implementation. This phase shall consist of implementation of the approved corrective action design. This phase shall include construction and installation of all components, post-closure monitoring and any required operation and maintenance activities.

19.151: continued

(3) Department Approval. Upon submittal of the Corrective Action Design, the Department shall make one of the following determinations:

- (a) The Corrective Action Design is approved. The Department may impose terms and conditions on its approval including a schedule and sequence for submission of further data; or
- (b) The Corrective Action Design is incomplete, inadequate or inconsistent with 310 CMR 19.000 or other applicable laws or regulations and further design activities are required.

(4) Oversight of Corrective Action Implementation. The owner or operator shall provide the Department with progress reports detailing the activities undertaken to implement the approved corrective action alternative. Reports shall be filed by a registered engineer and submitted to the Department on a schedule to be approved by the Department. A registered engineer shall certify that construction of the corrective action alternative has been accomplished in accordance with approved plans.

(5) Applicability of M.G.L. c. 21E. Nothing in 310 CMR 19.151 shall limit or restrict the Department from exercising its authority in accordance with the provisions of M.G.L. c. 21E and 310 CMR 40.000.

19.200: Preamble

310 CMR 19.200 through 19.207, which follow, establish minimum performance and design standards and operation and maintenance standards for solid waste handling facilities. In combination with 310 CMR 19.001 through 19.083, these two sets of regulations govern all solid waste management activities at solid waste handling facilities. The procedures for application, approvals, authorizations, and transfers are set forth in 310 CMR 19.000 through 19.083.

19.201: Applicability

All handling facilities shall be managed in a manner consistent with 310 CMR 19.200 through 19.207 and the requirements of 310 CMR 19.001 through 19.083. Facilities and operations exempted from site assignment by the Site Assignment for Solid Waste Facilities regulations, 310 CMR 16.05: *Applicability*, are exempted from the requirements of 310 CMR 19.200 through 19.207.

19.202: Definitions

All terms used herein shall have the meanings set forth in 310 CMR 19.006 unless the context clearly implies or indicates another meaning.

19.203: Additional Requirements

Nothing in 310 CMR 19.000 shall be construed to limit the Department from determining on a facility or site specific basis that additional design or operation and maintenance components are required where conditions warrant such additional design or operation and maintenance measures to protect public health, safety and the environment or to mitigate potential adverse impacts. When deemed necessary by the Department, in response to conditions that have developed at a facility, the Department may require a facility to monitor air and/or surface or ground water to determine if the conditions present a threat to public health, safety or the environment.

(19.204: Handling Facility Plan: Reserved)

19.205: Handling Facility Design Requirements(1) Storm Water Controls.

(a) Performance Standard. Storm water controls shall prevent erosion, prevent the discharge of pollutants, protect the physical integrity of the handling facility, and be managed according to applicable standards established by the Department including, but not limited to, the wetlands protection regulations at 310 CMR 10.05(6)(b) and the Department's Storm Waster Policy. For purposes of meeting the stormwater standards established by the Department, recharge shall be permitted at the handling facility only where the recharge will not adversely impact the quality of groundwater leaving the site. Peak rate attenuation shall be in accordance with that described in 310 CMR 19.205(1)(b): *Design Standards*, and source controls and pollution prevention measures (including design of the handling facility) shall be implemented to prevent discharge of pollutants. This standard applies to the construction and operational phases of the handling facility.

(b) Design Standards. Storm water controls shall be designed to:

1. prevent run-on or flow onto the waste or material handling or storage areas during the peak discharge from a 24 hour, 100-year storm;
2. control the peak rate of run-off from the handling facility and paved areas of the site resulting from a 24 hour, 25-year storm.
3. control the peak rate of run-off from the handling facility resulting from a 24 hour, 100-year storm, to the extent practicable, if an evaluation of the peak rate of run-off resulting from a 24-hour, 100-year storm indicates there will be flooding up or downstream of the site using the most recent precipitation atlas approved for use by the United States National Weather Service, or their predecessor the U.S. Weather Bureau, shall be used to determine the rainfall depth associated with the 100-year storm (currently Technical Paper-40 published May, 1961).

(2) Equipment.

(a) The operator shall provide equipment in adequate numbers and of appropriate type and size for the proper operation of the handling facility in accordance with good engineering practice and in compliance with 310 CMR 19.00. All compactor or other processing units shall be in duplicate with each unit capable of handling the expected design tons per day; except that only one compactor or processing unit may be satisfactory

1. where the handling facility will handle under 150 tons per day, or
2. where adequate facilities to continue operation and/or an alternate method to handle all incoming refuse in an approved and sanitary manner in the event of a failure or breakdown is provided.

(b) The operator shall make provisions for the routine maintenance of equipment to assure satisfactory performance capability for the various operations of the handling facility.

(c) The operator shall provide at the site suitable shelter or protection for all equipment and necessary service supplies used in connection with the handling facility.

(d) The operator shall make arrangements for providing standby equipment in the event of breakdown of regular equipment. Such standby equipment shall be available for use and shall be provided within 24 hours of breakdown; otherwise the handling facility shall be closed for receipt of wastes until equipment becomes available.

(3) Weighing Facilities. The operator shall make provision on a continuous basis for the weighing or measuring of refuse delivered to the handling facility. Scales or other measuring devices may be required by the Department as follows:

(a) The operator of existing or new handling facilities receiving 100 tons or more per day shall weigh all incoming solid waste.

(b) Operators of handling facilities that receive less than 100 tons per day shall, on a daily basis, estimate the total weight and volume of waste delivered based upon the capacity of the vehicles which delivered solid waste to the facility.

19.206: Construction and Demolition (C&D) Waste Processing Facilities Requirements

(1) All handling (unloading, storage, crushing, shredding, chipping, sorting, *etc.*) of C&D waste shall occur indoors unless otherwise approved by the Department.

19.206: continued

(2) All processed C&D waste and recovered or recyclable materials shall be stored in a manner appropriate for that material to protect the public health, safety and the environment. In general all processed C&D wastes (*i.e.* C&D fires), but not necessarily recovered or recyclable materials, shall be stored in covered containers or in covered piles on impervious surfaces.

(3) All storm water, or water used for site operations, that comes in contact with C&D materials and recovered or recyclable materials shall be controlled and collected and otherwise properly managed in accordance with all applicable local, state and federal requirements prior to discharge offsite.

19.207: Handling Facility Operation and Maintenance Requirements

(1) General. Operators shall incorporate procedures and practices, in accordance with approved plans and permit conditions, which will prevent pollution of ground water, surface water and air quality and prevent dust, odors, noise and other nuisance conditions from developing.

(2) Supervision of Operation.

(a) The operator of the handling facility shall be under the overall supervision and direction of an engineer or other person qualified and experienced in matters of solid waste handling and disposal.

(b) The operator of the handling facility shall be knowledgeable of the requirements of 310 CMR 16.00 and 310 CMR 19.000, and of the general operating procedures and plans as prescribed by the design engineer.

(c) The operator shall be required to demonstrate familiarity and capability to operate equipment at the handling facility.

(3) Access to Facilities.

(a) The operator shall provide and maintain in good repair access roads at the facility. Such access roads shall be paved to minimize dust and designed and constructed so that traffic will flow smoothly and will not be interrupted by inclement weather.

(b) The operator shall limit access to the facility to such periods of time as an attendant is on duty and to those persons authorized to use the facility for the disposal of refuse.

(4) Security.

(a) The operator shall provide sufficient fences or other barriers to prevent access to the facility except at designated points of entry or exit.

(b) A gate shall be provided at all access points and shall be locked at all times when the operator or his agent is not on site or during hours when the facility is not operating.

(5) Posting of the Handling Facility. The operator of a handling facility shall post signs at all access points to the facility which, at minimum, include the following information:

(a) the name(s) of the owner and operator of the facility;

(b) a 24 hour emergency telephone number for the facility;

(c) the hours of operation;

(d) a list of solid wastes banned or restricted pursuant to 310 CMR 19.017;

(e) other limitations and conditions of access to the facility; and

(f) where established by the municipality, penalties for unauthorized use.

(6) Unloading Refuse. The operator shall provide for continuous supervised unloading of refuse from incoming vehicles and shall post appropriate signs or other means to indicate clearly where incoming vehicles are to unload the refuse by direction of the attendant or equipment operator on duty.

(7) Special Wastes. No solid waste that has been classified as a special waste pursuant to 310 CMR 19.061(2): *Special Waste*, shall be received or handled at any handling facility unless the provisions of 310 CMR 19.061 are satisfied and the special waste is handled in accordance with any conditions specified by the Department in granting approval to handle the special waste and in accordance with the handling provisions of 310 CMR 19.061.

19.207: continued

(8) Banned or Restricted Solid Wastes. Solid wastes which have been banned or restricted from transfer or disposal pursuant to 310 CMR 19.017: *Waste Bans*, shall be managed at a handling facility in accordance with the approved facility plan prepared and approved in accordance with 310 CMR 19.017(5) unless an exception has been granted under 310 CMR 19.017(6).

(9) Hazardous Waste.

(a) No operator shall handle any material subject to the Hazardous Waste Regulations, 310 CMR 30.000, at a solid waste handling facility permitted pursuant to M.G.L. c. 111, § 150A, except that waste oil and household hazardous waste may be collected at a facility pursuant to 310 CMR 19.207(10).

(b) The operator shall implement a program, approved by the Department, for detection and exclusion of hazardous wastes.

(c) The operator shall, within 24 hours, notify the Department and the board of health of the discovery of any material subject to 310 CMR 30.000: *Hazardous Waste*.

(10) Household Hazardous Waste and Waste Oil Collections at Handling Facilities. If household hazardous waste and waste oil are collected at handling facilities, the household hazardous waste and/or waste oil shall be collected with prior notice to DEP and in compliance with either:

(a) 310 CMR 30.392: *Events for the Accumulation of Household Hazardous Waste and/or Hazardous Waste Generated by Very Small Quantity Generators*, or

b) 310 CMR 30.393: *Centers for the Accumulation of Hazardous Waste Generated by Households and/or Very Small Quantity Generators*.

(11) Bulky Waste.

(a) An operator may accept bulky wastes where:

1. the handling of such wastes is consistent with the facility's site assignment and/or permit; and

2. the handling of such wastes can be carried out in a manner which is manageable and compatible with the facility's operation and maintenance plan and environmental control systems.

(b) The Department may disallow or place conditions on the handling of bulky waste at a handling facility in order to protect the engineering or operational integrity of the facility.

(c) The board of health may, by regulation, specify the maximum size of large, heavy, or bulky items to be managed at the handling facility and may prohibit altogether the handling of certain items.

(d) If brush is accepted at the handling facility, provisions should be made for the brush to be received in bundles no larger in size than can be handled in an acceptable and sanitary manner by the specific equipment. Brush should not be allowed to accumulate beyond 48 hours after deposition at the handling facility.

(12) Liquid Wastes.

(a) No liquid wastes shall be managed at a handling facility. With the exception of septage, contained liquid wastes generated by and produced in the normal operation of a household shall not be considered to be liquid wastes unless expressly excluded through 310 CMR 19.017: *Waste Bans*.

(b) For the purpose of 310 CMR 19.130 liquid wastes means any material that drains freely or contains free draining liquids, as determined by using the Paint Filter Liquids Test, Method 9095 as described in USEPA Publication SW-846.

(13) Bird Hazards. The operator of facilities located in proximity to airports shall operate and maintain the facility in such manner as to minimize, to the extent practicable, the potential for the facility to pose a bird hazard to aircraft.

(14) Dust Control. The operator shall undertake suitable measures to control dust wherever and whenever necessary at the site, the access road, and any other areas related to or under control of the waste handling facility operator to prevent nuisance conditions. Water shall not be used for dust control in amounts that produce excessive infiltration, ponding, runoff or erosion.

19.207: continued

(15) Vector Control.

- (a) The operator shall cause routine waste handling facility operations to be carried out promptly in a systematic manner and shall take preventative measures to maintain conditions unfavorable for the attraction or production of insects, birds, rodents and other vectors.
- (b) The Department may require a routine program for the control and elimination of insects and rodents and other vectors at the or handling facility site. The operator shall cause supplemental control measures, including but not limited to the use of effective insecticides and rodenticides, to be implemented when necessary.
- (c) The application of pesticides shall be made only by a pesticide operator licensed by the Massachusetts Pesticide Board.

(16) Control of Wind-blown Litter.

- (a) The operator shall take measures to prevent the scattering of refuse and wind-blown litter, including incorporating litter fencing, natural barriers or other devices to prevent the scattering of solid waste beyond the facility.
- (b) The operator shall provide for routine maintenance and general cleanliness of the entire handling facility area. Such provisions are to be detailed on the engineering plans or written operating procedures.

(17) Staffing.

- (a) The operator shall provide an adequate number of trained staff to ensure that the facility is operated and maintained as designed and in accordance with good solid waste management practices.
- (b) During hours of operation the operator shall be continuously present at the handling facility.

(18) Employee Facilities.

- (a) The operator shall provide proper shelter and facilities for employees working at the facility. The shelter and facilities shall contain:
 - 1. sufficient light and heat;
 - 2. a safe drinking water supply;
 - 3. sanitary handwashing and toilet facilities;
 - 4. an operational telephone or two-way radio system; and
 - 5. other equipment or appurtenances necessary for full compliance with federal and state worker health and safety requirements.

(19) Accident Prevention and Safety.

- (a) All employees shall be instructed in the principles of first-aid and safety and in the specific operational procedure necessary to prevent accidents.
- (b) The operator shall provide and maintain adequate first-aid supplies at the site at all times.
- (c) The operator shall provide for two-way radios or telephones and ensure that the numbers for emergency medical care and ambulances are posted at the site.

(20) Fire Protection. The operator shall take suitable measures for the prevention and control of fires at the facility by complying with at least the following:

- (a) Make available at the facility an adequate supply of water under pressure with sufficient fire hose, unless a fully-manned fire station is located within two miles;
- (b) A separate area shall be provided, located away from combustible materials, refuse and buildings, for quick dumping and quenching or snuffing of hot loads;
- (c) Arrange for a nearby fire department to provide emergency service whenever called; and
- (d) Mount detachable fire extinguishers, maintained in working order, on all equipment and in all buildings.
- (e) The operator shall ensure that no materials are stored, held, maintained or placed at a handling facility in such a manner as to pose a fire hazard.
- (f) The operator shall be responsible for seeking fire-fighting assistance, initiating and providing assistance and/or resources for fire-fighting actions until all smoldering, smoking and burning cease.

19.207: continued

(21) Recycling Operations.

- (a) The operator may make provisions for the recycling of materials provided that a definite plan of procedure is implemented and followed to enable said operation to be carried out in an organized, sanitary, orderly and dependable manner with minimal interference to the routine handling facility operations.
- (b) Any container, or specially designed enclosed area, used for the storage of recyclable materials (such as glass, cans, paper, *etc.*) shall be clearly identified and maintained in a clean and sanitary condition and the surrounding areas shall be kept in a similar condition.
- (c) All accumulated recyclable materials shall be removed from the facility at least every 60 days and/or at such other times as may be specified by the Department.
- (d) Recyclable materials of a nature or in quantities that cause odor or pose a threat to the public health or are detrimental to the environment or the surrounding area shall not be accumulated.

(22) Records for Operational and Plan Execution.

- (a) The operator shall maintain a daily log to record operational information, including but not limited to the type and quantity of solid waste received and the status of all environmental control or monitoring systems.
- (b) The operator of existing or new handling facilities receiving 100 tons or more per day shall weigh all incoming solid waste.
- (c) Operators of handling facilities that receive less than 100 tons per day shall, on a daily basis, estimate the total weight and volume of waste delivered based upon the capacity of the vehicles which delivered solid waste to the facility.
- (d) The operator shall submit to the Department, no later than February 15th of each calendar year, an annual report summarizing the facility's operations for the previous calendar year or portion of a calendar year that waste is handled at the facility. Where the Department provides a form for annual reporting, the report shall be made on, and shall contain, all information as requested by that form. Otherwise, the report shall describe and summarize:
 - 1. the amount of solid waste handled during that year with the quantity reported in tons;
 - 2. all environmental monitoring and sampling data trends from ground water, surface water and gas monitoring systems from the monitoring required by the facility permit; and
 - 3. a demonstration of how the handling facility's operations during the year complied with the provisions of the recycling and composting plan contained as part of the facility's solid waste management permit.

(23) Screening and/or Fencing. The Department may require that the handling facility be suitably screened by fencing, or other approved methods, to shield the area from adjoining properties.

(24) Open Burning. No open burning of any refuse, including brush, wood or diseased trees shall be permitted at the handling facility site at any time of the year except as may be expressly permitted by the Department pursuant to 310 CMR 7.07: *U Open Burning.*

(25) Inspections. The facility shall be inspected by a third party inspector in accordance with 310 CMR 19.018, and such third-party inspection shall be conducted in accordance with the frequency and other requirements of 310 CMR 19.018, unless more frequent inspections or more stringent requirements are contained in the terms of any approval, order or other document issued by the Department pursuant to 310 CMR 19.000.

(26) End-of-life Mercury-added Products. Mercury-added products that are hazardous waste pursuant to 310 CMR 30.000: *Hazardous Waste* shall be handled in accordance with 310 CMR 30.000: *Hazardous Waste*. Mercury-added products that are not hazardous waste shall be handled in accordance with 310 CMR 76.05(2).

CLASS II RECYCLING PROGRAM

19.300: Preamble

310 CMR 19.300 through 19.303 establishes the process and requirements for Waste to Energy Facilities that were in operation before December 31, 1997 to qualify as a Waste Energy Generation Unit under 225 CMR 15.00: *Renewable Energy Portfolio Standard – Class II*.

19.301: Applicability

310 CMR 19.300 only applies to a Waste to Energy Facility that was in operation before December 31, 1997 and is operating in compliance with 310 CMR 7.08(2): *Municipal Waste Combustors* and, and the Facility's Solid Waste permit.

19.302: Definitions

All terms used in 310 CMR 19.300 through 19.303 shall have the meanings set forth in 310 CMR 19.006 unless the context expressly states otherwise. The following additional terms shall have the following meanings unless the context clearly indicates otherwise.

Dedicated Account means the account established by a Waste to Energy Facility that has qualified as a Waste Energy Generation Unit for receipt of revenue from the sale of any RPS Class II Waste Energy Generation Attribute.

Facility or Waste to Energy Facility means a Combustion Facility that generates Waste Energy.

[Note to reader: The following five definitions will follow the corresponding definitions found at 225 CMR 15.00: *Renewable Energy Portfolio Standard – Class II*.]

Generation Attribute means a non-price characteristic of the electrical energy output of a Generation Unit including, but not limited to, the Unit's fuel type, emissions, vintage and RPS eligibility.

Generation Unit means a facility that converts a fuel or an energy resource into electrical energy.

RPS Class II Waste Energy Generation Attribute means the Generation Attribute of the electrical energy output of a specific Waste Energy Generation Unit that derives from the Unit's production of Waste Energy.

Waste Energy means electrical energy generated from the combustion of municipal solid waste.

Waste Energy Generation Unit means a Generation Unit that utilizes conventional municipal solid waste plant technology in commercial use to generate Waste Energy and has a Department approved Class II Recycling Program.

19.303: Class II Recycling Program

(1) Class II Recycling Program Application. To qualify as a Waste Energy Generation Unit, a Facility shall submit to the Department for approval a solid waste permit modification application that complies with the Class II Recycling Program requirements at 310 CMR 19.303(1) through (4). The permit modification decision issued by the Department pursuant to 310 CMR 19.303 shall be limited to the Class II Recycling Program as described in 310 CMR 19.303. The permit modification application shall be limited to matters related to the Class II Recycling Program as described in 310 CMR 19.303 and shall include, but not be limited to, the following:

(a) Waste Characterization Study. Identification of an experienced and competent professional to conduct the waste characterization study of the solid waste received at the Facility as required pursuant to 310 CMR 19.303(3), including the qualifications of such a person;

(b) Electronic Tracking System. Documentation demonstrating that the Facility has installed an electronic tracking system that records for every incoming solid waste load the following information: truck owner; container owner; truck/container type and size; date and time of delivery; and generator(s) (to the extent known); and

(c) Waste Ban Compliance Professional. Evidence of a contract with an independent third party (the Waste Ban Compliance Professional) to assess compliance with the Waste Bans at 310 CMR 19.017 by haulers and generators delivering waste to the Facility.

1. Such contract shall require the Waste Ban Compliance Professional to:

a. Visually monitor all incoming loads on a minimum of ten random days every three months ("reporting period"). The Waste Ban Compliance Professional shall not notify the facility of the days chosen.

b. Spread on the tip floor any load not failed based on visual monitoring but which is suspected to exceed the allowable limits for waste ban materials as specified in the facility's Waste Ban Compliance Plan.

c. Be available to meet with the Department quarterly.

d. Receive training from the Department on waste ban inspection protocols.

2. Loads found to be noncompliant with the Waste Bans in accordance with 310 CMR 19.303(1)(c)1. shall be recorded using photographs, weigh slips, and standardized waste tracking forms developed by the Department. Such forms may include, but not be limited to, hauler and generator information (to the extent known) and the percentage of the load that is comprised of waste ban material(s);

3. Within 15 days after the end of each reporting period, the Waste Ban Compliance Professional shall conduct a comparative analysis of the percentage of failed loads identified by the Waste Ban Compliance Professional in accordance with 310 CMR 19.303(1)(c)1. and 2. with the percentage of failed loads documented pursuant to the Facility's ongoing Waste Ban monitoring protocols in accordance with 310 CMR 19.017;

4. The Facility and its Waste Ban Compliance Professional shall be available to meet with the Department quarterly; and

5. The Waste Ban Compliance Professional shall receive training from the Department on waste ban inspection protocols.

(d) Alternative to a Waste Ban Compliance Professional. The facility may, in lieu of the provisions of 310 CMR 19.303(1)(c), place 3% of the revenue from the sale of any RPS Class II Waste Energy Generation Attribute into the Sustainable Materials Recovery Program Expendable Trust ("Trust") no later than 30 days after the receipt of funds from any such sale. These funds, which are in addition to the funds described in 310 CMR 19.303(2)(b), shall be used by the Department to hire an independent third party to perform the activities defined at 310 CMR 19.303(1)(c). If the revenue placed in the Trust pursuant to this provision is not spent by the Department in a specific state fiscal year, the excess shall be credited to the facility's obligation under 310 CMR 19.303(1)(d) for the next year.

(2) Sustainable Materials Recovery Program. A Facility shall comply with the requirements of the Sustainable Materials Recovery Program contained in 310 CMR 19.303(2) after obtaining an approval from the Department for the Facility's solid waste permit modification application to qualify as a Waste Energy Generation Unit.

19.303: continued

- (a) The Department shall develop a Sustainable Materials Recovery Program. The Department shall solicit projects on a schedule determined by the Department from eligible state agencies, municipalities, businesses and non-profit organizations (project proponents). The projects shall be consistent with objectives contained in the Commonwealth's Solid Waste Master Plan and as further specified in the Department's solicitation. At least annually, the Department shall evaluate, assign a priority ranking, and publish a list of approved projects.
- (b) A Facility shall place 50% of the revenue from the sale of any RPS Class II Waste Energy Generation Attribute into a Dedicated Account and/or the Sustainable Materials Recovery Program Expendable Trust ("Trust") no later than 30 days after the receipt of funds from any such sale. A Facility shall manage the funds in its Dedicated Account, including the revenue from the sale of any RPS Class II Waste Energy Generation Attribute and any investment income derived from such revenue, in accordance with generally accepted accounting practices and the following:
1. Segregate funds in the Dedicated Account from all other revenues and accounts of the Facility;
 2. Disburse all funds in the Dedicated Account provided there are sufficient approved projects for funding;
 3. Remit to the Trust any funds in the Dedicated Account not encumbered by a binding commitment with a project proponent for an approved project(s) within 12 months; and
 4. Remit to the Trust any funds in the Dedicated Account that have not been expended within 24 months unless otherwise approved by the Department.
- (c) Conduct Project or Contract with Project Proponent. A Facility shall use the funds in its Dedicated Account solely to:
1. Conduct or operate in conjunction with a project proponent a project from the list in 310 CMR 19.303(2)(a), as approved and directed by the Department; and/or,
 2. Contract directly with any project proponent(s) to fund and manage projects from the list in 310 CMR 19.303(2)(a), as approved and directed by the Department.
- (d) The Department shall establish and manage the Trust in accordance with the terms of such Trust. The Department shall utilize the funds of the Trust to administer and oversee Class II Recycling Programs, including allocation of funds for the list of approved projects as part of the Sustainable Materials Recovery Program.
- (e) Each project proponent that receives funding through the Sustainable Materials Recovery Program shall spend such funds in accordance with the description of its project, the Department's solicitation, and any ensuing contract between the project proponent and the Department (for projects funded from the Trust) or between the project proponent and the Facility (for projects funded from a Facility's Dedicated Account). Each such project proponent shall report to the Department within 30 days of the completion of the project on the implementation of the approved project on a form developed by the Department. Failure to report shall prohibit the project proponent from receiving or applying for funds in future years until such reporting requirement is met.
- (3) Waste Characterization Study. A Facility shall:
- (a) Complete a waste characterization study of the solid waste received at the Facility in accordance with 310 CMR 19.303(1)(a) within 18 months of the approval of its Class II Recycling Program and conduct such study every three years thereafter. Such study shall include but not be limited to an identification of the volumes and weights of various components of the waste stream;
 - (b) Six months prior to conducting the study, the Facility shall submit to the Department for approval the methodology for such study;
 - (c) The Facility shall submit the study as part of the annual facility report for the year in which the study is conducted; and
 - (d) After the first waste characterization study, if the Department finds the character of the waste is similar at Facilities owned by the same entity, the Department may approve a methodology that combines some or all Facilities owned by the same entity.

19.303: continued

(4) Reporting.

(a) 30 days after the sale of any RPS Class II Waste Energy Generation Attribute (Attribute), a Facility shall report to the Department the following information: the number of Attributes sold; the price of the individual Attribute(s); the total funds from the sale; and the sum to be placed in its Dedicated Account and/or in the Trust. The Department may periodically audit the sale of any Attribute(s) and a Facility's Dedicated Account. The Facility shall cooperate with the Department concerning any such audit;

(b) A Facility shall submit, within 15 days of the end of the reporting period, in an electronic format to be specified by the Department, the data collected pursuant to 310 CMR 19.303(1)(c)2. and 3. for that reporting period. Within 15 days of a written request from the Department, a Facility shall submit in an electronic format to be specified by the Department data collected from the electronic tracking system installed pursuant to 310 CMR 19.303(1)(b);

(c) A Facility shall include in its annual facility report to the Department, on a form developed by the Department, the following information:

1. the implementation of the Facility's approved Class II Recycling Program;
2. the Facility's obligations under 310 CMR 19.303(2), including but not limited to, information about the projects the Facility conducts or operates pursuant to 310 CMR 19.303(2)(c)1. and that it contracts for pursuant to 310 CMR 19.303(2)(c)2., including the dollars spent and the equipment or services purchased; and
3. the waste characterization study in accordance with 310 CMR 19.303(3).

(5) Recordkeeping. A Facility shall retain a copy of all records required pursuant to 310 CMR 19.300 through 19.303, whether written or electronic, for at least five years following the creation of any such record. This five year period shall be extended automatically for the duration of any enforcement action against the Facility under 310 CMR 19.303, including any appeal thereof, until the conclusion of such action or appeal.

(6) Termination, Suspension, and Revocation.

(a) A Facility may terminate its qualification as a Waste Energy Generation Unit by notifying the Department in writing that the Facility will no longer implement a Class II Recycling Program. After submitting such notification, a Facility must submit a new solid waste permit modification to re-qualify as a Waste Energy Generation Unit.

(b) The Department may suspend or revoke the solid waste permit modification that qualifies a Facility as a Waste Energy Generation Unit for failure to comply with 310 CMR 7.08(2), 310 CMR 19.000, or the Facility's Solid Waste Permit.

REGULATORY AUTHORITY

310 CMR 19.000: M.G.L. c. 21A, §§ 2 and 8; c. 111, § 150A.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 21.00: FEDERAL SAFE DRINKING WATER ACT ASSESSMENT

Section

- 21.01: Purpose and Authority
- 21.02: Definitions
- 21.03: Federal Safe Drinking Water Act Assessment
- 21.04: Calculation of Withdrawal Amount or Estimated Withdrawal Amount
- 21.05: Calculation of the Assessment
- 21.06: Collection By End Suppliers
- 21.07: Inspection and Audit
- 21.08: Jurisdiction of the Department of Public Utilities Unaffected
- 21.09: Receipts from Assessments
- 21.10: Required State Contribution
- 21.11: The Advisory Committee
- 21.12: Duties of the Advisory Committee
- 21.13: Federal Supremacy
- 21.14: Severability

21.01: Purpose and Authority

310 CMR 21.00 is intended to establish a Federal Safe Drinking Water Act Assessment to assist in providing technical compliance assistance to all suppliers of water, pursuant to the authority granted the Department by M.G.L. c. 21A, § 18A. The Assessment shall be used to assist the Division of Water Supply of the Department in providing technical compliance assistance to public water systems and in implementing the Federal Safe Drinking Water Act (42 U.S.C. § 300f *et seq.*) and the regulations promulgated thereunder.

21.02: Definitions

As used in 310 CMR 21.00, the following words shall have the following meanings:

Advisory Committee, the Advisory Committee on Administration of the Federal Safe Drinking Water Act Assessment, appointed by the Commissioner of the Department.

Act, the Federal Safe Drinking Water Act, 42 U.S.C. 300f *et seq.*, as amended from time to time.

Assessment, the Federal Safe Drinking Water Act Assessment, (or Payment in Lieu of Assessment,) authorized and established by M.G.L. c. 21A, § 18A and 310 CMR 21.00, to be paid by each end supplier.

Assessment Rate, the factor by which each 1000 gallons of drinking water withdrawn by each end supplier shall be multiplied to determine the Assessment owed to the Department by each end supplier.

Commissioner, the Commissioner of the Department of Environmental Protection.

Department, the Department of Environmental Protection.

End suppliers, suppliers of water, who are operators of all categories of "Public Water Systems" as defined in 310 CMR 22.02, and the Federal Safe Drinking Water Act, providing water directly to users.

Estimated Withdrawal Amount, the estimated gallons of water withdrawn, purchased or pumped by an unmetered end supplier, calculated as required by 310 CMR 21.04.

Metered End Suppliers, those end suppliers using master meters to measure source production, purchase and/or sales of water to other public water systems.

Receipts, monies received by the Department which are proceeds from the Assessment, including

interest.

21.02: continued

Unmetered End Suppliers, those end suppliers not using master meters.

Users, all consumers, whether public, private, taxed or tax-exempt, of water provided by end suppliers.

Withdrawal Amount, the gallons of water withdrawn, purchased or pumped by a metered public water system which enters the transmission and/or distribution system. Withdrawal amount shall not include any water sold to another public water system.

21.03: Federal Safe Drinking Water Act Assessment

(1) Basis for Assessment Rate. By October 1 of each year, the Department, in consultation with the Advisory Committee, shall set the Assessment Rate at a uniform level not to exceed 1¢ per 1000 gallons of withdrawal amount and/or estimated withdrawal amount, for billing in the following fiscal year. The Assessment Rate shall be set so that receipts in the aggregate shall be reasonably related to defraying the Department's costs for monitoring, inspections, technical assistance, reporting and enforcement activities necessary to ensure compliance with the Federal Safe Drinking Water Act, 310 CMR 21.00 and 310 CMR 22.00.

(2) Notification of Assessment Rate. End suppliers shall be notified by the Department by mail of the Assessment Rate and the flat rate schedule set out in 310 CMR 21.05(2)(b) by November 1 of each year.

(3) Notification of Assessments and Payments Due. Assessments for each fiscal year shall be due after July 1 of each year as directed by the Department. At least 45 days before the date an Assessment is due, the Department shall deliver to the end supplier a written statement of the amount due. The statement shall be considered to be delivered if provided by mail or personal delivery to the correspondence address listed in the end supplier's permit or permit application, to the address of the permitted facility or project, or to any other correspondence address used by the end supplier; or by other means reasonably calculated to assure receipt by the end supplier.

(4) Collection, Interest and Penalties. Each end supplier shall remit to the Department the Assessment due that year as directed by the Department. In the event of untimely payment, interest shall be assessed on the balance due at the rate determined by the Commissioner of Administration under M.G.L. c. 29, § 29C. Interest on overdue remittances, including applicable penalties if any, shall be borne by the end supplier. The Department may impose penalties not to exceed \$5,000 per day for failure of end suppliers to remit the Assessment to the Department.

21.04: Calculation of Withdrawal Amount or Estimated Withdrawal Amount

The Withdrawal Amount for metered end suppliers shall be calculated using the measured volumes reported to the Department in the Annual Statistics Report required at 310 CMR 22.15(5). For unmetered end suppliers serving a population of at least 900 persons the Estimated Withdrawal Amount shall be calculated using the following formula:

Population Served, as reported to the Division in the Annual Statistical Report, multiplied by the average number of gallons of water used per person per day, as determined by the Department, multiplied by the number of days in that year, or for seasonal systems, the number of days the system operated that year = Estimated Withdrawal Amount.

21.05: Calculation of the Assessment

(1) For metered end suppliers, the Assessment shall be calculated by multiplying the Withdrawal Amount by the Assessment Rate.

21.05: continued

- (2) For unmetered end suppliers the Assessment shall be calculated as follows:
 - (a) for unmetered end suppliers which serve a population of 900 persons or more, by multiplying the Estimated Withdrawal Amount by the Assessment Rate;
 - (b) for unmetered end suppliers which serve a population of less than 900 persons, the Assessment shall equal a flat rate set by the Department, in consultation with the advisory committee, for the following categories based on the population served by the system.
 1. Suppliers serving 25-100 persons
 2. Suppliers serving 101-200 persons
 3. Suppliers serving 201-899 persons
- (3) The Department shall encourage universal master metering in order to accurately quantify the amount of water which passes through each distribution system and to fairly apportion the assessment among users.

21.06: Collection By End Suppliers

- (1) Amounts payable as Assessments and administrative costs of end suppliers related to the Assessment shall be recovered to the maximum practical extent from charges to users. End suppliers may recover from users administrative costs relating to the Assessment, in an amount not to exceed 5% of the annual Assessment for that system. Interest on overdue remittances, including applicable penalties, shall be borne by the end suppliers.
- (2) To the maximum extent practicable, the Assessment shall be apportioned among users by end suppliers based on the number of gallons of water consumed, or the estimated number of gallons consumed by each user.
- (3) Each end supplier shall have the option of determining how its invoices to users shall show such defraying amounts and shall determine the frequency of invoicing.
- (4) 310 CMR 21.06(4) shall not apply to the manner in which investor owned end suppliers apportion and collect the Assessment from users, which shall be determined by the Department of Public Utilities in accordance with 310 CMR 21.08.

21.07: Inspection and Audit

All records of end suppliers, including the annual measured volume records and records of population served, shall be made available upon request to the Department at any reasonable time for inspection. For at least six years from each Assessment period each end supplier shall maintain, preserve, and make available for inspection and audit all records relating to the Assessment.

21.08: Jurisdiction of The Department of Public Utilities Unaffected

The Department of Public Utilities shall determine the manner in which investor-owned end suppliers apportion and collect amounts necessary to defray the Assessment and applicable administrative costs. Nothing in 310 CMR 21.00 shall limit the authority of the Department of Public Utilities to rule on the propriety of any rates charged by any end supplier subject to its jurisdiction; provided that in making such a ruling the Department of Public Utilities shall consider the amount of the Assessment and, provided further, that such ruling shall not impose any condition inconsistent with the provisions or intent of M.G.L. c. 21A, § 18A, or 310 CMR 21.00. Compliance with any requirement imposed by the Department of Public Utilities shall not exempt any end supplier from the requirements of M.G.L. c. 21A, § 18A, or 310 CMR 21.00.

21.09: Receipts from Assessments

All receipts shall be deposited in the Environmental Permitting and Compliance Assurance Fund established pursuant to M.G.L. c. 29, § 2P, and shall be used solely for the purposes described in 310 CMR 21.01. Receipts shall be separately accounted for and shall be used solely for administering the Federal Safe Drinking Water Act and furthering its purposes. Any unexpended balance shall be used to defray the amount of the Assessment in future fiscal years.

21.10: Required State Contribution

310 CMR 21.00 establishing the Assessment shall not be in effect in any fiscal year in which the department fails to provide from state funds, other than those collected under the terms of M.G.L. c. 21A, § 18A and 310 CMR 21.00, a match of 75% of the amount of the federal grant attributable to the implementation of the Federal Safe Drinking Water Act.

21.11: The Advisory Committee

The Department shall establish an Advisory Committee on Administration of the Federal Safe Drinking Water Act Assessment. Representative organizations from the categories below may nominate persons for consideration and the Commissioner shall appoint such persons to the Advisory Committee as considered desirable in accordance with 310 CMR 21.11. Members of the Advisory Committee shall serve until successors shall be appointed and qualified by the Commissioner. The Commissioner's appointees shall include one representative from each of the following categories of organizations:

- (a) a Massachusetts statewide water works non-profit association;
- (b) a New England regional water works non-profit association;
- (c) a non-profit association representing rural water systems;
- (d) a regional water works association;
- (e) a non-profit association representing investor-owned water companies;
- (f) a statewide environmental organization;
- (g) a second statewide environmental organization;
- (h) organizations representing non-community water suppliers;
- (i) the Massachusetts Municipal Association;
- (j) an organization representing industry; and
- (k) one other designee the commissioner considers desirable.

The total membership of the committee shall not exceed 11, a majority of which shall be comprised of water utility personnel. Two designated representatives who are water utility personnel shall also serve, as members of the Department's fees advisory committee established pursuant to M.G.L. c. 21A, § 18. No state employee shall be appointed to the advisory committee and no person appointed to the advisory committee shall be deemed to be a state employee for purposes of any other general or special law. Members of the Advisory Committee shall serve without compensation except for reimbursement of their direct expenses of travel from their place of abode to the regular meetings of the Advisory Committee.

21.12: Duties of the Advisory Committee

The Department shall consult with the advisory committee annually in setting the Assessment Rate, and prior to adoption of, or amendment to, 310 CMR 21.00. The Department shall review with the advisory committee the operation of the Assessment program and 310 CMR 21.00 at least quarterly. The Advisory Committee and the Department shall ensure that regular public service announcements are released to inform the public as to the requirements and costs associated with the Federal Safe Drinking Water Act. With administrative support from the department, the advisory committee shall produce an annual report on the Assessment program for the House and Senate Committees on Ways and Means and the Joint Committee on Natural Resources and Agriculture. The annual report shall also be made available to all end suppliers, and shall include an accounting of all Assessment receipts.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

21.13: Federal Supremacy

In the event that the requirements of 310 CMR 21.00 conflict with applicable federal requirements pertaining to the establishment and collection of the Assessment by the Department, such federal requirements shall take precedence over any conflicting requirements of 310 CMR 21.00.

21.14: Severability

If any provision or application of any provision of 310 CMR 21.00 is held to be invalid, such invalidity shall not affect any other provisions of 310 CMR 21.00 not specifically held to be invalid.

REGULATORY AUTHORITY

310 CMR 21.00: M.G.L. c. 21A, § 18A.

22.01: continued

The Department affirms its authority to determine compliance or initiate enforcement actions related to 310 CMR 22.00 based upon analytical results and other information compiled by its sanctioned representatives and agencies.

22.02: Definitions

(1) As used in 310 CMR 22.00, the following terms shall have the following meanings:

Abandoned Source means a source that is physically disconnected from a public water system and is no longer maintained as an active, inactive, or Emergency Source. Abandoned Source(s) cannot be used as a public water system source. A source may only be abandoned pursuant to 310 CMR 22.25.

Action Level means, for the purpose of 310 CMR 22.06(B), the concentration of lead or copper in water specified in 310 CMR 22.06B(1)(c) which determines, in some cases, the treatment requirements contained in 310 CMR 22.06B that a water system is required to complete. The definition of Action Level for the purpose of a consumer confidence report is contained in 310 CMR 22.16A.

Active Source means an Approved Source(s), monitored and maintained to meet 310 CMR 22.00 and used for primary or backup purposes to meet consumer demands as necessary.

Administrator means the Administrator of the Agency.

Adsorption means the gathering of a gas, liquid, or dissolved substance on the surface or interface zone of another material.

Aeration means the process of adding air to water, whether by passing air through water or by passing water through air.

Agency means the United States Environmental Protection Agency.

Air Stripping means a treatment process used to remove dissolved gases and volatile substances from water by bubbling large volumes of air through the water being treated.

Approved Source means a water supply source approved by the Department for drinking water purposes pursuant to 310 CMR 22.03(1).

Bag Filter means pressure-driven separation devices that remove particulate matter larger than one micrometer using an engineered porous Filtration media. They are typically constructed of a non-rigid, fabric Filtration media housed in a pressure vessel in which the direction of flow is from the inside of the bag to outside.

Bank means the portion of the land surface which normally abuts and confines a water body; it lies between a water body and a bordering vegetated wetland and adjacent flood plain, or in the absence of these, it lies between a water body and an upland; the upper boundary of a Bank is the first observable break in the slope or the mean annual flood level, whichever is lower; the lower boundary of a Bank is the mean annual low flow level.

Bank Filtration means a water treatment process that uses a well to recover Surface Water that has naturally infiltrated into Groundwater through a river bed or Bank(s). Infiltration is typically enhanced by the hydraulic gradient imposed by a nearby pumping water supply or other well(s).

Best Available Technology or "BAT" means the best technology Treatment Techniques, or other means which the EPA or Department finds, after examination for efficacy under field conditions and not solely under laboratory conditions, are available (taking cost into consideration).

Cartridge Filter means pressure-driven separation devices that remove particulate matter larger than one micrometer using an engineered porous Filtration media. They are typically constructed as rigid or semi-rigid, self-supporting filter elements housed in pressure vessels in which flow is from the outside of the cartridge to the inside.

22.02: continued

Certified Operator means an individual who has received a certificate of competency issued by the Board of Certification of Operators of Drinking Water Supply Facilities in accordance with 236 CMR 2.00 through 5.00 and currently maintains a valid license.

Chemical Feed System means an automated or manually controlled mechanism for introducing chemical compounds into a water treatment system in regulated concentrations and amounts at predetermined events or times for the purpose of treating water in order to ensure a safe and pure drinking water supply.

Chloramination means the application of chlorine and ammonia to water to form chloramines for the purpose of Disinfection.

Clean Compliance History means, for purposes of 310 CMR 22.05, a record of no Maximum Contaminant Level (MCL) violations, no monitoring violations, no coliform Treatment Technique trigger exceedances, and no Treatment Technique violations; all under 310 CMR 22.05; and no Treatment Technique violations or Significant Deficiencies under 310 CMR 22.26.

Coagulation means a process using coagulant chemicals and mixing by which colloidal and suspended materials are destabilized and agglomerated into flocs.

Combined Distribution System means the interconnected distribution system consisting of the distribution systems of wholesale systems and of the consecutive systems that receive finished water.

Commissioner means the Commissioner of the Department of Environmental Protection.

Compliance Cycle means the nine-year (calendar year) cycle during which public water systems must monitor. Each Compliance Cycle consists of three three-year Compliance Periods. The first calendar year cycle begins January 1, 1993 and ends December 31, 2001; the second begins January 1, 2002 and ends December 31, 2010; the third begins January 1, 2011 and ends December 31, 2019. Each subsequent Compliance Cycle shall commence on the 1st day of January immediately following the last day of the prior Compliance Cycle, and shall end on the 31st day of December in its ninth calendar year.

Compliance Period means a three-year (calendar year) period within a Compliance Cycle. Each Compliance Cycle has three three-year Compliance Periods. Within the first Compliance Cycle, the first Compliance Period runs from January 1, 1993 to December 31, 1995; the second from January 1, 1996 to December 31, 1998; the third from January 1, 1999 to December 31, 2001. Each subsequent Compliance Period shall commence on the 1st day of January immediately following the last day of the prior Compliance Period, and shall end on the 31st day of December in its third calendar year.

Comprehensive Performance Evaluation (CPE) means a thorough review and analysis of a treatment plant's performance-based capabilities and associated administrative, operation and maintenance practices. It is conducted to identify factors that may be adversely impacting a plant's capability to achieve compliance and emphasizes approaches that can be implemented without significant capital improvements. The comprehensive performance evaluation must consist of at least the following components: assessment of plant performance; evaluation of major unit processes; identification and prioritization of performance limiting factors; assessment of the applicability of comprehensive technical assistance; and preparation of a CPE report.

Confirmatory Sample or Confirmation Sample shall mean a sample collected from the same Sampling Point as an initial sample for analysis, in order to verify the analytical results of the initial sample.

Confluent Growth means a continuous bacterial growth covering the entire filtration area of a membrane filter, or a portion thereof, in which bacterial colonies are not discrete.

Consecutive Public Water System means a public water system that receives some or all of its finished water from one or more wholesale systems. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

22.02: continued

Contaminant means any physical, chemical, biological or radiological substance or matter in water.

Contract Operator Compliance Notice means a written submittal from a Supplier of Water, who has contracted with a Certified Operator (pursuant to 310 CMR 22.11B), to the Department identifying the allocation of the following categories of duties and responsibilities between the Supplier of Water and the Certified Operator, on a form to be provided by the Department:

- (a) operation and maintenance;
- (b) monitoring and reporting;
- (c) compliance;
- (d) recordkeeping;
- (e) administration;
- (f) emergency response;
- (g) budgeting;
- (h) safety and source protection;
- (i) training;
- (j) inspections; and
- (k) consumer relations.

Conventional Filtration Treatment means a series of processes, including coagulation, flocculation, sedimentation, and filtration resulting in substantial particulate removal.

Corrosion Inhibitor means a substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.

CT or CT_{calc} is the product of "residual disinfectant concentration" ("C") in mg/l determined before or at the first customer, and the corresponding "disinfectant contact time" ("T") in minutes, *i.e.*, "C" x "T". If a public water system applies disinfectants at more than one point prior to the first customer, it must determine the CT of each disinfectant sequence before or at the first customer to determine the total percent inactivation or "total inactivation ratio". In determining the total inactivation ratio, the public water system must determine the residual disinfectant concentration of each disinfection sequence and corresponding contact time before any subsequent disinfection application point(s). "CT_{99.9}" is the CT value required for 99.9% (3-log) inactivation of *Giardia lamblia* cysts. CT_{99.9} for a variety of disinfectants and conditions appear in Tables (1.1-22.20A through 1.6-22.20A, 2.1-22.20A and 3.1-22.20A) in 310 CMR 22.20A(5)(b)3.

$$\frac{CT_{calc}}{CT_{99.9}}$$

is the inactivation ratio. The sum of the inactivation ratios, or total inactivation ratio shown as

$$\frac{(CT_{calc})}{(CT_{99.9})}$$

is calculated by adding together the inactivation ratio for each disinfection sequence. A total inactivation ratio equal to or greater than 1.0 is assumed to provide a 3-log inactivation of *Giardia lamblia* cysts.

Customers, for the purpose of 310 CMR 22.16A, means billing units or service connections to which water is delivered by a community water system.

Day means calendar day, except as otherwise expressly provided in 310 CMR 22.00.

Department means the Department of Environmental Protection of the Commonwealth of Massachusetts.

22.02: continued

Detected Contaminant, for the purpose of 310 CMR 22.16A, means at or above the method detection levels reported by the certified laboratory which shall be less than or equal to the method detection levels prescribed by 310 CMR 22.00.

Diatomaceous Earth means a fine, siliceous (made of silica) material composed mainly of the skeletal remains of diatoms.

Direct Filtration means a method of treating water which consists of the addition of coagulant chemicals, flash mixing, Coagulation, minimal flocculation, and Filtration; but does not include Sedimentation.

22.02: continued

Direct Responsible Charge means accountability for and performance of active, daily on-site operation of a Treatment Facility or Distribution System, or a major segment of a Treatment Facility or Distribution System where shift operation is not required. Where shift operation is required "Direct Responsible Charge" shall mean accountability for and performance of active, daily on-site operation of an operating shift, or a major segment of the operation of a Treatment Facility or Distribution System.

Disinfectant means any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines, and ozone, which is added to water in any part of the treatment or distribution process, and which is intended to kill or inactivate pathogenic microorganisms.

Disinfectant Contact Time ("T" in CT calculations) means the time in minutes that it takes for water to move from the Point of Disinfectant Application or the previous point of Disinfectant residual measurement to a point before or at the point where Residual Disinfectant Concentration ("C") is measured. Where only one "C" is measured, "T" is the time in minutes that it takes for water to move from the Point of Disinfectant Application to a point before or at where Residual Disinfectant Concentration ("C") is measured. Where more than one "C" is measured, "T" is (a) for the first measurement of "C", the time in minutes that it takes for water to move from the first or only Point of Disinfectant Application to a point before or at the point where the first "C" is measured and (b) for subsequent measurements of "C", the time in minutes that it takes for water to move from the previous "C" measurement point to the "C" measurement point for which the particular "T" is being calculated. Disinfectant Contact Time in pipelines must be calculated based on "plug flow" by dividing the internal volume of the pipe by the maximum hourly flow rate through that pipe. Disinfectant Contact Time within mixing basins and storage reservoirs must be determined by tracer studies or an equivalent demonstration.

Disinfection means a process that inactivates pathogenic organisms in water by chemical oxidants or equivalent agents.

Disinfection Profile means a summary of daily *Giardia lamblia* inactivation through the treatment plant.

Distribution System means a system of conduits (laterals, distributors, pipes, mains, and their appurtenances, and in some cases includes interior plumbing) by which potable water is distributed to consumers. The Distribution System may include the source booster pumping stations, storage tanks and reservoirs.

Division means the Drinking Water Program, one of the programs within the Bureau of Resource Protection comprising the Department of Environmental Protection.

Domestic or Other Non-distribution System Plumbing Problem means a coliform contamination problem in a public water system with more than one service connection that is limited to the specific service connection from which the coliform-positive sample was taken.

Dose Equivalent means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission on Radiological Units and Measurements (ICRU).

Dual Sample Set means a set of two samples collected at the same time and same location, with one sample analyzed for TTHM and the other sample analyzed for HAA5. Dual Sample Sets are collected for the purposes of conducting an IDSE under 310 CMR 22.07F(1) through 310 CMR 22.07F(6) and determining compliance with the TTHM and HAA5 MCLs under 310 CMR 22.07F.

Effective Corrosion Inhibitor Residual, for the purpose of 310 CMR 22.06B only, means a concentration sufficient to form a passivating film on the interior walls of a pipe.

Electrodialysis means the selective separation of dissolved solids on the basis of electrical charge, by diffusion through a semi-permeable membrane across which an electrical potential is imposed.

22.02: continued

Emergency means any situation or event, natural or man-made, which causes or threatens to cause damage to a water supply system that could disrupt normal water supply functions. An Emergency may affect a portion of the system or the entire system. In an Emergency, a water supplier must take immediate action to assess the situation or event and may need to take immediate action to protect public health.

Emergency Source means any source of water used to supplement or temporarily replace a public water system's active or Inactive Source(s) when water of sufficient quality or quantity is not available. An Emergency Source may be placed On-line only after the Department's approval pursuant to a declaration of a state of water emergency under M.G.L. c. 21G, §§ 15 through 17 or as a requirement of a Department administrative order.

Enhanced Coagulation means the addition of sufficient coagulant for improved removal of Disinfection byproduct precursors by conventional Filtration treatment.

Enhanced Softening means the improved removal of Disinfection byproduct precursors by precipitative softening.

EPA means the United States Environmental Protection Agency.

Expand means to increase the yield of a well or Wellfield above the approved pumping rate.

Filter Profile means a graphical representation of individual filter performance, based on continuous Turbidity measurements or total particle counts versus time for an entire filter run, from startup to backwash inclusively, that includes an assessment of filter performance while another filter is being backwashed.

Filtration means a process for removing particulate matter from water by passage through porous media.

Finished Water means water that is introduced into the distribution system of a public water system and is intended for distribution and consumption without further treatment, except as treatment necessary to maintain water quality in the distribution system (e.g., booster Disinfection, addition of corrosion control chemicals).

First Draw Sample means a one-liter sample of tap water, collected in accordance with 310 CMR 22.06B(1)(a)2. that has been standing in plumbing pipes at least six hours and is collected without flushing the tap.

Flocculation means a process to enhance agglomeration or collection of smaller floc particles into larger, more easily settleable particles through gentle stirring by hydraulic or mechanical means.

Flowing Stream means a course of running water flowing in a definite channel.

Foreseeable Future means that a Public Water System has demonstrated its capacity to operate and maintain the system in compliance with 310 CMR 22.00 and each federal national primary drinking water regulation that will be in effect five years from the date of the Department's determination of the system's capacity.

GAC10 means granular activated carbon filter beds with an empty-bed contact time of ten minutes based on average daily flow and a carbon reactivation frequency of every 180 days except that the reactivation frequency for GAC10 used as a Best Available Technology for compliance with the MCLs under 310 CMR 22.07E(1)(c) shall be 120 days.

GAC20 means granular activated carbon filter beds with an empty-bed contact time of 20 minutes based on average daily flow and a carbon reactivation frequency of every 240 days.

Gross Alpha Particle Activity means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.

22.02: continued

Gross Beta Particle Activity means the total radioactivity due to beta particle emission as inferred from measurements on a dry sample.

Groundwater means all water that exists beneath the land surface in soils or geologic formations, specifically that part of the subsurface water in the Saturated Zone.

Groundwater under the Direct Influence of Surface Water means any water beneath the surface of the ground with significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia* or *Cryptosporidium*, or significant and relatively rapid shifts in water characteristics such as Turbidity, temperature, conductivity, or pH which closely correlate to climatological or Surface Water conditions.

Guidelines and Policies for Public Water Systems means the Department's Drinking Water Program's document titled "Guidelines and Policies for Public Water Systems," as amended, utilized by the Drinking Water Program as a guidance document. Copies of the "Guidelines and Policies for Public Water Systems" are available for a nominal fee from the State Bookstore, State House, Room 116, Boston, Massachusetts and 436 Dwight Street, Springfield, Massachusetts.

Haloacetic Acids (Five) (HAA5) means the sum of the concentrations in milligrams per liter of the haloacetic acid compounds (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid), rounded to two significant figures after addition.

Halogen means one of the chemical elements chlorine, bromine, or iodine.

Home Water Treatment Device means any apparatus, appliance, instrument, or product designed or used in conjunction with residential plumbing systems or systems providing water in any building or structure for human consumption or use; including but not limited to, apparatus, appliances, instruments, or products using Filtration, distillation, absorption, ion exchange, Reverse Osmosis, or other treatment processes or technologies which alter the properties of water. Home Water Treatment Device includes point-of-entry and point-of-use devices.

Inactive Source means an Approved Source(s) that is expected to be off-line for at least one year (12 months). A source may be deemed inactive only upon written approval of the Department. An Inactive Source may not return to active status without written approval from the Department. Monitoring as specified at 310 CMR 22.00, is not required during the time that the source is inactive, unless otherwise specified by the Department.

Infiltration Gallery means a subsurface Groundwater collection system, which generally consists of a horizontal screen(s) or other porous media that collects Groundwater and induced Surface Water and routes it to a chamber from which water is pumped to a water treatment plant or Distribution System, installed adjacent to a Surface Water body for the purpose of inducing infiltration from the Surface Water body.

Initial Compliance Period means the first full three-year Compliance Period which begins at least 18 months after promulgation of the federal regulations.

Interim Wellhead Protection Area (IWPA) means that for public water systems using wells or Wellfields that lack a Department-approved Zone II, the Department will apply an Interim Wellhead Protection Area. This Interim Wellhead Protection Area shall be a one half mile radius measured from the well or Wellfield for sources whose approved pumping rate is 100,000 gpd or greater. For wells or Wellfields that pump less than 100,000 gpd, the IWPA radius is proportional to the approved pumping rate which may be calculated according to the following equation: IWPA radius in feet = (32 x pumping rate in gallons per minute) + 400. A default IWPA radius or an IWPA radius otherwise computed and determined by the Department shall be applied to Transient Non-community Water System (TNC) and Non-transient Non-community Water System (NTNC) wells when there is no metered rate of withdrawal or no approved pumping rate.

22.02: continued

Laboratory Analyst means a Person who is qualified to perform tests in specified disciplines or categories.

Laboratory Director means the Person who has administrative and legal responsibility for the operation of the laboratory.

Laboratory Supervisor/Consultant means a Person with management and technical responsibility, who exercises supervision over technical personnel, evaluates the quality of analytical methods, performs tests requiring special scientific skills and is responsible for the accuracy and reporting of results.

Lake/Reservoir means a natural or man made basin or hollow on the Earth's surface in which water collects or is stored that may or may not have a current or single direction of flow.

Large Water System, for the purpose of 310 CMR 22.06(B), means a water system that serves more than 50,000 persons.

Lead-free means:

- (a) not containing more than 0.2% lead when used with respect to solder and flux; and
- (b) not more than a weighted average of 0.25% lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures; provided that the weighted average lead content of a pipe, pipe fitting, plumbing fitting, or fixture shall be calculated by using the following formula:
 - 1. for each wetted component, the percentage of lead in the component shall be multiplied by the ratio of the wetted surface area of that component to the total wetted surface area of the entire product to arrive at the weighted percentage of lead of the component;
 - 2. the weighted percentage of lead of each wetted component shall be added together, and the sum of these weighted percentages shall constitute the weighted average lead content of the product;
 - 3. the lead content of the material used to produce wetted components shall be used to determine compliance; and
 - 4. for lead content of materials that are provided as a range, the maximum content of the range shall be used.

Lead Service Line means a service line made of lead which connects the water main to the building inlet and any lead pigtail, gooseneck or other fitting that is connected to such lead line.

Legionella means a genus of bacteria, some species of which have caused a type of pneumonia called Legionnaires Disease.

Level 1 Assessment means an evaluation to identify the possible presence of Sanitary Defects, defects in Distribution System coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment, and which consists, at a minimum, of the following elements:

- (a) review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired;
- (b) changes in Distribution System maintenance and operation that could affect distributed water quality (including water storage);
- (c) source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a groundwater system is disinfected);
- (d) existing water quality monitoring data; and
- (e) inadequacies in sample sites, sampling protocol, and sample processing.

Level 2 Assessment means an evaluation to identify the possible presence of Sanitary Defects, defects in Distribution System coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment, and which consists of a more detailed examination of the system (including the system's monitoring and operational practices) than a Level 1 Assessment through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices, and includes, at a minimum, the following elements:

22.02: continued

- (a) review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired;
- (b) changes in Distribution System maintenance and operation that could affect distributed water quality (including water storage);
- (c) source and treatment considerations that bear on distributed water quality, where appropriate (*e.g.*, whether a groundwater system is disinfected);
- (d) existing water quality monitoring data; and
- (e) inadequacies in sample sites, sampling protocol, and sample processing.

Locational Running Annual Average (LRAA) means the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

Man-made Beta Particle and Photon Emitters means all radionuclides emitting beta particles and/or photons listed in *Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure, NBS Handbook 69*, except the daughter products of thorium-232, uranium-235 and uranium-238.

Maximum Contaminant Level or MCL means the maximum permissible level of a contaminant in water which is delivered to any user of a public water system. The definition of Maximum Contaminant Level for the purpose of the consumer confidence report is contained in 310 CMR 22.16A(4)(c)2.

Maximum Contaminant Level Goal or MCLG means the level of a contaminant in drinking water at or below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) means a level of a Disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects. MRDLs are enforceable in the same manner as Maximum Contaminant Levels under 310 CMR 22.00.

Maximum Residual Disinfectant Level Goal (MRDLG) means the maximum level of a Disinfectant added for water treatment at which no known or anticipated adverse effect on the health of Persons would occur, and which allows an adequate margin of safety. MRDLGs are non-enforceable health goals and do not reflect the benefit of the addition of the chemical for control of waterborne microbial contaminants.

Maximum Total Trihalomethane Potential means the maximum concentration of Total Trihalomethanes produced in a given water containing a Disinfectant residual after seven days at a temperature of 25°C or above.

Medium-size Water System, for the purpose of 310 CMR 22.06B, means a water system that serves greater than 3,300 and less than or equal to 50,000 persons.

Membrane Filtration means a pressure or vacuum driven separation process in which particulate matter larger than one micrometer is rejected by an engineered barrier, primarily through a size-exclusion mechanism, and which has a measurable removal efficiency of a target organism that can be verified through the application of a direct integrity test. 310 CMR 22.02: Membrane Filtration includes the common membrane technologies of microfiltration, ultrafiltration, nanofiltration, and Reverse Osmosis.

Method Detection Limit or MDL means the minimum concentration of substance that can be identified, measured, and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte. The method detection limit refers to samples that have been processed through all the steps of an established analytical procedure.

Minimum Reporting Level or MRL means the minimum concentration that can be reported as a quantitated value for a target analyte in a sample following analysis.

22.02: continued

Near the First Service Connection means at one of the 20% of all service connections in the entire system that are nearest the water supply treatment facility, as measured by water transport time within the distribution system.

New Source means any existing, proposed, or expanded use of a water source in a public water system that has not met the requirements of guidelines and regulations utilized by the Drinking Water Program.

New Source Approval Process means the step-by-step process utilized by the Department's Drinking Water Program culminating in the development of water for a public water system.

Non-zoning Controls means by-laws, ordinances, rules and regulations, other than Zoning Controls, adopted in accordance with the constitutional and statutory powers of cities and towns to protect the health, safety and general welfare of their present and future inhabitants.

On-line means a well, Wellfield or Surface Water Source from which water currently is being pumped or drawn for use in a public water system.

Optimal Corrosion Control Treatment means, for the purpose of 310 CMR 22.06B only, the corrosion control treatment that minimizes the lead and copper concentrations at users' taps while insuring that the treatment does not cause the water system to violate any national primary drinking water regulations.

Performance Evaluation Sample means a reference sample provided to a laboratory for the purpose of demonstrating that the laboratory can successfully analyze the sample within limits of performance set by the Department.

Person means an individual, corporation, company, association, trust, partnership, the Commonwealth, a municipality, district or other subdivision or body politic of the Commonwealth, any department, agency, or instrumentality of the United States, except that nothing herein shall be construed to refer to or include any American Indian tribe, or the United States Secretary of the Interior in his capacity as trustee of Indian lands.

Picocurie (pCi) means that quantity of radioactive material producing 2.22 nuclear transformations per minute.

Plant Intake means the works or structures at the head of a conduit through which water is diverted from a source (*e.g.*, river or lake) into the treatment plant.

Point of Disinfectant Application is the point where the Disinfectant is applied and water downstream of that point is not subject to recontamination by Surface Water runoff.

Point-of-entry Treatment Device (POE) means a device installed to treat the water entering a house or building or portion of such for the purpose of reducing contaminants in the water distributed throughout the house or building or portion of such.

Point-of-use Treatment Device (POU) means a treatment device installed on a single faucet or spigot used for the purpose of reducing contaminants in drinking water at that one faucet or spigot.

Pre-sedimentation means a preliminary treatment process used to remove gravel, sand and other particulate material from the source water through settling before the water enters the primary clarification and Filtration processes in a treatment plant.

Primary Operator means a person who is certified by the Board of Certification of Drinking Water Supply Facilities and has a grade certificate at least equal to the class of the corresponding facility at which he or she is employed. The Primary Operator shall be the individual who has direct supervision and responsibility for charge of the operation of a facility such as the superintendent or chief plant operator who has active field supervision of the operation of the facility or who is required in the performance of their normal duties to give responsible, technical

22.02: continued

advice and supervision of the technical aspects rather than only general administrative supervision of the treatment and/or distribution of the water supply and spends their working hours at the treatment facility or performing distribution system duties and is knowledgeable of 310 CMR 22.00, guidelines and policies. The Primary Operator of the facility shall hold a "Full Operator" status and cannot hold an "Operator-in-training" certificate as defined in 236 CMR 4.05: *Issuance of Certificates*.

Public Water System means a system for the provision to the public of water for human consumption, through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year. Public Water System includes any collection, treatment, storage, and distribution facilities under control of the operator of such a system and used primarily in connection with such system, and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. The Department may presume that a system is a Public Water System as defined in 310 CMR 22.00 based on the average number of persons using a facility served by the system or on the number of bedrooms in a residential home or facility. The Department reserves the right to evaluate and determine whether two or more wells located on commonly owned property, that individually may serve less than 25 people, but collectively serve more than 25 people for more than 60 days of the year should not be regulated as a Public Water System, taking into account the risk to public health. A Public Water System includes a "Community Water System" or a "Non-community Water System".

(a) Community Water System means a Public Water System which serves at least 15 service connections used by year-round residents or regularly serves at least 25-year round residents.

(b) Non-community Water System means a Public Water System that is not a Community Water System.

1. Non-transient Non-community Water System or NTNC means a Public Water System that is not a Community Water System and that has at least 15 service connections or regularly serves at least 25 of the same individuals or more approximately four or more hours per day, four or more days per week, more than six months or 180 days per year; such as a workplace providing water to its employees.

2. Transient Non-community Water System or TNC means a Public Water System that is not a Community Water System or a Non-transient Non-community Water System, but is a Public Water System which has at least 15 service connections or serves water to 25 different persons at least 60 days per year. Some examples of these types of systems are: restaurants, motels, camp grounds, parks, golf courses, ski areas and community centers.

Public Water System Capacity means a Public Water System has the technical, financial, and managerial ability to operate in compliance with 310 CMR 22.00, the Department's *Guidelines and Policies for Public Water System* and each National Primary Drinking Water Regulation in effect at the time of such approval and in the foreseeable future

Raw Water means water in its natural state, prior to treatment, which typically is the water entering the first treatment process of a water treatment plant.

Reliably and Consistently below the MCL means that though a system detects contaminants in its water supply, it has sufficient knowledge of the source or extent of the contamination to predict that the MCL would not be exceeded in the future. Wide variations in analytical results or an analytical result which is close to the MCL are examples of situations where systems would not be Reliably and Consistently below the MCL.

Rem means the unit of Dose Equivalent from ionizing radiation to the total body or any internal organ or organ system. A "millirem (mrem)" is $1/1000$ of a rem.

Repeat Compliance Period means any subsequent Compliance Period after the Initial Compliance Period.

22.02: continued

Replacement Well means a new well(s)/Wellfield installed to replace or supplement an approved well(s)/Wellfield where the proposed new well(s)/Wellfield will be situated within 250 feet of the original well(s)/Wellfield and have a pumping rate equal to or less than that of the original well(s)/Wellfield. Replacement Wells must be installed in the same unconsolidated geologic formation as the original approved well(s)/Wellfield. Criteria used to determine location of Replacement Wells shall include, but not be limited to, the following: extent to which negative environmental impacts caused by the existing well can be minimized; degree to which Replacement Wells alter the existing groundwater hydraulics or Zone II boundaries; and the degree to which significant potential contamination threats can be lessened. Replacement Wells shall not significantly alter the existing groundwater hydraulics or Zone II boundaries. Replacement Wells are subject to the New Source requirements as deemed applicable by the Department.

Residual Disinfectant Concentration ("C" in CT calculations) means the concentration of Disinfectant measured in mg/l in a representative sample of water.

Reverse Osmosis means the application of pressure to a concentrated solution which causes the passage of a liquid from the concentrated solution to a weaker solution across a semi-permeable membrane. The membrane allows the passage of the water (solvent) but not the dissolved solids (solutes).

River Source means a drinking water source with a direct intake located at any river or stream that is designated as a drinking water source in 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*. Protected Zones A, B, and C, as defined in 310 CMR 22.00, do not apply to River Sources designated as Class B under 314 CMR 4.00.

Running Annual Average. The Running Annual Average for MCL/MRDL compliance calculation purposes is defined as the average of quarterly or monthly averages of the compliance monitoring result(s) from the prior four calendar quarters. If multiple compliance monitoring samples are collected in any given quarter or month, then the results of these samples are averaged in order to establish a single representative contaminant concentration for each quarter or month. These quarterly (four values) or monthly (12 values) concentrations are then averaged for the prior four calendar quarters. If all of the required compliance monitoring sample(s) for a quarter or month were not collected, then the Running Annual Average calculation shall exclude a concentration value for that quarter or month (*e.g.*, if one quarter's sampling is missing, then the Running Annual Average is based upon the sum of the quarterly averages from the other three quarters divided by three). Results from additional samples that were collected and analyzed in the same manner as compliance monitoring samples and that are representative of drinking water being provided to the public may also be used in this calculation.

Sampling Point means the entry point to the distribution system that represents each source after treatment.

Sanitary Defect means a defect that could provide a pathway of entry for microbial contamination into the Distribution System or that is indicative of a failure or imminent failure in a barrier that is already in place. (Sanitary Defect may also be identified as a Significant Deficiency under the Ground Water Rule 310 CMR 22.26.)

Sanitary Survey means an on-site review of the water sources, facilities, equipment, operation and maintenance of a Public Water System for the purpose of evaluating the adequacy of such source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water.

Satellite Facility means a Treatment Facility which is operated, controlled, and monitored by an appropriately Certified Operator working within the same Public Water System.

Saturated Zone means a zone in which all voids, large and small, are filled with water under pressure, equal to or greater than atmospheric pressure.

SCADA *see* definition for Supervisory Control and Data Acquisition System.

22.02: continued

Seasonal System means a Non-community Water System that is not operated as a Public Water System on a year-round basis and starts up and shuts down at the beginning and end of each operating season.

22.02: continued

Secondary Maximum Contaminant Level (SMCL) means standards which apply to Public Water Systems and which in the judgment of the Administrator or the Department, are requisite to protect the public welfare. The SMCL is the maximum permissible level of a contaminant in water, which is delivered to the free flowing outlet of the ultimate user of a Public Water System. Contaminants added to the water under circumstances controlled by such user, except those resulting from corrosion of piping and plumbing caused by water quality, are excluded from Secondary Maximum Contaminant Level (SMCL)

Secondary Operator means a person who is certified by the Board of Certification of Operators of Drinking Water Supply Facilities and has an operator's license not less than one grade lower than the classification of the facility at which they are employed. For Class III treatment facilities or higher, the Secondary Operator must also have at least six months working experience in a Class II treatment facility or higher. A Secondary Operator shall be an individual who spends their working hours at the treatment facility as the shift supervisor or performs distribution system duties as a foreman or assistant superintendent and is knowledgeable of 310 CMR 22.00: *Drinking Water*, guidelines and policies. A Secondary Operator shall be in Direct Responsible Charge during periods of time when the Primary Operator is temporarily absent or is not scheduled for duty. The Secondary Operator may hold an Operator-in-Training certificate as defined in 236 CMR: *Board of Certification of Operators of Drinking Water Supply Facilities*.

Sedimentation means a process for removal of solids before Filtration by gravity or separation.

Service Line Sample means a one-liter sample of water, collected in accordance with 310 CMR 22.06B(7) has been standing for at least six hours in a service line.

Significant Deficiency means one or more conditions that cause, or have the potential to cause, the introduction of contamination into water delivered to customers, including without limitation:

- (a) defects in design, operation, or maintenance of any source, Treatment Facility or Distribution System; and
 - (b) the failure or malfunction of any of source, Treatment Facility or Distribution System.
- (Significant Deficiency may also be identified as a Sanitary Defect under 310 CMR 22.05.)

Single Family Structure, for the purpose of 310 CMR 22.06B only, means a building constructed as a single-family residence that is currently used as either a residence or a place of business.

Slow Sand Filtration means a process involving passage of raw water through a bed of sand at low velocity (generally less than 0.4 m/h) resulting in substantial particulate removal by physical and biological mechanisms.

Small Water System, for the purpose of 310 CMR 22.06B, means a water system that serves no more than 3,300 persons.

Spring means a natural discharge point where groundwater issues from soil or rocks in concentrated flow. Public water supply Springs will be perennial or intermittent springs of nonthermal origin. A source is not considered a Spring if mechanical methods are used to enhance the flow of water.

Stabilization means the processes that convert organic materials to a form that resists change. Organic material is stabilized by bacteria which convert the material to gases and other relatively inert substances. Stabilized organic material generally will not give off obnoxious odors.

Standard Sample means the aliquot of finished drinking water that is examined for the presence of coliform bacteria.

Substantial Modification means any deviation from approved plans or specifications affecting capacity, hydraulic conditions, operating units, the functioning of water treatment processes or systems, or the quality of water delivered to consumers. Substantial Modification does not apply to Substantial Modifications as that term is used in 310 CMR 22.22.

22.02: continued

Supervisory Control and Data Acquisition System or SCADA System means a computer-monitored alarm, response, control and data acquisition system used by drinking water facilities to monitor their operations.

Supplier of Water means any Person who owns or operates a Public Water System.

Surface Water means all water that is open to the atmosphere and subject to surface runoff.

Surface Water Source means any lake, pond, reservoir, river, stream or impoundment designated as a public water supply in 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*.

SUVA means Specific Ultraviolet Absorption at 254 nanometers (nm), an indicator of the humic content of water. It is a calculated parameter obtained by dividing a sample's ultraviolet absorption at a wavelength of 254 nm (UV_{254}) (in m^{-1}) by its concentration of dissolved organic carbon (DOC) (in mg/l).

System with a Single Service Connection means a system that supplies drinking water to consumers via a single service line.

Tier 1 Public Notice means a public notice required for 310 CMR 22.00 violations and situations with significant potential to have serious adverse effects on human health as a result of short-term exposure.

Tier 2 Public Notice means a public notice required for 310 CMR 22.00 violations and situations with potential to have serious adverse effects on human health.

Tier 3 Public Notice means a public notice for all other 310 CMR 22.00 violations and situations not included in Tier 1 and Tier 2.

Too Numerous to Count (TNTC) means that the total number of bacterial colonies exceeds 200 on a 47-mm diameter membrane filter used for coliform detection.

Total Organic Carbon (TOC) means Total Organic Carbon in mg/l measured using heat, oxygen, ultraviolet irradiation, chemical oxidants, or combinations of these oxidants that convert organic carbon to carbon dioxide, rounded to two significant figures.

Total Trihalomethanes (TTHM) means the sum, rounded to two significant figures, of the concentrations in milligrams per liter of the trihalomethane compounds, trichloromethane (chloroform), bromodichloromethane, dibromochloromethane, and tribromomethane (bromoform).

Treatment Facility means those components of a Public Water System involved in the production of drinking water for public consumption by the addition of any chemical or use of any treatment process to alter the physical, biological or chemical quality of the water.

Treatment Technique (TT) means a process, practice, or device required by 310 CMR 22.00, the National Primary Drinking Water Standards, or by the terms and conditions of a permit, approval or order issued by the Department intended to reduce the level of a contaminant or other constituent in drinking water.

Tributary means any body of running, or intermittently running, water which moves in a definite channel, naturally or artificially created, in the ground due to a hydraulic gradient, and which ultimately flows into a Class A Surface Water Source, as defined in 314 CMR 4.05(3)(a): *Class A*.

Trihalomethane means one of the family of organic compounds, named as derivatives of methane, wherein three of the four hydrogen atoms in methane are each substituted by a Halogen atom in the molecular structure.

Two-stage Lime Softening means a process in which chemical addition and hardness precipitation occur in each of two distinct unit clarification processes in series prior to Filtration.

22.02: continued

Turbidity means a measure of water clarity. Turbidity is measured in terms of Nephelometric Turbidity Units (NTU), representing the intensity of light scattered by a sample under defined conditions.

Uncovered Finished Water Storage Facility means is a tank, reservoir, or other facility used to store water that will undergo no further treatment to reduce microbial pathogens except residual Disinfection and is directly open to the atmosphere.

Variations and Exemptions means, as defined in 310 CMR 22.16A(4)(d)1., permission by the Department or EPA not to meet an MCL or a Treatment Technique under certain conditions

Virus means a Virus of fecal origin which is infectious to humans by waterborne transmission.

Water Used for Human Consumption means water that is used by humans in residential, commercial, industrial, institutional or other setting for drinking, bathing, showering, cooking, dishwashing, or maintaining oral hygiene.

Waterborne Disease Outbreak means the significant occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a Public Water System which is deficient in treatment, as determined by the Department in conjunction with the Massachusetts Department of Public Health.

Watershed means the area contained within geomorphic or topographic boundaries of higher elevations which cause Surface Water and/or Groundwater to drain or flow to lower elevations into water used as a Public Water System source.

Wellfield means a series of three or more wells that are manifolded together provided that the wells:

- (a) shall be either suction lifted or individually pumped all at the same time;
- (b) shall have pump intake depths no greater than 28 feet below ground level; and
- (c) shall be a maximum distance of 50 feet apart.

Wholesale System means a Public Water System that treats source water as necessary to produce finished water and then delivers some or all of that finished water to another Public Water System. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

Zone A means:

- (a) the land area between the Surface Water Source and the upper boundary of the Bank;
- (b) the land area within a 400 foot lateral distance from the upper boundary of the Bank of a Class A Surface Water Source, as defined in 314 CMR 4.05(3)(a): *Class A*; and
- (c) the land area within a 200 foot lateral distance from the upper boundary of the Bank of a Tributary or associated Surface Water body.

Zone B means the land area within ½ mile of the upper boundary of the Bank of a Class A Surface Water Source, as defined in 314 CMR 4.05(3)(a): *Class A*, or edge of Watershed, whichever is less. However, Zone B shall always include the land area within a 400-foot lateral distance from the upper boundary of the Bank of the Class A Surface Water Source.

Zone C means the land area not designated as Zone A or B within the Watershed of a Class A Surface Water Source as defined at 314 CMR 4.05(3)(a): *Class A*.

Zone I means the protective radius required around a public water supply well or Wellfield. For Public Water System wells with approved yields of 100,000 gpd or greater, the protective radius is 400 feet. Wellfields and infiltration galleries with approved yields of 10,000 gpd or greater require a 250-foot protective radius. Protective radii for all other Public Water System wells, Wellfields, and infiltration galleries are determined by the following equation: Zone I radius in feet = $(150 \times \log \text{ of pumping rate in gpd}) - 350$. This equation is equivalent to the chart in the *Guidelines and Policies for Public Water Systems*. A default Zone I radius or a Zone I radius otherwise computed and determined by the Department shall be applied to Transient Non-community Water System (TNC) and Non-transient Non-community Water System (NTNC) wells when there is no metered rate of withdrawal or no approved pumping rate. In no case shall the Zone I radius be less than 100 feet.

22.02: continued

Zone II means that area of an aquifer that contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at approved yield, with no recharge from precipitation). It is bounded by the groundwater divides that result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone II shall extend upgradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary). The Zone II must include the entire Zone I area. For Springs, the Zone II is that area of an aquifer, which contributes water to the Spring under naturally flowing conditions.

Zone III means that land area beyond the area of Zone II from which Surface Water and groundwater drain into Zone II. The surface drainage area as determined by topography is commonly coincident with the groundwater drainage area and will be used to delineate Zone III. In some locations, where surface and groundwater drainage is not coincident, Zone III shall consist of both the surface drainage and the groundwater drainage areas.

Zoning Controls means by-laws and ordinances adopted by cities and towns in accordance with M.G.L. c. 40A.

(2) Definitions as Related to Cross Connections. As used in 310 CMR 22.22, unless the context indicates otherwise, the following words shall have the following meanings:

Air Gap Separation means the method of preventing backflow through the use of an unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture, or other device and the flood level rim of the receptacle. The air gap separation shall be at least twice the internal diameter of the supply pipe discharge line but in no case less than one inch.

Approved Backflow Prevention Device or Device means a testable or non-testable cross connection control device that is approved by the Department for use in Massachusetts.

Approved Examiner means an individual authorized in writing by the Department to administer written and practical certification examinations at a recognized training institution.

Atmospheric Vacuum Breaker means an approved backflow device used to prevent back siphonage which is not designed for use under static line pressure.

Audit means a review of a Public Water System's implementation of its cross connection program to evaluate its effectiveness in distributing safe drinking water.

Back Pressure means pressure created by mechanical means or other means which causes water or other liquids or substances to flow or move in a direction opposite to that which is intended.

Back Siphonage means a form of backflow due to reduced or sub-atmospheric pressure within a water system.

Backflow means the flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply from any source other than the intended source.

Backflow Preventer with Intermediate Atmospheric Vent means a non testable device having two independently operating check valves separated by an intermediate chamber with a means for automatically venting it to the atmosphere, in which the check valves are force loaded to a normally closed position and the venting means is forced loaded to a normally open position.

Backflow Prevention Device Tester means an individual who is certified by the Department as a Massachusetts Backflow Prevention Device Tester.

Barometric Loop means a loop of pipe rising at least 35 feet, at its topmost point, above the highest fixture it supplies for the protection of back siphonage.

22.02: continued

Certification Examination means an examination approved by the Department for the purpose of testing competency in all areas of cross connection control and backflow prevention device testing.

Certified Backflow Prevention Device Tester means an individual who holds a valid Massachusetts Backflow Prevention Device Tester's Certificate issued by the Department.

Contaminant means any physical, chemical, biological or radiological substance or matter in water.

Cross Connection means any actual or potential physical connection or arrangement between a pipe conveying potable water from a Public Water System and any non-potable water supply, piping arrangement or equipment including, but not limited to, waste pipe, soil pipe, sewer, drain, other unapproved sources.

Cross Connection Program Plan means a plan submitted to the Department by the water supplier describing the current and proposed cross connection program and including information on staffing, training, testing, surveying, fee structure, *etc.*

Cross Connection Surveyor means a Person who is certified by the Department as a Massachusetts Cross Connection Surveyor.

Cross Connection Violation Form means a violation form which is sent to the owner by the water supplier with copies to the plumbing inspectors and Board of Health delineating cross connection violations found on the owner's premises and a procedure for corrective action.

Department's Designee or Designee means any water supplier to whom, upon written request of said water supplier, the Department delegates any portion of its authority to act under 310 CMR 22.22.

Design Data Sheet means a report form submitted to the Department or its Designee along with plans for each installation of a reduced pressure backflow preventer or double check valve assembly, or for each change to any such device already installed, describing and showing the details of the specific installation.

Double Check Valve Assembly means a Department approved testable backflow prevention device that incorporates an assembly of check valves, with shut-off valves at each end and appurtenances for testing.

Health Hazard means an actual or potential threat of contamination to the potable water in a Public Water System, which, in the opinion of the Department or its Designee would endanger health.

Hose Bibb Vacuum Breaker means an atmospheric vacuum breaker designed to be used on outlets with hose connection thread.

In-plant Protection means the location of approved backflow prevention devices in a manner, which provides protection of the consumers of water and the potable water system within the premises.

Inspection means an on-site inspection and survey by a qualified individual to determine the existence and location of cross connections and/or the physical examination and testing of an installed backflow prevention device to verify that the backflow prevention device is functioning properly.

Inspection and Maintenance Report Form means a report form, designated by the Department, which is to be used by certified testers to record all pertinent testing information.

Owner means any Person maintaining a cross connection installation or owning or occupying premises on which cross connections can or do exist.

22.02: continued

Owner's Agent means any Person or body designated by the owner to act as his or her representative.

Potable Water means water from any source that has been approved by the Department for human consumption.

Pressure Vacuum Breaker means an approved backflow prevention device designed to prevent only back siphonage and which is designed for use under static line pressure.

Reduced Pressure Backflow Preventer means an approved testable backflow prevention device incorporating:

- (a) two or more check valves;
- (b) an automatically operating differential relief valve located between the two checks;
- (c) two shut-off valves; and
- (d) necessary appurtenances for testing; and which is designed to operate so that:
 1. the pressure in the zone between the two check valves is maintained at a value less than the pressure on the Public Water System side of the device;
 2. at cessation of normal flow, the pressure in the zone between the two check valves is maintained at a value less than the pressure on the Public Water System side of the device; and
 3. in the case of leakage of either check valve, the differential relief valve shall operate to maintain reduced pressure in the zone by discharging to the atmosphere.

Reviewing Authority means the Department, its Designee, or the local plumbing inspector, authorized by M.G.L. c. 142 and licensed by the Board of State Examiners of Plumbers and Gas Fitters, whichever is responsible for the review and approval of the installation of an approved backflow prevention device.

Unapproved Source means the source or distribution system for any water or other liquid or substance which has not been approved by the Department as being of safe and sanitary quality for human consumption, including but not limited to any waste pipe, soil pipe, sewer, drain, or non-acceptable potable water system material.

22.03: Compliance

(1) No source of water used by a Public Water System, no system of water supply used by a Public Water System, and no treatment facilities or treatment works used by a Public Water System shall be deemed by the Department to be safe, fit, or pure, or in any other way approved; and no Supplier of Water, or other Person subject to a requirement of 310 CMR 22.00 shall supply drinking water to the users of a Public Water System, including without limitation for emergency use; unless that Public Water System complies with 310 CMR 22.00. In the event of a violation of 310 CMR 22.00, the Department may establish a schedule for compliance within an administrative consent order or other enforceable document that may include interim measures that the Supplier of Water must take. It shall be a violation of 310 CMR 22.00 to fail to comply with:

- (a) any provision or requirement of 310 CMR 22.00;
- (b) a schedule for compliance, including any interim measures required by the Department in an administrative consent order or other enforceable document; or
- (c) any term or condition of a permit, written approval, registration, certification or order issued by the Department pursuant to M.G.L. c. 111, § 160 or 310 CMR 22.00.

(2) A Supplier of Water, upon request by the Department, shall sample and analyze its water for any parameter, at any location and frequency, deemed necessary to prevent the pollution of and secure the sanitary protection of waters used as sources of water supply and to ensure the delivery of a fit and pure water supply to all consumers, in accordance with 310 CMR 22.00. All results of such sampling and analysis shall be reported to the Department as directed and in accordance with 310 CMR 22.00. A Supplier of Water that fails to report such results to the Department as directed, and in accordance with 310 CMR 22.00, shall be presumed to have failed to conduct such monitoring.

22.03: continued

(3) 310 CMR 22.00 shall apply to every Public Water System in the Commonwealth, except a consecutive Public Water System which demonstrates to the Department's satisfaction that it meets all the following Criteria:

- (a) The consecutive system consists only of distribution and storage facilities (and does not have any collection and treatment facilities);
- (b) The consecutive system obtains all of its water from but is not owned by or operated by, a Public Water System which is subject to 310 CMR 22.00;
- (c) The consecutive system does not sell water to any Person;
- (d) The consecutive system is not a carrier which conveys passengers in commerce; and
- (e) The consecutive system and the supplying system have entered into a written agreement that addresses the status and responsibilities of the parties for the ownership, operation and maintenance of the combined system, including but not limited to, drinking water sources, treatment facilities, Distribution System, storage and water quality sampling.

(4) If the Department determines that a consecutive Public Water System is exempt from 310 CMR 22.00 based on the consecutive system meeting the criteria in 310 CMR 22.03(3)(a) through (e), the supplying system shall thereafter be responsible for the compliance of the combined system with 310 CMR 22.00, including the requirement to obtain the Department's approval for a Substantial Modification to an existing Public Water System pursuant to 310 CMR 22.04.

(5) Where the Department, in consultation with the Department of Public Health, determines that:

- (a) a Supplier of Water is supplying drinking water in violation of 310 CMR 22.00; and
- (b) an order to cease supplying such water would pose a significantly greater hazard to the public health than the continued supplying of such water in violation of 310 CMR 22.00, the Department may authorize the supplying of such water subject to such conditions as may be imposed by the Commissioner, but only for a temporary, non-renewable period not to exceed the amount of time the Supplier of Water reasonably needs to either eliminate the violation or promptly apply for and obtain a variance or exemption.

(6) The Department shall report all violations of 310 CMR 22.00 to the Massachusetts Department of Public Health promptly upon obtaining knowledge of such violations, and shall consult with the Massachusetts Department of Public Health with regard to enforcement actions taken to obtain compliance with 310 CMR 22.00.

(7) No Person shall violate, or cause to be violated, any municipal zoning or nonzoning control that is required as part of a Department-issued approval of a Groundwater source or Surface Water Source for public water supply approval pursuant to 310 CMR 22.20C or 22.21(2), or a requirement of an approved watershed protection/control program.

(8) In the event the Department finds on the basis of a health assessment made by the Department's Office of Research and Standards that the level of any contaminant found in water collected within a Distribution System and/or at a Sampling Point at the entry to a Distribution System, poses an unacceptable health risk to consumers, acting alone or in combination with other contaminants, the Supplier of Water shall take appropriate actions to reduce the level of contaminant concentrations to levels the Department deems safe or remove the source of supply from service by the deadline specified by the Department. The Supplier of Water shall be required to monitor the source as directed by the Department, provide public notification and notify the Department of the actions it intends to take in response to a finding that a source of supply poses an unacceptable risk to health.

22.03: continued

(9) Schedule for Compliance.

(a) No Supplier of Water shall violate, or cause to be violated, any Treatment Technique requirement established by 310 CMR 22.20A. A Supplier of Water subject to one or more Treatment Technique requirements shall take appropriate action to timely come into compliance with each such requirement. The Department may require a Supplier of Water to notify the Department of the actions it intends to take to come into compliance with each Treatment Technique requirement. Each such notice must include, at a minimum, a schedule that includes the dates by which the Supplier of Water will hire a professional engineer to prepare plans and specifications, submit draft and final design plans and specifications to the Department for approval, request bids for construction, award a contract for construction, and commence and complete construction of the work necessary.

(b) If an extension is required to meet an Action Level, Treatment Technique, or other requirement established by 310 CMR 22.00, the Department will set a schedule for compliance with an administrative consent order or other enforceable document and may specify any interim measures that the Supplier of Water must take. Failure to meet the schedule or interim measures constitutes a violation of 310 CMR 22.00.

(10) All water quality data submitted to the Department shall be analyzed by a laboratory certified pursuant to 310 CMR 42.00: *Certification and Operation of Environmental Analysis Laboratories*, unless otherwise specified by the Department. All water quality data for contaminants listed in 310 CMR 22.00, including additional and voluntary samples, shall be submitted to the Department, unless otherwise specified by the Department. All sample collection, handling and preservation shall be subject to the following procedures:

(a) those procedures referenced or defined in 310 CMR 22.00. Samples shall be stored in such a way that cross-contamination from other samples, standards or reagents is avoided; and

(b) a Supplier of Water shall maintain a copy of the chain-of-custody for each sample collected, shall retain said copy for the same time period applicable to the corresponding sample reports as specified in 310 CMR 22.17, and shall provide a copy to the Department upon request. Chain of custody information shall be recorded for all samples, including those shipped by mail or courier, using either a chain-of-custody form that accompanies the samples or an electronic tracking system meeting at a minimum, generally accepted industry standards for establishing a chain of custody by such means. Chain-of-custody information shall include:

1. sample number;
2. sample description including any preservation (*e.g.*, chemical, thermal, *etc.*) used;
3. date and time of sample collection;
4. specific location of sample collection (including applicable Location ID#);
5. analysis requested;
6. name of sample collector and intermediate custodians, if any;
7. date(s) and time(s) of custody transfer to the laboratory; and
8. name(s) and signature(s) of the individual(s) receiving the sample.

(11) The Department may require that special purpose samples collected by a Supplier of Water and analyzed by a certified laboratory using approved methods as specified at 310 CMR 42.00: *Certification and Operation of Environmental Analysis Laboratories* be used to determine compliance with the applicable MCL.

(12) A Public Water System is in operation during the period the system is providing (pumping or gravity feeding) water to the water Distribution System and/or the Public Water System is providing water to at least one of its service connections or customers.

(13) A Supplier of Water shall submit or report to the Department all data or information required to be submitted or reported pursuant to 310 CMR 22.00, including without limitation 310 CMR 22.15, in the format and manner as specified and approved by the Department. Where required, including without limitation as specified in 310 CMR 22.07G(17), written submissions shall be made using the electronic filing system designated by the Department. A Supplier of Water may request in writing a waiver from any applicable electronic filing requirement, for a limited period of time. All such requests shall be based on a showing that internet access

22.03: continued

necessary to make the required electronic filings is not available, despite the reasonable efforts of the Supplier of Water or party acting on its behalf (*e.g.*, a laboratory) to acquire the needed internet access. All electronic filing waiver requests shall be made on a form provided by the Department and shall be subject to the Department's written approval. Any Supplier of Water whose waiver request is approved shall make paper filings in *lieu* of the applicable electronic filings during the period of the waiver using printed copies of the applicable filing forms.

(14) In the event of a violation of a regulated contaminant limit established by 310 CMR 22.00, or notification by the Department either pursuant to sampling and analysis required by 310 CMR 22.03(2), or pursuant to 310 CMR 22.03(8), a Supplier of Water shall:

22.03: continued

(a) take appropriate actions to reduce the level of contaminant concentrations to levels the Department deems safe by the deadline specified by the Department. The Supplier of Water shall conduct monitoring as directed by the Department and provide public notification in accordance with 310 CMR 22.16; and

(b) unless the Department directs the Supplier of Water to take specific corrective action, the Supplier of Water shall submit a corrective action plan to the Department within 30 days of the Supplier of Water learning of the violation or receipt of the Department's notification of the exceedance. The corrective action plan shall detail the specific interim and long-term action measures the Supplier of Water intends to take to ensure water supplied to consumers meets applicable standards.

(15) Requests for Information.

(a) To properly carry out its responsibilities under M.G.L. c. 111, § 160 and 310 CMR 22.00 to protect the health, environment, and well-being of the citizens of the Commonwealth, the Department and its authorized agents and representatives may request information from any Person as it deems necessary to ascertain the purity and fitness of water supply for domestic use, or the possibility of the water supply Distribution System imperiling the public health, or to evaluate whether that Person is subject to, in compliance with, or in violation of, M.G.L. c. 111, § 160, or 310 CMR 22.00.

(b) No Person shall fail to provide any information requested within the time specified by the Department pursuant to 310 CMR 22.03(15)(a).

(16) Altering, Falsifying or Tampering with Collection, Analysis, or Reporting of Samples.

(a) No Person shall alter, falsify, tamper with, or attempt to tamper with, the collection, analysis or reporting of samples required by 310 CMR 22.00; nor allow or cause any other Person to alter, falsify, tamper with, or attempt to tamper with, the collection, analysis or reporting of samples required by 310 CMR 22.00.

(b) No Person shall render inaccurate any monitoring device required by 310 CMR 22.00, nor allow or cause any other Person to render inaccurate any monitoring device required by 310 CMR 22.00.

(c) No Person shall render inaccurate any method required to be performed by 310 CMR 22.00, nor allow or cause any other Person to render inaccurate any method required to be performed by 310 CMR 22.00.

(17) Intentional or Negligent Damage. No Person shall intentionally or negligently break, damage, destroy, uncover, deface, or tamper with any source, structure, appurtenance, equipment, or any other component of a Public Water System; nor cause or allow any other Person to intentionally or negligently break, damage, destroy, uncover, deface, or tamper with any source, structure, appurtenance, equipment, or any other component of a Public Water System.

(18) False, Inaccurate, Incomplete or Misleading Statements.

(a) No Person shall make, nor allow or cause any other Person to make, any false, inaccurate, incomplete or misleading statement in any submission required by 310 CMR 22.00, or by any permit, approval, certification or registration issued pursuant to 310 CMR 22.00.

(b) No Person shall make, nor allow or cause any other Person to make, any false, inaccurate, incomplete or misleading statement in any record, report, plan, file, log, register or other document which such Person is required to keep by the terms of a permit, approval, certification or registration issued pursuant to M.G.L. c. 111, § 160, or 310 CMR 22.00.

(19) Orders. Without limitation, the Department may issue such orders as in its opinion may be necessary to prevent the pollution and to secure the sanitary protection of all waters used as sources of water supply and to ensure the delivery of a fit and pure water supply to all consumers. Such orders may include, but shall not be limited to, orders requiring Persons to cease any activity which is in violation of M.G.L. c. 111, § 160, or 310 CMR 22.00 or to carry out activities necessary to bring such Person into compliance.

22.03: continued

(20) Penalties. Any Person violating M.G.L. c. 111, § 160, or 310 CMR 22.00 shall be subject to the full range of legal actions authorized by M.G.L. c. 21A, § 16, c. 111, § 160, 310 CMR 5.00: *Administrative Penalty*, and any other applicable law or regulation including, without limitation, criminal fines, imprisonment, and civil and administrative orders and penalties.

22.04: Construction, Operation and Maintenance of Public Water Systems

(1) New or Substantially Modified Public Water Systems. Any Person proposing to construct a new Public Water System, operate a Public Water System or to substantially modify an existing Public Water System shall obtain the prior written approval of the Department, by at a minimum demonstrating to the Department's satisfaction that:

- (a) the drinking water source for the system meets the criteria in 310 CMR 22.20A, 22.20B, 22.20C, and 22.21, as applicable, and complies with the Department's Guidelines and Policies for Public Water System;
- (b) the storage, treatment and Distribution System and facilities including transmission lines for the system have been sited, designed, and constructed in compliance with 310 CMR 22.19, 22.20A, 22.22 and the Department's *Guidelines and Policies for Public Water Systems*;
- (c) the Supplier of Water has the technical, managerial and financial capacity to operate and maintain the Public Water System in compliance with 310 CMR 22.00, and each National Primary Drinking Water Regulation in effect at the time of the Department's determination of the system's capacity and in effect in the foreseeable future;
- (d) the Public Water System is in compliance with the Department's *Guidelines and Policies for Public Water Systems*, in effect at the time of the Department's determination of the system's capacity;
- (e) the Public Water System manager has attended a capacity training program approved by the Department or shall attend such a program if deemed necessary by the Department;
- (f) in the case of Transient Non-community Water Systems or any other Public Water System, if deemed necessary by the Department, a notice has been or shall be recorded on the deed of the property where a drinking water source serving such Public Water System is located, stating that such property contains a drinking water source subject to 310 CMR 22.00; and
- (g) the staffing of the Public Water System complies with 310 CMR 22.11B and any related policies established by the Department or the Board of Certification of Operators of Drinking Water Supply Facilities.

(2) To the extent practicable, said Person shall avoid locating all or any part of a new or substantially modified facility at a site which:

- (a) is subject to a significant risk from earthquakes, floods, fires, or other disasters which could cause a breakdown of the Public Water System or a portion thereof;
- (b) except for intake structures, is within the floodplain of a 100-year flood or is lower than any recorded high tide where appropriate records exist; and can reasonably obtain service from an existing system (the Department shall consider proximity to existing systems and the economic feasibility of extending service).

(3) Information Required for Department Approval. Persons seeking the Department's approval under 310 CMR 22.04(1), shall submit the following information:

- (a) all necessary plans, specifications, standard operating, maintenance procedures, and proposed staffing for the system, prepared by a Massachusetts registered professional engineer unless otherwise determined by the Department;
- (b) documentation, including but not limited to, a water system business plan, which demonstrates that the Public Water System complies with the capacity requirements in 310 CMR 22.04(1)(c); and
- (c) any additional information that the Department deems relevant to its review and approval.

22.04: continued

(4) Prohibition on Construction or Substantial Modification of a Public Water System Without Prior Department Approval.

(a) No Person shall commence construction or otherwise implement or operate a proposed new Public Water System or make Substantial Modifications to an existing Public Water System unless the Department has issued its prior written approval and any other applicable Department permits.

(b) No Person shall operate a Public Water System unless such operation is in accordance with the terms and conditions of all Department permits and approvals. No Person shall make changes to a permitted or approved Treatment Technique or remove a permitted or approved treatment device from service without prior notification to and approval by the Department unless the change or removal is in response to an Emergency. If the change or removal is in response to an Emergency, then the Public Water System must notify the Department within 24 hours of the change or removal.

(c) After a Treatment Technique has been approved by the Department, the Supplier of Water shall install and maintain such Treatment Technique and implement any such approved procedures and practices in accordance with 310 CMR 22.00 and the terms and conditions of all applicable permits, approvals, and orders issued by the Department.

(5) Existing Public Water Systems. The Department may require any existing Public Water System to demonstrate its compliance with 310 CMR 22.00, including but not limited to 310 CMR 22.04(1) and the Department's *Guidelines and Policies for Public Water Systems*, at the time of a Sanitary Survey conducted pursuant to 310 CMR 22.04(12) or as otherwise directed by the Department.

(6) By no later than December 31, 2001, all Public Water Systems shall install meter(s) at location(s) sufficient to record each system's total production of water from all sources, including water purchased from and/or water sold to other Public Water Systems.

(7) Each Supplier of Water shall operate and maintain its system in a manner that ensures the delivery of safe drinking water to consumers. In determining whether a Supplier of Water is properly operating and maintaining a Public Water System, the Department will apply the standards for Public Water Systems set forth in the Drinking Water Program's *Guidelines and Policies for Public Water Systems*.

(8) New Product or Technology.

(a) No Supplier of Water shall add, install or use any chemicals, drinking water additives, or treatment devices or equipment that come into direct contact with drinking water, unless such devices or equipment have received the prior written approval of the Department.

(b) To obtain the Department's approval of a new product (*e.g.*, additives, coatings), a manufacturer shall demonstrate that the product:

1. conforms to the applicable American National Standards Institute (ANSI) and the National Sanitation Foundation (NSF) Standard 60 or 61; or Underwriter Laboratory (UL) standards or the performance of the technology has been verified by the Environmental Protection Agency's (EPA's) Environmental Technology Verification Program (ETV);

2. was approved by the EPA prior to April 1990 and conforms to the standards of the American Water Works Association (AWWA); and

3. is capable of producing finished water that meets all federal and state Maximum Contaminant Levels and drinking water standards for the intended and approved technology use.

(c) To obtain the Department's approval of a major new technology system, a manufacturer shall demonstrate that:

1. The major technology has been approved and used successfully in the United States for at least five years. In addition, such major new technology must have been approved and used successfully in three states for at least two years. One of the three states must either be a New England state or New York state or another state determined by the Department to have similar environmental conditions, and the other two states must be primacy states.

22.04: continued

2. If a technology does not meet the requirements of 310 CMR 22.04(8)(c)1., then the technology must be piloted in Massachusetts in accordance to 310 CMR 22.04(9).
 3. The Department will consider for approval technologies that have received prior approval from third party organizations such as UL, ANSI/NSF, or AWWA. Additionally, the Department will consider for approval technologies with published ETV performance verification reports.
 - (d) If the technology is a vending machine, then National Automatic Merchandizing Association (NAMA) certification shall be required to obtain the Department's approval.
 - (e) If the technology is a POU/POE device it shall conform to the requirements of 310 CMR 22.23.
 - (f) Persons seeking to have a product or technology listed are directed to follow the procedures set forth in the Drinking Water Program's policy entitled: *New Product or Technology Review Policy* DWP Policy No. 89-01, a copy of which is available from the Drinking Water Program. The Department may revoke its approval of a product or technology if it determines that the product or technology is defective or performs inadequately in the field.
 - (g) For products, if the drinking water chemicals or coatings have NSF certification, a NSF certification shall also be required of the original producer of the product. Repackers of chemicals are not required to be formally certified, but shall self-certify to the Department that the cleanliness of their procedures and purity of the resultant product is equivalent to the standards applicable to the original manufacturer. Any local reformulation of chemical requires certification in accordance with NSF 60.
 - (h) Any public or private entity providing the testing and certification described in 310 CMR 22.04(6)(b) for other parties shall be certified by the American National Standards Institute (ANSI).
- (9) Pilot Requirements. The Department may require Persons seeking approval of a Disinfection or Filtration treatment system or process for use in a Public Water System to perform a pilot study to determine whether the proposed system or process will perform adequately in the field. Persons required to perform such a study should follow the procedures set forth in the Division's policy entitled *Pilot Study Requirements for Proposed Surface Water Treatment/Filtration Plants*, DWS Policy No. 90-04, a copy of which is available from the Drinking Water Program.
- (10) Treatment Techniques for Acrylamide and Epichlorohydrin. Each Supplier of Water using acrylamide or epichlorohydrin in a Public Water System shall certify annually in writing to the Department (using third party or manufacturer's certification) that the combination (or product) of dose and monomer level does not exceed the levels specified as follows:
 Acrylamide = 0.05% dosed at 1 ppm (or equivalent)
 Epichlorohydrin = 0.01% dosed at 20 ppm (or equivalent)
 Such certifications shall be made by the manufacturers or third parties, as approved by the Department.
- (11) Any application of a herbicide to any surface water body that serves as a source of water for a Public Water System shall comply with 310 CMR 22.20B(8).
- (12) Sanitary Surveys. The Department or its agent may conduct Sanitary Surveys of Public Water Systems to evaluate each system's source, facilities, equipment, operation, monitoring schedule, technical, managerial and financial capacity, and maintenance procedures at a frequency determined by the Department.
 - (a) If any violation or deficiency of 310 CMR 22.00, M.G.L. c. 111, § 160 or any other statute or regulation administered by the Department is identified during a Sanitary Survey, including without limitation any violations or deficiencies related to system capacity, the Public Water System shall be notified of the violation, the action necessary to comply with the statute or regulations, and the time period within which compliance must be attained. The Public Water System shall respond to any violations or deficiencies identified in the Sanitary Survey report within 30 days of receipt of such, unless the Department otherwise requires certain corrective action. The Department shall also include capacity recommendations for whole system improvements in its report.

22.04: continued

(b) The owner of a Transient Non-community Water Systems (TNC) shall be responsible for conducting or having a Sanitary Survey conducted by June 29, 1999 to evaluate the system's source, facilities, equipment, operation, monitoring schedule and maintenance plan. Thereafter, TNC systems shall undergo another Sanitary Survey every five years unless otherwise required by the Department. The survey information shall be submitted to the Department on a form or in a format provided by the Department for such use no later than 90 days after the completion of the survey or as specified by the Department. The Department will review the results of each Sanitary Survey to determine whether the existing monitoring frequency is adequate and whether additional measures are necessary, to improve drinking water quality. In conducting the survey the Public Water System shall be subject to 310 CMR 22.04(1)(a), except that the Department may conduct a survey of the TNC system at any time to determine compliance with 310 CMR 22.00.

(c) If a Significant Deficiency is identified by the Department or its agent during a Sanitary Survey at a groundwater Public Water System conducted to comply with 310 CMR 22.26(2), the system must comply with the requirements of 310 CMR 22.26(4)(a). Unless the Department requires the groundwater system to implement corrective action, the groundwater system shall consult with the Department in accordance with the schedule listed under 310 CMR 22.26(4)(a)4. and 5.

(13) Emergencies.

(a) Each Supplier of Water must prepare and keep in an easily accessible location an Emergency Response Plan prepared in accordance with 310 CMR 22.04(13) and *Massachusetts Drinking Water Guidelines and Policies for Public Water Supplies, Chapter 12 - Emergency Response Planning Requirements Guidance including Appendix O - Handbook for Water Supply Emergencies*. The Emergency Response Plan shall be designed to ensure that the water supplier is able to respond effectively to potential and actual Emergencies. The Emergency Response Plan shall include detailed steps that the water supplier shall implement to ensure the continuation of service in the event of a potential or actual Emergency, including but not limited to:

1. Loss of water supply from a source;
2. Loss of water supply due to major component failure;
3. Damage to power supply equipment or loss of power;
4. Contamination of water in the Distribution System from backflow or other causes;
5. Collapse of a reservoir, reservoir roof, or pump house structure;
6. Break in a transmission or distribution line that could result in a loss of service to customers for more than four hours;
7. Potential or imminent threat of chemical or microbiological contamination of the water supply over limits specified by 310 CMR 22.00, including without limitation, any standards specific to an individual Public Water System established pursuant to a health assessment as provided in 310 CMR 22.03(8);
8. Potential or imminent threat of an overfeed of an approved drinking water treatment chemical into the system;
9. An act of vandalism or sabotage that has the potential to impact or impacts water quality or the quantity of water available to the system.
10. A shortage or lack of resources that could affect the operations of the system, such as:
 - a. Staffing shortages;
 - b. Receipt of notice from a power utility of lengthy power outages; or
 - c. Imminent depletion of treatment chemical inventory; and
11. Any other failure of part or all of the water supply system due to equipment failure, human acts (deliberate or accidental) or natural or human made disasters.

(b) The Emergency Response Plan required by 310 CMR 22.04(13) shall include, at a minimum, a description of the procedures, structures and equipment used to respond to potential or actual Emergencies, including but not limited to:

1. Identification of alternate sources of water supply for use during an Emergency and procedures for bringing such sources On-line;
2. Procedures for notifying the Department and other regulatory agencies, the news media, and consumers of the Emergency and the actions, if any, consumers should take during the Emergency, including the use of personal protective equipment, if necessary, and water-use guidelines or restrictions;

22.04: continued

3. Procedures for communication, including a clear outline of the lines communication among system personnel and between the water supplier and local, state and federal officials and the public;
4. Procedures for testing and maintaining all facility communications and alarm systems as necessary to ensure their proper operation;
5. Procedures for disinfecting and testing the Distribution System after an Emergency in order to return it to service;
6. Identification of critical system components that must remain in service or be returned to service quickly;
7. An inventory of equipment needs and availability, including the location of existing Emergency equipment, generators and spill response materials, identification of additional Emergency equipment needs, and procedures for obtaining additional services and equipment, including critical spare parts;
8. Procedures for implementing any interconnections with other Public Water Systems and any other arrangements in effect with neighboring communities or other public water suppliers;
9. A description of the duties and responsibilities of key personnel who will be involved in Emergency response actions, and a procedure for contacting and scheduling staff;
10. A plan for annually training staff and local partners in Emergency response procedures to ensure that they are familiar with the all Emergency procedures, equipment and systems; and
11. Any other matter identified by the Department in *Massachusetts Drinking Water Guidelines and Policies for Public Water Supplies, Chapter 12 - Emergency Response Planning Requirements* including *Appendix O - Handbook for Water Supply Emergencies*.

(c) Each water supplier must implement the Emergency Response Plan established in accordance with 310 CMR 22.04(13)(a) and (b), including without limitation the provisions for annual training of staff and local partners in the implementation of such plan in the event of a potential or actual Emergency.

(14) Chemical Safety Control for Critical Chemical Feed Systems.

(a) Any Chemical Feed System which uses any of the chemicals listed in 310 CMR 22.04(14)(a)1. through 5. shall be subject to critical Chemical Feed System requirements as set forth in 310 CMR 22.04(14)(b).

1. Gaseous or liquid chlorine;
2. Chloramines;
3. Hydrofluorosilicic acid;
4. Sodium hydroxide; or
5. Potassium hydroxide.

(b) Critical Chemical Feed System Requirements. All Chemical Feed Systems subject to 310 CMR 22.04(14)(b) shall be equipped with control systems and alarm systems, consisting at a minimum and meeting at a minimum the following:

1. Analyzer Requirements.

- a. Each water pump or group of pumps discharging treated water into a Distribution System shall be monitored with a chemical analyzer for each critical chemical injected into the water system by a chemical metering pump.
- b. A Supplier of Water that demonstrates to the Department's satisfaction that an overfeed or underfeed would not lead to an unsafe or impure drinking water supply shall be exempt from the requirement of 310 CMR 22.04(14)(b)1.a.

2. Interlock Requirements.

- a. The pump motor controller(s) of the pump that paces the chemical injection, chemical metering pump(s), and chemical analyzer(s) shall be interlocked so that no chemical is injected if the pump is not running;
- b. A flow meter or thermal type flow switch shall be installed and interlocked such that when no flow is detected, the chemical feed pumps shall not operate;
- c. Each water pump and associated metering pump(s) shall automatically shut down, and the alarm system shall immediately send an alarm to a properly Certified Operator, if the analyzer for the critical chemical injected into the water system detects a parameter that is out of the range set in the analyzer; and

22.04: continued

- d. A facility that is staffed 24 hours a day, seven days a week, 365 days a year shall not be required to have an automatic shut down, nor shall any of its Satellite Facilities, but a properly Certified Operator shall be available to take proper action in the event of an overfeed or underfeed.
3. Powering of all metering pumps shall be configured to prevent overriding of the safety shut down systems.
4. Controls, instrumentation, alarms, and data logging system requirements. In every Public Water System, controls, instrumentation, alarms, and data logging systems shall be:
 - a. installed in order to insure a reliable and safe system;
 - b. calibrated in accordance with the manufacturer's recommendations; and
 - c. tested quarterly.
5. The Supplier of Water shall maintain logs recording all test results for a rolling period of five years from the date of each set of tests. The Supplier of Water shall make the logs available for review by the Department during inspections or upon request.
6. The Supplier of Water shall establish written protocols for testing critical alarms, which protocols shall be periodically reviewed and updated as appropriate.

(15) Lead Reduction Act.

- (a) Except as provided in 310 CMR 22.04(15)(b), no Person shall use any pipe, pipe fitting, plumbing fitting or fixture, any solder, or any flux; that is not Lead-free; in the installation or repair of any Public Water System or any plumbing in a residential or nonresidential facility providing water for human consumption.
- (b) The prohibition set forth in 310 CMR 22.04(15)(a) shall not apply to the following:
 1. pipes, pipe fittings, plumbing fittings or fixtures; including backflow preventers; that are used exclusively for nonpotable services such as manufacturing, industrial processing, irrigation, outdoor watering, or any other uses where the water is not anticipated to be used for human consumption; or
 2. service saddles, or water distribution main gate valves that are two inches in diameter or larger; or
 3. fire hydrants.
- (c) All products required to be lead free shall be certified as being in compliance with NSF/ANSI 372 or Annex G of NSF/ANSI 61. Certification shall be made by an independent agency in accordance with the preceding standards. Self-certification by the manufacturer will not be accepted.

22.05: Maximum Microbiological Contaminant Levels, Monitoring Requirements and Analytical Methods(1) Routine Coliform Monitoring.

- (a) General Requirements. Each Supplier of Water shall collect total coliform samples at sites which are representative of water throughout the Distribution System, at the entry point to the Distribution System, and at storage facilities. All such samples shall be collected at the frequency applicable to total coliform sampling set forth in the coliform sampling plan for that Supplier of Water's Public Water System. Samples required to be collected at the entry point to the Distribution System, in accordance with an approved coliform sampling plan required by 310 CMR 22.05(1)(a)3., shall be collected in addition to the minimum number of samples required pursuant to 310 CMR 22.05(1)(b), as set forth in 310 CMR 22.05: *Table 1*. Samples required to be collected at storage facilities, in accordance with an approved coliform sampling plan required by 310 CMR 22.05(1)(a)3., shall be collected in addition to the minimum number of samples required pursuant to 310 CMR 22.05(1)(b), as set forth in 310 CMR 22.05: *Table 1*, unless otherwise provided in the coliform sampling plan. The Department may require additional routine monitoring samples to ensure adequate Distribution System representation.
 1. Each Supplier of Water is required to maintain a Raw Water source sample tap at a location prior to any alteration or treatment of the source water unless otherwise specified by the Department in an approved coliform sampling plan.
 - a. A Supplier of Water shall collect a Raw Water source sample if the water at the entry point to the Distribution System is not representative of the source, or as otherwise specified in an approved coliform sampling plan required by 310 CMR 22.05(1)(a)3.

22.05: continued

- b. If a Supplier of Water is required to collect a Raw Water sample under 310 CMR 22.05(1)(a)1.a., then it shall collect the sample monthly on the same day as any one of its required Distribution Samples.
 - c. A total coliform-positive Raw Water sample shall not trigger the requirements of 310 CMR 22.05(2).
 - d. In the event of a total coliform-positive Raw Water sample, the Supplier of Water shall comply with the applicable provisions of 310 CMR 22.26(3)(b) and other provisions of 310 CMR 22.26.
2. Community Water Systems and Non-community Non-transient Water Systems are required to install a chemical injection port for Emergency Disinfection. The injection port shall be located prior to the first customer and at a location which maximizes Disinfection contact time.
3. Coliform Sampling Plan. A Supplier of Water shall develop and implement a written coliform sampling plan that identifies sampling sites and a sample collection schedule that are representative of water throughout the Distribution System. These plans, including any revisions to these plans, are subject to Department review, revision and approval. The Supplier of Water shall ensure that an approved sampling plan continues to be representative of water throughout the Distribution System, including seeking Department approval for a sampling plan revision as necessary. Monitoring required by 310 CMR 22.05(1) and (2) may take place at a customer's premises, a Department approved dedicated sampling station, or other designated compliance sampling location. Routine and repeat sample sites and any Sampling Points necessary to meet the requirements of 310 CMR 22.05(1) and (2), and 22.26 must be reflected in the sampling plan.
- a. A Supplier of Water shall collect samples at regular time intervals throughout the month, except that a Supplier of Water, whose Public Water System uses only groundwater and serves 4,900 persons or fewer, may collect all required samples on a single day if they are taken from different sampling locations.
 - b. A Supplier of Water shall take at least the minimum number of required samples even if the Public Water System has had an *E. coli* MCL violation or has exceeded the coliform Treatment Technique triggers in 310 CMR 22.05(4)(a).
 - c. A Supplier of Water, subject to Department approval, may conduct more compliance monitoring than is required by 310 CMR 22.05(1) to investigate potential problems in the Distribution System and use monitoring as a tool to assist in uncovering problems. If a Supplier of Water takes more than the minimum number of required routine samples at the locations specified in the existing coliform sampling plan, then the Supplier of Water shall include those sampling results in calculating whether the coliform Treatment Technique trigger in 310 CMR 22.05(4)(a)1.a. or b. has been exceeded. If a Supplier of Water takes samples at locations not previously specified in the existing coliform sampling plan, and the Department determines that these locations are representative of water throughout the Distribution System, the Supplier of Water shall include those sampling results in calculating whether the coliform Treatment Technique trigger in 310 CMR 22.05(4)(a)1.a. or b. has been exceeded.
 - d. A Supplier of Water shall identify repeat monitoring locations in the coliform sampling plan. Unless a Supplier of Water has obtained the Department's approval pursuant to 310 CMR 22.05(1)(a)3.d.i. or ii., that Supplier of Water must collect at least one repeat sample from the sampling tap where the original total coliform-positive sample was taken, and at least one repeat sample at a tap within five service connections upstream and at least one repeat sample at a tap within five service connections downstream of the original sampling site. If a total coliform-positive sample is at the end of the Distribution System, or one service connection away from the end of the Distribution System, the Supplier of Water must still take all required repeat samples. The Supplier of Water, subject to Department approval, may propose an alternative sampling location in lieu of the requirement to collect at least one repeat sample upstream or downstream of the original sampling site in accordance with 310 CMR 22.05(1)(a)3.d.i. or ii. Except as provided for in 310 CMR 22.05(1)(a)3.d.ii., a Supplier of Water required to conduct triggered source water monitoring under 310 CMR 22.26 shall take groundwater source sample(s) in addition to repeat samples required under 310 CMR 22.05(1)(a)3.d.

22.05: continued

i. A Supplier of Water may propose repeat monitoring locations to the Department that the Supplier of Water believes to be representative of a pathway for contamination of the Distribution System. A Supplier of Water may elect to specify either alternative fixed locations or criteria for selecting repeat sampling sites on a situational basis in a standard operating procedure (SOP) in its coliform sampling plan. The Supplier of Water must design its SOP to focus the repeat samples at locations that best verify and determine the extent of potential contamination of the Distribution System area based on specific situations. The Department may modify the SOP or require alternative monitoring locations as needed in order to meet the requirements of 310 CMR 22.05(1)(a)3.

ii. Groundwater Public Water Systems serving 1,000 or fewer people may propose repeat sampling locations to the Department that differentiate potential source water and Distribution System contamination (*e.g.*, by sampling at entry points to the Distribution System). A groundwater Public Water System with a single well required to conduct triggered source water monitoring may, with written Department approval, take one of its repeat samples at the monitoring location required for triggered source water monitoring under 310 CMR 22.26(3)(a) if the Supplier of Water demonstrates to the Department's satisfaction that the coliform sampling plan remains representative of water quality in the Distribution System. If approved by the Department, the Supplier of Water may use that sample result to meet the monitoring requirements in both 310 CMR 22.05(1)(a)3. and 22.26(3)(a).

A. If a repeat sample taken at the monitoring location required for triggered source water monitoring is *E. coli*-positive, the Supplier of Water has violated the *E. coli* MCL and must also comply with 310 CMR 22.26(3)(a)4. If a Supplier of Water takes more than one repeat sample at the monitoring location required for triggered source water monitoring under 310 CMR 22.26, the Supplier of Water may reduce the number of additional source water samples required under 310 CMR 22.26(3)(a) by the number of repeat samples taken at that location that were not *E. coli*-positive.

B. If a Supplier of Water takes more than one repeat sample at the monitoring location required for triggered source water monitoring under 310 CMR 22.26(3)(a), and more than one repeat sample is *E. coli*-positive, the system has violated the *E. coli* MCL and must also comply with 310 CMR 22.26(4)(a)1.

C. If all repeat samples taken at the monitoring location required for triggered source water monitoring are *E. coli*-negative and a repeat sample taken at a monitoring location other than the one required for triggered source water monitoring is *E. coli*-positive, the system has violated the *E. coli* MCL, but is not required to comply with 310 CMR 22.26(3)(a)4.

e. The Department may review, revise, and approve, as appropriate, repeat sampling proposed by a Supplier of Water under 310 CMR 22.05(1)(a)3.d.i. or ii. The Supplier of Water shall demonstrate that the coliform sampling plan remains representative of the water quality in the Distribution System. The Department may determine that monitoring at the entry point to the Distribution System (especially for undisinfected groundwater Public Water Systems) is effective to differentiate between potential source water and Distribution System problems.

f. Special purpose samples, such as those taken to determine whether Disinfection practices are sufficient following pipe placement, replacement, or repair, shall not be used to determine whether the coliform Treatment Technique trigger has been exceeded. Repeat samples taken pursuant to 310 CMR 22.05(2) are not considered special purpose samples, and must be used to determine whether the coliform Treatment Technique trigger has been exceeded.

(b) Coliform Monitoring Frequency. The minimum number of total coliform samples for Public Water Systems is based on the population served by the Public Water System according to 310 CMR 22.05: *Table 1*.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.05: continued

310 CMR 22.05: *Table 1*
 TOTAL COLIFORM MONITORING FREQUENCY
 FOR PUBLIC WATER SYSTEMS

Population Served	Minimum Number of Samples Per Month
Up to 1,000 ¹	1
1,001 to 2,500	2
2,501 to 3,300	3
3,301 to 4,100	4
4,101 to 4,900	5
4,901 to 5,800	6
5,801 to 6,700	7
6,701 to 7,600	8
7,601 to 8,500	9
8,501 to 12,900	10
12,901 to 17,200	15
17,201 to 21,500	20
21,501 to 25,000	25
25,001 to 33,000	30
33,001 to 41,000	40
41,001 to 50,000	50
50,001 to 59,000	60
59,001 to 70,000	70
70,001 to 83,000	80
83,001 to 96,000	90
96,001 to 130,000	100
130,001 to 220,000	120
220,001 to 320,000	150
320,001 to 450,000	180
450,001 to 600,000	210
600,001 to 780,000	240
780,001 to 970,000	270
970,001 to 1,230,000	300
1,230,001 to 1,520,000	330
1,520,001 to 1,850,000	360
1,850,001 to 2,270,000	390
2,270,001 to 3,020,000	420
3,020,001 to 3,960,000	450
3,960,001 or more	480

¹ Includes Public Water Systems which have at least 15 service connections, but serve fewer than 25 people.

22.05: continued

(c) Routine monitoring requirements for Community Water Systems serving 1,000 or fewer people using only groundwater.

1. Following any total coliform-positive sample taken under 310 CMR 22.05(1), Public Water Systems must comply with the repeat monitoring requirements and *E. coli* analytical requirements in 310 CMR 22.05(2).

2. Once all monitoring required by 310 CMR 22.05(1)(c) and (2) for a calendar month has been completed, Suppliers of Water must determine whether any coliform Treatment Technique triggers specified in 310 CMR 22.05(4)(a) have been exceeded. If any trigger has been exceeded, Suppliers of Water must complete assessments as required by 310 CMR 22.05(4)(b).

3. Monitoring Frequency for Total Coliforms. All Suppliers of Water described in 310 CMR 22.05(1)(c) shall monitor for total coliforms monthly. No such Supplier of Water shall be eligible for quarterly monitoring.

4. Each Public Water System shall be subject to a special monitoring evaluation by the Department during each Sanitary Survey to review the status of the Public Water System, including the Distribution System, and to determine whether the Public Water System is on an appropriate monitoring schedule. After the Department has performed the special monitoring evaluation during each Sanitary Survey, the Supplier of Water may be required by the Department to modify the Public Water System's monitoring schedule, as necessary, or it may allow the Public Water System to stay on its existing monitoring schedule, consistent with 310 CMR 22.05(1)(c).

(d) Routine monitoring requirements for Non-community Water Systems serving 1,000 or fewer people using only groundwater.

1. General.

a. 310 CMR 22.05(1)(d) shall apply to Non-community Water Systems using only groundwater (except Groundwater Under the Direct Influence of Surface Water, as defined in 310 CMR 22.02(1)) and serving 1,000 people or fewer.

b. Any Supplier of Water who takes a sample pursuant to 310 CMR 22.05(1)(d) that is total coliform-positive shall comply with the repeat monitoring requirements and *E. coli* analytical requirements set forth in 310 CMR 22.05(2).

c. Once a Supplier of Water completes all monitoring required by 310 CMR 22.05(1)(d) and (2) for a calendar month, the Supplier of Water shall determine whether any coliform Treatment Technique triggers specified in 310 CMR 22.05(4) have been exceeded. If any such trigger has been exceeded, the Supplier of Water shall complete assessments as required by 310 CMR 22.05(4).

d. A Supplier of Water for the purpose of determining eligibility for remaining on or qualifying for quarterly monitoring under 310 CMR 22.05(1)(d)4.a. and 5.d., respectively, for Transient Non-community Water Systems, may request, subject to approval from the Department, not to count monitoring violations under 310 CMR 22.05(11)(c)1. if the missed sample is collected no later than the end of the monitoring period following the monitoring period in which the sample was missed. The Supplier of Water shall collect the make-up sample in a different week than the routine sample for that monitoring period and as soon as possible during the monitoring period. Provided, however, that no such Department approval not to count a monitoring violation shall affect a determination made under 310 CMR 22.05(11)(c)1. nor an obligation to report under 310 CMR 22.05(12)(a)4.

2. Monitoring Frequency for Total Coliforms. All Suppliers of Water described in 310 CMR 22.05(1)(d)1.a. shall monitor for total coliforms each calendar month that its Public Water System provides water to the public or as provided under 310 CMR 22.05(1)(d)3. through 5., or 7. Provided, however, a Seasonal System shall meet the monitoring requirements set forth in 310 CMR 22.05(1)(d)6.

22.05: continued

3. Special Monitoring Evaluation for Public Water Systems During Sanitary Survey. Each Public Water System shall be subject to a special monitoring evaluation by the Department during each Sanitary Survey to review the status of its compliance with 310 CMR 22.05(1)(a) and (b) and to determine whether it is on an appropriate monitoring schedule. After the Department has performed the special monitoring evaluation during each Sanitary Survey, the Supplier of Water may be required by the Department to modify its monitoring schedule, as necessary, or may be allowed to stay on its existing monitoring schedule, consistent with the requirements of 310 CMR 22.05. Provided, however, that no Supplier of Water shall be allowed to begin less frequent monitoring under the special monitoring evaluation unless its Public Water System has already met the applicable criteria for less frequent monitoring in 310 CMR 22.05(1)(d)4. For Seasonal Systems on quarterly monitoring, the special monitoring evaluation shall include review of the approved coliform sampling plan, which must designate the time period(s) for monitoring based on site-specific considerations (*e.g.*, during periods of highest demand or highest vulnerability to contamination). Seasonal Systems shall collect compliance samples during these time periods.

4. Criteria for Quarterly Monitoring. Notwithstanding 310 CMR 22.05(1)(d)2., any Supplier of Water approved in writing by the Department for quarterly monitoring prior to April 1, 2016 may remain on quarterly monitoring unless the Department determines otherwise pursuant to 310 CMR 22.05(1)(d)3. and except as provided in 310 CMR 22.05(1)(d)5. A Supplier of Water may submit a written request to reduce the monitoring frequency for its Public Water System from monthly monitoring to quarterly monitoring, subject to the following requirements. The Supplier of Water must demonstrate, subject to the Department's written approval, that its Public Water System meets the criteria set forth in 310 CMR 22.05(1)(d)4.a. through f.

- a. The Public Water System must have a Clean Compliance History for the preceding 12 months;
- b. The Public Water System must be found to be free of Sanitary Defects based upon one or more of the following, which must have occurred during the preceding 12 months:
 - i. a Sanitary Survey;
 - ii. a site visit completed by the Department;
 - iii. a voluntary Level 2 Assessment by a Person approved by the Department.
- c. The Public Water System is in compliance with 310 CMR 22.21(1)(b)3. through 5., (3)(b) and (4);
- d. The Public Water System must be in compliance with the certified operator provisions under 310 CMR 22.11B;
- e. The Public Water System is not required to disinfect for microbiological contaminants by the Department pursuant to 310 CMR 22.05; and
- f. The Public Water System must be constructed in compliance with 310 CMR 22.04.

5. Increased monitoring requirements for Public Water Systems on quarterly monitoring. A Supplier of Water who operates a Public Water System on quarterly monitoring that experiences any of the events identified in 310 CMR 22.05(1)(d)5.a., through d. shall begin monthly monitoring the month following the event. The Supplier of Water shall continue monthly monitoring until approved to return to quarterly monitoring in accordance with 310 CMR 22.05(1)(d)4. A Public Water System on monthly monitoring for reasons other than those identified in 310 CMR 22.05(1)(d)5.a. through d. is not considered to be on increased monitoring for the purposes of 310 CMR 22.05(1)(d)4.

- a. The Public Water System triggers a Level 2 assessment or two Level 1 assessments under 310 CMR 22.05(4) in a rolling 12-month period.
- b. The Public Water System has an *E. coli* MCL violation.
- c. The Public Water System has a coliform treatment technique violation.
- d. The Public Water System has two monitoring violations under 310 CMR 22.05(11)(c) or one monitoring violation under 310 CMR 22.05(11)(c) and one Level 1 assessment under 310 CMR 22.05(4) in a rolling 12-month period.

22.05: continued

6. Seasonal Systems.

a. A Supplier of Water who owns or operates a Seasonal System shall demonstrate completion of a Department approved start-up procedure prior to serving water to the public each season, including start-up sampling, in accordance with the following requirements. A written start-up procedure signed by the Supplier of Water shall be submitted no less than seven days prior to serving water to the public each season, and shall be deemed approved unless the Department otherwise notifies the Supplier of Water prior to the date the Supplier of Water will begin serving water to the public, provided that the written start-up procedure includes all of the following elements:

- i. notification to the Department and the Primary Operator of the date the Supplier of Water will begin serving water to the public;
- ii. inspection of all Seasonal System components including source(s), treatment components, distribution lines and storage tanks;
- iii. activation of source(s);
- iv. flushing of the entire Distribution System;
- v. collection of coliform samples in accordance with the Department-approved coliform sampling plan, including any additional samples representing the re-activated portions of the system;
- vi. if the Seasonal System uses chlorination, a requirement that all chlorination equipment be installed and operational and chlorinated water be left in the Distribution System for at least 24 hours and then flushed prior to any coliform sample collection;
- vii. a requirement that the Seasonal System disinfect and flush atmospheric storage tank(s) if applicable; and
- viii. a requirement to re-install water meters, and re-install and test backflow preventers throughout the Distribution System, if applicable.

Completion of a start-up procedure shall be demonstrated by submitting a description of all start-up activities completed on a Department-approved form, signed by the Supplier of Water, to the Department no less than seven days prior to serving water to the public each season, which shall constitute the Supplier of Water's certification of the completion of the start-up procedure.

b. Monitoring Frequency for Total Coliforms. All Suppliers of Water who operate a Seasonal System described in 310 CMR 22.05(1)(d)1.a. shall monitor for total coliforms each calendar month that it is in operation unless it meets the criteria in 310 CMR 22.05(1)(d)6.b.i. through iii. to be eligible for monitoring less frequently than monthly, except as provided in 310 CMR 22.05(1)(d)3.

- i. Seasonal Systems monitoring less frequently than monthly shall have an approved coliform sampling plan that designates the time period for monitoring based on site-specific considerations (*e.g.*, during periods of highest demand or highest vulnerability to contamination). Seasonal Systems shall collect compliance samples during this time period.
- ii. To be eligible for quarterly monitoring, the Seasonal System shall meet the criteria in 310 CMR 22.05(1)(d)4.

c. The Supplier of Water may request, subject to approval from the Department, an exemption from some or all of the requirements for Seasonal Systems if the entire Distribution System remains pressurized during the entire period that the Seasonal System is not operating, except that a Seasonal System that monitors less frequently than monthly shall still monitor during the vulnerable period designated by the Department pursuant to the site-specific considerations identified in 310 CMR 22.05(1)(d)6.b.i.

22.05: continued

7. Additional Routine Monitoring the Month Following a Total Coliform-positive Sample. A Public Water System collecting samples on a quarterly frequency shall conduct additional routine monitoring the month following one or more total coliform-positive samples (with or without a Level 1 treatment technique trigger). A Public Water System shall collect at least three routine samples during the next month, except that the Supplier of Water may request, subject to approval from the Department a waiver of this requirement if the conditions of 310 CMR 22.05(1)(d)7.a., b., or c. are met. A Public Water System shall either collect samples at regular time intervals throughout the month or shall collect all required routine samples on a single day if samples are taken from different sites. A Public Water System shall use the results of additional routine samples in coliform Treatment Technique trigger calculations under 310 CMR 22.05(4)(a).

a. A Supplier of Water may request, subject to approval from the Department, a waiver of the requirement to collect three routine samples the next month in which the Public Water System provides water to the public if the Department, or an agent approved by the Department, performs a site visit before the end of the next month in which the Public Water System provides water to the public. Although a Sanitary Survey need not be performed, the site visit must be sufficiently detailed to allow the Department to determine whether additional routine monitoring and/or any corrective action is needed. An employee of the Public Water System cannot perform this site visit, even if the employee is an agent approved by the Department to perform Sanitary Surveys.

b. A Supplier of Water may request, subject to approval from the Department, a waiver of the requirement to collect three routine samples the next month in which its Public Water System provides water to the public, if, based upon appropriate submittals:

- i. the Department has determined why the sample was total coliform-positive; and
- ii. the Department has established that the Public Water System has corrected the problem or will correct the problem before the end of the next month in which the Public Water System serves water to the public.

The waiver shall be effective once the Supplier of Water has received written documentation from the Department of its decision describing the specific cause of the total coliform-positive sample and what action the Public Water System has taken and/or will take to correct this problem, a copy of which shall be made available to EPA and the public.

c. A Supplier of Water shall not receive a waiver of the requirement to collect three additional routine samples the next month in which the system provides water to the public solely on the grounds that all repeat samples are total coliform-negative. A Supplier of Water may request, subject to approval from the Department, a waiver of the requirement for additional routine monitoring the next month if it demonstrates that the contamination problem was corrected before the Supplier of Water is scheduled to take the set of repeat samples required in 310 CMR 22.05(2), and all repeat samples were total coliform-negative.

(e) Routine Monitoring Requirements for Public Water Systems Serving More than 1,000 People.

1. 310 CMR 22.05(1)(e) shall apply to all Public Water Systems serving more than 1,000 people.
2. Following any total coliform-positive sample taken under the provisions of 310 CMR 22.05(1)(e), the Supplier of Water must comply with the repeat monitoring requirements and *E. coli* analytical requirements in 310 CMR 22.05(2).
3. Once all monitoring required by 310 CMR 22.05(1)(e) and (2) for a calendar month has been completed, the Supplier of Water must determine whether any coliform Treatment Technique triggers specified in 310 CMR 22.05(4) have been exceeded. If any trigger has been exceeded, the Supplier of Water must complete assessments as required by 310 CMR 22.05(4).
4. Monitoring Frequency for Total Coliforms. All Suppliers of Water described in 310 CMR 22.05(1)(e)1. shall monitor for total coliforms monthly, except as provided in 310 CMR 22.05(1)(e)7.

22.05: continued

5. Seasonal Systems.

a. A Supplier of Water who owns or operates a Seasonal System shall demonstrate completion of a Department approved start-up procedure prior to serving water to the public each season, including start-up sampling, in accordance with the following requirements. A written start-up procedure signed by the Supplier of Water shall be submitted no less than seven days prior to serving water to the public each season, and shall be deemed approved unless the Department otherwise notifies the Supplier of Water prior to the date the Supplier of Water will begin serving water to the public, provided that the written start-up procedure includes all of the following elements:

- i. notification to the Department and the Primary Operator of the date the Supplier of Water will begin serving water to the public;
- ii. inspection of all Seasonal System components including source(s), treatment components, distribution lines and storage tanks;
- iii. activation of source(s);
- iv. flushing of the entire Distribution System;
- v. collection of coliform samples in accordance with the Department-approved coliform sampling plan, including any additional samples representing the re-activated portions of the system;
- vi. if the Seasonal System uses chlorination, a requirement that all chlorination equipment be installed and operational and chlorinated water be left in the Distribution System for at least 24 hours and then flushed prior to any coliform sample collection;
- vii. a requirement that the Seasonal System disinfect and flush atmospheric storage tank(s) if applicable; and
- viii. a requirement to re-install water meters, and re-install and test backflow preventers throughout the Distribution System, if applicable.

Completion of a start-up procedure shall be demonstrated by submitting a description of all start-up activities completed on a Department-approved form, signed by the Supplier of Water, to the Department no less than seven days prior to serving water to the public each season, which shall constitute the Supplier of Water's certification of the completion of the start-up procedure.

b. A Supplier of Water who owns or operates a Seasonal System may request, subject to Department approval, an exemption from some or all of the requirements for Seasonal Systems if the entire Distribution System remains pressurized during the entire period that the system is not operating.

6. Unfiltered Surface Water or Groundwater under the Direct Influence of Surface Water.

A Public Water System serving more than 1,000 people using Surface Water or Groundwater Under the Direct Influence of Surface Water which does not practice Filtration (in compliance with 310 CMR 22.20A, 22.20D, 22.20F, and 22.20G) must collect at least one total coliform sample Near the First Service Connection each day the Turbidity level of the source water, measured as specified in 310 CMR 22.20A(5)(b)2., exceeds one NTU. When one or more Turbidity measurements in any day exceed one NTU, the Supplier of Water shall collect a coliform sample within 24 hours of the first exceedance, unless the Supplier of Water demonstrates to the Department's satisfaction that, for logistical reasons outside the Supplier of Water's control, it cannot have the sample analyzed within 30 hours of collection and that it has developed an alternative sample collection schedule. Sample results from this coliform monitoring must be included in determining whether the coliform Treatment Technique trigger in 310 CMR 22.05(4)(a) has been exceeded.

7. Reduced Monitoring. No Public Water Systems described in 310 CMR 22.05(1)(e) shall reduce monthly monitoring, except for Non-community Water System using only groundwater (and not Groundwater Under the Direct Influence of Surface Water) serving 1,000 or fewer people in some months and more than 1,000 people in other months. In months when more than 1,000 people are served, the Supplier of Water shall monitor at the frequency specified in 310 CMR 22.05(1)(e). In months when 1,000 or fewer people are served, the Supplier of Water may request, subject to approval from the Department, reducing the monitoring frequency to a frequency allowed under 310 CMR 22.05(1)(d) for a similarly situated Public Water System that always serves 1,000 or fewer people, taking into account the provisions in 310 CMR 22.05(1)(d)4. and 5.

22.05: continued

(f) Routine monitoring requirements for Surface Water or Groundwater under the Direct Influence of Surface Water Public Water Systems serving 1,000 or fewer people.

1. 310 CMR 22.05(1)(f) applies to Surface Water or Groundwater under the Direct Influence of Surface Water Public Water Systems serving 1,000 or fewer people.
2. Following any total coliform-positive sample taken under 310 CMR 22.05(1)(f)1., a Supplier of Water shall comply with the repeat monitoring requirements and *E. coli* analytical requirements in 310 CMR 22.05(2).
3. Once all monitoring required by 310 CMR 22.05(1)(f) and (2) for a calendar month has been completed, a Supplier of Water shall determine whether any coliform Treatment Technique triggers specified in 310 CMR 22.05(4) have been exceeded. If any trigger has been exceeded, a Supplier of Water shall complete assessments as required by 310 CMR 22.05(4).
4. Seasonal Systems.
 - a. All Seasonal Systems must demonstrate completion of a Department-approved start-up procedure, in accordance with 310 CMR 22.05(1)(d)6.a. and (e)3.a. which includes a requirement for start-up sampling prior to serving water to the public.
 - b. The Department may exempt any Seasonal System from some or all of the requirements for Seasonal Systems if the entire Distribution System remains pressurized during the entire period that the system is not operating.
5. Monitoring Frequency for Total Coliforms. All Suppliers of Water described in 310 CMR 22.05(1)(f)1. (including consecutive systems) shall monitor for total coliforms monthly. No such Supplier of Water shall be eligible for quarterly monitoring.
6. A Public Water System that uses Surface Water or Groundwater Under the Direct Influence of Surface Water, as defined in 310 CMR 22.02, that does not practice Filtration (in compliance with 310 CMR 22.20A, 22.20D, 22.20F, and 22.20G) must collect at least one total coliform sample Near the First Service Connection each day the Turbidity level of the source water, measured as specified in 310 CMR 22.20A(5)(b)2., exceeds one NTU. This sample must be analyzed for the presence of total coliform. When one or more Turbidity measurements in any day exceeds one NTU, the Supplier of Water must collect this coliform sample within 24 hours of the first exceedance, unless the Department determines that the Supplier of Water, for logistical reasons outside the Supplier of Water's control, cannot have the sample analyzed within 30 hours of collection and identifies an alternative sample collection schedule. Sample results from this coliform monitoring must be included in determining whether the coliform Treatment Technique trigger in 310 CMR 22.05(4)(a) has been exceeded.

(2) Repeat Monitoring and *E. coli* Requirements.

- (a) Repeat Monitoring. If a sample taken under 310 CMR 22.05(1) is total coliform-positive, the Supplier of Water must collect a set of repeat samples within 24 hours of being notified of the positive result. A Supplier of Water must collect no fewer than three repeat samples for each total coliform-positive sample found. The Supplier of Water may request an extension of the 24-hour limit on a case-by-case basis, subject to Department approval. In order to obtain such approval, the Supplier of Water shall demonstrate a logistical problem in collecting the repeat samples within 24 hours that is beyond its control. In the case of an extension, the Supplier of Water must collect the repeat samples within the amount of time specified by the Department. There shall be no waiver granted from the requirement for a Supplier of Water to collect repeat samples in 310 CMR 22.05(2)(a), (c) and (d).
- (b) Unless the provisions of 310 CMR 22.05(1)(a)3.d.i. or ii. are met, the Supplier of Water must collect at least one repeat sample from the sampling tap where the original total coliform-positive sample was taken, and at least one repeat sample at a tap within five service connections upstream and at least one repeat sample at a tap within five service connections downstream of the original sampling site. If a total coliform-positive sample is at the end of the Distribution System, or one service connection away from the end of the Distribution System, the Supplier of Water must still take all required repeat samples, using an alternative sampling location approved by the Department in *lieu* of the requirement to collect at least one repeat sample upstream or downstream of the original sampling site. Except as provided for in 310 CMR 22.05(1)(a)3.d.ii., a Supplier of Water required to conduct triggered source water monitoring under 310 CMR 22.26(3)(a) must take groundwater source sample(s) in addition to repeat samples required under 310 CMR 22.05(2).

22.05: continued

(c) A Supplier of Water must collect all repeat samples on the same day, except that a Public Water System with a Single Service Connection, in accordance with a coliform sampling plan approved pursuant to 310 CMR 22.05(1)(a)3., may collect:

1. the required set of repeat samples over a three-day period; or
2. a larger volume repeat sample(s) in one or more sample containers of any size, as long as the total volume collected is at least 300 ml.

(d) If one or more repeat samples in the current set of repeat samples is total coliform-positive, the Supplier of Water must collect an additional set of repeat samples in the manner specified in 310 CMR 22.05(2)(a), (c) and (d). The additional samples must be collected within 24 hours of being notified of the positive result, unless the Department extends the limit as provided in 310 CMR 22.05(2)(a). A Supplier of Water must continue to collect additional sets of repeat samples until either total coliforms are not detected in one complete set of repeat samples or the Supplier of Water determines that a coliform Treatment Technique trigger in 310 CMR 22.05(4)(a) has been exceeded as a result of a repeat sample being total coliform-positive and notifies the Department in accordance with 310 CMR 22.05(4)(a). If a trigger identified in 310 CMR 22.05(4)(a) is exceeded as a result of a routine samples being total coliform-positive, a Supplier of Water is required to conduct only one round of repeat monitoring for each total coliform-positive routine sample.

(e) After a Supplier of Water collects a routine sample and before it learns the results of the analysis of that sample, if it collects another routine sample(s) from within five adjacent service connections of the initial sample, and the initial sample, after analysis, is found to contain total coliforms, then the Supplier of Water may count the subsequent sample(s) as a repeat sample instead of as a routine sample.

(f) Results of all routine and repeat samples taken under 310 CMR 22.05(1) and 310 CMR 22.05(2) not invalidated by the Department must be used to determine whether a coliform Treatment Technique trigger specified in 310 CMR 22.05(4)(a) has been exceeded.

(g) Escherichia coli (E. coli) Testing.

1. If any routine or repeat sample is total coliform-positive, the Supplier of Water shall analyze that total coliform-positive culture medium to determine if *E. coli* are present. If *E. coli* are present the Supplier of Water must notify and consult with the Department as soon as possible but no later than the end of the day when the Supplier of Water learns of an *E. coli* MCL violation. If the Public Water System receives such notification outside of the Department's regular business hours, then it shall provide notification to the Department by calling the Department's Emergency notification telephone number and using any other electronic reporting tool designated by the Department, or other Department designated numbers.
2. A Supplier of Water may forgo *E. coli* testing on a total coliform-positive sample provided that the Supplier of Water assumes the total coliform-positive sample is *E. coli*-positive, in which case the provisions of 310 CMR 22.05(8)(a) shall apply for purposes of determining whether the Public Water System is in compliance with the MCL for *E. coli*. The Supplier of Water making such assumption shall notify the Department as specified in 310 CMR 22.05(2)(g)1.

(3) Invalidation of Total Coliform Samples. A total coliform-positive sample invalidated under 310 CMR 22.05(3) does not count towards meeting the minimum monitoring requirements of 310 CMR 22.05(1).

(a) A Supplier of Water may request that a total coliform-positive sample be invalidated, subject to Department approval. Any such request shall satisfy the conditions of 310 CMR 22.05(3)(a)1. through 3.

1. The laboratory establishes that improper sample analysis caused the total coliform-positive result.
2. The Supplier of Water demonstrates, on the basis of the results of repeat samples collected as required by 310 CMR 22.05(2)(a) through (d), that the total coliform-positive sample resulted from a domestic or other non-Distribution System plumbing problem. No sample shall be invalidated on the basis of repeat sample results unless all repeat sample(s) collected at the same tap as the original total coliform-positive sample are also total coliform-positive, and all repeat samples collected at a location other than the original tap are total coliform-negative (*e.g.*, no total coliform-positive sample shall be invalidated on the basis of repeat samples if all the repeat samples are total coliform-negative, or if the Public Water System has only one service connection).

22.05: continued

3. The Department has substantial grounds to believe that a total coliform-positive result is due to a circumstance or condition which does not reflect water quality in the Distribution System. In this case, the Supplier of Water must still collect all repeat samples required under 310 CMR 22.05(2)(a) through (d), and use them to determine if a coliform Treatment Technique trigger in 310 CMR 22.05(4) has been exceeded. To invalidate a total coliform-positive sample under 310 CMR 22.05(3)(a)3., the decision and supporting rationale must be documented in writing, and approved and signed by the supervisor of the Department official who recommended the decision. The Department must make this document available to EPA and the public. The written documentation must state the specific cause of the total coliform-positive sample, and what action the Supplier of Water has taken, or will take to correct this problem. The Department may not invalidate a total coliform-positive sample solely on the grounds that all repeat samples are total coliform-negative.

(b) A laboratory must invalidate a total coliform sample (unless total coliform are detected) if the sample produces a turbid culture in the absence of gas production using an analytical method where gas formation is examined (*e.g.*, the Multiple-tube Fermentation Technique), produces a turbid culture in the absence of an acid reaction in the Presence-Absence (P-A) Coliform Test, or exhibits confluent growth or produces colonies Too Numerous to Count with an analytical method using a membrane filter (*e.g.*, Membrane Filter Technique). If a laboratory invalidates a sample because of such interference, the Supplier of Water must collect another sample from the same location as the original sample within 24 hours of being notified of the interference problem, and have it analyzed for the presence of total coliforms. The Supplier of Water must continue to re-sample within 24 hours and have the samples analyzed until it obtains a valid result. The Department may waive the 24-hour time limit on a case-by-case basis.

(4) Coliform Treatment Technique Triggers and Assessment Requirements for Protection against Potential Fecal Contamination.

(a) Treatment Technique Triggers. A Supplier of Water shall conduct assessments in accordance with 310 CMR 22.05(4)(b) after exceeding any Treatment Technique trigger in 310 CMR 22.05(4)(a)1. or 2.; and shall notify the Department as soon as possible but no later than five calendar days after the collection date of the sample that triggered the assessment.

1. Level 1 Treatment Technique Triggers. Any of the following occurrences is a Level 1 Treatment Technique trigger:

- a. for a Supplier of Water taking 40 or more samples per month, the Public Water System exceeds 5.0% total coliform-positive samples for the month;
- b. for a Supplier of Water taking fewer than 40 samples per month, the Public Water System has two or more total coliform-positive samples in the same month; or
- c. for each Supplier of Water, failure to take every required repeat sample after any single total coliform-positive sample.

2. Level 2 Treatment Technique Triggers. Any of the following occurrences is a Level 2 Treatment Technique trigger:

- a. An *E. coli* MCL violation, as specified in 310 CMR 22.05(11); or
- b. A second occurrence of a Level 1 trigger, as defined in 310 CMR 22.05(4)(a)1., within a rolling 12-month period, unless the Department has determined a likely reason that the samples that caused the first Level 1 Treatment Technique trigger were total coliform-positive and has established that the Supplier of Water has corrected the problem.

(b) Requirements for Assessments.

1. Parties responsible for performing assessments.

- a. Level 1 Assessments. A Supplier of Water shall ensure that Level 1 Assessments are conducted in order to identify the possible presence of Sanitary Defects and defects in Distribution System coliform monitoring practices. Level 1 Assessments shall be conducted by the Supplier of Water unless notified in writing by the Department, within ten days of the Supplier of Water's Treatment Technique trigger notification to the Department pursuant to 310 CMR 22.05(4)(a) that the Department will conduct the assessment.

22.05: continued

- b. Level 2 Assessments. A Supplier of Water shall ensure that Level 2 Assessments are conducted, by Department-approved parties, in order to identify the possible presence of Sanitary Defects and defects in Distribution System coliform monitoring practices; unless notified in writing, within ten days of the Supplier of Water's Treatment Technique trigger notification to the Department pursuant to 310 CMR 22.05(4)(a), that the Level 2 Assessment will be conducted by the Department.
 - c. All assessments shall be submitted in a Department-approved format.
2. When conducting assessments, Suppliers of Water must ensure that the assessor's evaluation includes review and identification of the following elements, at a minimum:
- a. inadequacies in sample sites;
 - b. sampling protocol;
 - c. sample processing;
 - d. atypical events that could affect distributed water quality or indicate that distributed water quality was impaired;
 - e. changes in Distribution System maintenance and operation that could affect distributed water quality (including water storage);
 - f. source and treatment considerations that bear on distributed water quality, where appropriate (*e.g.*, small groundwater Public Water Systems); and
 - g. existing water quality monitoring data.

When conducting an assessment under 310 CMR 22.05(4) a Public Water System may integrate any other required assessment (*e.g.* an assessment under the Groundwater Rule) provided that the integrated assessment shall meet all applicable requirements of all such rules.

3. Level 1 Assessments. A Supplier of Water must conduct a Level 1 Assessment consistent with Department requirements if the Public Water System exceeds one of the Treatment Technique triggers in 310 CMR 22.05(4)(a)1.
- a. The Supplier of Water must complete and submit to the Department a Level 1 Assessment as soon as practical after collecting the sample that triggered the assessment in 310 CMR 22.05(4)(a)1., but no later than 30 days after the collection date. In the completed assessment form, (which may include any relevant portions of a corrective action plan submitted under 310 CMR 22.26(4)), the Supplier of Water shall either:
 - i. describe any Sanitary Defects detected;
 - ii. describe all corrective actions completed;
 - iii. propose a timetable for any corrective actions not yet completed;
 - iv. describe any interim measures it plans to implement for the protection of human health prior to the completion of any corrective actions, including a timetable for doing so; or
 - v. state that no Sanitary Defects were identified.
 - b. The Supplier of Water, upon notification from the Department that the Level 1 Assessment is not sufficient (including any proposed timetable for any corrective actions not yet completed) shall consult with the Department regarding the assessment. Following such consultation, the Supplier of Water shall submit a revised assessment on a schedule approved by the Department not to exceed 30 days from the date of the consultation.
 - c. All Level 1 Assessments, including any revised Level 1 Assessments pursuant to 310 CMR 22.05(4)(b)3.b. shall be subject to the Department's review to determine whether the Supplier of Water has identified a likely cause for the Level 1 trigger and whether the Supplier of Water has corrected the problem, or has included a schedule acceptable to the Department including any Department-specified interim measures, for correcting the problem.
 - i. The Supplier of Water shall comply with any interim measures, including any specified schedule, specified by the Department for the protection of public health, pending Department approval of the corrective action plan, or the Supplier of Water's completion of the corrective action plan, or both.
 - ii. No Department-approved corrective action plan may be modified unless such modification is approved by the Department.

22.05: continued

4. Level 2 Assessments. A Supplier of Water must ensure that a Level 2 Assessment consistent with Department requirements is conducted if the Public Water System exceeds one of the Treatment Technique triggers in 310 CMR 22.05(4)(a)2. The Supplier of Water shall comply with any expedited actions or additional actions required by the Department in the case of an *E. coli* MCL violation.

a. Unless the Department notifies the Supplier of Water that the Department intends to conduct the Level 2 Assessment, the Supplier of Water must ensure that a Level 2 Assessment is completed by a party approved by the Department as soon as practical after any trigger in 310 CMR 22.05(4)(a)2. The Supplier of Water must submit a completed Level 2 Assessment form to the Department no later than 30 days after the collection date of the sample that triggered the assessment. The completed assessment form (which may include any relevant portions of a corrective action plan submitted under 310 CMR 22.26(4)) must either:

- i. describe any Sanitary Defects detected;
- ii. describe all corrective actions completed;
- iii. propose a timetable for any corrective actions not yet completed;
- iv. describe any interim measures planned for the protection of human health prior to the completion of any corrective actions, including a timetable for performing those interim measures; or
- v. state that no Sanitary Defects were identified.

b. The Supplier of Water may conduct Level 2 Assessments if the Public Water System has staff or management with the certification or qualifications specified by the Department unless otherwise directed by the Department.

c. The Supplier of Water, upon notification from the Department that a Level 2 Assessment, the performance of which is ensured by the Supplier of Water, is not sufficient (including any proposed timetable for any corrective actions not yet completed) shall consult with the Department regarding the assessment. Following such consultation, the Supplier of Water shall submit a revised assessment on a schedule approved by the Department not to exceed 30 days from the date of the consultation.

d. Upon the Supplier of Water completing and submitting the assessment form, the Department will determine if the Supplier of Water has identified a likely cause for the Level 2 trigger and if so the Department will determine whether the Supplier of Water has corrected the problem, or has included a schedule acceptable to the Department for correcting the problem.

i. If the Department has specified interim measures for protection of the public health pending Department approval of the corrective action plan and schedule or pending completion of the corrective action plan, or both, the Supplier of Water shall comply with these interim measures, including any specified schedule.

ii. Any subsequent modifications to a Department-approved corrective action plan must also be approved by the Department.

(c) Corrective Action. Supplier of Water shall correct Sanitary Defects found through either Level 1 or Level 2 Assessments conducted under 310 CMR 22.05(4)(b). For corrections not completed by the time of submission of the assessment form, the Supplier of Water shall complete the corrective action(s) in compliance with a timetable approved by the Department in consultation with the Supplier of Water. The Supplier of Water shall notify the Department in writing when each scheduled corrective action is completed.

(d) Consultation. At any time during the assessment or corrective action phase, the Supplier of Water may request a consultation with the Department to determine the appropriate actions to be taken. In addition, the Supplier of Water shall consult with the Department upon written notification from the Department to do so. The Supplier of Water may consult with the Department on all relevant information that may impact its ability to comply with a requirements of 310 CMR 22.05(4), including the method of accomplishment, an appropriate timeframe, and other relevant information.

(5) Maximum Microbiological Contaminant Levels, Monitoring Requirements and Analytical Methods. (Reserved)

22.05: continued

(6) Analytical Methodology.

- (a) The Standard Sample volume required for analysis, regardless of analytical method used, is 100 ml.
- (b) Public Water Systems need only determine the presence or absence of total coliform and *E. coli*; a determination of density is not required.
- (c) The time from sample collection to initiation of test medium incubation shall not exceed 30 hours. Suppliers of Water are encouraged but not required to hold samples below 10°C during transit.
- (d) If water having residual chlorine (measured as free, combined, or total chlorine) is to be analyzed, sufficient sodium thiosulfate ($\text{Na}_2\text{S}_2\text{O}_3$) must be added to the sample bottle before sterilization to neutralize any residual chlorine in the water sample. Dechlorination procedures are addressed in Section 9060A.2 of *Standard Methods for the Examination of Water and Wastewater*, 20th edition (1998) and 21st edition (2005), American Public Health Association, 800 I Street, NW., Washington, DC 20001.
- (e) Public Water Systems must conduct total coliform and *E. coli* analyses in accordance with one of the analytical methods in the following table or one of the alternative methods described in 310 CMR 22.10.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.05: continued

Organism	Methodology Category	Method ¹	Citation ¹
Total Coliforms	Membrane Filtration Methods	Standard Total Coliform Membrane Filter Procedure	Standard Methods 9222 B, C (20 th ed.; 21 st ed.) ^{2,4} Standard Methods Online 9222 B-97 ^{2,4} , 9222 C -97 ^{2,4}
		Membrane Filtration using MI Medium	EPA Method 1604 ²
		m-ColiBlue24® Test ^{2,4} Chromocult ^{2,4}	
	Enzyme Substrate Methods	Colilert® Colisure® E*Colite® Test ² Readycult® Test ^{2,9} modified Colitag® Test ²	Standard Methods 9223 B (20 th ed.; 21 st ed.) ^{2,5} Standard Methods 9223 B (20 th ed.; 21 st ed.) ^{2,5,6} Standard Methods Online 9223 B-97 ^{2,5}
<i>Escherichia coli</i>	<i>Escherichia coli</i> Partition Method . . Membrane Filtration Methods Enzyme Substrate Methods	EC broth with MUG (EC-MUG)	Standard Methods 9222 G.1 c(2) (20 th ed.; 21 st ed.) ^{2,8}
		NA-MUG medium	Standard Methods 9222 G.1c(1) (20 th ed.; 21 st ed.) ²
		Membrane Filtration using MI medium m-ColiBlue24® Test ^{2,4} Chromocult ^{2,4}	EPA Method 1604 ²
		Colilert®	Standard Methods 9223 B (20 th ed.; 21 st ed.) ^{2,5}
		Colisure®	Standard Methods Online 9223 B-97 ^{2,5,6}
		E*Colite® Test ²	Standard Methods 9223 B (20 th ed.; 21 st ed.) ^{2,5,6}
		Readycult® Test ²	Standard Methods Online 9223 B-97 ^{2,5,6}
		modified Colitag® Test ²	

¹ The procedures must be done in accordance with the documents listed in 310 CMR 22.05(6)(g). For Standard Methods, either editions, 20th (1998) or 21st (2005), may be used. For the Standard Methods Online, the year in which each method was approved by the Standard Methods Committee is designated by the last two digits following the hyphen in the method number. The methods listed are the only online versions that may be used. For vendor methods, the date of the method listed in 310 CMR 22.05(6)(g) is the date/version of the approved method. The methods listed are the only versions that may be used for compliance with this rule. Laboratories should be careful to use only the approved versions of the methods, as product package inserts may not be the same as the approved versions of the methods.

² Incorporated by reference. See 310 CMR 22.05(6)(g).

22.05: continued

³ Lactose broth, as commercially available, may be used in *lieu* of lauryl tryptose broth, if the Public Water System conducts at least 25 parallel tests between lactose broth and lauryl tryptose broth using the water normally tested, and if the findings from this comparison demonstrate that the false-positive rate and false-negative rate for total coliforms, using lactose broth, is less than 10%.

⁴ All Filtration series must begin with Membrane Filtration equipment that has been sterilized by autoclaving. Exposure of Filtration equipment to UV light is not adequate to ensure sterilization. Subsequent to the initial autoclaving, exposure of the Filtration equipment to UV light may be used to sanitize the funnels between filtrations within a Filtration series. Alternatively, Membrane Filtration equipment that is pre-sterilized by the manufacturer (*i.e.*, disposable funnel units) may be used.

⁵ Multiple-tube and multi-well enumerative formats for this method are approved for use in presence-absence determination under 310 CMR 22.00.

⁶ Colisure® results may be read after an incubation time of 24 hours.

⁷ A multiple tube enumerative format, as described in Standard Methods for the Examination of Water and Wastewater 9221, is approved for this method for use in presence-absence determination under this regulation.

⁸ The following changes must be made to the EC broth with MUG (EC-MUG) formulation: Potassium dihydrogen phosphate, KH₂PO₄, must be 1.5g, and 4-methylumbelliferyl-Beta-D-glucuronide must be 0.05 g.

(f) **Laboratory Certification.** Public Water Systems must have all compliance samples required under 310 CMR 22.05(1) and 310 CMR 22.05(2) analyzed by a laboratory certified by the Department or EPA to analyze drinking water samples. The laboratory used by the Public Water System must be certified for each method (and associated contaminant(s)) used for compliance monitoring analyses under 310 CMR 22.05(1) and 310 CMR 22.05(2).

(g) **Incorporation by Reference.** The following standards are incorporated by reference into 310 CMR 22.05.

1. American Public Health Association, 800 I Street, NW., Washington, DC 20001.
 - a. *Standard Methods for the Examination of Water and Wastewater*, 20th edition (1998):
 - i. Standard Methods 9222, *Membrane Filter Technique for Members of the Coliform Group, B, Standard Total Coliform Membrane Filter Procedure.*
 - ii. Standard Methods 9222, *Membrane Filter Technique for Members of the Coliform Group, C, Delayed-Incubation Total Coliform Procedure.*
 - iii. Standard Methods 9223, *Enzyme Substrate Coliform Test, B, Enzyme Substrate Test, Colilert and Colisure.*
 - iv. Standard Methods 9222, *Membrane Filter Technique for Members of the Coliform Group, G.1.c(2), Escherichia coli Partition Method: EC broth with MUG (EC- MUG).*
 - v. Standard Methods 9222, *Membrane Filter Technique for Members of the Coliform Group, G.1.c(1), Escherichia coli Partition Method: NA-MUG medium.*
 - b. *Standard Methods for the Examination of Water and Wastewater*, 21st edition (2005):
 - i. Standard Methods 9222, *Membrane Filter Technique for Members of the Coliform Group, B, Standard Total Coliform Membrane Filter Procedure.*
 - ii. Standard Methods 9222, *Membrane Filter Technique for Members of the Coliform Group, C, Delayed-Incubation Total Coliform Procedure.*
 - iii. Standard Methods 9223, *Enzyme Substrate Coliform Test, B, Enzyme Substrate Test, Colilert and Colisure.*
 - iv. Standard Methods 9222, *Membrane Filter Technique for Members of the Coliform Group, G.1.c(2), Escherichia coli Partition Method: EC broth with MUG (EC- MUG).*
 - v. Standard Methods 9222, *Membrane Filter Technique for Members of the Coliform Group, G.1.c(1), Escherichia coli Partition Method: NA-MUG medium.*
 - c. Standard Methods Online available at <http://www.standardmethods.org>.
 - i. Standard Methods Online 9222, *Membrane Filter Technique for Members of the Coliform Group* (1997), B-97, *Standard Total Coliform Membrane Filter Procedure.*
 - ii. Standard Methods Online 9222, *Membrane Filter Technique for Members of the Coliform Group* (1997), C-97, *Delayed-incubation Total Coliform Procedure.*
 - iii. Standard Methods Online 9223, *Enzyme Substrate Coliform Test* (1997), B-97, *Enzyme Substrate Test, Colilert and Colisure.*

22.05: continued

2. Charm Sciences, Inc., 659 Andover Street, Lawrence, MA 01843-1032, telephone 1-800-343-2170: *E*Colite - Charm E*Colite™ Presence/Absence Test for Detection and Identification of Coliform Bacteria and Escherichia coli in Drinking Water*, January 9, 1998.
 3. CPI International, Inc., 5580 Skylane Blvd., Santa Rosa, CA, 95403, telephone 1-800-878-7654: *modified Colitag, ATP D05- 0035-Modified Colitag™ Test Method for the Simultaneous Detection of E. coli and other Total Coliforms in Water*, August 28, 2009.
 4. EMD Millipore (a division of Merck KGaA, Darmstadt Germany), 290 Concord Road, Billerica, MA 01821, telephone 1-800-645-5476:
 - a. *Chromocult - Chromocult Coliform Agar Presence/Absence Membrane Filter Test Method for Detection and Identification of Coliform Bacteria and Escherichia coli for Finished Waters*, November 2000, Version 1.0.
 - b. *Readycult - Readycult Coliforms 100 Presence/Absence Test for Detection and Identification of Coliform Bacteria and Escherichia coli in Finished Waters*, January 2007, Version 1.1.
 5. EPA's Water Resource Center (MC-4100T), 1200 Pennsylvania Avenue NW., Washington, DC 20460, telephone 1-202-566-1729: *EPA Method 1604, EPA 821-R-02-024- EPA Method 1604: Total Coliforms and Escherichia coli in Water by Membrane Filtration Using a Simultaneous Detection Technique (MI Medium)*, September 2002.
 6. Hach Company, P.O. Box 389, Loveland, CO 80539, telephone 1-800- 604-3493: *m-ColiBlue24 - Membrane Filtration Method m-ColiBlue24 Broth*, Revision 2, August 17, 1999.
- (7) Maximum Microbiological Contaminant Levels, Monitoring Requirements and Analytical Methods. (Reserved)
- (8) Maximum Contaminant Levels (MCLs) for Microbiological Contaminants.
- (a) A Public Water System shall be considered to be in compliance with the MCL for *E. coli* for samples taken under 310 CMR 22.05, unless any of the conditions identified in 310 CMR 22.05(8)(a)1. through 4. occurs. For purposes of the public notification requirements in 310 CMR 22.16, the occurrence of any of the following conditions is a violation that may pose an acute risk to health:
 1. the Public Water System has an *E. coli*-positive repeat sample following an associated total coliform-positive routine sample;
 2. the Public Water System has a total coliform-positive repeat sample following an *E. coli*-positive routine sample;
 3. the Supplier of Water fails to take all required repeat samples following an *E. coli*-positive routine sample; or
 4. the Supplier of Water fails to test for *E. coli* when any repeat sample tests positive for total coliform.
 - (b) A Supplier of Water shall determine compliance with the MCL for *E. coli* in 310 CMR 22.05(8)(a) for each month in which it is required to monitor for total coliforms.
 - (c) As provided in 310 CMR 22.26(3)(a), a Supplier of Water who is in violation of 310 CMR 22.05(8)(a)1. due to an *E. coli*-positive repeat sample taken at the monitoring location required for triggered source water monitoring under 310 CMR 22.26(3)(a), is also subject to 310 CMR 22.26(3)(a)4.
- (9) Best Available Technology, Treatment Techniques.
- (a) The following have been determined to provide best available technology, treatment techniques or other means available for achieving compliance with the Maximum Contaminant Level for *E. coli* in 310 CMR 22.05(8)(a):
 1. Protection of wells from fecal contamination by appropriate placement and construction;
 2. Maintenance of a disinfectant residual throughout the distribution system;
 3. Proper maintenance of the distribution system including appropriate pipe replacement and repair procedures, main flushing programs, proper operation and maintenance of storage tanks and reservoirs, cross connection control and continual maintenance of positive water pressure in all parts of the distribution system;

22.05: continued

4. Filtration and/or disinfection of surface water, as described in 310 CMR 22.20A, 310 CMR 22.20D, 22.20F, and 22.20G or disinfection of ground water using strong oxidants such as chlorine, chlorine dioxide, or ozone; and
 5. For Public Water Systems using groundwater, compliance with the Department's wellhead protection requirements under 310 CMR 22.21(1).
- (b) The Department hereby identifies the technology, Treatment Techniques, or other means available identified in 310 CMR 22.05(9)(a)1. through 5. as affordable technology, Treatment Techniques, or other means available to Public Water Systems serving 10,000 or fewer people for achieving compliance with the Maximum Contaminant Level for *E. coli* in 310 CMR 22.05(8)(a).
- (10) Maximum Microbiological Contaminant Levels, Monitoring Requirements and Analytical Methods. (Reserved)
- (11) Violations.
- (a) *E. coli* MCL Violation. A Supplier of Water at whose Public Water System any of the conditions identified in 310 CMR 22.05(8)(a)1. through 4. occurs is in violation of the MCL for *E. coli*.
 - (b) Treatment Technique Violation. Each of the following occurrences is a Treatment Technique violation:
 1. when a Public Water System exceeds a Treatment Technique trigger specified in 310 CMR 22.05(4)(a)1.a. through c. or in 2.a. through b. and the Supplier of Water then fails to conduct the required assessment or corrective actions within the timeframe specified in 310 CMR 22.05(4)(b) and (c). A Supplier of Water that has failed to submit the required assessment form within the timeline specified in 310 CMR 22.05(4)(b)3.a. or 4.a. shall be deemed to have failed to conduct the assessment; or
 2. when a Seasonal System fails to complete a Department-approved start-up procedure prior to serving water to the public. A Public Water System that has failed to submit a required start-up certification within the timeframe specified in 310 CMR 22.05(12)(a)5. shall be deemed to have failed to complete the start-up procedure.
 - (c) Monitoring Violations. Each of the following occurrences is monitoring violation:
 1. failure to take every required routine or additional routine sample in a Compliance Period; or
 2. failure to analyze for *E. coli* following a total coliform-positive routine sample is a monitoring violation.
 - (d) Reporting Violations. Each of the following occurrences is a reporting violation:
 1. failure to submit a monitoring report or completed assessment form after a Public Water System properly conducts monitoring or assessment by the deadlines established in 310 CMR 22.15(2)(a) and (b), and 22.05(4)(b)3.a. and 4.a. respectively;
 2. failure to notify the Department following an *E. coli*-positive sample as required by 310 CMR 22.05(12)(a)1.b. and by the deadline established in 310 CMR 22.05(2)(g);
 3. failure to submit certification of completion of Department-approved start-up procedure by a Seasonal System by the deadline established in 310 CMR 22.05(1)(d)6.a. or (e)5.a.;
 4. failure to notify the Department of a Treatment Technique trigger by the deadline established in 310 CMR 22.05(4)(a); or
 5. failure to notify the Department of an *E. coli* MCL violation in accordance with 310 CMR 22.05(12)(a)1.a.
- (12) Reporting and Recordkeeping.
- (a) Reporting.
 1. *E. coli.*
 - a. A Supplier of Water shall notify and consult with the Department as soon as possible but no later than the end of the day when the Supplier of Water learns of an *E. coli* MCL violation and shall notify the public in accordance with 310 CMR 22.16. If the Supplier of Water receives such notification outside of the Department's regular business hours, then it shall provide notification to the Department by calling the Department's Emergency notification telephone number and using any other electronic reporting tool designated by the Department, or other Department designated numbers.

22.05: continued

b. If *E. coli* are present in a routine sample, the Supplier of Water shall notify and consult with the Department on the same day as the Supplier of Water receives notification from the laboratory. If the Supplier of Water receives such notification outside of the Department's regular business hours, then the Supplier of Water shall on the same day call the Department's Emergency notification telephone number and use any other electronic reporting tool designated by the Department, or other Department designated numbers.

2. A Supplier of Water whose Public Water System has violated the Treatment Technique for coliforms in 310 CMR 22.05(4)(a) shall report the violation to the Department no later than the end of the next business day after it learns of the violation, and notify the public in accordance with 310 CMR 22.16.

3. A Supplier of Water required to conduct an assessment under 310 CMR 22.05(4) shall submit the assessment report as soon as possible but not later than 30 days after the collection date of the sample that triggered the assessment, pursuant to 310 CMR 22.05(4)(b)3.a or 4.a.

The Supplier of Water shall notify the Department in accordance with 310 CMR 22.05(4)(c) when each scheduled corrective action is completed for corrections not completed by the time of submission of the assessment form.

4. A Supplier of Water who has failed to comply with a coliform monitoring requirement shall report the monitoring violation to the Department within ten days after the Supplier of Water discovers the violation and notify the public in accordance with 310 CMR 22.16.

5. At the beginning of each operating period, a Supplier of Water of a Seasonal System shall certify, prior to serving water to the public, that it has complied with the Department-approved start-up procedure in accordance with 310 CMR 22.05(1)(d)6.a. or (e)3.a.

6. A Supplier of Water shall notify the Department as soon as possible but no later than five days after the collection date of the sample that, in accordance with 310 CMR 22.05(4)(a)1. or 2., triggered an assessment.

(b) Recordkeeping.

1. The Supplier of Water shall maintain any assessment form, regardless of who conducts the assessment, and documentation of corrective actions completed as a result of those assessments, or other available summary documentation of the Sanitary Defects and corrective actions taken under 310 CMR 22.05(4), for Department review. This record shall be maintained by the Supplier of Water for a period not less than five years after completion of the assessment or corrective action.

2. The Supplier of Water shall maintain a record of any repeat sample taken that meets Department criteria for an extension of the 24-hour period for collecting repeat samples as provided for under 310 CMR 22.05(2)(a).

22.06: Inorganic Chemical Maximum Contaminant Levels, Monitoring Requirements and Analytical Methods

(1) Monitoring. A Supplier of Water shall collect samples of water as specified in 310 CMR 22.06(4) and provide for analysis of such samples for inorganic chemical contaminants listed in 310 CMR 22.06(2) consistent with the requirements set forth in 310 CMR 22.06(5) through (9) and methods set forth in 310 CMR 22.06(16).

All analytical results shall be rounded to the same number of significant figures as the applicable MCL or SMCL.

(2) Inorganic Maximum Contaminant Levels (MCLs). The Maximum Contaminant Levels for inorganic contaminants specified in 310 CMR 22.06(2)(b) through (g) and (k) through (q) apply to Community Water Systems and Non-transient Non-community Water Systems. The Maximum Contaminant Level specified in 310 CMR 22.06(2)(a) only applies to Community Water Systems. The Maximum Contaminant Levels specified in 310 CMR 22.06(2)(h) through (j) apply to Community, Non-transient Non-community, and Transient Non-community Water Systems. The Maximum Contaminant Level for arsenic is 0.05 milligrams per liter for Community Water Systems and Non-transient Non-community Water Systems until January 23, 2006.

22.06: continued

MAXIMUM CONTAMINANT LEVELS FOR INORGANIC CHEMICALS

<u>Contaminant</u>	<u>MCL (mg/l)</u>
(a) Fluoride (C)	4.0
(b) Asbestos (C, NTNC)	7 Million Fibers/liter (longer than 10 µm)
(c) Arsenic (C,NTNC)	0.010
(d) Barium (C,NTNC)	2
(e) Cadmium (C,NTNC)	0.005
(f) Chromium (C,NTNC)	0.1
(g) Mercury (C,NTNC)	0.002
(h) Nitrate (C,NTNC,TNC)	10 (as Nitrogen)
(i) Nitrite (C,NTNC,TNC)	1 (as Nitrogen)
(j) Total Nitrate & Nitrite (C,NTNC,TNC)	10 (as Nitrogen)
(k) Selenium (C,NTNC)	0.05
(l) Antimony (C,NTNC)	0.006
(m) Beryllium (C,NTNC)	0.004
(n) Cyanide (as free Cyanide) (C,NTNC)	0.2
(o) Nickel (C,NTNC)	[Reserved] (Under review)
(p) Thallium (C,NTNC)	0.002
(q) Perchlorate (C,NTNC)	0.0020 ¹

C = Community Water Systems; NTNC = Non-transient Non-community Water Systems;
TNC = Transient Non-community Water Systems

¹ The Department will review and revise as necessary the perchlorate MCL within six years of its promulgation, taking into account new data on health effects, sources and occurrence, Treatment Techniques and associated issues, analytical feasibility and any other relevant information.

(3) Inorganic Chemicals (IOC). Sampling and Analytical Requirements: Community Water Systems and Non-transient Non-community Water Systems shall conduct monitoring to determine compliance with the Maximum Contaminant Levels specified in 310 CMR 22.06(2) in accordance with 310 CMR 22.06. Transient, Non-community Water Systems shall conduct monitoring to determine compliance with the MCLs for nitrate, nitrite and total nitrate in 310 CMR 22.06(2)(h) through (j) (as appropriate) in accordance with 310 CMR 22.06.

(4) Sampling Protocol. Monitoring shall be as follows:

(a) Ground Water Sampling Points. Groundwater systems shall take one sample at every entry point to the Distribution System which is representative of each well after treatment (Sampling Point) beginning in the Compliance Period starting January 1, 1993. The system shall take each sample at the same Sampling Point unless conditions make another Sampling Point more representative of each source or treatment plant.

(b) Surface Water Sampling Points. Surface water systems (Note: or purposes of 310 CMR 22.06(4)(b), Surface Water systems include systems with a combination of surface and ground sources) shall take a minimum of one sample at every entry point to the Distribution System after any application of treatment or in the Distribution System at a point which is representative of each source after treatment (Sampling Point) beginning in the Compliance Period beginning January 1, 1993. The system shall take each sample at the same Sampling Point unless conditions make another Sampling Point more representative of each source or treatment plant.

(c) Multiple Sources. If a system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the Distribution System during periods of normal operating conditions (*i.e.*, when water is representative of all sources being used).

(d) Composite Sampling. The total number of samples which must be analyzed may be reduced by compositing samples. Composite samples from a maximum of five Sampling Points are allowed provided that the detection limit of the method used for analysis is less than 1/5 of the MCL and none of the samples to be composited are representative of multiple sources. Compositing of samples must be approved by the Department and must be done in the laboratory. Compositing of source with previous detects is not allowed, unless otherwise authorized by the Department.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.06: continued

1. If the concentration in the composite sample is greater than or equal to 1/5 of the MCL of any inorganic chemical, then a follow-up sample must be analyzed within 14 days from each Sampling Point included in the composite. These samples must be analyzed for the contaminants that exceeded 1/5 of the MCL in the composite sample. Detection limits for each analytical method and MCL are the following:

DETECTION LIMITS FOR INORGANIC CONTAMINANTS

<u>Contaminant</u>	<u>MCL(mg/l)</u>	<u>Methodology</u>	<u>Detection Limit (mg/l)</u>
Antimony	0.006	Atomic Absorption; furnace	0.003
			0.0008 ⁵
Arsenic	0.010 ⁶	ICP-Mass Spectrometry	0.0004
		Hydride-Atomic absorption	0.001
		Atomic Absorption; Furnace	0.001
		Atomic Absorption; Platform-Stabilized Temperature	0.0005 ⁷
		Atomic Absorption; Gaseous Hydride	0.001
Asbestos	7 MFL ¹	ICP- Mass Spectrometry	0.0014 ⁸
		Transmission Electron Microscopy	0.2 MFL
Barium	2	Atomic Absorption; furnace technique	0.002
		Atomic Absorption; direct aspiration	0.1
		Inductively Coupled Plasma	0.002
Beryllium	0.004		(0.001)
		Atomic Absorption; furnace	0.0002
		Atomic Absorption; platform	0.00002 ⁵
		Inductively Coupled Plasma ²	0.0003
Cadmium	0.0003		
	0.005	Atomic Absorption; furnace technique	0.0001
Chromium	0.1	Inductively Coupled Plasma	0.001
		Atomic Absorption; furnace technique	0.001
		Inductively Coupled Plasma	0.007
Cyanide	0.2		(0.001)
		Distillation, Spectrophotometric ³	0.02
		Distillation, Automated, Spectrophotometric ³	0.005
		Distillation, Selective Electrode ^{3, 4}	0.05
		Distillation, Amenable, Spectrophotometric ⁴	0.02
		UV, Distillation, Spectrophotometric ¹¹	0.0005
		Micro Distillation, Flow Injection, Spectrophotometric ³	0.0006
Mercury	0.002	Ligand Exchange with Amperometry ⁴	0.0005
		Manual Cold Vapor Technique	0.0002
		Automated Cold Vapor Technique	0.0002
Nickel	Reserved		
Nitrate	10 (as N)	Manual Cadmium Reduction	0.01
		Automated Hydrazine Reduction	0.01
		Automated Cadmium Reduction	0.05
		Ion Selective Electrode	1
		Ion Chromatography	0.01
		Capillary Ion Electrophoresis	0.076
Nitrite	1 (as N)	Spectrophotometric	0.01
		Automated Cadmium Reduction	0.05
		Manual Cadmium Reduction	0.01
		Ion Chromatography	0.004
		Capillary Ion Electrophoresis	0.103
Perchlorate	0.0020	Ion Chromatography ⁹	0.0010 ¹⁰
		LC/MS or LC/MS/MS	
	0.0010		
Selenium	0.05	IC/MS or IC/MS/MS	0.0010
		Atomic Absorption; furnace	0.002
Sodium		Atomic Absorption: gaseous hydride	0.002
		See 310 CMR 22.06A	
Thallium	0.002	Atomic Absorption; furnace	0.001
		Atomic Absorption; platform	0.0007 ⁵
		ICP-Mass Spectrometry	0.0003

22.06: continued

- ¹ MFL = million fibers per liter >10 µm.
² Using a 2X preconcentration step as noted in Method 200.7. Lower MDLs may be achieved when using a 4X preconcentration.
³ Screening methods for total cyanides.
⁴ Measures "free" cyanides when distillation, digestion, or ligand exchange is omitted.
⁵ Lower MDLs are reported using stabilized temperature graphite furnace atomic absorption.
⁶ The MCL for arsenic is effective January 23, 2006. Until then, the MCL is 0.05 mg/l.
⁷ The MDL reported for EPA method 200.9 (Atomic Absorption; Platform---Stabilized Temperature) was determined using a 2x concentration step during sample digestion. The MDL determined for samples analyzed using direct analyses (*i.e.*, no sample digestion) will be higher. Using multiple deposition, EPA 200.9 is capable of obtaining MDL of 0.0001 mg/l.
⁸ Using selective ion monitoring, EPA Method 200.8 (ICP-MS) is capable of obtaining a MDL of 0.0001 mg/l.
⁹ Analysis must be conducted using EPA Method 314.0, revision 1.0, November 1999 as modified to achieve the stated detection limit or EPA Method 314.1.
¹⁰ Minimum Reporting Level (MRL). EPA Method 314.0 is capable of obtaining a MDL of less than 0.0010 mg/l.
¹¹ Measures total cyanides when UV-digester is used, and "free" cyanides when UV-digester is bypassed.

2. If the population served by the system is >3,300 persons, then compositing may only be permitted at Sampling Points within a single system. In systems serving <3,300 persons, compositing among different systems may be allowed with the approval of the Department, provided the five-sample limit is maintained.

3. If duplicates of the original sample taken from each Sampling Point used in the composite are available, the system may use these instead of resampling. The duplicates must be analyzed and the results reported to the Department within 14 days after completion of the composite analyses or before the holding time for the control sample is exceeded, whichever is sooner.

(e) Frequency Requirements for IOC Monitoring. The frequency of monitoring for asbestos shall be in accordance with 310 CMR 22.06(5); the frequency of monitoring for antimony, arsenic, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium and thallium shall be in accordance with 310 CMR 22.06(6); the frequency of monitoring for nitrate shall be in accordance with 310 CMR 22.06(7); the frequency of monitoring for nitrite shall be in accordance with 310 CMR 22.06(8); and the frequency of monitoring for perchlorate shall be in accordance with 310 CMR 22.06(9).

(f) Consecutive System Monitoring. Public Water Systems that obtain water from another Public Water System are exempt from conducting compliance monitoring for the purchased portion of the system for the inorganic chemicals under 310 CMR 22.06, provided that the system from which the water is obtained has conducted the analyses required under 310 CMR 22.06, unless otherwise specified by the Department. These systems are not exempt from 310 CMR 22.06(5) asbestos sampling.

(5) Asbestos Sampling Frequency. The frequency of monitoring conducted to determine compliance with the Maximum Contaminant Level for asbestos specified in 310 CMR 22.06(2) shall be conducted as follows:

(a) Initial Sampling Frequency. Each Community and Non-transient, Non-community Water System is required to monitor for asbestos during the first three-year Compliance Period of each nine-year Compliance Cycle beginning in the Compliance Period starting January 1, 1993 as specified in 310 CMR 22.06(5)(e) through (g).

(b) Sampling During Waiver. If the system believes it is not vulnerable to either asbestos contamination in its source water or due to corrosion of asbestos-cement pipe, or both, it may apply to the Department for a waiver of the monitoring requirement in 310 CMR 22.06(5)(a). If the Department grants the waiver, the system will be required to monitor pursuant to 310 CMR 22.06(5)(d).

(c) Basis of an Asbestos Waiver. The granting of a waiver will be based on a consideration of the following factors:

1. Potential asbestos contamination of the water source; and
2. The use of asbestos-cement pipe for finished water distribution and the corrosive nature of the water.

22.06: continued

(d) Effect of an Asbestos Waiver. A waiver remains in effect until the completion of the three-year Compliance Period. Systems not receiving a waiver must monitor in accordance with the provisions of 310 CMR 22.06(5)(a).

(e) Distribution System Sampling Criteria for Asbestos. A system vulnerable to asbestos contamination due solely to corrosion of asbestos-cement pipe shall take at a minimum one sample at a tap approved by the Department. This tap location must be served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur. Additional sample locations (taps) may be required if in the Department's opinion the use of asbestos-cement is extensive and contamination is likely to occur in several areas of the system.

(f) Source Water Sampling Criteria for Asbestos. A system vulnerable to asbestos contamination due solely to source water shall monitor in accordance with the provisions of 310 CMR 22.06(2) and (4).

(g) Combined Asbestos Vulnerability. A system vulnerable to asbestos contamination due both to its source water supply and corrosion of asbestos-cement pipe shall monitor in accordance with 310 CMR 22.06(5)(e) and (f).

(h) Exceeding the Asbestos MCL. A system which exceeds the Maximum Contaminant Levels as defined by 310 CMR 22.06(2) shall report to the Department within seven days and shall monitor quarterly beginning in the following quarter.

(i) Average Exceeding MCL. When the average of four analyses made pursuant to 310 CMR 22.06(5)(h), rounded to the same number of significant figures as the Maximum Contaminant Level for the substance in question, exceeds the Maximum Contaminant Level, the Supplier of Water shall report to the Department pursuant to 310 CMR 22.15 and give public notice to the public pursuant to 310 CMR 22.16. Monitoring after public notification shall be at a frequency designated by the Department and shall continue until the Maximum Contaminant Level has not been exceeded in two successive samples or until a monitoring schedule as condition to variance, exemption or enforcement action shall become effective.

(j) Asbestos Reliably & Consistently below the MCL. The quarterly monitoring requirement may be decreased to the frequency specified in 310 CMR 22.06(5)(a) provided the Department has determined that the system is reliably and consistently below the Maximum Contaminant Level and a groundwater system has taken a minimum of two quarterly samples and a surface (or combined surface/ground) water system has taken a minimum of four quarterly samples.

(k) Grandfathered Asbestos Data. If monitoring data collected after January 1, 1990 are generally consistent with the requirements of 310 CMR 22.06(5), the data may be used with the Department's approval, to satisfy the monitoring requirement for the Initial Compliance Period beginning January 1, 1993.

(6) Sampling Frequency for IOCs. The frequency of monitoring conducted to determine compliance with the Maximum Contaminant Levels in 310 CMR 22.06(2) for antimony, arsenic, beryllium, barium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium and thallium shall be as follows:

(a) IOCs Sampling Frequency. Groundwater systems shall take one sample at each Sampling Point once every three years. Surface Water systems (or combined surface/ground) shall take one sample annually at each Sampling Point.

(b) IOCs Sampling Waiver. The system may apply to the Department for a waiver from the monitoring frequencies specified in 310 CMR 22.06(6)(a).

(c) IOC Sampling During a Waiver. A condition of the waiver shall require that a system shall take a minimum of one sample while the waiver is effective. The term during which the waiver is effective shall not exceed one Compliance Cycle (*i.e.*, nine years).

(d) Basis of an IOC Waiver & Grandfathered Data. A waiver may be granted by the Department provided the Surface Water systems have monitored annually for at least three years and groundwater systems have conducted a minimum of three rounds of monitoring. (Analytical monitoring results must have been representative of all sources at the time of sampling.) Both surface and groundwater systems shall demonstrate that all previous analytical results were less than the Maximum Contaminant Level. Systems that use a new water source are not eligible for a waiver until three rounds of monitoring from the New Source have been completed.

22.06: continued

(e) Basis of the IOC Sampling Frequency During a Waiver. The granting of a waiver by the Department will be based on the following:

1. Reported concentrations from all previous monitoring;
2. The degree of variation in reported concentrations; and
3. Other factors which may affect contaminant concentrations such as changes in groundwater pumping rates, changes in the system's configuration, changes in the system's operating procedures, or changes in stream flows or characteristics.

(f) Effect of an IOC Waiver. A Supplier of Water must have received a written approval from the Department which shall set forth the basis for the determination. The determination may be initiated by the Department or upon an application by the Public Water System. The Public Water System shall specify the basis for its request. The Department may revise its determination of the appropriate monitoring frequency, if the system submits new monitoring data or when other data relevant to the system's appropriate monitoring frequency become available.

(g) Exceeding an IOC MCL. Systems which exceed a Maximum Contaminant Levels as defined by 310 CMR 22.06(2) shall report to the Department within seven days and shall monitor quarterly beginning in the following quarter.

(h) Average Exceeding MCL. When the average of four analyses made pursuant to 310 CMR 22.06(6)(g), rounded to the same number of significant figures as the Maximum Contaminant Level for the substance in question, exceeds the Maximum Contaminant Level, the Supplier of Water shall report to the Department pursuant to 310 CMR 22.15 and give public notice to the public pursuant to 310 CMR 22.16. Monitoring after public notification shall be at a frequency designated by the Department and shall continue until the Maximum Contaminant Level has not been exceeded in two successive samples or until a monitoring schedule as condition to variance, exemption or enforcement action shall become effective.

(i) IOCs Reliably & Consistently below the MCL. If the system is reliably and consistently below the Maximum Contaminant Level, the quarterly monitoring requirement may be decreased with the Department's approval to the frequencies specified in 310 CMR 22.06(6)(a). Systems requesting this decrease must have taken at a minimum two quarterly samples for a groundwater system and four quarterly samples for a Surface Water system.

(j) All new Public Water Systems or systems that use a New Source of water that begin operation after January 22, 2004 must demonstrate compliance with the MCL within a period of time as specified by the Department. The system must also comply with the initial sampling frequencies specified by the Department to ensure a system can demonstrate compliance with the MCL. Routine and increased monitoring frequencies shall be conducted in accordance with the requirements in 310 CMR 22.06(6).

(7) Sampling Frequency for Nitrate. All Public Water Systems (Community, Non-transient Non-community, and Transient Non-community Water Systems) shall monitor to determine compliance with the Maximum Contaminant Level for nitrate specified in 310 CMR 22.06(2).

(a) Initial Nitrate Sampling. Community and Non-transient Non-community Water Systems served by groundwater source shall monitor annually beginning January 1, 1993; systems served by Surface Water shall monitor quarterly beginning January 1, 1993.

(b) Transient Non-community Nitrate Sampling Frequency. Each Transient Non-community Water System shall monitor annually beginning January 1, 1993.

(c) Ground Water Repeat Nitrate Sampling Frequency. For all Public Water Systems: the repeat monitoring frequency for groundwater systems shall be quarterly for at least one year following any one sample in which the concentration is >50% the MCL. A groundwater system may reduce the sampling frequency to annually with the Department's approval, after four consecutive quarterly samples are reliably and consistently less than the MCL.

(d) Surface Water Repeat Nitrate Sampling Frequency. All Public Water Systems with Surface Water Sources may reduce the sampling frequency to annually with the Department's approval, if all analytical results from four consecutive quarters are <50% of the MCL. A Surface Water system shall return to quarterly monitoring if any one sample is \geq 50% of the MCL.

(e) Scheduling Annual Nitrate Repeat Samples. After the initial round of quarterly sampling is completed, all Public Water Systems which are monitoring quarterly because the concentration of any one sample was >50% of the MCL shall take subsequent annual samples during the quarter(s) which previously resulted in the highest analytical result.

22.06: continued

(8) Sampling Frequency for Nitrite. All Public Water Systems (Community, Non-transient Non-community, and Transient Non-community Water Systems) shall monitor to determine compliance with the Maximum Contaminant Level for nitrite in 310 CMR 22.06(2).

(a) Initial Nitrite Sampling. All Public Water Systems shall take one sample at each Sampling Point in the Compliance Period beginning January 1, 1993 and ending December 31, 1995.

(b) Under the Nitrite Trigger Level. After the initial sample, systems where an analytical result for nitrite is <50% of the MCL shall monitor at the frequency specified by the Department.

(c) Above the Nitrite Trigger Level. For Community, Non-transient Non-community, and Transient Non-community Water Systems, the repeat monitoring frequency for any water system shall be quarterly for at least one year following any one sample in which the concentration is >50% of the MCL. With the Department's approval, a system may reduce the sampling frequency to annually if the system is reliably and consistently less than the MCL.

(d) Scheduling of Annual Nitrite Repeat Samples. Systems which are monitoring annually shall take each subsequent sample during the quarter(s) which previously resulted in the highest analytical result.

(9) Sampling Frequency for Perchlorate.

(a) Initial Monitoring. Community and Non-transient Non-community systems shall complete initial monitoring for perchlorate as specified in 310 CMR 22.06(9)(a).

1. Effective January 1, 2007, for systems served by groundwater, perchlorate shall be monitored twice, once during the month of April and once during the month of September.

2. Effective January 1, 2007, for systems served by surface water, perchlorate shall be monitored for four consecutive quarters.

(b) Grandfathered Perchlorate Data. If the perchlorate monitoring data collected by a Public Water System after January 1, 2004 is consistent with the requirements of 310 CMR 22.06(9), such data may be used with the Department's approval to satisfy the initial monitoring requirements specified in 310 CMR 22.06(9)(a).

(c) Exceeding the Perchlorate MCL. A Public Water System that exceeds the Maximum Contaminant Level (MCL) for perchlorate in 310 CMR 22.06(2) shall follow the reporting and confirmation procedures in 310 CMR 22.06(10)(c).

(d) Repeat Perchlorate Sampling Frequency. If, after completing the initial monitoring required in 310 CMR 22.06(9)(a), no perchlorate is detected, a Public Water System may thereafter reduce the sampling frequency to once per year.

(e) Exceeding the Perchlorate Trigger Level. The repeat monitoring frequency for any Public Water System shall be on a quarterly basis for at least one year following any one sample in which the concentration is > 0.0010 mg/L (unqualified). With the Department's approval, a system may reduce the sampling frequency to once per year, provided the monitoring for perchlorate done by the system is Reliably and Consistently below the MCL.

(f) Eligibility for a Waiver. A Public Water System may apply for a waiver from the monitoring requirements for perchlorate specified in 310 CMR 22.06(9) in accordance with the IOC waiver provisions in 310 CMR 22.06(6)(b) through (f).

(g) The Department may, on a case-by-case basis, require a Public Water System to monitor for perchlorate more frequently than otherwise provided in 310 CMR 22.06(9)(b) through (f).

(10) Confirmation Sampling.

(a) Deadline for IOCs Confirmation Samples. Where the results of sampling for antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, or thallium indicate an exceedance of the Maximum Contaminant Level, one additional sample shall be collected as soon as possible after the initial sample was taken (but not to exceed two weeks) at the same Sampling Point.

22.06: continued

(b) Deadline for Nitrate & Nitrite Confirmation Samples. Where nitrate or nitrite sampling results indicate an exceedance of the Maximum Contaminant Level, the system shall take a confirmation sample within 24 hours of the system's receipt of notification of the analytical results of the first sample and shall report to the Department within seven days. Systems unable to comply with the 24-hour sampling requirement must immediately notify the consumers served by the area served by the Public Water System in accordance with 310 CMR 22.16. Systems exercising this option must take and analyze a confirmation sample within two weeks of notification of the analytical results of the first sample.

(c) Deadline for Perchlorate Confirmation Samples. Whenever the perchlorate sampling results indicate an exceedance of the Maximum Contaminant Level, the system shall take a confirmation sample using EPA Method 331.0 or EPA Method 332.0 in accordance with 310 CMR 22.06(10)(c)1. and 2. within 24 hours of the system's receipt of written notification of the analytical results. For the purposes of 310 CMR 22.06(10)(c), written notification of the analytical results means notification by email, fax, or letter. The system shall report the initial sample result that exceeded the MCL to the Department within seven days. Systems that are unable to take a confirmation sample within 24 hours of the system's receipt of written notification of the analytical results, shall immediately contact the Department for further direction. When taking a confirmation sample as required by 310 CMR 22.06(10)(c):

1. The system shall obtain an analysis and written notification turnaround time for the confirmation sample of no more than three days.

2. The system shall report the confirmation sample results to the Department within three days of the system's receipt of the written notification of the analytical results.

(d) Compliance Calculations & Confirmation Samples. The results of the initial and confirmation sample shall be averaged. The resulting average shall be used to determine the system's compliance in accordance with 310 CMR 22.06(13). Obvious sampling errors may be deleted with the approval of the Department.

(11) Increased Sampling Frequency. The Department may require more frequent monitoring than specified in 310 CMR 22.06(5) through (9) or may require confirmation samples for positive and negative results at its discretion.

(12) PWS Request for Increased Sampling Frequency. Systems may apply to the Department to conduct more frequent monitoring than the minimum monitoring frequencies specified in 310 CMR 22.06.

(13) Compliance Calculations. Compliance with the Maximum Contaminant Levels set out in 310 CMR 22.06(2) shall be determined based on the analytical results obtained at each Sampling Point. If one Sampling Point is in violation of an MCL, the system is in violation of the MCL.

(a) Sampling Frequencies Greater than Annual. For systems monitoring more than once per year, compliance with the MCL, with the exception of nitrate, nitrite and perchlorate, is determined by a Running Annual Average at each Sampling Point.

(b) Sampling Frequencies of Annual or Less. Each Supplier of Water monitoring annually or less frequently whose sample result exceeds an MCL, with the exception of nitrate, nitrite and perchlorate, must begin quarterly sampling. The system will not be considered in violation of the MCL until it has completed one year of quarterly sampling.

(c) If any sample result will cause the Running Annual Average to exceed the MCL at any Sampling Point, the system is out of compliance with the MCL immediately.

(d) If a Supplier of Water fails to collect the required number of samples, compliance (average concentration) will be based on the total number of samples collected.

(e) If a sample result is less than the detection limit, zero will be used to calculate the annual average.

(f) Compliance Calculations for Nitrate & Nitrite. Compliance with the Maximum Contaminant Levels for nitrate and nitrite is determined based on one sample if the levels of these contaminants are below the MCLs. If the level of nitrate or nitrite exceeds the MCL in the initial sample, a confirmation sample is required in accordance with 310 CMR 22.06(10)(b) and (d), and compliance shall be determined based on the average of the initial and confirmation samples.

22.06: continued

(g) Compliance Calculations for Perchlorate. Compliance with the Maximum Contaminant Level for perchlorate is determined based on one sample if the level is below the MCL. If the level of perchlorate exceeds the MCL in the initial sample a confirmation sample is required in accordance with 310 CMR 22.06(10)(c) and (d), and compliance shall be determined based on the average of the initial and the confirmation sample. The Department may allow or require additional sampling.

(h) Average Exceeding Nitrate, Nitrite and Perchlorate MCL. When the average of analyses made pursuant to 310 CMR 22.06(7) through (9), (10)(b) and (c), rounded to the same number of significant figures as the Maximum Contaminant Level for the substance in question, exceeds the Maximum Contaminant Level, the Supplier of Water shall report to the Department pursuant to 310 CMR 22.15 and give public notice pursuant to 310 CMR 22.16. Monitoring after public notification shall be at a frequency designated by the Department.

(i) Arsenic sampling results shall be reported to the nearest 0.001 mg/l.

(14) Sampling Schedules: Each Public Water System shall monitor at the time designated by the Department during each Compliance Period.

(15) Reporting MCL Violation: A system which exceeds the MCL listed in 310 CMR 22.06(2) and is out of compliance shall report the exceedance to the Department within seven days.

(16) Analytical and Sampling Methods for Inorganics:

(a) Analytical Methods for IOCs: Analysis for the listed inorganic contaminants shall be conducted using the following methods:

INORGANIC CONTAMINANTS ANALYTICAL METHODS

Reference (Method Number)

<u>Contaminant</u>	<u>Methodology</u> ¹¹	<u>EPA</u>	<u>ASTM</u> ³	<u>SM</u> ⁴	<u>SM Online</u> ²³	<u>Other</u>
Antimony	Atomic Absorption: Furnace			3113B	3113 B-99	
	Atomic Absorption: platform	² 200.9				
	ICP-Mass Spectrometry	² 200.8				
Arsenic ¹²	Hydride-Atomic Absorption		D-3697-92, 02			
	Atomic Absorption: Furnace		D2972-97C, 03C	3113B	3113 B-99	
	Atomic Absorption; Hydride		D-2972-97, 03B	3114B	3114 B-97	
	Inductively Coupled Plasma ¹³	² 200.7		3120B ⁵	3120 B-99	
	ICP-Mass Spectrometry	² 200.8				
Asbestos	Atomic Absorption; Platform	² 200.9				
	Differential Pulse Anodic Stripping Voltametry					Method 1001 ¹⁶
	Transmission Electron Microscopy	⁹ 100.1				
Barium	Transmission Electron Microscopy	¹⁰ 100.2				
	Atomic Absorption; Furnace			3113B	3113B-99	
	Atomic Absorption; Direct			3111D	3111D-99	
	Inductively Coupled Plasma	² 200.7		3120B	3120B-99	
Beryllium	ICP-Mass Spectrometry	² 200.8				
	Atomic Absorption; Furnace		D3645-97, 03B	3113B	3113B-99	
	Atomic Absorption; Platform	² 200.9				
	Inductively Coupled Plasma	² 200.7		3120B	3120B-99	
	ICP-Mass Spectrometry	² 200.8				

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.06: continued

<u>Contaminant</u>	<u>Methodology</u> ¹¹	<u>EPA</u>	<u>ASTM</u> ³	<u>SM</u> ⁴	<u>SM Online</u> ²³	<u>Other</u>
Cadmium	Atomic absorption; Furnace			3113B	3113B-99	
	Inductively-coupled Plasma	² 200.7				
	ICP-Mass Spectrometry	² 200.8				
Chromium	Atomic Absorption; Platform	² 200.9				
	Atomic absorption; Furnace			3113B	3113B-99	
	Inductively Coupled Plasma	² 200.7		3120B	3120B-99	
	ICP-Mass Spectrometry	² 200.8				
Cyanide	Atomic Absorption; Platform	² 200.9				
	Manual Distillation		D2036-98A	4500-CN C		
	Manual Distillation followed by: Spectrophotometric, Amenable		D2036-98B	4500-CN G	4500-CN G-99	
	Manual Distillation followed by Spectrophotometric, Manual		D2036-98A	4500-CN E	4500-CN E-99	I-3300-85 ⁵
	Spectrophotometric, Semi-automated	⁶ 335.4				
	Selective Electrode			4500-CN F	4500-CN F-99	
	UV, Distillation, Spectrophotometric Micro Distillation, Flow Injection Spectrophotometric					Kelada-01 ¹⁸ QuikChem10-204-00-1-X ¹⁹
Mercury	Ligand Exchange and Amperometry ²²	D6888-04			OIA-1677-DW ²¹	
	Manual cold vapor	² 245.1	D3223-97,02	3112B	3112B-99	
	Automated cold vapor	¹ 245.2				
Nickel	ICP-Mass Spectrometry	² 200.8				
	Atomic Absorption: Furnace			3113B	3113B-99	
	Atomic Absorption: Platform	² 200.9				
	Atomic Absorption Direct			3111B	3113B-99	
	Inductively Coupled Plasma	² 200.7		3120B	3120-99	
Nitrate	ICP-Mass Spectrometry	² 200.8				
	Manual cadmium reduction		D3867-90B	4500-NO ₃ E	4500-NO ₃ E-00	
	Automated cadmium reduction	⁶ 353.2	D3867-90A	4500-NO ₃ F	4500-NO ₃ F-00	
	Ion selective electrode			4500-NO ₃ D	4500-NO ₃ D-0	601 ⁷
Nitrite	Ion chromatography	⁶ 300.0	D4327-97,03	4110B	4110B-00	B-1011 ⁸
		²⁰ 300.1				
	Capillary Ion Electrophoresis Spectrophotometric					D6508-00, Rev.2 ²⁴
	Automated cadmium reduction	⁶ 353.2	D3867-90A	4500-NO ₂ B	4500-NO ₂ B-00	
	Manual cadmium reduction		D3867-90B	4500-NO ₃ F	4500-NO ₃ F-00	
Perchlorate	Ion chromatography	⁶ 300.0	D4327-97,03	4110B	4110B-00	B-1011 ⁸
		²⁰ 300.1				
	Capillary Ion Electrophoresis					D6508-00, Rev.2 ²⁴
Selenium	Ion chromatography	¹⁴ 314.0				
		¹⁵ 314.1				
	LC/MS or LC/MS/MS	¹⁶ 331				
	IC/MS or IC/MS/MS	¹⁷ 332				
Thallium	Hydride-Atomic absorption;		D3859-98,03A	3114B	3114B-97	
	Atomic Absorption: Furnace		D3859-98,03B	3113B	3113B-99	
	ICP-Mass Spectrometry	² 200.8				
Thallium	Atomic Absorption; Platform	² 200.9				
	ICP-Mass Spectrometry	² 200.8				

22.06: continued

The procedures shall be done in accordance with the documents listed below. The incorporation by reference of the following documents listed in footnotes 1-11 and 15 was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies of the documents may be obtained from the sources listed below. Information regarding obtaining these documents can be obtained from the Safe Drinking Water Hotline at 900-426-4791. Documents may be inspected at EPA's Drinking Water Docket, 401 M Street, SW., Washington, DC 20460 (Telephone 202-260-3027); or at the Office of Federal Register, 800 North Capital Street, NW., Suite 700, Washington, DC.

- ¹ *Methods of Chemical Analysis of Water and Wastes*, EPA-600/4-79-020, March 1983. Available at NTIS, PB84-128677.
- ² *Methods for the Determination of Metals in Environmental Samples - Supplement I*, EPA-600/R-94/111 May 1994. Available at NTIS, PB 95-125472.
- ³ Annual Book of ASTM Standards, 1994, 1996, or 1999 Vols. 11.01 and 11.02, American Society for Testing and Materials. The previous versions of D1688-95A, D1688-95C (copper), D3559-95D (lead), D1293-95 (pH), D1125-95A, (conductivity) and D859-94 (silica) are also approved. These previous versions D1688-90A, C; D3559-90D, D1293-84, D1125-91A and D859-88, respectively are located in the Annual Book of ASTM Standards, 1994, Vols. 11.01. Copies may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428.
- ⁴ 18th, 19th, and 20th edition of *Standard Methods for the Examination of Water and Wastewater*, 18th (1982), 19th (1995), and 20th (1998) editions, American Public Health Association; either edition may be used. Copies may be obtained from the American Public Health Association, 1015 Fifteenth Street NW, Washington, DC 20005. The cited methods published in any of these three editions may be used, except that the versions of 3111B, 3111D, 3113B and 3114B in the 20th edition may not be used.
- ⁵ Method I-2601-90, *Methods for Analysis by the U.S. Geological Survey National Water Quality Laboratory – Determination of Inorganic and Organic Constituents in Water and Fluvial Sediments*, Open File Report 93-125, 1993; For Methods I-1030-85; I-1601-85; I-1700-85; I-2598-85, I-2700-85; and I-3300-85 See *Techniques of Water Resources Investigation of the U.S. Geological Survey*, Book 5, Chapter A-1, 3rd edition, 1989; Available from Information Services, U.S. Geological Survey, Federal Center, Box 25286, Denver, CO 80225-0425.
- ⁶ *Methods for the Determination of Inorganic Substances in Environmental Samples*, EPA 600/R-93/100, August 1993. Available at NTIS, PB94-120821.
- ⁷ The procedure shall be done in accordance with Technical Bulletin 601 *Standard Method of Test for Nitrate in Drinking Water*, July 1994, PN 221890-001, Analytical Technology, Inc. Copies may be obtained from ATI Orion, 529 Main Street, Boston, MA 02129.
- ⁸ Method B-1011, *Standard Method of Test for Nitrate in Drinking Water*, July 1994, PN 221890-001, Analytical Technology, Inc. Copies may be obtained from ATI Orion, 529 Main Street, Boston, MA 02129.
- ⁹ Method 100.1, *Analytical Methods for Determination of Asbestos Fibers in Water*, EPA/600/4-83/043, September 1983, Available at NTIS, PB83-206471.
- ¹⁰ Method 100.2, *Determination of Asbestos Structures Over 10 μm in Length in Drinking Water*, EPA/600/R-94/134, June 1994. Available at NTIS, PB94-201902.
- ¹¹ Because MDLs reported in EPA Methods 200.7 and 200.9 were determined using a 2X preconcentration step during sample digestion, MDLs determined when samples are analyzed by direct analysis (*i.e.*, no sample digestion) will be higher. For direct analysis of cadmium and arsenic by Method 200.7, and arsenic by Method 3120B sample preconcentration using pneumatic nebulization may be required to achieve lower detection limits. Preconcentration may also be required for direct analysis of antimony, lead, and thallium by Method 200.9; antimony and lead by Method 3113B; and lead by Method D3559-90D unless multiple infurnace depositions are made.
- ¹² If ultrasonic nebulization is used in the determination of arsenic by Method 200.8 the arsenic must be in the pentavalent state to provide uniform signal response. For direct analysis of arsenic with the Method 200.8 using ultrasonic nebulization, samples and standards must contain 1 mg/L of sodium hypochlorite.
- ¹³ [Deleted].
- ¹⁴ Revision 1.0, November, 1999, *Determination of Perchlorate in Drinking Water Using Ion Chromatography* as modified to achieve performance requirements in 310 CMR 22.06(4).
- ¹⁵ EPA Method 314.1: *Determination of Perchlorate in Drinking Water Using Inline Column Concentration/Matrix Elimination Ion Chromatography with Suppressed Conductivity Detection*.
- ¹⁶ EPA Method 331.0: *Determination of Perchlorate in Drinking Water by Liquid Chromatography Electro Spray Ionization Mass Spectrometry*.

22.06: continued

- ¹⁷ EPA Method 332.0: *Determination of Perchlorate in Drinking Water Using Ion Chromatography with Suppressed Conductivity and Electrospray Ionization Mass Spectrometry.*
- ¹⁸ The description for the Kelada-01 Method, *Kelada Automated Test Methods for Total Cyanide, Acid Dissociable Cyanide, and Thiocyanate*, Revision 1.2, August 2001, EPA #821-B-01-009 for cyanide is available from the National Technical Information Service (NTIS), PB 2001-108275, 5285 Port Royal Road, Springfield, VA 22161. The toll-free telephone number is 800-553-6847. Note: A 450-W UV lamp may be used in this method instead of the 550-W lamp specified if it provides performance within the quality control (QC) acceptance criteria of the method in a given instrument. Similarity, modified flow cell configurations and flow conditions may be used in the method, provided that the QC acceptance criteria are met.
- ¹⁹ The description for the QuikChem Method 10-204-00-1-X, Digestion and distillation of total cyanide in drinking and wastewaters using MICRO DIST and determination of cyanide by flow injection analysis, "Revision 2.1, November 30, 2000, for cyanide is available from Lachat Instruments, 6645 W. Mill Rd., Milwaukee, WI 53218. Telephone: 414-358-4200.
- ²⁰ *Methods for the Determination of Organic and Inorganic Compounds in Drinking Water*, Vol.1, EPA 815-R-00-014, August 2000. Available at NTIS, PB2000-106981.
- ²¹ Method OIA -1677, *DW Available Cyanide by Flow Injection, Ligand Exchange, and Amperometry*, January 2004. EPA-821-R-04-001, Available from ALPKEM, A Division of OL Analytical, P.O. Box 9010, College Station, TX 77842-9010.
- ²² Sulfide levels below those detected using lead acetate paper may produce positive method interferences. Test samples using a more sensitive sulfide method to determine if a sulfide interference is present, and treat samples accordingly.
- ²³ Standard Methods Online are available at <http://www.standardmethods.org>. The year in which each method was approved by the Standards Methods Committee is designated by the last two digits in the method number. The methods listed are the only online versions that may be used.
- ²⁴ Method D6508, Rev.2, *Test Method for Determination of Dissolved Inorganic Anions in Aqueous Matrices Using Capillary Ion Electrophoresis and Chromate Electrolyte.*

(b) Analytical Methods for Fluoride: Analyses for fluoride shall be conducted using the following methods:

<u>Methodology</u>	<u>Reference (Method Number)</u>				
	<u>EPA</u>	<u>ASTM</u> ¹	<u>SM</u> ²	SM Online ⁸	<u>Other</u>
Ion Chromatography	300.05	D4327-97	4110B	4110B-00-	
Manual Distillation; Colorimetric SPADNS	300.16		4500F-B,D	4500F-B,D-97	
Manual Electrode		D1179-93,99B	4500F-C	4500F-C-97	
Automated Alizarin fluorine blue - lanthanum with distillation (complexone)			4500F-E		129-71W ³
Automated ion selective electrode					380-75WE ⁴
Capillary Ion Electrophoresis					D6508, Rev. 2 ⁷

- ¹ Annual Book of ASTM Standards, part 31 Water. American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.
- ² *Standard Methods for the Examination of Water and Wastewater*, 18th, 19th, and 20th edition, American Public Health Association, American Water Works Association, Water Pollution Control Federation, 1992, 1995, and 1998.
- ³ *Fluoride in Water and Wastewater, Industrial Method # 129-71W*. Technicon Industrial Systems. December 1972. Copies may be obtained from Bran & Luebbe, 1025 Busch Parkway, Buffalo Grove, IL 60089.
- ⁴ *Fluoride in Water and Wastewater*, Technicon Industrial Systems. February 1976. Copies may be obtained from Bran & Luebbe, 1025 Busch Parkway, Buffalo Grove, IL 60089.
- ⁵ *Methods for the Determination of Inorganic Substances in Environmental Samples*, EPA-600/R-93/100, August 1993. Available at NTIS, PB94-120821.
- ⁶ *Methods for the Determination of Organic and Inorganic Compounds in Drinking Water*, Vol.1, EPA 815-R-00-014, August 2000, Available at NTIS, PB2000-106981.

22.06: continued

⁷ Method 6508, Rev.2, *Test Method for Determination of Dissolved Inorganic Anions in Aqueous Matrices Using Capillary Ion Electrophoreses and Chromate Electrolyte*, available from Waters Corp., 34 Maple St., Milford, MA 01757, Telephone: 508/482-2131, Fax: 508/482-3625.

⁸ Standard Methods Online are available at <http://www.standardmethods.org>. The year in which each method was approved by the Standard Methods Committee is designated by the last two digits in the method number. The methods listed are the only online versions that may be used.

(c) Sample Collection Methods for IOCs: Sample collection for antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, nitrate, nitrite, perchlorate, selenium and thallium under 310 CMR 22.06 shall be conducted using the sample preservation, container, and maximum holding time procedures specified in the table below:

<u>Contaminant</u>	<u>Preservative</u> ¹	<u>Container</u> ²	<u>Time</u> ³
Antimony	Con HNO ₃ to pH<2	P or G	six months
Arsenic	Con HNO ₃ to pH<2	P or G	six months
Asbestos	Cool, 4°C	P or G	48 hours
Barium	Con HNO ₃ to pH<2	P or G	six months
Beryllium	Con HNO ₃ to pH<2	P or G	six months
Cadmium	Con HNO ₃ to pH<2	P or G	six months
Chromium	Con HNO ₃ to pH<2	P or G	six months
Cyanide	Cool,4°C, NAOH to pH>12 ⁴	P or G	14 days
Fluoride	None	P or G	one month
Mercury	Con HNO ₃ to pH<2	P or G	28 days
Nickel	Conc HNO ₃	P or G	six months
Nitrate			
Chlorinated	Cool, 4°C	P or G	14 days
Chlorinated	Con H ₂ SO ₄ to pH<2	P or G	28 days
Non-chlorinated	Cool 4°C	P or G	48 hours
Non-chlorinated	Con H ₂ SO ₄ to pH<2	P or G	28 days
Nitrite	Cool, 4°C	P or G	48 hours
Perchlorate	None	P or G	28 days
Selenium	Con HNO ₃ to pH<2	P or G	six months
Thallium	Con HNO ₃ to pH<2	P or G	six months

¹ For cyanide determinations samples must be adjusted with sodium hydroxide to pH 12 at the time of collection. When chilling is indicated the sample must be shipped and stored at 4°C or less. Acidification of nitrate or metals samples may be with a concentrated acid or a dilute (50% by volume) solution of the applicable concentrated acid. Acidification of samples for metals analyses is encouraged and allowed at the laboratory rather than at the time of sampling provided the shipping time and other instruction in Section 8.3 of EPA methods 200.78 or 200.8 or 200.9 are followed.

² P = plastic, hard or soft; G = glass, hard or soft.

³ In all cases, samples should be analyzed as soon after collection as possible. Follow additional (if any) information on preservation, containers, or holding times that is specified in the method.

⁴ See method(s) for the information for preservation.

22.06: continued

(17) BATs for IOCs: The following are the best technology, Treatment Technique, or other means available for achieving compliance with the Maximum Contaminant Level for inorganic contaminants identified in 310 CMR 22.06(2) except fluoride:

BAT FOR INORGANIC CONTAMINANTS LISTED IN 310 CMR 22.06(2)

<u>CHEMICAL NAME</u>	<u>BAT(s)</u>
Antimony	2,7
Arsenic	1, 2, 5, 6, 7, 9, 12 ⁵
Asbestos	2, 3, 8
Barium	5, 6, 7, 9
Beryllium	1, 2, 5, 6, 7
Cadmium	2, 5, 6, 7
Chromium	2, 5, 6 ² , 7
Cyanide	5, 7, 13
Mercury	2 ¹ , 4, 6 ¹ , 7 ¹
Nickel	5, 6, 7
Nitrate	5, 7, 9
Nitrite	5, 7
Perchlorate	5
Selenium	1, 2 ³ , 6, 7, 9
Thallium	1, 5

Key to BATs in Table

- 1 = Activated Alumina
- 2 = Coagulation/Filtration (Not BAT for Systems <500 service connections)
- 3 = Direct and Diatomite Filtration
- 4 = Granular Activated Carbon
- 5 = Ion Exchange
- 6 = Lime Softening (not BAT for systems <500 service connections)
- 7 = Reverse Osmosis
- 8 = Corrosion Control
- 9 = Electrodialysis
- 10 = Chlorine
- 11 = Ultraviolet
- 12 = Oxidation/Filtration
- 13 = Alkaline Chlorination

- ¹
- ² BAT only if influent Hg concentrations ≤ 10 $\mu\text{g/l}$.
- ³ BAT for Chromium III only
- ⁴ BAT for Selenium IV only
- ⁵ BAT for Arsenic V. Pre-oxidation may be required to convert Arsenic III to Arsenic V. To obtain high removals; iron to arsenic ratio must be at least 20:1.

(18) The Administrator, pursuant to the Safe Drinking Water Act, Title 14, § 1412, hereby identifies in the following table the affordable technology, Treatment Technique, or other means available to systems serving 10,000 persons or fewer for achieving compliance with the Maximum Contaminant Level for arsenic:

22.06: continued

SMALL SYSTEM COMPLIANCE TECHNOLOGIES (SSCTS)¹ FOR ARSENIC²

<u>Small System Compliance Technology</u>	<u>Affordable for Listed Small System Categories³</u>
Activated Alumina (centralized)	All size categories.
Activated Alumina (Point-of-Use) ⁴	All size categories.
Coagulation/Filtration ⁵	501–3,300, 3,301–10,000.
Coagulation-assisted Microfiltration	501–3,300, 3,301–10,000.
Electrodialysis reversal ⁶	501–3,300, 3,301–10,000.
Enhanced Coagulation/Filtration	All size categories.
Enhanced lime softening (pH> 10.5)	All size categories.
Ion Exchange	All size categories.
Lime Softening ⁵	501–3,300, 3,301–10,000.
Oxidation/Filtration ⁷	All size categories.
Reverse Osmosis (centralized) ⁶	501–3,300, 3,301–10,000.
Reverse Osmosis (Point-of-Use) ⁴	All size categories.

¹ Section 1412(b)(4)(E)(ii) of SDWA specifies that SSCTs must be affordable and technically feasible for small systems.

² SSCTs for Arsenic V. Pre-oxidation may be required to convert Arsenic III to Arsenic V.

³ The SDWA (*ibid.*) specifies three categories of small systems: (i) those serving 25 or more, but fewer than 501, (ii) those serving more than 500, but fewer than 3,301, and (iii) those serving more than 3,300, but fewer than 10,001.

⁴ When POU or POE devices are used for compliance, programs to ensure proper long-term operation, maintenance, and monitoring must be provided by the water system to ensure adequate performance.

⁵ Unlikely to be installed solely for arsenic removal. May require pH adjustment to optimal range if high removals are needed.

⁶ Technologies reject a large volume of water—may not be appropriate for areas where water quantity may be an issue.

⁷ To obtain high removals, iron to arsenic ratio must be at least 20:1.

22.06A: Special Monitoring for Sodium, Reporting and Analytical Methods and Frequency

- (1) Monitoring. All public water systems (community, non-transient non-community and transient non-community) shall monitor for the determination of sodium concentration levels.
- (2) Initial Sampling Frequency. Each community, non-transient, non-community and transient non-community water system is required to monitor for sodium during the first three-year compliance period of each nine-year compliance cycle beginning in the compliance period starting January 1, 1993.
 - (a) GW Sampling Frequency. Groundwater systems shall take one sample at each sampling point during each compliance period beginning in the compliance period starting January 1, 1993, (once every three years).
 - (b) SW Sampling Frequency. Surface water systems (or combined surface/ground) shall take one sample annually at each sampling point beginning January 1, 1993.
- (3) Sampling Protocol. Monitoring shall be conducted as follows:
 - (a) Ground Water Sampling Points. Groundwater systems shall take a minimum of one sample at every entry point to the distribution system which is representative of each well after treatment (sampling point) beginning in the compliance period starting January 1, 1993. The system shall take each sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.
 - (b) Surface Water Sampling Points. Surface water systems (Note: For purposes of 310 CMR 22.06A(3)(b), surface water systems include systems with a combination of surface and ground sources.) shall take a minimum of one sample at every entry point to the distribution system after any application of treatment or in the distribution system at a point which is representative of each source after treatment (sampling point) beginning in the compliance period beginning January 1, 1993. The system shall take each sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

22.06A: continued

(c) Multiple Sources. If a system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (*i.e.*, when water is representative of all sources being used).

(4) Sodium Reporting. The supplier of water shall report to the Department the results of the analyses for sodium within the first ten days of the month following the month in which the sample results were received or within the first ten days following the end of the required monitoring period, whichever comes first.

(5) Sodium Notification. The supplier of water shall report the level of sodium for each source to the local Boards of Health and Massachusetts Department of Public Health by written notice by direct mail within 30 days after the supplier of water first learns of the analytic results which indicate a level of sodium.

(6) Sampling Schedules. Each public water system shall monitor at the time designated by the Department during each compliance period.

(7) Sodium Analysis Analytical Methods. Analysis for sodium shall be conducted using the following method:

SODIUM ANALYTICAL METHODS

<u>Contaminant</u>	<u>Reference (Method Number)</u>		<u>EPA</u> ¹	<u>SM</u> ²
	<u>Methodology</u> ⁴			
Sodium	Inductively-coupled Plasma		200.7	--
	Atomic absorption; direct aspiration		--	3111B

¹ *Methods for the Determination of Metals in Environmental Samples - Supplement I*", EPA-600/r-94/111, May 1994. Available at NTIS, PB-95-125472.

² *Standard Methods for the Examination of Water and Wastewater*", 18th and 19th edition, American Public Health Association, 1992 and 1995, only - not the 20th edition.

³ For approved analytical procedures for metals, the technique applicable to total metals must be used.

⁴ Standard Methods Online are available at <http://www.standardmethods.org>. The year in which each method was approved by the Standard Methods Committee is designated by the last two digits in the method number. The methods listed are the only online versions that may be used.

22.06B: Control of Lead and Copper in Drinking Water

(1) General Requirements.

(a) Applicability. The requirements of 310 CMR 22.06B constitute the Massachusetts drinking water regulations for lead and copper. Unless otherwise indicated, each of the provisions of 310 CMR 22.06B applies to community water systems and non-transient, non-community water systems ("water systems" or "systems").

(b) Scope. 310 CMR 22.06B establishes a treatment technique for lead and copper that includes requirements for corrosion control treatment, source water treatment, lead service line replacement, and public education. These requirements are triggered, in some cases, by lead and copper action levels measured in samples collected at consumers' taps.

(c) Lead and Copper Action Levels:

1. The lead action level is exceeded if the concentration of lead in more than 10% of tap water samples collected during any monitoring period conducted in accordance with 310 CMR 22.06B(7) is greater than 0.015 mg/L (*i.e.*, if the "90th percentile" lead level is greater than 0.015 mg/L).

2. The copper action level is exceeded if the concentration of copper in more than 10% of tap water samples collected during any monitoring period conducted in accordance with 310 CMR 22.06B(7) is greater than 1.3 mg/L (*i.e.*, if the "90th percentile" copper level is greater than 1.3 mg/L).

22.06B: continued

3. The 90th percentile lead and copper levels shall be computed as follows:
 - a. The results of all lead or copper samples taken during a monitoring period shall be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. Each sampling result shall be assigned a number, ascending by single integers beginning with the number one for the sample with the lowest contaminant level. The number assigned to the sample with the highest contaminant level shall be equal to the total number of samples taken.
 - b. The number of samples taken during the monitoring period shall be multiplied by 0.9.
 - c. The contaminant concentration in the numbered sample yielded by the calculation in 310 CMR 22.06B(1)(c)3.b. is the 90th percentile contaminant level.
 - d. For water systems serving fewer than 100 people that collect five samples per monitoring period, the 90th percentile is computed by taking the average of the highest and second highest concentrations.
 - e. For a public water system that has been allowed by the Department to collect fewer than five samples in accordance with 310 CMR 22.06B(7)(c), the sample result with the highest concentration is considered the 90th percentile value.
 - f. If unapproved sample sites are submitted with lead and copper results, they shall be included in the computation of the 90th percentile.
 - (d) Corrosion Control Treatment Requirements.
 1. All water systems shall install and operate optimal corrosion control treatment as defined in 310 CMR 22.02.
 2. Any water system that complies with the applicable corrosion control treatment requirements specified by the Department under 310 CMR 22.06B(2) and (3) shall be deemed in compliance with the treatment requirement contained in 310 CMR 22.06B(1)(d)1.
 - (e) Source Water Treatment Requirements. Any system exceeding the lead or copper action level shall implement all applicable source water treatment requirements specified by the Department under 310 CMR 22.06B(4).
 - (f) Lead Service Line Replacement Requirements. Any system exceeding the lead action level after implementation of applicable corrosion control and source water treatment requirements shall complete the lead service line replacement requirements contained in 310 CMR 22.06B(5).
 - (g) Public Education Requirements. Pursuant to 310 CMR 22.06B(6), all water systems shall provide a consumer notice of lead and copper tap water monitoring results to the persons served at the sites (taps) that are tested. Any system exceeding the lead action level shall implement the public education requirements.
 - (h) Monitoring and Analytical Requirements. Tap water monitoring for lead and copper, monitoring for water quality parameters, source water monitoring for lead and copper, and analyses of the monitoring results under 310 CMR 22.06B(1) shall be completed in compliance with 310 CMR 22.06B(7) through (10).
 - (i) Reporting Requirements. Systems shall report to the Department any information required by the treatment provisions of 310 CMR 22.06B(1) and 310 CMR 22.06B(11).
 - (j) Recordkeeping Requirements. Systems shall maintain records in accordance with 310 CMR 22.06B(12).
 - (k) Violation of National Primary Drinking Water Regulations. Failure to comply with the applicable requirements of 310 CMR 22.06B(1) through (12), including requirements established by the Department pursuant to 310 CMR 22.00 shall constitute a violation of the national primary drinking water regulations for lead and/or copper.
- (2) Applicability of corrosion control treatment steps to small, medium-size and large water systems.
 - (a) Systems shall complete the applicable corrosion control treatment requirements described in 310 CMR 22.06B(3) by the deadlines established in 310 CMR 22.06B.
 1. A large system (serving >50,000 persons) shall complete the corrosion control treatment steps specified in 310 CMR 22.06B(2)(d), unless it is deemed to have optimized corrosion control under 310 CMR 22.06B(2)(b)2. or (b)3.

22.06B: continued

2. A small system (serving ≤ 3300 persons) and a medium size system (serving $>3,300$ and $\leq 50,000$ persons) shall complete the corrosion control treatment steps specified in 310 CMR 22.06B(2)(e), unless it is deemed to have optimized corrosion control under 310 CMR 22.06B(2)(b)1., 2., or 3.

(b) A system is deemed to have optimized corrosion control and is not required to complete the applicable corrosion control treatment steps identified in 310 CMR 22.06B if the system satisfies one of the criteria specified in 310 CMR 22.06(2)(b)1. through 3. Any such system deemed to have optimized corrosion control under 310 CMR 22.06B(2)(b), and which has treatment in place, shall continue to operate and maintain optimal corrosion control treatment and meet any requirements that the Department determines appropriate to ensure that optimal corrosion control is maintained.

1. A small or medium-size water system is deemed to have optimized corrosion control if the system meets the lead and copper action levels during each of two consecutive six-month monitoring periods conducted in accordance with 310 CMR 22.06B(7).

2. Any water system may be deemed by the Department to have optimized corrosion control treatment if the system demonstrates to the satisfaction of the Department that it has conducted activities equivalent to the corrosion control steps applicable to such system under 310 CMR 22.06B. If the Department makes this determination, it shall provide the system with written notice explaining the basis for its decision and shall specify the water quality control parameters representing optimal corrosion control in accordance with 310 CMR 22.06B(3)(f). Water systems deemed to have optimized corrosion control under 310 CMR 22.06B(2)(b)2. shall operate in compliance with Department-designated optimal water quality control parameters in accordance with 310 CMR 22.06B(3)(g) and continue to conduct lead and copper tap and water quality parameter sampling in accordance with 310 CMR 22.06B(7)(d)3. and 310 CMR 22.06B(8)(d), respectively. A system shall provide the Department with the following information in order to support a determination under 310 CMR 22.06B(2)(b)2.:

a. the results of all test samples collected for each of the water quality parameters in 310 CMR 22.06B(3)(c)3.

b. a report explaining the test methods used by the water system to evaluate the corrosion control treatments listed in 310 CMR 22.06B(3)(c)1., the results of all tests conducted, and the basis for the system's selection of optimal corrosion control treatment;

c. a report explaining how corrosion control has been installed and how it is being maintained to insure minimal lead and copper concentrations at consumers' taps; and

d. the results of tap water samples collected in accordance with 310 CMR 22.06B(7) at least once every six months for one year after corrosion control has been installed.

3. Any water system is deemed to have optimized corrosion control if it submits results of tap water monitoring conducted in accordance with 310 CMR 22.06B(7) and source water monitoring conducted in accordance with 310 CMR 22.06B(9) that demonstrates for two consecutive six-month monitoring periods that the difference between the 90th percentile tap water lead level computed under 310 CMR 22.06B(1)(c)3. and the highest source water lead concentration, is less than the Practical Quantitation Level (PQL) for lead specified in 310 CMR 22.06B(10)(a)1.b.

a. Those systems whose highest source water lead level is below the Method Detection Limit may also be deemed to have optimized corrosion control under 310 CMR 22.06B(2)(b)3.a. if the 90th percentile tap water lead level is less than or equal to the Practical Quantitation Level for lead for two consecutive six-month monitoring periods.

b. Any water system deemed to have optimized corrosion control in accordance with 310 CMR 22.06B(2)(b)3.b. shall continue monitoring for lead and copper at the tap no less frequently than once every three calendar years using the reduced number of sites specified in 310 CMR 22.06B(7)(c) and collecting the samples at times and locations specified in 310 CMR 22.06B(7)(d)4.d. Any such system that has not conducted a round of monitoring pursuant to 310 CMR 22.06(B)(7)(d) since September 30, 1997, shall complete a round of monitoring pursuant to 310 CMR 22.06B(2)(b)3.b. no later than September 30, 2000.

22.06B: continued

c. Any water system deemed to have optimized corrosion control pursuant to 310 CMR 22.06B(2)(b)3.c. shall notify the Department in writing pursuant to 310 CMR 22.06(B)(11)(a)3. of any upcoming long-term change in treatment or the addition of a new source as described in 310 CMR 22.06B(11)(a)3. The Department must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system. The Department may require any such system to conduct additional monitoring or to take other action the Department deems appropriate to ensure that such systems maintain minimal levels of corrosion in the distribution system.

d. As of July 12, 2001, a system is not deemed to have optimized corrosion control under 310 CMR 22.06B(2)(b)3.d., and shall install corrosion control treatment pursuant to 310 CMR 22.06B(2)(b)3.e. unless it meets the copper action level.

e. Any system triggered into corrosion control because it is no longer deemed to have optimized corrosion control under 310 CMR 22.06B(2)(b)3.e. shall implement corrosion control treatment in accordance with the deadlines in 310 CMR 22.06B(2)(e). Any such large system shall adhere to the schedule specified in 310 CMR 22.06B(2)(e) for medium-size systems, with the time periods for completing each step being triggered by the date the system is no longer deemed to have optimized corrosion control under 310 CMR 22.06B(2)(b)3.e.

(c) Any small or medium-size water system that is required to complete the corrosion control steps due to its exceedance of the lead or copper action level may cease completing the treatment steps whenever the system meets both action levels during each of two consecutive monitoring periods conducted pursuant to 310 CMR 22.06B(7) and submits the results to the Department. If any such water system thereafter exceeds the lead or copper action level during any monitoring period, the system (or the Department, as the case may be) shall recommence completion of the applicable treatment steps, beginning with the first treatment step which was not previously completed in its entirety. The Department may require a system to repeat treatment steps previously completed by the system where the Department determines that this is necessary to implement properly the treatment requirements of 310 CMR 22.06B. The Department shall notify the system in writing of such a determination and explain the basis for its decision. The requirement for any small or medium size system to implement corrosion control treatment steps in accordance with 310 CMR 22.06(B)(2)(e) (including systems deemed to have optimized corrosion control under 310 CMR 22.06B(2)(b)l.) is triggered whenever any small-or medium-sized system exceeds the lead or copper action level.

(d) Treatment Steps and Deadlines for Large Systems. Except as provided in 310 CMR 22.06B(2)(b)2. and 3., large systems shall complete the following corrosion control treatment steps (described in the referenced portions of 310 CMR 22.06B(3), (7), and (8)) by the indicated dates.

1. Step 1: The system shall conduct initial monitoring as specified in 310 CMR 22.06B(7)(d)1. and (8)(b) during two consecutive six-month monitoring periods by January 1, 1993.
2. Step 2: The system shall complete corrosion control studies (310 CMR 22.06B(3)(c)) by July 1, 1994.
3. Step 3: The Department shall designate optimal corrosion control treatment (310 CMR 22.06B(3)(d)) by January 1, 1995.
4. Step 4: The system shall install optimal corrosion control treatment (310 CMR 22.06B(3)(e)) by January 1, 1997.
5. Step 5: The system shall complete follow-up sampling (310 CMR 22.06B(7)(d)2. and (8)(c)) by January 1, 1998.
6. Step 6: The Department shall review installation of treatment and designate optimal water quality control parameters (310 CMR 22.06B(3)(f)) by July 1, 1998.
7. Step 7: The system shall operate in compliance with the Department-specified optimal water quality control parameters (310 CMR 22.06B(3)(g)) and continue to conduct tap sampling (310 CMR 22.06B(7)(d)3. and (8)(d)).

22.06B: continued

(e) Treatment Steps and Deadlines for Small and Medium-size Systems. Except as provided in 310 CMR 22.06B(2)(b), small and medium-size systems shall complete the following corrosion control treatment steps (described in the referenced portions of 310 CMR 22.06B(3), (7) and (8)) by the indicated time periods.

1. Step 1: The system shall conduct initial tap sampling (310 CMR 22.06B(7)(d)1. and 310 CMR 22.06B(8)(b)) until the system either exceeds the lead or copper action level or becomes eligible for reduced monitoring under 310 CMR 22.06B(7)(d)4. A system exceeding the lead or copper action level shall recommend optimal corrosion control treatment (310 CMR 22.06B(3)(a)) within six months after the end of the monitoring period during which it exceeds one of the action levels.
2. Step 2: Within 12 months after the end of a monitoring period during which a system exceeds the lead or copper action level, the Department may require the system to perform corrosion control studies (310 CMR 22.06B(3)(b)). If the Department does not require the system to perform such studies, the Department shall specify optimal corrosion control treatment (310 CMR 22.06B(3)(d)) within the following timeframes:
 - a. for medium-size systems, within 18 months after the end of the monitoring period during which such system exceeds the lead or copper action level;
 - b. for small systems, within 24 months after the end of the monitoring period during which such system exceeds the lead or copper action level.
3. Step 3: If the Department requires a system to perform corrosion control studies under step 2, the system shall complete the studies (310 CMR 22.06B(3)(c)) within 18 months after the Department requires that such studies be conducted.
4. Step 4: If the system has performed corrosion control studies under step 2, the Department shall designate optimal corrosion control treatment (310 CMR 22.06B(3)(d)) within six months after completion of step 3.
5. Step 5: The system shall install optimal corrosion control treatment (310 CMR 22.06B(3)(e)) within 24 months after the Department designates such treatment.
6. Step 6: The system shall complete follow-up sampling (310 CMR 22.06B(7)(d)2. and 310 CMR 22.06B(8)(c)) within 36 months after the Department designates optimal corrosion control treatment.
7. Step 7: The Department shall review the system's installation of treatment and designate optimal water quality control parameters (310 CMR 22.06B(3)(f)) within six months after completion of step 6.
8. Step 8: The system shall operate in compliance with the Department-designated optimal water quality control parameters (310 CMR 22.06B(3)(g)) and continue to conduct tap sampling (310 CMR 22.06B(7)(d)3. and (8)(d)).

(3) Description of Corrosion Control Treatment Requirements. Each system shall complete the corrosion control treatment requirements described in 310 CMR 22.06B(3)(a) through (h) which are applicable to such system under 310 CMR 22.06B(2).

(a) System Recommendation Regarding Corrosion Control Treatment. Based upon the results of lead and copper tap monitoring and water quality parameter monitoring, small and medium-size water systems exceeding the lead or copper action level shall recommend installation of one or more of the corrosion control treatments listed in 310 CMR 22.06B(3)(c)1. which the system believes constitutes optimal corrosion control for that system. The Department may require the system to conduct additional water quality parameter monitoring in accordance with 310 CMR 22.06B(8)(b) to assist the Department in reviewing the system's recommendation.

(b) Department Decision to Require Studies of Corrosion Control Treatment (Applicable to Small and Medium-size Systems). The Department may require any small or medium-size system that exceeds the lead or copper action level to perform corrosion control studies under 310 CMR 22.06B(2)(c) to identify optimal corrosion control treatment for the system.

(c) Performance of Corrosion Control Studies.

1. Any public water system performing corrosion control studies shall evaluate the effectiveness of each of the following treatments, and, if appropriate, combinations of the following treatments to identify the optimal corrosion control treatment for that system:

22.06B: continued

- a. alkalinity and pH adjustment;
 - b. calcium hardness adjustment; and
 - c. the addition of a phosphate or silicate based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples.
2. The water system shall evaluate each of the corrosion control treatments using either pipe rig/loop tests, metal coupon tests, partial-system tests, or analyses based on documented analogous treatments with other systems of similar size, water chemistry and distribution system configuration.
 3. The water system shall measure the following water quality parameters in any tests conducted under 310 CMR 22.06B(3)(c)3. before and after evaluating the corrosion control treatments listed in 310 CMR 22.06(B)(3)(c)1. through c.:
 - a. lead;
 - b. copper;
 - c. pH;
 - d. alkalinity;
 - e. calcium;
 - f. conductivity;
 - g. orthophosphate (when an inhibitor containing a phosphate compound is used);
 - h. silicate (when an inhibitor containing a silicate compound is used);
 - i. water temperature.
 4. The water system shall identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment and document such constraints with at least one of the following:
 - a. data and documentation showing that a particular corrosion control treatment has adversely affected other water treatment processes when used by another water system with comparable water quality characteristics; and/or
 - b. data and documentation demonstrating that the water system has previously attempted to evaluate a particular corrosion control treatment and has found that the treatment is ineffective or adversely affects other water quality treatment processes.
 5. The water system shall evaluate the effect of the chemicals used for corrosion control treatment on other water quality treatment processes.
 6. On the basis of an analysis of the data generated during each evaluation, the water system shall recommend to the Department in writing the treatment option that the corrosion control studies indicate constitutes optimal corrosion control treatment for that system. The water system shall provide a rationale for its recommendation along with all supporting documentation specified in 310 CMR 22.06B(3)(c)1. through 5.
- (d) Department Designation of Optimal Corrosion Control Treatment.
1. Based upon consideration of available information including, where applicable, studies performed under 310 CMR 22.06B(3)(c) and a system's recommended treatment alternative, the Department shall either approve the corrosion control treatment option recommended by the system, or designate alternative corrosion control treatment(s) from among those listed in 310 CMR 22.06B(3)(c)1. When designating optimal treatment the Department shall consider the effects that additional corrosion control treatment may have on water quality parameters and on other water quality treatment processes.
 2. The Department shall notify the system of its decision on optimal corrosion control treatment in writing and explain the basis for this determination. If the Department requests additional information to aid its review, the water system shall provide the information.
- (e) Installation of Optimal Corrosion Control. Each system shall properly install and operate throughout its distribution system the optimal corrosion control treatment designated by the Department under 310 CMR 22.06B(3)(d).
- (f) Department Review of Treatment and Specification of Optimal Water Quality Control Parameters. The Department shall evaluate the results of all lead and copper tap samples and water quality parameter samples submitted by the water system and determine whether the system has properly installed and operated the optimal corrosion control treatment designated by the Department in 310 CMR 22.06B(3)(d). Upon reviewing the results of tap water and water quality parameter monitoring by the system, both before and after the system installs optimal corrosion control treatment, the Department shall designate:

22.06B: continued

1. a minimum value or a range of values for pH measured at each entry point to the distribution system;
2. a minimum pH value, measured in all tap samples. Such value shall be equal to or greater than 7.0, unless the Department determines that meeting a pH level of 7.0 is not technologically feasible or is not necessary for the system to optimize corrosion control;
3. if a corrosion inhibitor is used, a minimum concentration or a range of concentrations for the inhibitor, measured at each entry point to the distribution system and in all tap samples, that the Department determines is necessary to form a passivating film on the interior walls of the pipes of the distribution system;
4. if alkalinity is adjusted as part of optimal corrosion control treatment, a minimum concentration or a range of concentrations for alkalinity, measured at each entry point to the distribution system and in all tap samples;
5. if calcium carbonate stabilization is used as part of corrosion control, a minimum concentration or a range of concentrations for calcium, measured in all tap samples. The values for the applicable water quality control parameters listed above shall be those that the Department determines to reflect optimal corrosion control treatment for the system. The Department may designate values for additional water quality control parameters determined by the Department to reflect optimal corrosion control for the system. The Department shall notify the system in writing of these determinations and explain the basis for its decisions.

(g) Continued Operation and Monitoring. All systems optimizing corrosion control shall continue to operate and maintain optimum corrosion control treatment, including maintaining water quality control parameters at or above minimum values or within ranges designated by the Department under 310 CMR 22.06B(3)(f), in accordance with 310 CMR 22.06B(3)(g) for all samples collected under 310 CMR 22.06B(8)(d) through (f). Compliance with the requirements of 310 CMR 22.06B(3)(g) shall be determined every six months, as specified under 310 CMR 22.06B(8)(d). A water system is out of compliance with the requirements of 310 CMR 22.06B(3)(g) for a six-month period if it has excursions for any Department-specified parameter for more than nine days during the period. An excursion occurs whenever the daily value for one or more of the water quality control parameters measured at a sampling location is below the minimum value or outside the range designated by the Department. Daily values are calculated as follows.

1. On days when more than one measurement for the water quality parameter is collected at the sampling location, the daily value shall be the average of all results collected during the day regardless of whether they are collected through continuous monitoring, grab sampling, or a combination of both.
2. On the days when only one measurement for the water quality parameter is collected at the sampling location, the daily value shall be the result of that measurement.
3. On days when no measurement is collected for the water quality parameter at the sampling location, the daily value shall be the daily value calculated on the most recent day on which the water quality was measured at the sample site. To minimize the number of days counted as excursions, a system should take a confirmation sample as soon as possible when a daily value is below the minimum value or outside the range designated by the Department. The Department has the discretion to delete results of obvious sampling errors from this calculation.

(h) Modification of Department Treatment Decisions. Upon its own initiative or in response to a reasonable request by a water system or other interested party, the Department may modify its determination of the optimal corrosion control treatment under 310 CMR 22.06B(3)(d) or optimal water quality control parameters under 310 CMR 22.06B(3)(d)(f). A request for modification by a system or other interested party shall be in writing, explain why the modification is appropriate, and provide supporting documentation. The Department may modify its determination where it concludes that such change is necessary to ensure that the system continues to optimize corrosion control treatment. A revised determination shall be made in writing, set forth the new treatment requirements, explain the basis for the Department's decision, and provide an implementation schedule for completing the treatment modifications.

22.06B: continued

(4) Source Water Treatment Requirements. Systems shall complete the applicable source water monitoring and treatment requirements (described in the referenced portions of 310 CMR 22.06B(3)(b), (7) and (9)) by the following deadlines.

(a) Deadlines for Completing Source Water Treatment Steps.

1. Step 1: A system exceeding the lead or copper action level shall complete lead and copper source water monitoring (310 CMR 22.06B(9)(b)) and make a treatment recommendation to the Department (310 CMR 22.06B(4)(b)1.) no later than 180 days after the end of the monitoring period during which the lead or copper action level was exceeded.
2. Step 2: The Department shall make a determination regarding source water treatment (310 CMR 22.06B(4)(b)2.) within six months after submission of monitoring results under Step 1.
3. Step 3: If the Department requires installation of source water treatment, the system shall install the treatment (310 CMR 22.06B(4)(b)3.) within 24 months after completion of Step 2.
4. Step 4: The system shall complete follow-up tap water monitoring (310 CMR 22.06B(7)(d)2.) and source water monitoring (310 CMR 22.06B(9)(c)) within 36 months after completion of Step 2.
5. Step 5: The Department shall review the system's installation and operation of source water treatment and specify maximum permissible source water levels (310 CMR 22.06B(4)(b)4.) within six months after completion of Step 4.
6. Step 6: The system shall operate in compliance with the Department-specified maximum permissible lead and copper source water levels (310 CMR 22.06B(4)(b)4.) and continue source water monitoring (310 CMR 22.06B(9)(d)).

(b) Description of Source Water Treatment Requirements.

1. System Treatment Recommendation. Any system which exceeds the lead or copper action level shall recommend in writing to the Department the installation and operation of one of the source water treatments listed in 310 CMR 22.06B(4)(b)2. A system may recommend that no treatment be installed based upon a demonstration that source water treatment is not necessary to minimize lead and copper levels at users' taps.
2. Department Determination Regarding Source Water Treatment. The Department shall complete an evaluation of the results of all source water samples submitted by the water system to determine whether source water treatment is necessary to minimize lead or copper levels in water delivered to users' taps. If the Department determines that treatment is needed, the Department shall either require installation and operation of the source water treatment recommended by the system (if any) or require the installation and operation of another source water treatment from among the following: ion exchange, reverse osmosis, lime softening or coagulation/filtration. If the Department requests additional information to aid in its review, the water system shall provide the information by the date specified by the Department in its request. The Department shall notify the system in writing of its determination and set forth the basis for its decision.
3. Installation of Source Water Treatment. Each system shall properly install and operate the source water treatment designated by the Department under 310 CMR 22.06B(4)(b)2.
4. Department Review of Source Water Treatment and Specification of Maximum Permissible Source Water Levels. The Department shall review the source water sample analysis taken by the water system both before and after the system installs source water treatment, and determine whether the system has properly installed and operated the source water treatment designated by the Department. Based upon its review, the Department shall designate the maximum permissible lead and copper concentrations for finished water entering the distribution system. Such levels shall reflect the contaminant removal capability of the treatment properly operated and maintained. The Department shall notify the system in writing and explain the basis for its decision.
5. Continued Operation and Maintenance. Each water system shall maintain source water lead and copper levels below 0.005 mg/L and 0.65 mg/L respectively at each sampling point monitored in accordance with 310 CMR 22.06B(9). The system is out of compliance with 310 CMR 22.06B(9) if the level of lead or copper at any source water sampling point is greater than 0.005 mg/L for lead or 0.65 mg/L for copper.

22.06B: continued

6. Modification of Department Treatment Decisions. Upon its own initiative or in response to a request by a water system or other interested party, the Department may modify its determination of the source water treatment under 310 CMR 22.06B(4)(b)2., or maximum permissible lead and copper concentrations for finished water entering the distribution system under 310 CMR 22.06B(4)(b)4. A request for modification by a system or other interested party shall be in writing, explain why the modification is appropriate, and provide supporting documentation. The Department may modify its determination where it concludes that such change is necessary to ensure that the system continues to minimize lead and copper concentrations in source water. A revised determination shall be made in writing, set forth the new treatment requirements, explain the basis for the Department's decision, and provide an implementation schedule for completing the treatment modifications.
- (5) Lead Service Line Replacement Requirements.
- (a) Systems that fail to meet the lead action level in tap samples taken pursuant to 310 CMR 22.06B(7)(d)2., after installing corrosion control and/or source water treatment (whichever sampling occurs later), shall replace lead service lines in accordance with the requirements of 310 CMR 22.06B(5). Such systems shall submit a lead service line replacement plan to the Department for approval within 60 days of the end of the monitoring period unless otherwise approved by the Department. If a system is in violation of 310 CMR 22.06B(2) or (4) for failure to install source water or corrosion control treatment, the Department may require the system to commence lead service line replacement under 310 CMR 22.06B(5) after the date by which the system was required to conduct monitoring under 310 CMR 22.06B(7)(d)2. has passed.
- (b) 1. A water system shall replace annually at least 7% of the initial number of lead service lines in its distribution system. The initial number of lead service lines is the number of lead lines in place at the time the replacement program begins. The system shall identify the initial number of lead service lines in its distribution system, including an identification of the portion(s) owned by the system, based on a materials evaluation, including the evaluation required under 310 CMR 22.06B(7)(a) and relevant legal authorities (*e.g.* contracts, local ordinances) regarding the portion owned by the system. The first year of lead service line replacement shall begin on the first day following the end of the monitoring period in which the action level was exceeded in tap sampling referenced in 310 CMR 22.06B(5)(a). If monitoring is required annually or less frequently, the end of the monitoring period is September 30th of the calendar year in which the sampling occurs. If the Department has established an alternate monitoring period, then the end of the monitoring period will be the last day of that period.
2. Any water system resuming a lead service line replacement program after the cessation of its lead service line replacement program as allowed in 310 CMR 22.06B(5)(f) must do the following:
- a. Shall update its inventory of lead service lines to include those sites that were previously determined not to require replacement through the sampling provision under 310 CMR 22.06B(5)(c).
- b. The system will then divide the updated number of remaining lead service lines by the number of remaining years in the program to determine the number of lines that must be replaced per year (7% lead service line replacement is based on a 15-year replacement program, so, for example, systems resuming lead service line replacement after previously conducting two years of replacement would divide the updated inventory by 13).
- c. For those systems that have completed a 15-year lead service line replacement program, the Department will determine a schedule for replacing or retesting lines that were previously tested out under the replacement program when the system re-exceeds the action level.
- (c) A system is not required to replace an individual lead service line if the lead concentration in all service line samples from that line, taken pursuant to 310 CMR 22.06B(7)(b)3. is less than or equal to 0.015 mg/L.

22.06B: continued

(d) A water system shall replace that portion of the lead service line that it owns. In cases where the system does not own the entire lead service line, the system shall notify the owner of the line, or the owner's authorized agent, that the system will replace the portion of the service line that it owns and shall offer to replace the owner's portion of the line. A system is not required to bear the cost of replacing the privately-owned portion of the line, nor is it required to replace the privately-owned portion where the owner chooses not to pay the cost of replacing the privately-owned portion of the line, or where replacing the privately-owned portion would be precluded by State, local or common law. A water system that does not replace the entire length of the service line also shall complete the following tasks.

1. At least 45 days prior to commencing with the partial replacement of a lead service line, the water system shall provide notice to the resident(s) of all buildings served by the line explaining that they may experience a temporary increase of lead levels in their drinking water, along with guidance on measures consumers can take to minimize their exposure to lead. The Department may allow the water system to provide notice under the previous sentence less than 45 days prior to commencing partial lead service line replacement where such replacement is in conjunction with emergency repairs. In addition, the water system shall inform the resident(s) served by the line that the system will, at the system's expense, collect a sample from each partially-replaced lead service line that is representative of the water in the service line for analysis of lead content, as prescribed under 310 CMR 22.06B(7)(b)3., within 72 hours after the completion of the partial replacement of the service line. The system shall collect the sample and report the results of the analysis to the owner and the resident(s) served by the line within three business days of receiving the results. Mailed notices post-marked within three business days of receiving the results shall be considered "on time".

2. The water system shall provide the information required by 310 CMR 22.06B(5)(d)1. to the residents of individual dwellings by mail or by methods approved by the Department. In instances where multi-family dwellings are served by the line, the water system shall have the option to post the information at a conspicuous location.

(e) The Department shall require a system to replace lead service lines on a shorter schedule than that required by 310 CMR 22.06B(5), taking into account the number of lead service lines in the system, where such a shorter replacement schedule is feasible. The Department shall make this determination in writing and notify the system of its finding within six months after the system is triggered into lead service line replacement based on monitoring referenced in 310 CMR 22.06B(5)(a).

(f) Any system may cease replacing lead service lines whenever first draw samples collected pursuant to 310 CMR 22.06B(7)(d)3. meet the lead action level during each of two consecutive monitoring periods and the system submits the results to the Department. If first draw samples collected in any such water system thereafter exceeds the lead action level, the system shall recommence replacing lead service lines, pursuant to 310 CMR 22.06B(5)(b)2.

(g) To demonstrate compliance with 310 CMR 22.06B(5)(a) through (d), a system shall report to the Department the information specified in 310 CMR 22.06B(11)(e).

(6) Public Education and Supplemental Monitoring Requirements. All water systems must deliver a consumer notice of lead and copper tap water monitoring results to persons served by the water system at sites that are tested, as specified in 310 CMR 22.06B(6)(c). A water system that exceeds the lead action level based on tap water samples collected in accordance with 310 CMR 22.06B(7) shall deliver the public education materials contained in 310 CMR 22.06B(6)(a) in accordance with the requirements in 310 CMR 22.06B(6)(b). Water systems that exceed the lead and/or copper action level must sample the tap water of any customer who requests it in accordance with 310 CMR 22.06B(6)(c). The system is not required to pay for collecting or analyzing the sample, nor is the system required to collect and analyze the sample itself.

22.06B: continued

(a) Content of Written Public Education Materials.

1. Community Water System and Non-transient Non-community Water Systems. Water systems must include the following elements in printed materials (*e.g.*, brochures and pamphlets) in the same order as listed in 310 CMR 22.06(B)(a)1.a. through f. In addition, language in 310 CMR 22.06B(6)(a)1.a. through b. and (a)1.f. must be included in the materials, exactly as written, except for the text in brackets in 310 CMR 22.06B(6)(a)1.a., b. and f. for which the water system must include system-specific information. Any additional information presented by a water system must be consistent with the information in 310 CMR 22.06(B)(a)1.a. through f. and be in plain language that can be understood by the general public. Water systems must submit all written public education materials to the Department prior to delivery. Unless otherwise approved, the Department shall require the system to obtain approval of the content of written public materials prior to delivery.

a. **IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER.** [INSERT NAME OF WATER SYSTEM] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.

b. Health Effects of Lead. Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.

c. Sources of Lead.

(i) Explain what lead is.

(ii) Explain possible sources of lead in drinking water and how lead enters drinking water. Include information on home/building plumbing materials and service lines that may contain lead.

(iii) Discuss other important sources of lead exposure in addition to drinking water (*e.g.*, paint).

d. Discuss the steps the consumer can take to reduce their exposure to lead in drinking water.

(i) Encourage running the water to flush out the lead.

(ii) Explain concerns with using hot water from the tap and specifically caution against the use of hot water for preparing baby formula.

(iii) Explain that boiling water does not reduce lead levels.

(iv) Discuss other options consumers can take to reduce exposure to lead in drinking water, such as alternative sources or treatment of water.

(v) Suggest that parents have their child's blood tested for lead.

e. Explain why there are elevated levels of lead in the system's drinking water (if known) and what the water system is doing to reduce the lead levels in homes/building in this area.

f. For more information, call us at [INSERT YOUR NUMBER] [(IF APPLICABLE), OR VISIT our Web site at [INSERT YOUR WEB SITE HERE]. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at <http://www.epa.gov/lead> or contact your health care provider.

2. Community Water Systems. In addition to including the elements specified in 310 CMR 22.06B (6)(a)1., community water systems must:

a. Tell consumers how to get their water tested.

b. Discuss lead in plumbing components and the difference between low lead and lead free.

22.06B: continued

(b) Delivery of Public Education Materials

1. For public water systems serving a large proportion of non-English speaking consumers, as determined by the Department, the public education materials must contain information in the appropriate language(s) regarding the importance of the notice or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the public education materials or to request assistance in the appropriate language.

2. A community water system that exceeds the lead action level on the basis of tap water samples collected in accordance with 310 CMR 22.06B(7), and that is not already conducting public education tasks under 310 CMR 22.06B(6)(b), must conduct the public education tasks under 310 CMR 22.06B(6) within 60 days after the end of the monitoring period in which the exceedance occurred:

a Deliver printed materials meeting the content requirements of 310 CMR 22.06B(6)(a) to all bill paying customers.

b. (i) Contact customers who are most at risk by delivering education materials that meet the content requirements of 310 CMR 22.06B(6)(a) to local public health agencies even if they are not located within the water system's service area, along with an informational notice that encourages distribution to all the organization's potentially affected customers or community water system's users. The water system must contact the local public health agencies directly by phone or in person. The local public health agencies may provide a specific list of additional community based organizations serving target populations, which may include organizations outside the service area of the water system. If such lists are provided, systems must deliver education materials that meet the content requirements of 310 CMR 22.06B(6)(a) to all organizations on the provided lists.

(ii) Contact customers who are most at risk by delivering materials that meet the content requirements of 310 CMR 22.06B(6)(a) to the following organizations listed in A through F that are located within the water system's service area, along with an informational notice that encourages distribution to all the organization's potentially affected customers or community water system's users:

- A. Public and private schools or school boards;
- B. Women, Infants and children (WIC) and Head Start programs;
- C. Public and private hospitals and medical clinics;
- D. Pediatricians;
- E. Family Planning clinics;
- F. Local welfare agencies.

(iii) Make a good faith effort to locate the following organizations within the service area and deliver materials that meet the content requirements of 310 CMR 22.06B(6)(a) to them, along with an informational notice that encourages distribution to all potentially affected customers or users. The good faith effort to contact at-risk customers may include requesting specific contact list of these organizations from the local public health agencies, even if the agencies are not located within the water system's service area.

- A. Licensed childcare centers;
- B. Public and private preschools;
- C. Obstetricians-Gynecologists and Midwives.

c. No less often than quarterly, provide information on or in each water bill as long as the system exceeds the action level for lead. The message on the water bill must include the following statement exactly as written except for the text in brackets for which the water system must include system-specific information: [INSERT NAME OF WATER SYSTEM] found high levels of lead in drinking water in some homes. Lead can cause serious health problems. For more information please call or visit [INSERT NAME OF YOUR WATER SYSTEM OR YOUR WEB SITE HERE]. The message or delivery mechanism can be modified in consultation with the Department; specifically, the Department may allow a separate mailing of public education materials to customers if the water system cannot place the information on water bills.

22.06B: continued

- d. Post material meeting the content requirements of 310 CMR 22.06B(6)(a) on the water system's Web site if the system serves a population greater than 100,000.
 - e. Submit a press release to newspaper, television and radio stations.
 - f. In addition to the requirements of 310 CMR 22.06B(6)(b)2.a. through e., systems must implement at least three activities from one or more categories listed in 310 CMR 22.06B(6)(b)2.f.(i) through (iv). The educational content and selection of these activities must be determined in consultation with the Department.
 - (i) Public Service Announcements.
 - (ii) Paid advertisements.
 - (iii) Public Area Information Display.
 - (iv) E-mails to customers.
 - (v) Public Meetings.
 - (vi) Household Deliveries.
 - (vii) Targeted Individual Customer Contact.
 - (viii) Direct material distribution to all multi-family homes and institutions.
 - (iv) Other Methods approved by the Department.
 - g. For systems that are required to conduct monitoring annually or less frequently the end of the monitoring period is September 30th of the calendar year in which the sampling occurs, or if the Department has established an alternate monitoring period, the last day of that period.
3. As long as a community water system exceeds the action level, it must repeat the activities pursuant to 310 CMR 22.06B(6)(b)2. as described in 310 CMR 22.06B(6)(b)3.a. through d.
 - a. A community water system shall repeat tasks contained in 310 CMR 22.06B(6)(b)2.a., b., and d. every 12 months.
 - b. A community water system shall repeat tasks contained in 310 CMR 22.06B(6)(b)2.c. with each billing cycle.
 - c. A community water system serving a population greater than 100,000 shall post and retain material on a publicly accessible Web site pursuant to 310 CMR 22.06B(6)(b)2.d.
 - d. The community water system shall repeat the task in 310CMR 22.06B(6)(b)2.e. twice every 12 months on a schedule agreed upon with the Department. The Department can allow activities in 310 CMR 22.06B(6)(b)2.e. twice every 12 months on a schedule agreed upon with the Department. The Department can allow activities in 310 CMR 22.06B(6)(b)2.to extend beyond the 60-day requirement if needed for implementation purposes on a case-by-case basis; however, this extension must be approved in writing by the Department in advance of the 60-day deadline.
 4. Within 60 days after the end of the monitoring period in which the exceedance occurred, a non-transient non-community water system shall deliver the public education materials specified by 310 CMR 22.06B(6)(a) (unless it already is repeating public education tasks pursuant to 310 CMR 22.06B(6)(a)) as follows:
 - a. Post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the systems; and
 - b. Distribute informational pamphlets and/or brochures on lead in drinking water to each person served by the non-transient non-community water system. The Department may allow the system to utilize electronic transmission in *lieu* of or combined with printed materials as long as it achieves at least the same coverage.
 - c. For systems that are required to conduct monitoring annually or less frequently, the end of the monitoring period is September 30th of the calendar year in which the sampling occurs, or if the Department has established an alternate monitoring period, the last day of that period.
 5. A non-transient non-community water system shall repeat the tasks contained in 310 CMR 22.06B(6)(b)4. at least once during each calendar year in which the system exceeds the lead action level. The Department can allow activities in 310 CMR 22.06B(6)(b)4. to extend beyond the 60-day requirement if needed for implementation purposes on a case-by-case basis; however, this extension must be approved in writing by the Department in advance of the 60-day deadline.

22.06B: continued

6. A water system may discontinue delivery of public education materials if the system has met the lead action level during the most recent six-month monitoring period conducted pursuant to 310 CMR 22.06B(7). Such a system shall recommence public education in accordance with 310 CMR 22.06B(6)(b)6. if it subsequently exceeds the lead action level during any monitoring period.
 7. A community water system may apply to the Department, in writing (unless the Department has waived the requirement for prior Department approval), to use only the text specified in 310 CMR 22.06B(6)(a)1. in *lieu* of the text in 310 CMR 22.06B(6)(a)1. and 2. and to perform the tasks listed in 310 CMR 22.06B(6)(b)4. and 5. in *lieu* of the tasks in 310 CMR 22.06B(6)(b)2. and 3. if:
 - a. The system is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices, and
 - b. The system provides water as part of the cost of services provided and does not separately charge for water consumption.
 8. A community water system serving 3,300 or fewer people may limit certain aspects of their public education programs as follows:
 - a. With respect to the requirements of 310 CMR 22.06B(6)(b)2.f., a system serving 3,300 or fewer must implement at least one of the activities listed in 310 CMR 22.06B(6)(b)2.f.
 - b. With respect to the requirements of 310 CMR 22.06B(6)(b)2.b., a system serving 3,300 or fewer people may limit the distribution of the public education materials required under 310 CMR 22.06B(6)(b)2.b. to facilities and organizations served by system that are most likely to be visited regularly by pregnant women and children.
 - c. With respect to the requirements of 310 CMR 22.06B(6)(b)2.e., the Department may waive this requirement for systems serving 3,300 or fewer persons as long as the system distributes notices to every household served by the system.
- (c) Notification of Results.
1. Reporting Requirement. All water systems must provide a notice of the individual tap results from lead and copper tap water monitoring carried out under the requirements of 310 CMR 22.06B(7) to the persons served by the water system at the specific sampling site from which the sample was taken (*e.g.*, the occupants of the residence where the tap was tested).
 2. Timing of Notification. A water system must provide the consumer notice as soon as practical, but no later than 30 days after the system learns of the tap monitoring results.
 3. Content. The consumer notice must include the results of lead tap water monitoring for the tap that was tested, an explanation of the health effects of lead, list steps consumers can take to reduce exposure to lead in drinking water and contact information for the water utility. The notice must also provide the maximum contaminant level goal and the action level for lead and the definitions for these two terms from 310 CMR 22.02.
 4. Delivery. The consumer notice must be provided to persons served at the tap that was tested, either by mail or by another method approved by the Department. For example, upon approval by the Department, a non-transient non-community water system could post the results on a bulletin board in the facility to allow users to review the information. The system must provide the notice to customers at sample taps tested, including consumers who do not receive water bills.

22.06B: continued

(7) Monitoring Requirements for Lead and Copper in Tap Water.(a) Sample Site Location.

1. By the applicable date for commencement of monitoring under 310 CMR 22.06B(7)(d)1., each water system shall complete a materials evaluation of its distribution system in order to identify a pool of targeted sampling sites that meets the requirements of 310 CMR 22.06B(7), and which is sufficiently large to ensure that the water system can collect the number of lead and copper tap samples required in 310 CMR 22.06B(7)(c). All sites from which first draw samples are collected shall be selected from this pool of targeted sampling sites. Sampling sites may not include faucets that have point-of-use or point-of-entry treatment devices designed to remove inorganic contaminants. Once the sampling sites are selected they must be submitted to the Department on the required form for approval. All samples must be collected in accordance with the system's Department-approved sampling plan.

2. A water system shall use the information on lead, copper, and galvanized steel that it is required to collect under 310 CMR 22.19(4) and (5) when conducting a materials evaluation. When an evaluation of the information collected pursuant to 310 CMR 22.19(4) and (5) is insufficient to locate the requisite number of lead and copper sampling sites that meet the targeting criteria in 310 CMR 22.06B(7)(a), the water system shall review the sources of information listed below in order to identify a sufficient number of sampling sites. In addition, the system shall seek to collect such information where possible in the course of its normal operations (*e.g.*, checking service line materials when reading water meters or performing maintenance activities):

- a. all plumbing codes, permits, and records in the files of the building department(s) which indicate the plumbing materials that are installed within publicly and privately owned structures connected to the distribution system;
- b. all inspections and records of the distribution system that indicate the material composition of the service connections that connect a structure to the distribution system; and
- c. all existing water quality information, which includes the results of all prior analyses of the system or individual structures connected to the system, indicating locations that may be particularly susceptible to high lead or copper concentrations.

3. The sampling sites selected for a community water system's sampling pool ("tier 1 sampling sites") shall consist of single family structures that:

- a. contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or
- b. are served by a lead service line. When multiple-family residences comprise at least 20% of the structures served by a water system, the system may include these types of structures in its sampling pool.

4. Any community water system with insufficient tier 1 sampling sites shall complete its sampling pool with "tier 2 sampling sites", consisting of buildings, including multiple-family residences that:

- a. contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or
- b. are served by a lead service line.

5. Any community water system with insufficient tier 1 and tier 2 sampling sites shall complete its sampling pool with "tier 3 sampling sites", consisting of single family structures that contain copper pipes with lead solder installed before 1983. A community water system with insufficient tier 1, tier 2, and tier 3 sampling sites shall complete its sampling pool with representative sites throughout the distribution system. For the purpose of 310 CMR 22.06B(7)(a)5., a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.

6. The sampling sites selected for a non-transient non-community water system ("tier 1 sampling sites") shall consist of buildings that:

- a. contain copper pipes with lead solder installed after 1982 or contain lead pipes; and/or
- b. are served by a lead service line.

22.06B: continued

7. A non-transient non-community water system with insufficient tier 1 sites that meet the targeting criteria in 310 CMR 22.06B(7)(a)6. shall complete its sampling pool with sampling sites that contain copper pipes with lead solder installed before 1983. If additional sites are needed to complete the sampling pool, the non-transient non-community water system shall use representative sites throughout the distribution system. For the purpose of 310 CMR 22.06B(7)(a)7., a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.

8. Any water system whose distribution system contains lead service lines shall draw 50% of the samples it collects during each monitoring period from sites that contain lead pipes, or copper pipes with lead solder, and 50% of the samples from sites served by a lead service line. A water system that cannot identify a sufficient number of sampling sites served by a lead service line shall collect first-draw samples from all of the sites identified as being served by such lines.

9. In addition to the samples required by 310 CMR 22.06B(7) the Department requires community water supplies to collect lead and copper samples from at least two schools. Each school will have two sampling sites from which a 250 ml sample will be taken, one from a kitchen tap and one from a drinking water source such as a water fountain.

(b) Sample Collection Methods.

1. All tap samples for lead and copper collected in accordance with this subpart, with the exception of lead service line samples collected under 310 CMR 22.06B(5)(c) to determine whether or not a lead service line should be replaced and samples collected under 310 CMR 22.06B(7)(b)3., shall be first-draw samples. All samples must be collected in accordance with the system's Department-approved sampling plan.

2. Each first-draw tap sample for lead and copper shall be one liter and have stood motionless in the plumbing system of each sampling site for at least six hours. First-draw samples from residential housing shall be collected from the cold-water kitchen tap or bathroom sink tap. First-draw samples from a non-residential building shall be one liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. Non-first-draw samples collected in *lieu* of first-draw samples pursuant to 310 CMR 22.06B(7)(b)5. shall be one liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. First-draw samples may be collected by the system or the system may allow residents to collect first-draw samples after instructing the residents of the sampling procedures specified in 310 CMR 22.06B(7)(b)2. To avoid potential problems of residents handling nitric acid, acidification of first draw samples may be done up to 14 days after the sample has been collected. After acidification to resolubilize the metals, the sample must stand in the original container for the time specified in the approved EPA method before the sample can be analyzed. If a system allows residents to perform sampling, the system may not challenge, based on alleged errors in sample collection, the accuracy of sampling results.

3. Each lead service line sample shall be one liter in volume and have stood motionless in the lead service line for at least six hours, but not more than 12 hours. Lead service line samples, for the purpose of determining whether or not a line should be replaced, shall be collected in one of the following three ways:

- a. at the tap after flushing the volume of water between the tap and the lead service line. The volume of water shall be calculated based on the interior diameter and length of the pipe between the tap and the lead service line;
- b. tapping directly into the lead service line; or
- c. if the sampling site is a building constructed as a single-family residence, allowing the water to run until there is a significant change in temperature which would be indicative of water that has been standing in the lead service line.

4. A water system shall collect each first draw tap sample from the same sampling site from which it collected a previous sample. If, for any reason, the water system cannot gain entry to a sampling site in order to collect a follow-up tap sample, the system may collect the follow-up tap sample from another sampling site in its sampling pool as long as the new site meets the same targeting criteria, and is within reasonable proximity of the original site.

22.06B: continued

5. A non-transient non-community water system, or a community water system that meets the criteria of 310 CMR 22.06B(6)(a) and (b), that does not have enough taps that can supply first-draw samples, as defined in 310 CMR 22.06B, may apply to the Department in writing to substitute non-first-draw samples. Such systems shall collect as many first-draw samples from appropriate taps as possible and identify sampling times and locations that would likely result in the longest standing time for the remaining sites. The Department has the discretion to waive the requirement for prior Department approval of non-first-draw sample sites selected by the system, either through State regulation or written notification to the system.

(c) Number of Samples. Water systems shall collect at least one sample during each monitoring period specified in 310 CMR 22.06B(7)(d) from the number of sites listed in the second column (Standard Monitoring) of the table in 310 CMR 22.06B(7)(c). A system conducting reduced monitoring under 310 CMR 22.06B(7)(d)4. shall collect at least one sample from the number of sites specified in the third column (Reduced Monitoring) of the table in 310 CMR 22.06B(7)(c). A public water system that has fewer than five drinking water taps, that can be used for human consumption meeting the sample site criteria of 310 CMR 22.06B(7)(a) to reach the required number of sample sites listed in 310 CMR 22.06B(7)(c), must collect at least one sample from each tap and then must collect additional samples from those taps on different days during the monitoring period to meet the required number of sites. Alternatively, the Department may allow these public water systems to collect a number of samples less than the number of sites specified in 310 CMR 22.06B(7)(c), provided that 100% of all taps that can be used for human consumption are sampled. The Department must approve this reduction of the minimum number of samples in writing based on a request from the system or onsite verification by the Department.

<u>System Size (No. People Served)</u>	<u>Number of sites (Standard Monitoring)</u>	<u>Number of sites (Reduced Monitoring)</u>
>100,000	100	50
10,001-100,000	60	30
3,301 to 10,000	40	20
501 to 3,300	20	10
101 to 500	10	5
≤100	5	5

(d) Timing of Monitoring

1. Initial Tap Sampling. The first six-month monitoring period for small, medium-size and large systems shall begin on the following dates:

<u>System Size (No. People Served)</u>	<u>First Six-month Monitoring Period Begins On</u>
>50,000	January 1, 1992
3,301 to 50,000	July 1, 1992
≤3,300	July 1, 1993

- a. All large systems shall monitor during two consecutive six-month periods.
- b. All small and medium-size systems shall monitor during each six-month monitoring period until:
 - (i) the system exceeds the lead or copper action level and is therefore required to implement the corrosion control treatment requirements under 310 CMR 22.06B(2), in which case the system shall continue monitoring in accordance with 310 CMR 22.06B(7)(d)2., or
 - (ii) the system meets the lead and copper action levels during two consecutive six-month monitoring periods, in which case the system may reduce monitoring in accordance with 310 CMR 22.06B(7)(d)4.
2. Monitoring after Installation of Corrosion Control and Source Water Treatment.
 - a. Any large system which installs optimal corrosion control treatment pursuant to 310 CMR 22.06B(2)(d)4. shall monitor during two consecutive six-month monitoring periods by the date specified in 310 CMR 22.06B(2)(d)5.

22.06B: continued

- b. Any small or medium-size system which installs optimal corrosion control treatment pursuant to 310 CMR 22.06B(2)(e)5. shall monitor during two consecutive six-month monitoring periods by the date specified in 310 CMR 22.06B(2)(e)6.
 - c. Any system which installs source water treatment pursuant to 310 CMR 22.06B(4)(a)3. shall monitor during two consecutive six-month monitoring periods by the date specified in 310 CMR 22.06B(4)(a)4.
3. Monitoring after Department Specifies Water Quality Parameter Values for Optimal Corrosion Control. After the Department specifies the values for water quality control parameters under 310 CMR 22.06(3)(f), a large water system shall monitor during each subsequent six-month monitoring period, with the first monitoring period to begin on the date the Department specifies the optimal values under 310 CMR 22.06B(3)(f).
 4. Reduced Monitoring.
 - a. A small or medium-size water system that meets the lead and copper action levels during each of two consecutive six-month monitoring periods may reduce the number of samples in accordance with 310 CMR 22.06B(7)(c), and reduce the frequency of lead and copper tap sampling to once per year. A small or medium water system collecting fewer than five samples as specified in 310 CMR 22.06B(7)(c), that meets the lead and copper action levels during each of two consecutive six-month monitoring periods may reduce the frequency of sampling to once per year or other period as specified by the Department. In no case can the system reduce the number of samples required below the minimum of one sample per available tap. This reduced sampling shall begin during the calendar year immediately following the end of the second consecutive six-month monitoring period. In order to reduce its monitoring frequency or sites, the public water system must obtain prior written approval from the Department.
 - b. Any large water system that meets the lead and copper action levels and maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the Department under 310 CMR 22.06B(3)(f) during each of two consecutive six-month monitoring periods may reduce the frequency of monitoring for lead and copper to once per year and to reduce the number of lead and copper samples in accordance with 310 CMR 22.06B(7)(c) if it receives written approval from the Department. This sampling shall begin during the calendar year immediately following the end of the second consecutive six-month monitoring period. The Department shall review monitoring, treatment, and other relevant information submitted by the water system in accordance with 310 CMR 22.06(B)(11), and shall notify the system in writing when it determines the system is eligible to commence reduced monitoring pursuant to 310 CMR 22.06B(7)(d)4. The Department shall review, and where appropriate, revise its determination when the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.
 - c. A small or medium-size water system that meets the lead and copper action levels during three consecutive years of monitoring may request in writing the Department's approval to reduce the frequency of monitoring for lead and copper from annually to once every three years. Any large water system that meets the lead and copper action levels and maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the Department under 310 CMR 22.06B(3)(f) during three consecutive years of monitoring may reduce the frequency of monitoring for lead and copper from annually to once every three years if it receives written approval from the Department. Samples collected once every three years shall be collected no later than every third calendar year. The Department shall review monitoring, treatment, and other relevant information submitted by the water system in accordance with 310 CMR 22.06B(11) and shall notify the system in writing when it determined the system is eligible to reduce the frequency of monitoring to once every three years. The Department shall review, and where appropriate, revise its determination when the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.

22.06B: continued

d. A water system that reduces the number and frequency of lead and copper tap sampling shall collect these samples from representative sites included in the pool of targeted sampling sites identified in 310 CMR 22.06B(7)(a). Systems sampling annually or less frequently shall conduct the lead and copper tap sampling during the months of June, July, August or September unless the Department has approved a different sampling period in accordance with 310 CMR 22.06B(7)(d)4.d.(i).

(i) The Department, at its discretion, may approve a different period for conducting the lead and copper tap sampling for systems collecting a reduced number of samples. Such a period shall be no longer than four consecutive months and shall represent a time of normal operation where the highest levels of lead are most likely to occur. For a non-transient non-community water system that does not operate during the months of June through September, and for which the period of normal operation where the highest levels of lead are most likely to occur is not known, the Department shall designate a period that represents a time of normal operation for the system. This sampling shall begin during the period approved or designated by the Department in the calendar year immediately following the end of the second consecutive six-month monitoring period for systems initiating annual monitoring and during the three-year period following the end of the third consecutive calendar year of annual monitoring for systems initiating triennial monitoring.

(ii) Systems monitoring annually, that have been collecting samples during the months of June through September and that receive Department approval to alter their sample collection period under 310 CMR 22.06B(7)(d)4.d.(i), shall collect their next round of samples during a time period that ends no later than 21 months after the previous round of sampling. Systems monitoring triennially that have been collecting samples during the months of June through September, and receive Department approval to alter the sampling collection period as per 310 CMR 22.06B(7)(d)4.d.(i), shall collect their next round of samples during a time period that ends no later than 45 months after the previous round of sampling. Subsequent rounds of sampling shall be collected annually or triennially, as required by 310 CMR 22.06B(7)(d)4.d. Small systems with waivers, granted pursuant to 310 CMR 22.06B(7)(g), that have been collecting samples during the months of June through September and choose to alter their sample collection period under 310 CMR 22.06B(7)(d)4.d.(i) shall collect their next round of samples before the end of the nine-year period.

e. Any water system that demonstrates for two consecutive six-month monitoring periods that the tap water lead level computed under 310 CMR 22.06B(1)(c)3. is less than or equal to 0.005 mg/L and the tap water copper level computed under 310 CMR 22.06B(1)(c)3. is less than or equal to 0.65 mg/L may reduce the number of samples in accordance with 310 CMR 22.06B(7)(c) and reduce the frequency of sampling to once every three calendar years. This reduction in frequency of sampling requires written approval by the Department.

f. A small or medium-size water system subject to reduced monitoring that exceeds the lead or copper action level shall resume sampling in accordance with 310 CMR 22.06B(7)(c) and collect the number of samples specified for standard monitoring under 310 CMR 22.06B(7)(c). Such system shall also conduct water quality parameter monitoring in accordance with 310 CMR 22.06B(8)(b), (c) or (d) (as appropriate) during the monitoring period in which it exceeded the action level. Any such small or medium system may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in 310 CMR 22.06B(7)(c) after it has completed two subsequent consecutive six-month rounds of monitoring that meet the criteria of 310 CMR 22.06B(7)(d)4.a. and/or may resume triennial monitoring for lead and copper at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either 310 CMR 22.06B(7)(d)4.c. or e.

22.06B: continued

g. Any large water system subject to the reduced monitoring frequency that fails to meet the lead action level during any four-month monitoring period or that fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the Department under 310 CMR 22.06B(3)(f) for more than nine days in any six-month period specified in 310 CMR 22.06B(8)(d) shall conduct tap water sampling for lead and copper at the frequency specified in 310 CMR 22.06B(7)(d)3., collect the number of samples specified for standard monitoring under 310 CMR 22.06B(7)(c), and shall resume monitoring for water quality parameters within the distribution system in accordance with 310 CMR 22.06B(8)(d). This standard tap water sampling shall begin no later than the six-month period beginning January 1st of the calendar year following the lead action level exceedance or water quality parameter excursion. Such a system may resume reduced monitoring for lead and copper at the tap and for water quality parameters within the distribution system under the following conditions:

(i) The system may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in 310 CMR 22.06B(7)(c) after it has completed two subsequent six-month rounds of monitoring that meet the criteria of 310 CMR 22.06B(7)(d)4.b. and the system has received written approval from the Department that it is appropriate to resume reduced monitoring on an annual frequency. This sampling shall begin during the calendar year immediately following the end of the second consecutive six-month monitoring period.

(ii) The system may resume triennial monitoring for lead and copper at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either 310 CMR 22.06B(7)(d)4.c. or e. and the system has received written approval from the Department that it is appropriate to resume triennial monitoring.

(iii) The system may reduce the number of water quality parameter tap water samples required in accordance with 310 CMR 22.06B(8)(e)1. and the frequency with which it collects such samples in accordance with 310 CMR 22.06B(8)(e)2. Such a system may not resume triennial monitoring for water quality parameters at the tap until it demonstrates, in accordance with the requirements of 310 CMR 22.06B(8)(e)2., that it has re-qualified for triennial monitoring.

h. Any water system subject to a reduced monitoring frequency under 310 CMR 22.06B(7)(d)4. shall notify the Department in writing in accordance with 310 CMR 22.06B(11)(a)3. of any upcoming long-term change in treatment or addition of a new source as described in 310 CMR 22.06B(11)(a)3. The Department must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system. The Department may require the system to resume sampling in accordance with 310 CMR 22.06B(7)(d)3. and collect the number of samples specified for standard monitoring under 310 CMR 22.06B(7)(c) or take other appropriate steps such as increased water quality parameter monitoring or re-evaluation of its corrosion control treatment given the potentially different water quality considerations.

(e) Additional Monitoring by Systems. The results of any monitoring conducted in addition to the minimum requirements of 310 CMR 22.06B shall be considered by the system and the Department in making any determinations (*i.e.*, calculating the 90th percentile lead or copper level) under 310 CMR 22.06B(7).

(f) Invalidation of Lead or Copper Tap Water Samples. A sample invalidated under 310 CMR 22.06B(7)(f) does not count toward determining lead or copper 90th percentile levels under 310 CMR 22.06B(1)(c)3. or toward meeting the minimum monitoring requirements of 310 CMR 22.06B(7)(c).

1. The Department may invalidate a lead or copper tap water sample at least if one of the following conditions is met.

a. The laboratory establishes that improper sample analysis caused erroneous results.

b. The Department determines that the sample was taken from a site that did not meet the site selection criteria of 310 CMR 22.06B(7).

c. The sample container was damaged in transit.

d. There is substantial reason to believe that the sample was subject to tampering.

22.06B: continued

2. The system shall report the results of all samples to the Department and all supporting documentation for samples the system believes should be invalidated.

3. To invalidate a sample under 310 CMR 22.06B(7)(f)1., the decision and the rationale for the decision shall be documented in writing. The Department may not invalidate a sample solely on the grounds that a follow-up sample result is higher or lower than that of the original sample.

4. The water system shall collect replacement samples for any samples invalidated under 310 CMR 22.06B(7) if, after the invalidation of one or more samples, the system has too few samples to meet the minimum requirements of 310 CMR 22.06B(7)(c). Any such replacement samples shall be taken as soon as possible, but no later than 20 days after the date the Department invalidates the sample or by the end of the applicable monitoring period, whichever occurs later. Replacement samples taken after the end of the applicable monitoring period shall not also be used to meet the monitoring requirements of a subsequent monitoring period. The replacement samples shall be taken at the same locations as the invalidated samples or, if that is not possible, at locations other than those already used for sampling during the monitoring period.

(g) Monitoring Waivers for Small Systems. Any small system that meets the criteria of 310 CMR 22.06B(7)(g) may apply to the Department to reduce the frequency of monitoring for lead and copper under 310 CMR 22.06B(7) to once every nine years (*i.e.*, a full waiver) if it meets all of the materials criteria specified in 310 CMR 22.06B(7)(g)1. and all of the monitoring criteria specified in 310 CMR 22.06B(7)(g)2. If Department regulations permit, any small system that meets the criteria in 310 CMR 22.06B(7)(g)1. and 2. only for lead, or only for copper, may apply to the Department for a waiver to reduce the frequency of tap water monitoring to once every nine years for that contaminant only (*i.e.*, a partial waiver).

1. Materials Criteria. The system shall demonstrate that its distribution system and service lines and all drinking water supply plumbing, including plumbing conveying drinking water within all residences and buildings connected to the system, are free of lead-containing materials and/or copper-containing materials, as those terms are defined in 310 CMR 22.06(7)(g)1., as follows:

a. Lead. To qualify for a full waiver, or a waiver of the tap water monitoring requirements for lead (*i.e.*, a lead waiver), the water system shall provide certification and supporting documentation to the Department that the system is free of all lead-containing materials, as follows:

(i) It contains no plastic pipes which contain lead plasticizers, or plastic service lines which contain lead plasticizers; and

(ii) It is free of lead service lines, lead pipes, lead soldered pipe joints, and leaded brass or bronze alloy fittings and fixtures, unless such fittings and fixtures meet the specifications of any standard established pursuant to 42 U.S.C. 300g-6(e) (SDWA, § 1417(e)).

b. Copper. To qualify for a full waiver, or a waiver of the tap water monitoring requirements for copper (*i.e.*, a copper waiver), the water system shall provide certification and supporting documentation to the Department that the system contains no copper pipes or copper service lines.

2. Monitoring Criteria for Waiver Issuance. The system shall have completed at least one six-month round of standard tap water monitoring for lead and copper at sites approved by the Department and from the number of sites required by 310 CMR 22.07B(7)(c) and demonstrate that the 90th percentile levels for any and all rounds of monitoring conducted since the system became free of all lead-containing and/or copper-containing materials, as appropriate, meet the following criteria.

a. Lead Levels. To qualify for a full waiver, or a lead waiver, the system shall demonstrate that the 90th percentile lead level does not exceed 0.005 mg/L.

b. Copper Levels. To qualify for a full waiver, or a copper waiver, the system shall demonstrate that the 90th percentile copper level does not exceed 0.65 mg/L.

22.06B: continued

3. Department Approval of Waiver Application. The Department shall notify the system of its waiver determination, in writing, setting forth the basis of its decision and any condition of the waiver. As a condition of the waiver, the Department may require the system to perform specific activities (*e.g.*, limited monitoring, periodic outreach to customers to remind them to avoid installation of materials that might void the waiver) to avoid the risk of lead or copper concentration of concern in tap water. The small system shall continue monitoring for lead and copper at the tap as required by 310 CMR 22.06B(7)(d)1. through 4., as appropriate, until it receives written notification from the Department that the waiver has been approved.
4. Monitoring Frequency for Systems with Waivers.
 - a. A system with a full waiver shall conduct tap water monitoring for lead and copper in accordance with 310 CMR 22.06B(7)(d)4.d. at the reduced number of sampling sites identified in 310 CMR 22.06B(7)(c) at least once every nine years and provide the materials certification specified in 310 CMR 22.06B(7)(g)1. for both lead and copper to the Department along with the monitoring results. Samples collected every nine years shall be collected no later than every ninth calendar year.
 - b. A system with a partial waiver shall conduct tap water monitoring for the waived contaminant in accordance with 310 CMR 22.06B(7)(d)4.d. at the reduced number of sampling sites specified in 310 CMR 22.06B(7)(c) at least once every nine years and provide the materials certification specified in 310 CMR 22.06B(7)(g)1. pertaining to the waived contaminant along with the monitoring results. Such a system also shall continue to monitor for the non-waived contaminant in accordance with requirements of 310 CMR 22.06B(7)(d)1. through 4., as appropriate.
 - c. Any water system with a full or partial waiver shall notify the Department in writing in accordance with 310 CMR 22.06B(11)(a)3. of any upcoming long-term change in treatment or addition of a new source, as described in 310 CMR 22.06B(11). The Department must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system. The Department has the authority to require the system to add or modify waiver conditions (*e.g.*, require recertification that the system is free of lead-containing and/or copper-containing materials, require additional round(s) of monitoring), if it deems such modifications are necessary to address treatment or source water changes at the system.
 - d. If a system with a full or partial waiver becomes aware that it is no longer free of lead-containing or copper-containing materials, as appropriate, (*e.g.*, as a result of new construction or repairs), the system shall notify the Department in writing no later than 60 days after becoming aware of such a change.
5. Continued Eligibility. If the system continues to satisfy the requirements of 310 CMR 22.06B(7)(g)4., the waiver will be renewed automatically, unless any of the conditions listed in 310 CMR 22.06B(7)(g)5.a. through c. occurs. A system whose waiver has been revoked may re-apply for a waiver at such time as it again meets the appropriate materials and monitoring criteria of 310 CMR 22.06B(7)(g)1. and 2.
 - a. A system with a full waiver or a lead waiver no longer satisfies the materials criteria of 310 CMR 22.06B(7)(g)1.a. or has a 90th percentile lead level greater than 0.005 mg/L.
 - b. A system with a full waiver or a copper waiver no longer satisfies the materials criteria of 310 CMR 22.06B(7)(g)1.b. or has a 90th percentile copper level greater than 0.65 mg/L.
 - c. The Department notifies the system, in writing, that the waiver has been revoked, setting forth the basis of its decision.
6. Requirements Following Waiver Revocation. A system whose full or partial waiver has been revoked by the Department is subject to the corrosion control treatment and lead and copper tap water monitoring requirements, as follows:
 - a. If the system exceeds the lead and/or copper action level, the system shall implement corrosion control treatment in accordance with the deadlines specified in 310 CMR 22.06B(2)(e), and any other applicable requirements of 310 CMR 22.06B.

22.06B: continued

b. If the system meets both the lead and the copper action level, the system shall monitor for lead and copper at the tap no less frequently than once every three years using the reduced number of sample sites specified in 310 CMR 22.06B(7)(c).

7. Pre-existing Waivers. Small system waivers approved by the Department in writing prior to April 11, 2000 shall remain in effect under the following conditions:

a. If the system has demonstrated that it is both free of lead-containing and copper-containing materials, as required by 310 CMR 22.06B(7)(g)1. and that its 90th percentile lead levels and 90th percentile copper levels meet the criteria of 310 CMR 22.06B(7)(g)2., the waiver remains in effect so long as the system continues to meet the waiver eligibility criteria of 310 CMR 22.06B(7)(g)5. The first round of tap water monitoring conducted pursuant to 310 CMR 22.06B(7)(g)4. shall be completed no later than nine years after the last time the system has monitored for lead and copper at the tap.

b. If the system has met the materials criteria of 310 CMR 22.06B(7)(g)1. but has not met the monitoring criteria of 310 CMR 22.06B(7)(g)2., the system shall conduct a round of monitoring for lead and copper at the tap demonstrating that it meets the criteria of 310 CMR 22.06B(7)(g)2. no later than September 30, 2000. Thereafter, the waiver shall remain in effect as long as the system meets the continued eligibility criteria of 310 CMR 22.06B(7)(g)5. The first round of tap water monitoring conducted pursuant to 310 CMR 22.06B(7)(g)4. shall be completed no later than nine years after the round of monitoring conducted pursuant to 310 CMR 22.06B(7)(g)2.

(8) Monitoring Requirements for Water Quality Parameters. All large water systems and all small and medium-size systems that exceed the lead or copper action level shall monitor water quality parameters in addition to lead and copper in accordance with 310 CMR 22.06B(8). The requirements of 310 CMR 22.06B(8) are summarized in the table at the end of 310 CMR 22.06B.

(a) General Requirements.

1. Sample Collection Methods.

a. Tap samples shall be representative of water quality throughout the distribution system taking into account the number of persons served, the different sources of water, the different treatment methods employed by the system, and seasonal variability. Tap sampling under 310 CMR 22.06B(8) is not required to be conducted at taps targeted for lead and copper sampling under 310 CMR 22.06B(7)(a). (Note: Systems may find it convenient to conduct tap sampling for water quality parameters at sites used for coliform sampling under 310 CMR 22.05.)

b. Samples collected at the entry point(s) to the distribution system shall be from locations representative of each source after treatment. If a system draws water from more than one source and the sources are combined before distribution, the system shall sample at an entry point to the distribution system during periods of normal operating conditions (*i.e.*, when water is representative of all sources being used).

2. Number of Samples.

a. Systems shall collect two tap samples for applicable water quality parameters during each monitoring period specified under 310 CMR 22.06B(8)(b) through (e) from the following number of sites.

<u>System Size (No. of People Served)</u>	<u>No. of Sites for Water Quality Parameters</u>
>100,000	25
10,001-100,000	10
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
<100	1

22.06B: continued

b. Except as provided in 310 CMR 22.06B(8)(c)3. systems shall collect two samples for each applicable water quality parameter at each entry point to the distribution system during each monitoring period specified in 310 CMR 22.06B(8)(b). During each monitoring period specified in 310 CMR 22.06B(8)(c) through (e), systems shall collect one sample for each applicable water quality parameter at each entry point to the distribution system.

(b) Initial Sampling. All large water systems shall measure the applicable water quality parameters as specified below at taps and at each entry point to the distribution system during each six-month monitoring period specified in 310 CMR 22.06B(7)(d)1. All small and medium-size systems shall measure the applicable water quality parameters at the locations specified below during each six-month monitoring period specified in 310 CMR 22.06B(7)(d)1. during which the system exceeds the lead or copper action level.

1. At taps:
 - a. pH;
 - b. alkalinity;
 - c. orthophosphate, when an inhibitor containing a phosphate compound is used;
 - d. silica, when an inhibitor containing a silicate compound is used;
 - e. calcium;
 - f. conductivity; and
 - g. water temperature.
2. At each entry point to the distribution system: all of the applicable parameters listed in 310 CMR 22.06B(8)(b)1.

(c) Monitoring after Installation of Corrosion Control. Any large system which installs optimal corrosion control treatment pursuant to 310 CMR 22.06B(2)(d)4. shall measure the water quality parameters at the locations and frequencies specified below during each six-month monitoring period specified in 310 CMR 22.06B(7)(d)2.a. Any small or medium-size system which installs optimal corrosion control treatment shall conduct such monitoring during each six-month monitoring period specified in 310 CMR 22.06B(7)(d)2.b. in which the system exceeds the lead or copper action level.

1. At taps, two samples for:
 - a. pH;
 - b. alkalinity;
 - c. orthophosphate, when an inhibitor containing a phosphate compound is used;
 - d. silica, when an inhibitor containing a silicate compound is used;
 - e. calcium, when calcium carbonate stabilization is used as part of corrosion control.
2. Except as provided in 310 CMR 22.06B(8)(c)3., at each entry point to the distribution system, one sample every two weeks (bi-weekly) for:
 - a. pH;
 - b. when alkalinity is adjusted as part of optimal corrosion control, a reading of the dosage rate of the chemical used to adjust alkalinity, and the alkalinity concentration; and
 - c. when a corrosion inhibitor is used as part of optimal corrosion control, a reading of the dosage rate of the inhibitor used, and the concentration of orthophosphate or silica (whichever is applicable).
3. Any ground water system can limit entry point sampling described in 310 CMR 22.06B(8)(c)2. to those entry points that are representative of water quality and treatment conditions throughout the system. If water from untreated ground water sources mixes with water from treated ground water sources, the system shall monitor for water quality parameters both at representative entry points receiving treatment and representative entry points receiving no treatment. Prior to the start of any monitoring under 310 CMR 22.06B(8)(c)3., the system shall provide to the Department written information identifying the selected entry points and documentation, including information on seasonal variability, sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.

22.06B: continued

(d) Monitoring after Department Specifies Water Quality Parameter Values for Optimal Corrosion Control. After the Department specifies the values for applicable water quality control parameters reflecting optimal corrosion control treatment under 310 CMR 22.06B(3)(f) all large systems shall measure the applicable water quality parameters in accordance with 310 CMR 22.06B(8)(c) and determine compliance with the requirements of 310 CMR 22.06B(3)(g) every six months with the first six-month period to begin on either January 1st or July 1st, whichever comes first, after the Department specifies the optimal values under 310 CMR 22.06B(3)(f). Any small or medium-size system shall conduct such monitoring during each six-month period specified in 310 CMR 22.06B(7)(d)3. in which the system exceeds the lead or copper action level. For any such small and medium-size system that is subject to a reduced monitoring frequency pursuant to 310 CMR 22.06B(7)(d)4. at the time of the action level exceedance, the start of the applicable six-month monitoring period under 310 CMR 22.06B(8)(d) shall coincide with the end of the applicable monitoring period under 310 CMR 22.06B(7)(d)4. Compliance with Department-designated optimal water quality parameter values shall be determined as specified under 310 CMR 22.06B(3)(g).

(e) Reduced Monitoring.

1. Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment during each of two consecutive six-month monitoring periods under 310 CMR 22.06B(8)(d) shall continue monitoring at the entry point(s) to the distribution system as specified in 310 CMR 22.06B(8)(c)2. Such system may collect two tap samples for applicable water quality parameters from the following reduced number of sites during each six-month monitoring period.

<u>System Size (No. of People Served)</u>	<u>Reduced No. of Sites for Water Quality Parameters</u>
>100,000	10
10,001 to 100,000	7
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
≤100	1

2. a. Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the Department under 310 CMR 22.06B(3)(f) during three consecutive years of monitoring under 310 CMR 22.06B(8)(e)2.a. may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in 310 CMR 22.06B(8)(e)1., from every six months to annually. This sampling begins during the calendar year immediately following the end of the monitoring period in which the third consecutive year of six-month monitoring occurs. Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the Department under 310 CMR 22.06B(3)(f), during three consecutive years of annual monitoring under 310 CMR 22.06B(8)(e)2. a. may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in 310 CMR 22.06B(8)(e)1. from annually to every three years. This sampling begins no later than the third calendar year following the end of the monitoring period in which the third consecutive year of monitoring occurs.

b. A water system may reduce the frequency with which it collects tap samples for applicable water quality parameters specified in 310 CMR 22.06B(8)(e)1. to every three years if it demonstrates during two consecutive monitoring periods that its tap water lead level at the 90th percentile is less than or equal to the PQL for lead specified in 310 CMR 22.06B(10)(a)1.b., that its tap water copper level at the 90th percentile is less than or equal to 0.65 mg/L for copper in 310 CMR 22.06B(1)(c)2., and that it also has maintained the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the Department under 310 CMR 22.06B(3)(f). Monitoring conducted every three years shall be done no later than every third calendar year.

22.06B: continued

3. A water system that conducts sampling annually shall collect these samples evenly throughout the year so as to reflect seasonal variability.

4. Any water system subject to the reduced monitoring frequency that fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the Department under 310 CMR 22.06B(3)(f) for more than nine days in any six-month period specified in 310 CMR 22.06B(3)(g) shall resume distribution system tap water sampling in accordance with the number and frequency requirements in 310 CMR 22.06B(8)(c). Such a system may resume annual monitoring for water quality parameters at the tap at the reduced number of sites specified in 310 CMR 22.06B(8)(e)1. after it has completed two subsequent consecutive six-month rounds of monitoring that meet the criteria of 310 CMR 22.06B(8)(e)1. and/or may resume triennial monitoring for water quality parameters at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either 310 CMR 22.06B(8)(e)2.a. or b.

(f) Additional Monitoring by Systems. The results of any monitoring conducted in addition to the minimum requirements of 310 CMR 22.06B(8) shall be considered by the system and the Department in making any determinations (*i.e.*, determining concentrations of water quality parameters) under 310 CMR 22.06B(3) or (8).

(g) For the purposes of determining compliance with 310 CMR 22.06B, samples may be considered only if they have been analyzed by a certified laboratory, except that measurements for alkalinity, calcium, conductivity, orthophosphate, pH, and silica may be performed by a Massachusetts certified operator.

(9) Monitoring Requirements for Lead and Copper in Source Water.

(a) Sample Location, Collection Methods, and Number of Samples.

1. A water system that fails to meet the lead or copper action level on the basis of tap samples collected in accordance with 310 CMR 22.06B(7) shall collect lead and copper source water samples in accordance with the following requirements regarding sample location, number of samples, and collection methods:

a. Groundwater systems shall take a minimum of one sample at every entry point to the distribution system which is representative of each well after treatment (sampling point). The system shall take one sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

b. Surface water systems shall take a minimum of one sample at every entry point to the distribution system after any application of treatment or in the distribution system at a point which is representative of each source after treatment (sampling point). The system shall take each sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

NOTE: For the purposes of 310 CMR 22.06B(9)(a)1.b., surface water systems include systems with a combination of surface and ground sources.

c. If a system draws water from more than one source and the sources are combined before distribution, the system shall sample at an entry point to the distribution system during periods of normal operating conditions (*i.e.*, when water is representative of all sources being used).

d. The Department may reduce the total number of samples which shall be analyzed by allowing the use of compositing. Compositing of samples shall be done by certified laboratory personnel. Composite samples from a maximum of five samples are allowed, provided that if the lead concentration in the composite sample is greater than or equal to 0.001 mg/L or the copper concentration is greater than or equal to 0.160 mg/L, then either:

(i) A follow-up sample shall be taken and analyzed within 14 days at each sampling point included in the composite; or

(ii) If duplicates of or sufficient quantities from the original samples from each sampling point used in the composite are available, the system may use these instead of resampling.

22.06B: continued

2. Where the results of sampling indicate an exceedance of 5ppb, the maximum permissible source water levels established under 310 CMR 22.06B(4)(b)4., the Department may require that one additional sample be collected as soon as possible after the initial sample was taken (but not to exceed two weeks) at the same sampling point. If a Department-required confirmation sample is taken for lead or copper, then the results of the initial and confirmation sample shall be averaged in determining compliance with the Department-specified maximum permissible levels. Any sample value below the detection limit shall be considered to be zero. Any value above the detection limit but below the PQL shall either be considered as the measured value or be considered one-half the PQL.
- (b) Monitoring Frequency after System Exceeds Tap Water Action Level. Any system which exceeds the lead or copper action level at the tap shall collect one source water sample from each entry point to the distribution system no later than six months after the end of the monitoring period during which the lead or copper action level was exceeded. For monitoring periods that are annual or less frequent, the end of the monitoring period is September 30th of the calendar year in which the sampling occurs, or if the Department has established an alternate monitoring period, the last day of that period.
- (c) Monitoring Frequency after Installation of Source Water Treatment. Any system which installs source water treatment pursuant to 310 CMR 22.06B(4)(a)3. shall collect an additional source water sample from each entry point to the distribution system during two consecutive six-month monitoring periods by the deadline specified in 310 CMR 22.06B(4)(a)4.
- (d) Monitoring Frequency after the Department Determines that Source Water Treatment is not Needed.
1. A system shall monitor at the frequency specified in 310 CMR 22.06B(9)(d)1. and
 2. in cases where the Department determines that the system is not required to install source water treatment under 310 CMR 22.06B(4)(b)2.
 - a. A water system using only groundwater shall collect samples once during the three-year compliance period (as that term is defined in 310 CMR 22.02) in effect when the applicable Department determination under 310 CMR 22.06B(9)(d)1. is made. Such systems shall collect samples once during each subsequent compliance period. Triennial samples shall be collected every third calendar year.
 - b. A water system using surface water (or a combination of surface and groundwater) shall collect samples once during each year, the first annual monitoring period to begin on the date on which the applicable Department determination is made under 310 CMR 22.06B(9)(d)1.
 2. A system is not required to conduct source water sampling for lead and/or copper if the system meets the action level for the specific contaminant in tap water samples during the entire source water sampling period applicable to the system under 310 CMR 22.06B(9)(d)1.a. or b. A water system using surface water (or a combination of surface and ground water) shall collect samples once during each calendar year the first annual monitoring period to begin during the year in which the applicable Department determination is made under 310 CMR 22.06B(9)(d)1.
- (e) Reduced Monitoring Frequency.
1. A water system using only ground water may reduce the monitoring frequency for lead and/or copper in source water to once during each nine-year compliance cycle (as that term is defined in 310 CMR 22.02) provided that the samples are collected no later than every ninth calendar year and if the system meets one of the following criteria:
 - a. The system demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations specified by the Department in 310 CMR 22.06B(4)(b)4. during at least three consecutive compliance periods under 310 CMR 22.06B(9)(d)1.; or
 - b. The Department has determined that source water treatment is not needed and the system demonstrates that, during at least three consecutive compliance periods in which sampling was conducted under 310 CMR 22.06B(9)(d)1., the concentration of lead in source water was less than or equal to 0.005 mg/L and the concentration of copper in source water was less than or equal to 0.65 mg/L.

22.06B: continued

2. A water system using surface water (or a combination of surface and ground waters) may reduce the monitoring frequency in 310 CMR 22.06B(9)(d)1. to once during each nine-year compliance cycle (as defined in 310 CMR 22.02 provided that the samples are collected no later than every ninth calendar year and if the system meets one of the following criteria:
 - a. The system demonstrates that finished drinking water entering the distribution system has been maintained below the maximum permissible lead and copper concentrations specified by the Department in 310 CMR 22.06B(4)(b)4. for at least three consecutive calendar years; or
 - b. The Department has determined that source water treatment is not needed and the system demonstrates that, during at least three consecutive calendar years, the concentration of lead in source water was less than or equal to 0.005 mg/L and the concentration of copper in source water was less than or equal to 0.65 mg/L.
 3. A water system that uses a new source of water is not eligible for reduced monitoring for lead and/or copper until concentrations in samples collected from the new source during three consecutive monitoring periods are below the maximum permissible lead and copper concentrations specified by the Department in 310 CMR 22.06B(4)(a)5.
- (10) Analytical Methods.
- (a) Analyses for lead, copper, pH, conductivity, calcium, alkalinity, orthophosphate, silica, and temperature shall be conducted using the following methods:

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.06B: continued

<u>Contaminant</u>	<u>Methodology</u> ⁹	<u>ANALYTICAL METHODS</u> <u>Reference (Method Number)</u>			<u>SM Online</u> ¹¹	<u>USGS</u> ⁴	<u>Other</u>
		<u>EPA</u> ¹	<u>ASTM</u> ²	<u>SM</u> ³			
Lead	Atomic absorption; furnace technique		D3559-96, 03D	3113B	3113B-99		
	Inductively-coupled plasma; mass spectrometry	200.8					
	Atomic absorption; platform furnace technique	200.9					
	Differential Pulse Anodic Stripping Voltameter						Method 1001 ¹⁰
Copper	Atomic absorption; furnace technique		D1688-95, 02C	3113B	3113B-99		
	Atomic absorption; direct aspiration		D1688-95, 02A	3111B	3113B-99		
	Inductively-coupled plasma	200.75		3120B	3120B-99		
	Inductively-coupled plasma; mass spectrometry	200.86					
	Atomic absorption; platform furnace	200.97					
Magnesium	Atomic absorption; furnace ICP	200.7	D 511-93 03B	3111B 3120B	311B-99 3120B-99		
	Complexation Titrimetric Methods		D 511-93, 3A	3500-Mg E 3500 Mg B	3500MB-97		
	Ion Chromatography		D6919-03				
	Electrometric	150.1 150.2	D1293-95, 99	4500-H ⁺ B	4500- H ⁺ B-00		
Conductivity	Conductance		D1125-95 (Re-approved 1999) A	2510B	2510B-97		
Calcium	EDTA titrimetric		D511-9303 A	3500- Ca-D Ca B	3500- Ca B-97		
	Atomic absorption; direct aspiration		D511-9303 B	3111B	3111 B-99		
	Inductively-coupled plasma	200.7		3120B	3120 B-99		
Alkalinity	Titrimetric		D1067-02 B	922320B	2320 B-97		
	Electrometric titration					I-1030-85	
Ortho-phosphate, unfiltered, no digestion or hydrolysis	Colorimetric, automated, ascorbic acid	365.18		4500-P-F			
	Colorimetric, ascorbic acid, single reagent		D515-88A	4500-P-E			
	Colorimetric, phosphomolybdate; automated-segmented flow; automated discrete					I-1601-85	
						I-2601-90	
						I-2598-85	
Silica	Ion Chromatography	300.08	D4327-97, 03	4110B	4110 B-00		
	Capillary Ion Electro-Phoresis	300.1	D6508, Rev. 2 -39				
	Colorimetric, molybdate blue; automated-segmented flow					I-1700-85	
	Colorimetric Molybdosilicate		D859-9400	4500-Si-D (18 th ,19 th) 4500-SiO ₂ C (20 th ed.)	4500-SiO ₂ C-97		I-2700-85

22.06B: continued

ANALYTICAL METHODS (continued)

<u>Contaminant</u>	<u>Methodology</u> ⁹	<u>EPA</u> ¹	<u>ASTM</u> ²	<u>SM</u> ³	<u>SM Online</u> ¹¹	<u>USGS</u> ⁴	<u>Other</u>
	Heteropoly blue			4500-Si-E (18 th , 19 th) 4500-SiO ₂ D (20 th ed.)	4500- SiO2 D-97		
	Automated method for molybdate-reactive silica			4500-Si- F (18 th , 19 th) 4500-SiO ₂ E (20 th ed.)	4500- SiO2 D-97		
	Inductively-coupled plasma	200.75		3120B	3120 B-99		
Temperature	Thermometric			2550			

¹ The procedures 239.2, 220.2, 220.1, 150.1, 150.2, 120.1, 215.2, 310.1, 365.1, 365.3, 365.2, and 370.1 are incorporated by reference and shall be done in accordance with "Methods for Chemical Analysis of Water and Wastes", EPA Environmental Monitoring and Support Laboratory, Cincinnati, OH (EPA-600/4-79-020), Revised March 1983, pp. 239.2-1 through 239.2-2 and metals-1 through metals-19, 220.2-1 through 220.2-2 and metals-1 through metals-19, 220.1-1 through 220.1-2 and metals-1 through metals-19, 150.1-1 through 150.1-3, 150.2-1 through 150.2-3, 120.1-1 through 120.1-3, 215.2-1 through 215.2-3, 215.1-1 through 215.1-2, 310.1-1 through 310.1-3, 365.1-1 through 365.1-9, 365.3-1 through 365.3-4, 365.2-1 through 365.2-6, and 370.1-1 through 370.1-5, respectively. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be obtained from ORD Publications, CERL, EPA, Cincinnati, OH 45268. Copies may be inspected at the United States Environmental Protection Agency, 401 M Street, SW., Room EB-15, Washington, D.C. 20460 or at the Office of the Federal Register, 1100 L Street, NW., Room 8401, Washington, D.C.

² The procedures D3559-96D, D1688-95C, D1688-95A, D1293-95B, D1125-82B, D511-88A, D511-88B, D1067-88B, D515-88A, D4327-97, and D859-88 are incorporated by reference and shall be done in accordance with *Annual Book of ASTM Standards*, 1994, 1996, or 1999, Vols. 11.01 and 11.02, ASTM International; any year containing the cited version of the method may be used. The previous versions of D1688-95A, D1688-95C (copper), D3559-95D (lead), D1293-95 (pH), D1125-91A (conductivity), and D859-94 (silica) are also approved. These previous versions D1688-90A, C; D355990D, D1293-84, D1125-91A and D859-88, respectively are located in the *Annual Book of ASTM Standards*, 1994, Vol. 11.01. Copies may be obtained from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

³ The procedures 3113, 3111-B, 3120, 4500-H⁺, 2510, 3500-Ca-D, 3120, 2320, 4500-P-F, 4500-P-E, 4110, 4500-Si-D, 4500-Si-E, 4500-Si-F, and 2550 are incorporated by reference and shall be done in accordance with *Standard Methods for the Examination of Water and Wastewater*, 18th edition (1992), 19th edition (1995) or 20th edition (1998), American Public Health Association, 1015 Fifteenth Street, NW, Washington, DC 20005. The cited methods published in any of these three editions may be used, except that the versions of 3111B and 3113B in the 20th edition may not be used. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be obtained from the American Water Works Association, Customer Services, 6666 West Quincy Avenue, Denver, Co 80235, Phone (303) 794-7711. Copies may be inspected at the United States Environmental Protection Agency, 401 M Street, SW., Room EB-15, Washington, D.C. 20460 or at the Office of the Federal Register, 1100 L Street, NW., Room 8401, Washington, D.C.

⁴ The procedures I-1030-85, I-1601-85, I-2601-85, I-2598-85, I-1700-85, and I-2700-85 are incorporated by reference and shall be done in accordance with "Methods for Determination of Inorganic Substances in Water and Fluvial Sediments", 3rd edition, U.S. Department of Interior, U.S. Geological Survey, 1989, pp. 55-56, 381-382, 383-385, 387-388, 415-416, and 417-419, respectively. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be purchased from the Books and Open-file Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, Co 80225. Copies may be inspected at the United States Environmental Protection Agency, 401 M Street, SW., Room EB-15, Washington, D.C. 20460 or at the Office of the Federal Register, 1100 L Street, NW., Room 8401, Washington, D.C.

⁵ *Determination of Metals and Trace Elements in Water and Wastes by Inductively-Coupled Plasma--Atomic Emission Spectrometry*, Revision 3.3, April 1991, *Methods for the Determination of Metals in Environmental Samples*, Office of Research and Development, Washington, DC 20460, EPA/4-91/010, June 1991.

⁶ *Determination of Trace Elements in Water and Wastes by Inductively-Coupled Plasma--Mass Spectrometry*, Revision 4.4, April 1991, *Methods for the Determination of Metals in Environmental Samples*, Office of Research and Development, Washington, DC 20460, EPA/600/4-91/010, June, 1991.

22.06B: continued

ANALYTICAL METHODS (continued)

⁷ *Determination of Trace Elements by Stabilized Temperature Graphite Furnace Atomic Absorption Spectrometry*, Revision 1.2, April 1991, *Methods for the Determination of Metals in Environmental Samples*, Office of Research and Development, Washington, DC 20460, EPA/600/4-91/010, June 1991.

⁸ *Determination of Inorganic Ions in Water by Ion Chromatography*, Method 300.0, December 1989, U.S. EPA EMSL. This document is available from U.S. EPA, EMSL, Cincinnati, OH 45268.

⁹ For analyzing lead and copper, the technique applicable to total metals shall be used and samples cannot be filtered. Samples that contain less than one NTU (nephelometric turbidity unit) and are properly preserved (conc HNO³ TO pH <2) may be analyzed directly (without digestion) for total metals: otherwise, digestion is required. Turbidity shall be measured on the preserved samples just prior to when metals analysis is initiated. When digestion is required, the "total recoverable" technique as defined in the method shall be used.

¹⁰ The description for Method 1001 for lead is available from Palintest, LTD, 21 Kenton Lands Road, P.O. Box 18395, Erlanger, KY 41018, or from the Hach Company, P.O. Box 389, Loveland, CO 80539.

¹¹ Standard Methods Online are available at <http://www.standardmethods.org>. The year in which each method was approved by the Standard Methods Committee is designated by the last two digits in the method number. The methods listed are the only online versions that may be used.

1. Analyses under 310 CMR 22.06B(9) shall only be conducted by laboratories that have been certified by EPA or the Department as stated in 310 CMR 22.11A. To obtain certification to conduct analyses for lead and copper, laboratories shall:

a. Analyze performance evaluation samples which include lead and copper provided by a laboratory certified by the National Institute of Standards and Technology (NIST); and

b. quantitative acceptance limits as follows:

(i) Lead: $\pm 30\%$ of the actual amount in the Performance Evaluation sample when the actual amount is greater than or equal to 0.005 mg/L. The Practical Quantitation Level, or PQL, for lead is 0.005 mg/L.

(ii) Copper: $\pm 10\%$ of the actual amount in the Performance Evaluation sample when the actual amount is greater than or equal to 0.050 mg/L. The Practical Quantitation Level, or PQL, for copper is 0.05 mg/L.

c. If the laboratory will be processing source water composite samples under 310 CMR 22.06B(9)(a)1.d., achieve method detection limits for lead of 0.001 mg/L according to the procedures in Appendix B of Part 136 of 40 CFR.

d. Be currently certified by EPA or the Department to perform analyses to the specifications described in 310 CMR 22.06B(10)(a)1.

2. The Department has the authority to allow the use of previously collected monitoring data for purposes of monitoring, if the data were collected and analyzed in accordance with the requirements of 310 CMR 22.06B(10)(a).

3. All lead levels measured between the PQL and the MDL shall be either reported as measured or they can be reported as one-half the PQL (0.0025 mg/L). All levels below the lead MDL shall be reported as zero.

4. All copper levels measured between the PQL and the MDL shall be either reported as measured or they can be reported as one-half the PQL (0.025 mg/L). All levels below the copper MDL shall be reported as zero.

(11) Reporting Requirements. All water systems shall report all of the following information to the Department in accordance with 310 CMR 22.06B(11).

(a) Reporting requirements for tap water monitoring for lead and copper and for water quality parameter monitoring

1. Except as provided in 310 CMR 22.06B(11)(a)1.h., a water system shall report the information specified below for all tap water samples specified in 310 CMR 22.06B(7) and for all water quality parameter samples specified in 310 CMR 22.06B(8) within the first ten days following the end of each applicable monitoring period specified in 310 CMR 22.06B(7) and (8) (*i.e.*, every six-months, annually, every three years, or every nine years). For monitoring periods with a duration less than six months, the end of the monitoring period is the last date samples can be collected during that period as specified in 310 CMR 22.06B(7) and (8).

a. The results of all tap samples for lead and copper including the location of each site and the criteria under 310 CMR 22.06B(7)(a)3. through 6., and/or 7. under which the site was selected for the system's sampling pool;

22.6B: continued

- b. Documentation for each sample tap water lead or copper sample for which the water system requests invalidation pursuant to 310 CMR 22.06B(7)(f)2.;
 - c. the 90th percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period (calculated in accordance with 310 CMR 22.06B(11)(c)3. Unless the Department calculates the systems 90th percentile lead and copper levels under 310 CMR 22.06B(11)(h);
 - d. with the exception of initial tap sampling conducted pursuant to 310 CMR 22.06B(7)(d)1., the system shall designate any site which was not sampled during previous monitoring periods, and include an explanation of why sampling sites have changed;
 - e. the results of all tap samples for pH, and where applicable, alkalinity, calcium, conductivity, temperature, and orthophosphate or silica collected under 310 CMR 22.06B(8)(b) through (e);
 - f. the results of all samples collected at the entry point(s) to the distribution system for applicable water quality parameters under 310 CMR 22.06B(8)(b) through (e).
 - g. A water system shall report the results of all water quality parameter samples collected under 310 CMR 22.06B(8)(c) through (f) during each six-month monitoring period specified in 310 CMR 22.06B(8)(d) within the first ten days following the end of the monitoring period unless the Department has specified a more frequent reporting requirement.
2. For a non-transient non-community water system, or a community water system meeting the criteria of 310 CMR 22.06B(6)(b)7., that does not have enough taps that can provide first-draw samples, the system shall either:
 - a. Provide written documentation to the Department identifying standing times and locations for enough non-first-draw samples to make up its sampling pool under 310 CMR 22.06B(7)(b)5. by the start of the first applicable monitoring period under 310 CMR 22.06B(7)(d) that commences after April 11, 2000, unless the Department has waived prior Department approval of non-first-draw sample sites selected by the system pursuant to 310 CMR 22.06B(7)(b)5.; or
 - b. If the Department has waived prior approval of non-first-draw sample sites selected by the system, identify, in writing, each site that did not meet the six-hour minimum standing time and the length of standing time for that particular substitute sample collected pursuant to 310 CMR 22.06B(7)(b)5. and include this information with the lead and copper tap sample results required to be submitted pursuant to 310 CMR 22.07B(11)(a)1.a.
 3.
 - a. At a time specified by the Department, or if no specific time is designated by the Department, then as early as possible but no later than 60 days prior to the addition of a new source or any long-term change in water treatment, a water system deemed to have optimized corrosion control under 310 CMR 22.06B(2)(b)3., a water system subject to reduced monitoring pursuant to 310 CMR 22.06B(7)(d)4., or a water system subject to a monitoring waiver pursuant to 310 CMR 22.06B(7)(g), shall submit a demonstration study to the Department describing the change or addition. The Department must review and approve the addition of a new source or the long-term change in treatment including a demonstration study before it is implemented by the water system. Examples of long-term treatment changes include the addition of a new treatment process or modification of an existing treatment process. Examples of modifications include switching secondary disinfectants, switching coagulants (*e.g.*, alum to ferric chloride), and switching corrosion inhibitor products (*e.g.*, orthophosphate to blended phosphate). Long-term changes can include dose changes to existing chemicals if the system is planning long-term changes to its finished water pH or residual inhibitor concentration. Long-term treatment changes would not include chemical dose fluctuations associated with daily raw water quality changes or seasonal variations.
 - b. For any short-term changes in corrosion control treatment practices, the public water system must notify the Department within 24 hours of making such changes. If the changes persist longer than seven days, then it will constitute a Treatment Technique Violation and the public water system shall provide public notification in accordance with 310 CMR 22.16(3).

22.06B: continued

4. Any small system applying for a monitoring waiver under 310 CMR 22.06B(7)(g), or subject to a waiver granted pursuant to 310 CMR 22.06B(7)(g)3., shall provide the following information to the Department in writing by the specified deadline:
 - a. By the start of the first applicable monitoring period in 310 CMR 22.06B(7)(d), any small water system applying for a monitoring waiver shall provide the documentation required to demonstrate that it meets the waiver criteria of 310 CMR 22.06B(7)(g)1. and 2.
 - b. No later than nine years after the monitoring previously conducted pursuant to 310 CMR 22.06B(7)(g)2. or 4.a., each small system desiring to maintain its monitoring waiver shall provide the information required by 310 CMR 22.06B(7)(g)4.a. and b.
 - c. No later than 60 days after it becomes aware that it is no longer free of lead-containing and/or copper-containing material, as appropriate, each small system with a monitoring waiver shall provide written notification to the Department, setting forth the circumstances resulting in the lead-containing and/or copper-containing materials being introduced into the system and what corrective action, if any, the system plans to remove these materials.
 - d. By October 10, 2000, any small system with a waiver granted prior to April 11, 2000 and that has not previously met the requirements of 310 CMR 22.06B(7)(g)2. shall provide the information required by 310 CMR 22.06B(7)(g)2.
 5. Each ground water system that limits water quality parameter monitoring to a subset of entry points under 310 CMR 22.06B(8)(c)3. shall provide, by the commencement of such monitoring, written correspondence to the Department that identifies the selected entry points and includes information sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.
- (b) Source Water Monitoring Reporting Requirements.
1. A water system shall report the sampling results for all source water samples collected in accordance with 310 CMR 22.06B(9), within the first ten days following the end of each source water monitoring period (*i.e.*, annually, per compliance period, per compliance cycle) specified in 310 CMR 22.06B(9).
 2. With the exception of the first round of source water sampling conducted pursuant to 310 CMR 22.06B(9)(b), the system shall specify any site which was not sampled during previous monitoring periods, and include an explanation of why the sampling point has changed.
- (c) Corrosion Control Treatment Reporting Requirements. By the applicable dates under 310 CMR 22.06B(2), systems shall report the following information:
1. for systems demonstrating that they have already optimized corrosion control, information required in 310 CMR 22.06B(2)(b)2. or 3.
 2. for systems required to optimize corrosion control, their recommendation regarding optimal corrosion control treatment under 310 CMR 22.06B(3)(a).
 3. for systems required to evaluate the effectiveness of corrosion control treatments under 310 CMR 22.06B(3)(c) the information required by 310 CMR 22.06B(3)(c).
 4. for systems required to install optimal corrosion control designated by the Department under 310 CMR 22.06B(3)(d), a letter certifying that the system has completed installing that treatment.
- (d) Source Water Treatment Reporting Requirements. By the applicable dates in 310 CMR 22.06B(4), systems shall provide the following information to the Department:
1. if required under 310 CMR 22.06B(4)(b)1., their recommendation regarding source water treatment;
 2. for systems required to install source water treatment under 310 CMR 22.06B(4)(b)2., a letter certifying that the system has completed installing the treatment designated by the Department within 24 months after the Department designated the treatment.
- (e) Lead Service Line Replacement Reporting Requirements. Systems shall report the following information to the Department to demonstrate compliance with the requirements of 310 CMR 22.06B(5):

22.06B: continued

1. No later than 12 months after the end of a monitoring period in which a system exceeds the lead action level in sampling referred to in 310 CMR 22.06B(5)(a), the system shall demonstrate in writing to the Department that it has conducted a materials evaluation, including the evaluation in 310 CMR 22.06B(7)(a), to identify the initial number of lead service lines in its distribution system at the time the system exceeds the lead action level, and shall provide the Department with the system's schedule for replacing annually at least 7% of the initial number of lead service lines in its distribution system.
 2. No later than 12 months after the end of a monitoring period in which a system exceeds the lead action level in sampling referred to in 310 CMR 22.06B(5)(a), and every 12 months thereafter, the system shall demonstrate to the Department in writing that the system has either:
 - a. replaced in the previous 12 months at least 7% of the initial lead service lines (or a greater number of lines specified by the Department under 310 CMR 22.06B(5)(f) in its distribution system, or
 - b. conducted sampling which demonstrates that the lead concentration in all service line samples from an individual line(s), taken pursuant to 310 CMR 22.06B(7)(b)3., is less than or equal to 0.015 mg/L. In such cases, the total number of lines replaced and/or which meet the criteria in 310 CMR 22.06B(5)(c) shall equal at least 7% of the initial number of lead lines identified under 310 CMR 22.06B(11)(e)1. (or the percentage specified by the Department under 310 CMR 22.06B(5)(e).
 3. The annual letter submitted to the Department under 310 CMR 22.06B(11)(e)2. shall contain the following information:
 - a. the number of lead service lines scheduled to be replaced during the previous year of the system's replacement schedule;
 - b. the number and location of each lead service line replaced during the previous year of the system's replacement schedule;
 - c. if measured, the water lead concentration and location of each lead service line sampled, the sampling method, and the date of sampling.
 4. Any system which collects lead service line samples following partial lead service line replacement required by 310 CMR 22.06B(5) shall report the results to the Department within the first ten days of the month following the month in which the system receives the laboratory results, or as specified by the Department. The Department, at its discretion may eliminate this requirement to report these monitoring results. Systems shall also report any additional information as specified by the Department, and in a time and manner prescribed by the Department, to verify that all partial lead service line replacement activities have taken place.
- (f) Public Education Program Reporting Requirements.
1. Any water system that is subject to the public education requirements in 310 CMR 22.06B(6) shall, within ten days after the end of each period in which the system is required to perform public education tasks in accordance with 310 CMR 22.06B(6)(b), send written documentation to the Department that contains:
 - a. A demonstration that the system has delivered the public education materials that meet the content requirements in 310 CMR 22.06B(6)(a) and the delivery requirements in 310 CMR 22.06B(6)(b); and
 - b. A list of all the newspapers, radio stations, television stations, and facilities and organizations to which the system delivered public education materials during the period in which the system was required to perform public education tasks.
 2. Unless required by the Department, a system that previously has submitted the information required by 310 CMR 22.06B(11)(f)1.b. need not resubmit the information required by 310 CMR 22.06B(11)(f)1.b., as long as there have been no changes in the distribution list and the system certifies that the public education materials were distributed to the same list submitted previously.
 3. No later than 90 days following the end of the monitoring period, each system shall mail a sample copy of the consumer notification of tap results to the Department along with a certification that the notification has been distributed in a manner consistent with the requirements of 310 CMR 22.06B(6)(c).

22.06B: continued

(g) Reporting of Additional Monitoring Data. Any system which collects sampling data in addition to that required by this subpart shall report the results to the Department within the first ten days following the end of the applicable monitoring period under 310 CMR 22.06B(7) through (9) during which the samples are collected.

(h) Reporting of 90th Percentile Lead and Copper Concentrations where the Department Calculates a System's 90th Percentile Concentrations. A water system is not required to report the 90th percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period, as required by 310 CMR 22.06B(11)(a)1.d. if:

1. The Department has previously notified the water system that it will calculate the water system's 90th percentile lead and copper concentrations, based on the lead and copper tap results submitted pursuant to 310 CMR 22.06B(h)2.a., and has specified a date before the end of the applicable monitoring period by which the system shall provide the results of lead and copper tap water samples;
2. The system has provided the following information to the Department by the date specified in 310 CMR 22.06B(11)(h)1.:
 - a. The results of all tap samples for lead and copper including the location of each site and the criteria under 310 CMR 22.06B(7)(a)3. through 6. and/or 7. under which the site was selected for the system's sampling pool, pursuant to 310 CMR 22.06B(11)(a)1.a.; and
 - b. An identification of sampling sites utilized during the current monitoring period that were not sampled during previous monitoring periods, and an explanation why sampling sites have changed; and
3. The Department has provided the results of the 90th percentile lead and copper calculations, in writing, to the water system before the end of the monitoring period.

(12) Recordkeeping Requirements. Any system subject to the requirements of 310 CMR 22.06B shall retain on its premises original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, Department determinations, and any other information required by 310 CMR 22.06B(2) through (9). Each water system shall retain the records required by 310 CMR 22.06B for no fewer than 12 years.

22.06B: continued

Summary of Monitoring Requirements for Water Quality Parameters¹

Monitoring Period	Parameters ²	Location	Frequency
Initial Monitoring.	pH, alkalinity, orthophosphate or silica ³ , calcium, conductivity, temperature.	Taps and at entry point(s) to distribution system.	Two samples every six months.
After Installation of Corrosion Control.	pH, alkalinity, orthophosphate or silica ³ , calcium ⁴ .	Taps.	Two samples every six months.
	pH, alkalinity, dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual ⁵ .	Entry point(s) to distribution system ⁶ .	No less frequently than every two weeks.
After State Specifies Parameter Values for Optimal Corrosion Control.	pH, alkalinity, orthophosphate or silica ³ , calcium ⁴ .	Taps.	Two Samples every six months.
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual ⁵ .	Entry point(s) to distribution system ⁶ .	No less frequently than every two weeks.
Reduced Monitoring.	pH, alkalinity, orthophosphate or silica ³ , calcium ⁴ .	Taps.	Two samples every six months, annually ⁷ or every three years ⁸ ; reduced number of sites.
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual ⁵ .	Entry point(s) to distribution system ⁶ .	No less frequently than every two weeks.

¹ Table is for illustrative purposes; consult the text of 310 CMR 22.06B(12) for precise regulatory requirements.

² Small and medium-size systems have to monitor for water quality parameters only during monitoring periods in which the system exceeds the lead or copper action level.

³ Orthophosphate shall be measured only when an inhibitor containing a phosphate compound is used. Silica shall be measured only when an inhibitor containing silicate compound is used.

⁴ Calcium shall be measured only when calcium carbonate stabilization is used as part of corrosion control.

⁵ Inhibitor dosage rates and inhibitor residual concentrations (orthophosphate or silica) shall be measured only when an inhibitor is used.

⁶ Ground water systems may limit monitoring to representative locations throughout the system.

⁷ Water systems may reduce frequency of monitoring for water quality parameters at the tap from every six months to annually if they have maintained the range of values for water quality parameters reflecting optimal corrosion control during three consecutive years of monitoring.

⁸ Water systems may further reduce the frequency of monitoring for water quality parameters at the tap from annually to once every three years if they have maintained the range of values for water quality parameters reflecting optimal corrosion control during three consecutive years of annual monitoring. Water systems may accelerate to triennial monitoring for water quality parameters at the tap if they have maintained 90th percentile lead levels less than or equal to 0.005 mg/L, 90th percentile copper levels less than or equal to 0.65 mg/L, and the range of water quality parameters designated by the State under 40 CFR 141.82(f) as representing optimal corrosion control during two consecutive six-month monitoring periods.

22.06C: Compliance with Secondary Maximum Contaminant Level and Public Notification for Fluoride

Community water systems sampling pursuant to 310 CMR 22.06 which exceed the secondary maximum contaminant level for fluoride, but do not exceed the maximum contaminant level for fluoride, shall comply with 310 CMR 22.16(4).

Secondary Maximum Contaminant Level for Fluoride - 2.0 mg/l

22.07A: Synthetic Organic Chemicals (SOC) Sampling and Analytical Requirements

(1) Synthetic Organic Chemicals MCLs. The following maximum contaminant levels for organic contaminants apply to community water systems and non-transient, non-community water systems.

	<u>CAS No.</u>	<u>Contaminant</u>	<u>MCL (mg/l)</u>
(a)	15972-60-8	Alachlor	0.002
(b)	Reserved		
(c)	Reserved		
(d)	Reserved		
(e)	1912-24-9	Atrazine	0.003
(f)	1563-66-2	Carbofuran	0.04
(g)	57-74-9	Chlordane	0.002
(h)	96-12-8	Dibromochloropropane	0.0002
(i)	94-75-7	2,4-D	0.07
(j)	72-20-80	Endrin	0.002
(k)	106-93-4	Ethylene dibromide	0.00002
(l)	76-44-8	Heptachlor	0.0004
(m)	1024-57-3	Heptachlor epoxide	0.0002
(n)	58-89-9	Lindane	0.0002
(o)	72-43-5	Methoxychlor	0.04
(p)	1336-36-3	Polychlorinated biphenyls	0.0005
(q)	87-86-5	Pentachlorophenol	0.001
(r)	8001-35-2	Toxaphene	0.003
(s)	93-72-1	2,4,5-TP	0.05
(t)	50-32-8	Benzo(a)pyrene	0.0002
(u)	75-99-0	Dalapon	0.2
(v)	103-23-1	Di(2-ethylhexyl) adipate	0.4
(w)	117-81-7	Di(2-ethylhexyl) phthalate	0.006
(x)	88-85-7	Dinoseb	0.007
(y)	85-00-7	Diquat	0.02
(z)	145-73-3	Endothall	0.1
(aa)	1071-53-6	Glyphosate	0.7
(bb)	118-74-1	Hexachlorobenzene	0.001
(cc)	77-47-4	Hexachlorocyclopentadiene	0.05
(dd)	23135-22-0	Oxamyl (Vydate)	0.2
(ee)	1918-02-1	Picloram	0.5
(ff)	122-34-9	Simazine	0.004
(gg)	1746-01-6	2,3,7,8-TCDD(Dioxin)	3x10 ⁻⁸

(2) SOC Sampling Requirements. Beginning with the initial compliance period, analysis of the contaminants listed in 310 CMR 22.07A(1)(a) through (gg) for the purposes of determining compliance with the maximum contaminant level shall be conducted as follows:

(a) SOC Ground Water Monitoring Protocols. Groundwater systems shall take a minimum of one sample at every entry point to the distribution system which is representative of each well after treatment (sampling point). Each sample must be taken at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

(b) SOC Surface Water Monitoring Protocols. Surface water systems [Note: For purposes of 310 CMR 22.07A(2)(b), surface water systems include systems with a combination of surface and ground sources.] shall take a minimum of one sample at points in the distribution system that are representative of each source or at each entry point to the distribution system after treatment (sampling point). Each sample must be taken at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

(c) Multiple Sources. If the system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (*i.e.*, when water representative of all sources is being used).

22.07A: continued

(d) Consecutive System Monitoring. Public water systems that obtain water from another public water system are exempt from conducting compliance monitoring for the purchased portion of the system for the organic chemicals (SOC) under 310 CMR 22.07A, provided that the system from which the water is obtained has conducted the analyses required under 310 CMR 22.07A, unless otherwise specified by the Department.

(3) SOC Monitoring Frequency.

(a) Each community and non-transient non-community water system shall take four consecutive quarterly samples for each contaminant listed in 310 CMR 22.07A(1) during each compliance period beginning with the compliance period starting January 1, 1993.

(b) Systems serving more than 3,300 persons which do not detect a contaminant in the initial compliance period, may reduce the sampling frequency to a minimum of two quarterly samples in one year during each repeat compliance period.

(c) Systems serving less than or equal to 3,300 persons which do not detect a contaminant in the initial compliance period may reduce the sampling frequency to a minimum of one sample during each repeat compliance period.

(4) SOC Sampling Waivers. Each community and non-transient water system may apply to the Department for a waiver from the requirement of 310 CMR 22.07A(3). A system must reapply for a waiver for each compliance period.

Basis of an SOC Sampling Waiver. The Department may grant a waiver after evaluating the following factor(s): Knowledge of previous use (including transport, storage, or disposal) of the contaminant within the watershed or zone of influence of the system. If a determination by the Department reveals no previous use of the contaminant within the watershed or Zone II or IWPA, a waiver may be granted. If previous use of the contaminant is unknown or it has been used previously, then the following factors shall be used to determine whether a waiver is granted.

(a) Previous analytical results.

(b) The proximity of the system to a potential point or non-point source of contamination. Point sources include spills and leaks of chemicals at or near a water treatment facility or at manufacturing, distribution, or storage facilities, or from hazardous and municipal waste landfills and other waste handling or treatment facilities. Non-point sources include the use of pesticides to control insect and weed pests on agricultural areas, forest lands, home and gardens, and other land application uses.

(c) The environmental persistence and transport of the pesticide or PCBs.

(d) How well the water source is protected against contamination due to such factors as depth of the well and the type of soil and the integrity of the well casing and other protective measures considered relevant by the Department.

(e) Elevated nitrate levels at the water supply source.

(f) Use of PCBs in equipment used in the production, storage, or distribution of water (i.e., PCBs used in pumps, transformers, *etc.*).

(5) Detection of an SOC. If an organic contaminant listed in 310 CMR 22.07A(1) is detected (as defined by 310 CMR 22.07A(16)) in any sample, then:

(a) Each system shall report to the Department within seven days and shall monitor quarterly at each sampling point which resulted in a detection.

(b) The Department may decrease the quarterly monitoring requirement specified in 310 CMR 22.07A(5)(a) provided it has determined that the system is reliably and consistently below the maximum contaminant level. In no case shall the Department make this determination unless a groundwater system takes a minimum of two quarterly samples and a surface water system takes a minimum of four quarterly samples.

22.07A: continued

(c) After the Department determines the system is reliably and consistently below the maximum contaminant level the Department may allow the system to monitor annually. Systems which monitor annually must monitor during the quarter that previously yielded the highest analytical result.

(d) Systems which have three consecutive annual samples with no detection of a contaminant may apply to the Department for a waiver as specified in 310 CMR 22.07A(4).

(e) If monitoring results in detection of one or more of certain related contaminants (heptachlor, heptachlor epoxide), then subsequent monitoring shall analyze for all related contaminants.

(6) MCL Violation and Reliably/consistently below the MCL. Systems which violate the requirements of 310 CMR 22.07A(1) as determined by 310 CMR 22.07A(9) must monitor quarterly. After a minimum of four quarterly samples show the system is in compliance and the Department determines the system is reliably and consistently below the MCL, as specified in 310 CMR 22.07A(9), the system shall monitor at the frequency specified in 310 CMR 22.07A(5)(c).

(7) SOC Confirmation Sampling. The Department may require a confirmation sample for positive or negative results. If a confirmation sample is required by the Department, the result must be averaged with the first sampling result and the average used for the compliance determination as specified by 310 CMR 22.07A(9). The Department has discretion to delete results of obvious sampling errors from this calculation.

(8) Composite SOC Sampling. The total number of samples which must be analyzed may be reduced by compositing samples. Composite samples from a maximum of five sampling points are allowed provided that the detection limit of the method used for analysis is less than one-fifth of the MCL and none of the samples to be composited are representative of multiple sources. Compositing of samples must be approved by the Department and must be done in the laboratory and analyzed within the holding times specified by EPA-814B-92-002, Change 2 - September 1992 *Manual for the Certification of Laboratories Analyzing Drinking Water*, third edition. Compositing of sources with previous detections greater than the detection limit is not allowed, unless otherwise authorized by the Department.

(a) If the concentration in the composite sample exceeds the detection limit for one or more contaminants listed in 310 CMR 22.07A(1), then a follow-up sample must be taken and analyzed from each sampling point included in the company within 14 days after completion of the composite analysis or before the holding time of the initial sample is exceeded, whichever is sooner.

(b) If duplicates of the original sample taken from each sampling point used in the composite are available, the system may use these duplicates instead of resampling. The duplicate must be analyzed and the results reported to the Department within 14 days of collection.

(c) If the population served by the system is >3,300 persons, then compositing may only be permitted by the Department at sampling points within a single system. In systems serving ≤3,300 persons, the Department may permit compositing among different systems provided the 5-sample limit is maintained.

(9) SOC Compliance Calculations. Compliance with 310 CMR 22.07A(1) shall be determined based on the analytical results obtained at each sampling point. If one sampling point is in violation of an MCL, the system is in violation of the MCL.

(a) Greater than Annual. For systems monitoring more than once per year, compliance with the MCL is determined by a running annual average at each sampling point.

(b) Annual or Less. Each supplier of water monitoring annually or less frequently whose sample result exceeds the regulatory detection level as defined by 310 CMR 22.07A(16) must begin quarterly sampling. The system will not be considered in violation of the MCL until it has completed one year of quarterly sampling.

22.07A: continued

(c) If any sample result will cause the running annual average to exceed the MCL at any sampling point, the system is out of compliance with the MCL immediately.

(d) If a supplier of water fails to collect the required number of samples, compliance will be based on the total number of samples collected.

(e) If a sample result is less than the detection limit, zero will be used to calculate the annual average.

(f) Average Exceeding SOC MCLs. When the average of four analyses made pursuant to 310 CMR 22.07A(5), rounded to the same number of significant figures as the maximum contaminant level for the substance in question, exceeds the maximum contaminant level, the supplier of water shall report to the Department pursuant to 310 CMR 22.15 and give public notice to the public pursuant to 310 CMR 22.16. Monitoring after public notification shall be at a frequency designated by the Department and shall continue until the maximum contaminant level has not been exceeded in two successive samples or until a monitoring schedule as condition to variance, exemption or enforcement action shall become effective.

(10) SOC Analytical Methods. Analysis for the contaminants listed in 310 CMR 22.07A(1) shall be conducted using the following EPA methods or their equivalent as approved by EPA. Methods 508A and 515.1 are contained in *Methods for the Determination of Organic Compounds in Drinking Water*, EPA-600/4-88-039, December 1988, Revised, July 1991, Methods 547, 550 and 550.1 are in, *Methods for the Determination of Organic Compounds in Drinking Water - Supplement I*, EPA/600-4-90-020, July 1990. Methods 548.1, 549.1, 552.1 and 555 are in, *Methods for the Determination of Organic Compounds in Drinking Water - Supplement II*, EPA/600/R-92/129, August 1992. Methods 502.2, 504.1, 505, 506, 507, 508, 508.1, 515.2, 524.2, 525.2, 531.1, 551.1 and 552.2 are in *Methods for the Determination of Organic Compounds in Drinking Water – Supplement III*, EPA/600/R-95-131, August 1995. Method 1613 is titled “Tetra-through Octa-Chlorinated Dioxins and Furans by Isotope-Dilution HRGC/HRMS”, EPA/821-B-94-005, October 1994. These documents are available from the National Technical Information Service, NTIS PB91-231480, PB91-146027, PB92-27703, PB95-261616 and PB95-104774 (respectively), U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161. The phone number is 800-553-6847. The phone number is 513-569-7586. Method 6610 is contained in *Standard Methods for the Examination of Water and Wastewater* 18th Edition Supplement, 1994, or with the 19th edition (1995) or 20th edition (1998), any of these three editions may be used. Method 6651 is contained in *Standard Methods for the Examination of Water and Wastewater* 18th Edition, (1992), 19th edition (1995), or 20th edition (1998); any of these three editions may be used. The APHA documents are available from American Public Health Association, 1015 Fifteenth Street NW, Wash., D.C. 20005. Other required analytical test procedures germane to the conduct of these analyses are contained in Technical Notes on Drinking Water Methods, EPA/600/R-94-173, October 1994, NTIS PB95-104766. EPA Methods 515.3 and 549.2 are available from U.S. Environmental Protection Agency, National Exposure Research Laboratory [NERL]-Cincinnati, 26 West Martin Luther King Drive, Cincinnati, OH 45268 ASTM Methods D 5317-93, 98 (Reapproved 2003) is available in the Annual Book of ASTM Standards, (1999), Vol. 11.02, ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428, any edition containing the cited version of the methods may be used. EPA Methods 515.4, “Determination of Chlorinated Acids in Drinking Water by Liquid-Liquid Microextraction, Derivatization and Fast Gas Chromatography with Electron Capture Detection”, Revision 1.0, April 2000, EPA/815/B-00/001 and EPA Methods 552.3, “Determination of Haloacetic Acids and Dalapon in Drinking Water by Liquid-Liquid Microextraction, Derivatization, and Gas Chromatography with Electron Capture Detection”, Revision 1.0, July 2003, EPA 815-B-03-002, can be accessed and downloaded directly online at <http://www.epa.gov/safewater/methods/sourcult.html>. Syngenta Method AG-625, “Atrazine in Drinking Water by Immunoassay”, February 2001, is available from Syngenta Crop Protection, Inc., 410 Swing Road, P.O. Box 18300, Greensboro, NC 27419. Telephone: 336-632-6000. Method 531.2 “Measurement of N-methylcarbamoyloximes and N-methylcarbamoyloximes and N-methylcarbamates in Water by Direct Aqueous Injection HPLC with Postcolumn Derivatization”, Revision 1., September 2001, EPA 815-B-01-002, can be accessed and downloaded directly online at <http://www.epa.gov/safewater/methods/sourcult.html>.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.07A: continued

Contaminant	EPA Method	SM	ASTM	Other
2,3,7,8-TCDD(dioxin)	1613			
2,4-D ³ (as acid, salts and esters)	515.2,555,515.1, 515.3, 515.4		D5317-93,98 (Reapproved 2003).	
2,4,5-TP ³ (Silvex)	515.2, 555, 515.1, 515.3, 515.4		D5317-93, 98 (Reapproved 2003).	
Alachor ¹	505, 507, 525.2, 508.1, 551.1			
Atrazine ¹	505, 507, 525.2, 508.1, 551.1			Syngenta AG-625 ⁴
Benzo(a)pyrene	525.2, 550, 550.1			
Carbofuran	531.1, 531.2	6610		
Chlordane	505, 508, 525.2, 508.1			
Dalapon	552.1, 515.1, 515.3, 552.2, 515.4			
Di(2-ethylhexyl)adipate	506, 525.2			
Di(2-ethylhexyl)phthalate	506, 525.2			
Dibromochloropropane (DBCP)	504.1, 551.1			
Dinoseb ³	515.2, 555, 515.1, 515.3, 515.4			
Diquat	549.2			
Endothall	548.1			
Endrin	505, 508, 525.2, 508.1, 551.1			
Ethylene dibromide (EDB)	504.1, 551.1	6651		
Glyphosate	547			
Heptachlor	505, 508, 525.2, 508.1, 551.1			
Heptachlor Epoxide	505, 508, 525.2, 508.1, 551.1			
Hexachlorobenzene	505, 508, 525.2, 508.1, 551.1			
Hexachloro- cyclopentadiene	505, 508, 525.2, 508.1, 551.1			
Lindane	505, 508, 525.2, 508.1, 551.1			
Methoxychlor	505, 508, 525.2, 508.1, 551.1			
Oxamyl	531.1, 531.2	6610		
PCBs(as decachlorobiphenyl) ²	508A			
PCBs (as Aroclors) ²	505, 508,508.1,525.2			
Pentachlorophenol	515.2,525.2,555, 515.1, 515.3, 515.4		D5317-93, 98 (Reapproved 2003).	
Picloram ³	515.2,555, 515.1, 515.3, 515.4		D5317-93, 98 (Reapproved 2003).	
Simazine ¹	505,507,525.2, 508.1,551.1			
Toxaphene	505,508,508.1, 525.2			

Footnotes

¹ Substitution of the detector specified in Methods 505, 507, 508, or 508.1 for the purpose of achieving lower detection limits is allowed as follows. Either an electron capture or nitrogen phosphorus detector may be used provided all regulatory requirements and quality control criteria are met.

22.07A: continued

² PCBs are qualitatively identified as Aroclors and measured for compliance purposes as decachlorobiphenyl. Users of Method 505 may have more difficulty in achieving the required detection limits than users of Methods 508.1, 525.2, or 508.

³ Accurate determination of the chlorinated esters requires hydrolysis of the sample as described in EPA Methods 515.1, 515.2, 515.3, 515.4 and 555 and ASTM Methods D5317-93,98 (Reapproved 2003).

⁴ This method may not be used for the analysis of atrazine in any system where chlorine dioxide is used for drinking water treatment. In samples from all other systems, any result for atrazine generated by Method AG-625 that is greater than ½ the maximum contaminant level (MCL) (in other words, greater than 0.0015mg/L or 1.5 ug/L) must be confirmed using another approved method for this contaminant and should use additional volume of the original sample collected for compliance monitoring. In instances where a result from Method AG-625 triggers such confirmatory testing, the confirmatory result is to be used to determine compliance.

(11) Analysis for PCBs shall be conducted as follows:

(a) Each system that monitors for PCBs shall analyze each sample using either Method 508.1, 525.2, 508 or 505. The mean of the method detection limits of all Aroclors shall be 0.00025mg/l except for Aroclor 1221 which is 0.02 mg/l. Users of Method 505 may have more difficulty in achieving the required Aroclor detection limits than using methods 508.1, 525.2 or 508.

1. A lab may conduct a scan for Aroclors using any one of the four methods mentioned in 310 22.07A(11)(a).

2. A lab that is certified for any of the four methods listed in 310 22.07A(11)(a) is eligible to conduct the scan for Aroclors.

(b) If PCBs (as one of seven Aroclors) are detected as designated in 310 CMR 22.07A(11)(a) the system shall reanalyze the sample using Method 508A to quantitate PCBs (as decachlorobiphenyl).

(c) Compliance with the PCB MCL shall be determined based upon the quantitative results of analyses using Method 508A.

(12) Grandfathered SOC Data: The Department may allow the use of monitoring data collected after January 1, 1990, for purposes of satisfying the initial monitoring requirement of 310 CMR 22.07A(2), if in the opinion of the Department, the data are generally consistent with the requirements of 310 CMR 22.07A(2). A single sample rather than four quarterly samples may be allowed by the Department to satisfy the monitoring requirement for the initial compliance period beginning January 1, 1993.

(13) Increased SOC Sampling: The Department may increase the required monitoring frequency, where necessary, to detect variations within the system (*e.g.*, fluctuations in concentration due to seasonal use, changes in water source).

(14) Enforcement: The Department has the authority to determine compliance or initiate enforcement action based upon analytical results and other information compiled by their sanctioned representatives and agencies.

(15) Designated Sampling Schedules: Each public water system shall monitor at the time designated by the Department within each compliance period.

22.07A: continued

(16) SOC Detection Limits: Detection as used in 310 CMR 22.07A(5) shall be defined as greater than or equal to the following concentrations for each contaminant. (Please refer to the Guidelines and Policies for further information regarding detection limits).

<u>SOC DETECTION LIMITS</u>	
<u>Contaminant</u>	<u>Detection Limit mg/l</u>
Alachlor	0.0002
Aldicarb	0.0005
Aldicarb sulfoxide	0.0005
Aldicarb sulfone	0.0008
Atrazine	0.0001
Benzo(a)pyrene	0.00002
Carbofuran	0.0009
Chlordane	0.0002
Dalapon	0.001
Dibromochloropropane (DBCP)	0.00002
Di (2-ethylhexyl) adipate	0.0006
Di (2-ethylhexyl) phthalate	0.0006
Dinoseb	0.0002
Diquat	0.0004
2,4-D	0.0001
Endothall	0.009
Endrin	0.00001
Ethylene dibromide (EDB)	0.00001
Glyphosate	0.006
Heptachlor	0.00004
Heptachlor epoxide	0.00002
Hexachlorobenzene	0.0001
Hexachlorocyclopentadiene	0.0001
Lindane	0.00002
Methoxychlor	0.0001
Oxamyl	0.002
Picloram	0.0001
Polychlorinated biphenyls (PCBs) (as decachlorobiphenyl)	0.0001
Pentachlorophenol	0.00004
Simazine	0.00007
Toxaphene	0.001
2,3,7,8-TCDD (Dioxin)	0.000000005
2,4,5-TP (Silvex)	0.0002

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.07A: continued

(17) SYNTHETIC ORGANIC BATs. The EPA Administrator, pursuant to the federal Safe Drinking Water Act, § 1412, has identified as indicated in the Table below either granular activated carbon (GAC), packed tower aeration (PTA), or oxidation (OX) as the best technology, treatment technique, or other means available for achieving compliance with the maximum contaminant level for organic contaminants identified in 310 CMR 22.07A(1):

BAT FOR ORGANIC CONTAMINANTS LISTED IN 310 CMR 22.07A(1)

<u>CAS #</u>	<u>Chemical</u>	<u>GAC</u>	<u>PTA</u>	<u>OX</u>
15972-60-8	Alachlor	X		
116-06-3	Aldicarb	X		
1646-88-4	Aldicarb sulfone		X	
1646-87-3	Aldicarb sulfoxide		X	
1912-24-9	Atrazine	X		
50-32-8	Benzo[a]pyrene	X		
1563-66-2	Carbofuran		X	
57-74-9	Chlordane	X		
75-99-0	Dalapon	X		
96-12-8	Dibromochloropropane (DBCP)	X	X	
75-09-2	Dichloreomethane		X	
103-23-1	Di (2-ethylhexyl) adipate	X	X	
117-81-7	Di (2-ethylhexyl) phthalate	X		
88-85-7	Dinoseb	X		
85-00-7	Diquat	X		
94-75-7	2,4-D	X		
72-20-8	Endrin	X		
145-73-3	Endothall	X		
106-93-4	Ethylene Dibromide (EDB)	X	X	
1071-583-6	Glyphosate			X
76-44-8	Heptachlor	X		
1024-57-3	Heptachlor epoxide	X		
118-74-1	Hexachlorobenzene	X		
77-47-3	Hexachlorocyclopentadiene	X	X	
58-89-9	Lindane	X		
72-43-5	Methoxychlor	X		
1336-36-3	Polychlorinated biphenyls(PCB)		X	
23135-22-0	Oxamyl (Vydate)	X		

22.07A: continued

BAT FOR ORGANIC CONTAMINANTS LISTED IN 310 CMR 22.07A(1)

<u>CAS #</u>	<u>Chemical</u>	<u>GAC</u>	<u>PTA</u>	<u>OX</u>
87-86-5	Pentachlorophenol	X		
1918-02-1	Picloram	X		
93-72-1	2,4,5-TP (Silvex)	X		
122-34-9	Simazine	X		
120-82-1	1,2,4-Trichlorobenzene	X	X	
79-00-5	1,1,2-Trichloroethane	X	X	
1746-01-6	2,3,7,8-TCDD(Dioxin)	X		
8001-35-2	Toxaphene	X	X	

(18) New Systems/Sources. Each new supplier of water or supplier of water that uses a new source of water that begins operation after January 22, 2004 must demonstrate compliance with the MCL within a period of time specified by the Department. The supplier of water must also comply with the initial sampling frequencies specified by the Department to ensure a system can demonstrate compliance with the MCL. Routine and increased monitoring frequencies shall be conducted in accordance with the requirements in 310 CMR 22.07A.

22.07B: Maximum Contaminant Levels (MCLs) for Volatile Organic Compounds (VOC)

(1) Volatile Organic MCLs. The following maximum contaminant levels for organic contaminants apply to community and non-transient, non-community water systems.

	<u>CAS No.</u>	<u>Contaminant</u>	<u>MCL (mg/l)</u>
(a)	75-01-4	Vinyl chloride	0.002
(b)	71-43-2	Benzene	0.005
(c)	56-23-5	Carbon tetrachloride	0.005
(d)	107-06-2	1,2-Dichloroethane	0.005
(e)	79-01-6	Trichloroethylene	0.005
(f)	106-46-7	para-Dichlorobenzene	0.005
(g)	75-35-4	1,1-Dichloroethylene	0.007
(h)	71-55-6	1,1,1-Trichloroethane	0.2
(i)	156-59-2	cis-1,2-Dichloroethylene	0.07
(j)	78-87-5	1,2-Dichloropropane	0.005
(k)	100-41-4	Ethylbenzene	0.7
(l)	108-90-7	Monochlorobenzene	0.1
(m)	95-50-1	o-Dichlorobenzene	0.6
(n)	100-42-5	Styrene	0.1
(o)	127-18-4	Tetrachloroethylene	0.005
(p)	108-88-3	Toluene	1
(q)	156-60-5	trans-1,2-Dichloroethylene	0.1
(r)	1330-20-7	Xylenes (total)	10
(s)	75-09-2	Dichloromethane	0.005
(t)	120-82-1	1,2,4-Trichlorobenzene	0.07
(u)	79-00-5	1,1,2-Trichloroethane	0.005

(2) VOC Sampling Requirements. Beginning with the initial compliance period analysis of the contaminants listed in 310 CMR 22.07B(1) for the purpose of determining compliance with the maximum contaminant level the monitoring shall be conducted as follows:

(a) VOC Ground Water Monitoring Protocols. Groundwater systems shall take a minimum of one sample at every entry point to the distribution system which is representative of each well after treatment (sampling point). If conditions warrant, the Department may designate additional sampling points within the distribution system or at the consumer's tap which more accurately determines consumer exposure. Each sample must be taken at the same sampling point unless the Department determine that conditions make another sampling point more representative of each source, treatment plant, or within the distribution system.

22.07B: continued

(b) VOC Surface Water Monitoring Protocols. Surface water systems (or combined surface/ground) shall take a minimum of one sample at points in the distribution system that are representative of each source or at each entry point to the distribution system after treatment (sampling point). If conditions warrant, the Department may designate additional sampling points within the distribution system or at the consumer's tap which more accurately determines consumer exposure. Each sample must be taken at the same sampling point unless conditions make another sampling point more representative of each source, treatment plant, or within the distribution system.

(c) Multiple Sources. If the system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (*i.e.*, when water representative of all sources is being used).

(d) Initial VOCs Sampling Frequency. Each community and non-transient non-community water system shall take four consecutive quarterly samples for each contaminant listed in 310 CMR 22.07B(1) during each compliance period, beginning in the initial compliance period.

(e) VOC Grandfathered Data with No Detects - Reduced Monitoring. If the initial monitoring for contaminants listed in 310 CMR 22.07B(1) as allowed in 310 CMR 22.07B(10), has been completed by December 31, 1992, and the system did not exceed the detection levels in 310 CMR 22.07B(4) any contaminant listed in 310 CMR 22.07B(1), then each ground and surface water system shall take one sample annually beginning with the initial compliance period.

(f) Reduced VOC Sampling - Annually. Groundwater and surface water systems which do not detect one of the contaminants listed in 310 CMR 22.07B(1) after conducting the initial round of monitoring required in 310 CMR 22.07B(2)(a) and (b) shall take one sample annually.

(3) VOC Sampling Waivers. Each community and non-transient non-community system which does not detect a contaminant listed in 310 CMR 22.07B(1) may apply to the Department for a waiver from the requirements of 310 CMR 22.07B(2)(d), (f) and (10) after completing the initial monitoring. (For the purposes of 310 CMR 22.07B, detection is defined as ≥ 0.0005 mg/l.) A waiver shall be effective for no more than three years (one compliance period).

(a) Basis of a VOC Sampling Waiver. A Department may grant a waiver after evaluating the following factor(s):

1. Knowledge of previous use (including transport, storage, or disposal) of the contaminant within the watershed or zone of influence of the system. If a determination by the State reveals no previous use of the contaminant within the watershed or Zone II or IWPA, a waiver may be granted.
2. If previous use of the contaminant is unknown or it has been used previously, then the following factors shall be used to determine whether a waiver is granted.
 - a. Previous analytical results.
 - b. The proximity of the system to a potential point or non-point source of contamination. Point sources include spills and leaks of chemicals at or near a water treatment facility or at manufacturing, distribution, or storage facilities, or from hazardous and municipal waste landfills and other waste handling or treatment facilities.
 - c. The environmental persistence and transport of the contaminants.
 - d. The number of persons served by the public water system and the proximity of a smaller system to a larger system.
 - e. How well the water source is protected against contamination, such as whether it is a surface or groundwater system and other protective measures considered relevant by the Department. Groundwater systems must consider factors such as depth of the well, the type of soil, and wellhead protection. Surface water systems must consider watershed protection.

22.07B: continued

(b) VOC Waiver Requirements for GW Systems. As a condition of the waiver a groundwater system must take one sample at each sampling point during the time the waiver is effective (*i.e.*, one sample during one compliance period or three years) and update its vulnerability assessment considering the factors listed in 310 CMR 22.07B(3)(a). Based on this vulnerability assessment the Department must reconfirm that the system is non-vulnerable. If the Department does not make this reconfirmation within three years of the initial determination, then the waiver is invalidated and the system is required to sample annually as specified in 310 CMR 22.07B(10)(a).

(c) VOC Waiver Requirements for SW Systems. Each community and non-transient non-community surface water system which does not detect a contaminant listed in 310 CMR 22.07B(1) may apply to the Department for a waiver from the requirements of 310 CMR 22.07B(2)(a) after completing the initial monitoring. Systems meeting this criteria must be determined by the Department to be non-vulnerable based on a vulnerability assessment during each compliance period. Each system receiving a waiver shall sample at the frequency specified by the Department.

(4) Detection of a VOC.

(a) If a contaminant listed in 310 CMR 22.07B(1) is detected at a level exceeding 0.0005 mg/l in any sample, then:

1. The system shall report to the Department within seven days and shall monitor for the contaminants listed in 310 CMR 22.07B quarterly at each sampling point which resulted in a detection.
2. The Department may decrease the quarterly monitoring requirement specified in 310 CMR 22.07B(4)(a)1. provided it has determined that the system is reliably and consistently below the maximum contaminant level. In no case shall the Department make this determination unless a groundwater system takes a minimum of two quarterly samples and a surface water system takes a minimum of four quarterly samples.
3. If the Department determines that the system is reliably and consistently below the MCL, the Department may allow the system to monitor annually. Systems which monitor annually must monitor during the quarter(s) which previously yielded the highest analytical result or as specified by the Department.

(b) Detection of a VOC Other than Those Listed in 310 CMR 22.07B(1). Systems which detect any VOC contaminants at any level shall report the results to the Department.

(c) VOCs Reliably and Consistently below the MCL. Systems which violate the requirements of 310 CMR 22.07B(1), as determined by 310 CMR 22.07B(7), must monitor quarterly. After a minimum of four consecutive quarterly samples which show the system is in compliance as specified in 310 CMR 22.07B(7) the system demonstration and the Department determines that the system is reliably and consistently below the maximum contaminant level, the system may monitor at the frequency and time specified in 310 CMR 22.07B(4)(a)3.

(5) VOC Confirmation Samples. The Department may require a confirmation sample for positive or negative results. The results of the confirmation sample must be averaged with the first sampling result and the average is used for the compliance determination as specified by 310 CMR 22.07B(7). The Department has the discretion to delete results of obvious sampling errors from this calculation.

(6) VOC Composite Samples. The total number of samples a system must analyze may be reduced, with the Department's approval, by the compositing of samples. Composite samples from a maximum of five sampling points are allowed, provided that the detection limit of the method used for analysis is less than one-fifth of the MCL and none of the samples to be composited are representative of multiple sources. Compositing of samples must be done in the laboratory and analyzed within 14 days of sample collection. Compositing of sources with previous detections exceeding the detection limit is not allowed, unless otherwise authorized by the Department. If duplicates of the original samples taken from each sampling point used in the composit samples are available, the system may use these instead of resampling. The duplicates must be analyzed and the results reported to the Department within 14 days after completing the analyses of the composited samples, provided the holding times of the samples has not been exceeded.

22.07B: continued

- (a) If the concentration in the composite sample is ≥ 0.0005 mg/l for any contaminant listed in 310 CMR 22.07B(1), then a follow-up sample must be taken and analyzed within 14 days from each sampling point included in the composite.
- (b) If duplicates of the original sample taken from each sampling point used in the composite are available, the system may use these instead of resampling. The duplicate must be analyzed and the results reported to the Department within 14 days of collection.
- (c) Compositing will be permitted at sampling points within a single system, unless the population served by the system is $\leq 3,300$ persons. In systems serving $\leq 3,300$ persons, compositing is permitted with the Department's approval among different systems provided the five-sample limit is maintained.
- (d) Compositing samples prior to GC analysis.
 - 1. Add 5 ml or equal larger amounts of each sample (up to five samples are allowed) to a 25 ml glass syringe. Special precautions must be made to maintain zero headspace in the syringe.
 - 2. The samples must be cooled at 4°C during this step to minimize volatilization losses.
 - 3. Mix well and draw out a 5-ml aliquot for analysis.
 - 4. Follow sample introduction, purging, and desorption steps described in the method.
 - 5. If less than five samples are used for compositing, a proportionately small syringe may be used.
- (e) Compositing samples prior to GC/MS analysis.
 - 1. Inject 5-ml or equal larger amounts of each aqueous sample (up to five samples are allowed) into a 25-ml purging device using the sample introduction technique described in the method.
 - 2. The total volume of the sample in the purging device must be 25 ml.
 - 3. Purge and desorb as described in the method.

(7) VOC Compliance Calculations. Compliance with 310 CMR 22.07B(1) shall be determined based on the analytical results obtained at each sampling point. If one sampling point is in violation of an MCL, the system is in violation of the MCL.

- (a) Greater than Annual. For systems monitoring more than once per year, compliance with the MCL is determined by a running annual average at each sampling point.
- (b) Annually or Less. Each supplier of water monitoring annually or less frequently whose sample result exceeds the MCL must begin quarterly sampling. The system will not be considered in violation of the MCL until it has completed one year of quarterly sampling.
- (c) If any sample result will cause the running annual average to exceed the MCL at any sampling point, the system is out of compliance with the MCL immediately.
- (d) If a supplier of water fails to collect the required number of samples, compliance will be based on the total number of samples collected.
- (e) If a sample result is less than the detection limit, zero will be used to calculate the annual average.
- (f) Enforcement. The Department has the authority to determine compliance or initiate enforcement action based upon analytical results and other information compiled by their sanctioned representatives and agencies.
- (g) Average Exceeding VOC MCLs. When the average of four analyses made pursuant to 310 CMR 22.07B(4), rounded to the same number of significant figures as the maximum contaminant level for the substance in question, exceeds the maximum contaminant level, the supplier of water shall report to the Department pursuant to 310 CMR 22.15 and give notice to the public pursuant to 310 CMR 22.16. Monitoring after public notification shall be at a frequency designated by the Department and shall continue until the maximum contaminant level has not been exceeded in two successive samples or until a monitoring schedule as condition to variance, exemption or enforcement action shall become effective.

22.07B: continued

(8) VOC Analytical Methods. Analysis for the contaminants listed in 310 CMR 22.07B(1) shall be conducted using the following EPA methods or their equivalent as approved by EPA.

Contaminant	EPA Method
Benzene	502.2, 524.2
Carbon tetrachloride	502.2, 524.2, 551.1
Chlorobenzene	502.2, 524.2
1,2-Dichlorobenzene	502.2, 524.2
1,4- Dichlorobenzene	502.2, 524.2
1,2- Dichloroethane	502.2, 524.2
cis-Dichloroethylene	502.2, 524.2
trans- Dichloroethylene	502.2, 524.2
Dichloromethane	502.2, 524.2
1,2-Dichloropropane	502.2, 524.2
Ethylbenzene	502.2, 524.2
Styrene	502.2, 524.2
Tetrachloroethylene	502.2, 524.2, 551.1
1,1,1-Trichlorobenzene	502.2, 524.2, 551.1
Trichloroethylene	502.2, 524.2, 551.1
Toluene	502.2, 524.2
1,2,4-Trichlorobenzene	502.2, 524.2
1,1-Dichloroethylene	502.2, 524.2
1,1,2-Trichloroethane	502.2, 524.2
Vinyl chloride	502.2, 524.2
Xylenes(total)	502.2, 524.2

(a) Methods 502.2 is in *Methods for the Determination of Organic Compounds in Drinking Water*, EPA-600/4-88-039, December 1988, Revised, July 1991.

(b) Methods 524.2, is in *Methods for the Determination of Organic Compounds in Drinking Water - Supplement III*, EPA/600/R-95/131, August 1995.

(c) Method 551.1 is in *Methods for the Determination of Organic Compounds in Drinking Water – Supplement III*, EPA/600/R-95-131, August 1995 and can be used to measure carbon tetrachloride, tetrachloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, and trichloroethylene.

(9) Maximum Contaminant Levels (MCLs) for Volatile Organic Compounds (VOC). (Reserved)

(10) Grandfathered VOC Data. The Department may allow the use of monitoring data collected after January 1, 1988, for purposes of complying with initial compliance period. If the data are generally consistent with the other requirements in 310 CMR 22.07B, the Department may use these data (*i.e.*, a single sample rather than four quarterly samples) to satisfy the initial monitoring requirement of 310 CMR 22.07B(2)(d). Systems which use grandfathered samples and did not detect any contaminants listed in 310 CMR 22.07B(1) shall begin monitoring annually in accordance with 310 CMR 22.07B(2)(e) beginning with the initial compliance period.

(11) Increased VOC Sampling. The Department may increase required monitoring where necessary to detect variations within the system.

(12) VOC Sampling Schedules. Each public water system shall monitor at the time designated by the Department within each compliance period.

22.07B: continued

(13) Consecutive System Monitoring. Public water systems that obtain water from another public water system are exempt from conducting compliance monitoring for the purchased portion of the system for the volatile organic chemicals under 310 CMR 22.07B, provided that the system from which the water is obtained has conducted the analyses required under 310 CMR 22.07B, unless otherwise specified by the Department.

(14) Volatile Organic BATs. The Department hereby identifies as indicated in the Table below either granular activated carbon (GAC), packed tower aeration (PTA), or both as the best technology, treatment technique, or other means available for achieving compliance with the maximum contaminant level for organic contaminants identified in 310 CMR 22.07B(1):

BAT FOR ORGANIC CONTAMINANTS			
<u>CAS #</u>	<u>Chemical</u>	<u>GAC</u>	<u>PTA</u>
71-43-2	Benzene	X	X
56-23-5	Carbon tetrachloride	X	X
95-50-1	o-Dichlorobenzene	X	X
107-06-2	1,2-Dichloroethane	X	X
156-59-2	cis-1,2-Dichloroethylene	X	X
156-60-5	trans-1,2-Dichloroethylene	X	X
75-35-4	1,1-Dichloroethylene	X	X
78-87-5	1,2-Dichloropropane	X	X
100-41-4	Ethylbenzene	X	X
108-90-7	Monochlorobenzene	X	X
106-46-7	para-Dichlorobenzene	X	X
100-42-5	Styrene	X	X
127-18-4	Tetrachloroethylene	X	X
71-55-6	1,1,1-Trichloroethane	X	X
79-01-6	Trichloroethylene	X	X
108-88-3	Toluene	X	X
75-01-4	Vinyl chloride		X
1330-20-7	Xylene	X	X

(15) New Systems/Sources. Each new supplier of water or supplier of water that use a new source of water that begin operation after January 22, 2004 must demonstrate compliance with the MCL within a period of time specified by the Department. The supplier of water must also comply with the initial sampling frequencies specified by the Department to ensure a system can demonstrate compliance with the MCL. Routine and increased monitoring frequencies shall be conducted in accordance with the requirements in 310 CMR 22.07B.

22.07C: Unregulated Inorganic and Organic Chemicals Special Monitoring

(1) Monitoring for Unregulated Organic and Inorganic Contaminants. The Monitoring frequency for the contaminants listed in 310 CMR 22.07C(5), (7) and (8) shall be as follows.

- (a) Sampling for Synthetic Organic Contaminants. Reserved.
- (b) Sampling for Inorganic Contaminants. Reserved.
- (c) Sampling for Volatile Organic Contaminants. Each community and non-transient non-community water system shall take one sample at each sampling point for each contaminant listed in 310 CMR 22.07C(5) and report the results to the Department. Monitoring shall be completed at the same time as routine VOC sampling in accordance with 310 CMR 22.07B.

22.07C: continued

(2) Sampling Locations. The sampling for the contaminants listed in 310 CMR 22.07C shall be conducted as follows:

(a) Ground Water Sampling Protocols. Groundwater systems shall take a minimum of one sample at every entry point to the distribution system which is representative of each well after treatment (sampling point). Each sample shall be taken at the same sampling point, unless conditions make another sampling point more representative of each source or treatment plant.

(b) Surface Water Sampling Protocols. Surface water systems including, but not limited to, surface water systems with a combination of surface and ground sources shall take a minimum of one sample at points in the distribution system that are representative of each source or at each entry point to the distribution system after treatment (sampling point). Each sample shall be taken at the same sampling point, unless conditions make another sampling point more representative of each source or treatment plant.

(c) Multiple Sources. If the system draws water from more than one source and the sources are combined before distribution, the system shall sample at an entry point to the distribution system during periods of normal operating conditions (*i.e.*, when water representative of all sources is being used).

(d) Confirmation Sampling. The Department may require a confirmation sample for positive or negative results.

(e) Composite Sampling. The Department may reduce the total number of samples a system shall analyze by allowing the use of compositing. Composite samples from a maximum of five sampling points are allowed, provided that the detection limit of the method used for analysis is less than $\frac{1}{5}$ of the MCL. Compositing of samples shall be done in the laboratory and the composite sample shall be analyzed within 14 days of collection and comply with 310 CMR 22.07B(6)(a) through (e). If the population served by the system is $>3,300$ persons, then compositing may only be permitted by the Department at sampling points within a single system. In systems serving $\leq 3,300$ persons, the Department may permit compositing among different systems provided the five-sample limit is maintained.

(3) Unregulated Inorganic and Organic Chemical Special Monitoring. (Reserved)

(4) Sampling Waivers. Each community and non-transient non-community water system may apply to the Department for a waiver from the requirements of 310 CMR 22.07C(1)(a), (b) and (c).

Basis of Sampling Waivers. The Department may grant a waiver for the monitoring requirement of 310 CMR 22.07C(5) based on the criteria specified in 310 CMR 22.07B(3)(a). Waivers for monitoring requirements of 310 CMR 22.07C(7) are based on the criteria specified in 310 CMR 22.07A(4). The Department may grant a waiver from the requirement of 310 CMR 22.07C(8) if previous analytical results indicate contamination would not occur, provided this data was collected after January 1, 1990.

(5) Unregulated VOC Contaminants. Methyl tert-butyl ether (MTBE)

(6) EPA Analytical Methods for Unregulated VOC Contaminants. Analysis for the contaminants listed in 310 CMR 22.07C(5) shall be conducted using the recommended EPA methods at 310 CMR 22.07B(8).

(7) Unregulated Synthetic Organic Contaminants and Analytical Methods. 1,4-Dioxane: EPA Method 522: *Determination of 1,4-Dioxane in Drinking Water by Solid Phase Extraction (SPE) and Gas Chromatography/Mass Spectrometry (GC/MS) with Selected Ion Monitoring (SIM)*, EPA/600/R-08/101, Version 1.0, September 2008.

(8) Unregulated Inorganic Contaminants and Analytical Methods. Reserved.

(9) Repeat Monitoring. All community and non-transient, non-community water systems shall repeat the monitoring for contaminants listed in 310 CMR 22.07C(5) no less frequently than every three years or in accordance with the sampling frequencies in 310 CMR 22.07(B).

(10) Unregulated Inorganic and Organic Chemical Special Monitoring. (Reserved)

22.07C: continued

(11) Analysis under 310 CMR 22.07C shall be conducted by laboratories approved under 310 CMR 42.00: *Certification and Operation of Environmental Analysis Laboratories* using the recommended EPA methods listed at 310 CMR 22.07A(10).

22.07D: Secondary Chemical Standards

(1) Secondary Contaminants. The following contaminant levels apply to every public water systems:

<u>Contaminant</u>	<u>Secondary MCL</u>
(a) Aluminum	0.05 to 0.2 mg/l
(b) Chloride	250 mg/l
(c) Color	15 Color Units
(d) Copper	1 mg/l
(e) Corrosivity	Non-corrosive
(f) Fluoride	2.0 mg/l
(g) Foaming Agents	0.5 mg/l
(h) Iron	0.3 mg/l
(i) Manganese	0.05 mg/l
(j) Odor	3 Threshold Unit Number
(k) pH	6.5 – 8.5
(l) Silver	0.10 mg/l
(m) Sulfate	250 mg/l
(n) Total Dissolved Solids	500 mg/l
(o) Zinc	5 mg/l

(2) Monitoring for Secondary Contaminants. The monitoring frequency for the contaminants listed in 310 CMR 22.07D(1) is at the discretion of the Department.

(3) Exceeding a Secondary Maximum Contaminant Level. If the Department finds based on a health evaluation by the Department's Office of Research and Standards, that an SMCL exceedance, acting alone or in combination with other contaminants, poses an unacceptable health risk to consumers, the public water system shall take all actions necessary to reduce the SMCL concentrations to levels the Department deems safe by the deadline specified by the Department. Such public water system shall also monitor the water and provide public notice as directed by the Department and notify the Department in writing of its proposed actions.

(4) The analytical methods for Secondary Contaminants are available in the Federal Register/Vol.72, No. 47/March 12, 2007.

22.07E: Disinfection Byproducts, Disinfectant Residuals and Disinfection Byproduct Precursors

(1) MCLs for Disinfection Byproducts. The Maximum Contaminant Levels for Disinfection byproducts of 310 CMR 22.07E apply only to Community Water Systems and Non-transient Non-community Water Systems which add a chemical Disinfectant (oxidant) to the water in any part of the drinking water treatment process. The MCLs are as follows:

<u>Disinfection Byproduct</u>	<u>MCL (mg/l)</u>
Total Trihalomethanes (TTHM)	0.080
Haloacetic (Acids Five) (HAA5)	0.060
Bromate	0.010
Chlorite	1.0

Total Trihalomethanes are the sum of the concentrations of bromodichloromethane, dibromochloromethane, tribromomethane (bromoform) and trichloromethane (chloroform) expressed in milligrams per liter (mg/l). Haloacetic acids are the sum of the concentrations of monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid and dibromoacetic acid expressed in milligrams per liter (mg/l).

22.07E: continued

(a) Compliance Dates for CWSs and NTNCWSs. Surface Water and Groundwater under the Direct Influence of Surface Water systems serving 10,000 or more persons must comply with 310 CMR 22.07E(1) beginning January 1, 2002. Surface Water and Groundwater under the Direct Influence of Surface Water systems serving fewer than 10,000 persons and systems using only groundwater not under the direct influence of surface water must comply with 310 CMR 22.07E(1) beginning January 1, 2004.

(b) TTHM and HAA5 - RAA Compliance.

Compliance Dates. Surface Water and Groundwater under the Direct Influence of Surface Water systems serving 10,000 or more persons must comply with 310 CMR 22.07E(1)(b) beginning January 1, 2002. Surface Water systems and Groundwater under the Direct Influence of Surface Water systems serving fewer than 10,000 persons and systems using only groundwater not under the direct influence of surface water must comply with 310 CMR 22.07E(1)(b) beginning January 1, 2004. All systems must comply with these MCLs until the date specified for Disinfection byproduct compliance in 310 CMR 22.07F(7).

(c) Stage 2 Disinfection Byproducts – LRAA Compliance.

Compliance Dates. The MCLs required under 310 CMR 22.07F for TTHM and HAA5 must be complied with as a Locational Running Annual Average at each monitoring location beginning the date specified for compliance in 310 CMR 22.07F(7)(c).

(2) MRDLs for Disinfectant Residuals. The maximum residual Disinfectant levels for the Disinfectant residuals of 310 CMR 22.07E apply to Community Water Systems and Non-transient Non-community Water Systems which add a chemical Disinfectant (oxidant) to the water in any part of the drinking water treatment process. In addition, the maximum residual Disinfectant level for chlorine dioxide applies to Transient Non-community Water Systems using chlorine dioxide as a Disinfectant or oxidant. The MRDLs are as follows:

<u>Disinfectant Residual</u>	<u>MRDL (mg/l)</u>
Chlorine 4.0 (as Cl ₂).	
Chloramines 4.0 (as Cl ₂).	
Chlorine dioxide	0.8 (as ClO ₂).

Notwithstanding the MRDLs in 310 CMR 22.07E(2), systems may increase residual Disinfectant levels in the Distribution System of chlorine or chloramines (but not chlorine dioxide) to a level and for a time necessary to protect public health, to address specific microbiological contamination problems caused by circumstances including, but not limited to, distribution line breaks, storm run-off events, source water contamination events, or cross connection events.

(3) Compliance Dates.

(a) Each Supplier of Water who uses a Surface Water Source or groundwater source under the direct influence of surface water that serves 10,000 or more persons shall comply with the requirements of 310 CMR 22.07E beginning January 1, 2002.

(b) Each Supplier of Water who uses a Surface Water Source or groundwater source under the direct influence of surface water that serves fewer than 10,000 persons and each Supplier of Water who uses only a groundwater source not under the direct influence of surface water shall comply with the requirements of 310 CMR 22.07E beginning January 1, 2004.

(c) Each Supplier of Water that plans to install granular activated carbon (GAC) or membrane technology to comply with the MCLs in 310 CMR 22.07E(1) may apply to the Department for an extension of up to 24 months past the dates in 310 CMR 22.07E(3)(a) and (b), but not beyond December 31, 2003. In granting the extension, the Department will require the system to issue public notice in accordance with 310 CMR 22.16. The notice shall include the length of the extension, the mandatory health effects language for Disinfection byproducts and the anticipated schedule for the construction and implementation of the new treatment processes. The Department may also require the Supplier of Water to perform an engineering study to optimize the current treatment processes to minimize the formation of Disinfection byproducts during the period of the extension.

22.07E: continued

(4) Disinfection Byproducts BATs.

(a) The EPA Administrator, pursuant to the federal Safe Drinking Water Act, § 1412 has identified the following as the best technology, Treatment Techniques, or other means available for achieving compliance with the Maximum Contaminant Levels for Disinfection byproducts identified in of 310 CMR 22.07E(1):

<u>Disinfection Byproduct</u>	<u>Best Available Technology</u>
TTHM	Enhanced Coagulation or Enhanced Softening or GAC10, with chlorine as the primary and residual Disinfectant.
HAA5	Enhanced Coagulation or Enhanced Softening or GAC10, with chlorine as the primary and residual Disinfectant.
Bromate	Control of ozone treatment process to reduce production of bromate.
Chlorite	Control of treatment processes to reduce Disinfectant demand and control of Disinfection treatment processes to reduce Disinfectant levels.

(b) The EPA Administrator, pursuant to the federal Safe Drinking Water Act, § 1412, 40 CFR 141, hereby identifies the following as the best technology, Treatment Techniques, or other means available for achieving compliance with the Maximum Contaminant Levels for TTHM and HAA5 identified in 310 CMR 22.07E(1) for all systems that disinfect their source water:

<u>Disinfection byproduct</u>	<u>Best Available Technology</u>
Total Trihalomethanes (TTHM) and Haloacetic (Acids Five) (HAA5).	Enhanced Coagulation or Enhanced Softening, plus GAC10; or nanofiltration with a molecular weight cutoff ≤ 1000 Daltons; or GAC20

(c) The EPA Administrator, pursuant to the federal Safe Drinking Water Act, § 1412, 40 CFR 141, hereby identifies the following as the best technology, Treatment Techniques, or other means available for achieving compliance with the Maximum Contaminant Levels for TTHM and HAA5 identified in 310 CMR 22.07E(1) for consecutive systems and applies only to the disinfected water that consecutive systems buy or otherwise receive:

<u>Disinfection Byproduct</u>	<u>Best Available Technology</u>
Total Trihalomethanes (TTHM) and Haloacetic (Acids Five) (HAA5).	Systems serving $\geq 10,000$: Improved Distribution System and storage tank management to reduce residence time, plus the use of chloramines for disinfectant residual maintenance Systems serving $< 10,000$: Improved Distribution System and storage tank management to reduce residence time.

(5) Disinfectant Residuals BATs. The EPA Administrator, pursuant to the federal Safe Drinking Water Act, § 1412, 40 CMR 141, has identified the control of treatment processes to reduce Disinfectant demand and the control of Disinfection treatment processes to reduce Disinfectant levels as the best technology, Treatment Techniques, or other means available for achieving compliance with the maximum residual Disinfectant levels for Disinfectant residuals identified in 310 CMR 22.07E(2).

(6) Analytical Requirements.

(a) Each Supplier of Water shall use only the analytical method(s) specified in 310 CMR 22.07E(6), or their equivalent as otherwise approved by EPA for monitoring under 310 CMR 22.07E and 22.07F, to demonstrate compliance with the requirements of 310 CMR 22.07E and 22.07F. These methods are effective for compliance monitoring as of February 16, 1999 unless a different effective date is specified in 310 CMR 22.07E(6) or by the Department.

22.07E: continued

(b) The methods described in 310 CMR 22.07E(6)(c) through (e) are contained within the following documents: EPA Method 552.1 is in *Methods for the Determination of Organic Compounds in Drinking Water - Supplement II*, USEPA, August 1992, EPA/600/R-92/129 (available through the National Technical Information Service (NTIS), PB92-207703). EPA Methods 502.2, 524.2, 551.1, and 552.2 are in *Methods for the Determination of Organic Compounds in Drinking Water - Supplement III*, USEPA, August 1995, EPA/600/R-95/131 (available through the NTIS, PB95-261616). EPA Method 300.0 is in *Methods for the Determination of Inorganic Substances in Environmental Samples*, USEPA, August 1993, EPA/600/R-93/100 (available through the NTIS, PB94-121811). EPA Methods 300.1 and 321.8 are in *Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume 1*, USEPA, August 2000, EPA 815-R-00-014 (available through NTIS, PB2000-106981). EPA Method 317.0, Revision 2.0, *Determination of Inorganic Oxyhalide Disinfection By-products in Drinking Water Using Ion Chromatography Incorporating the Addition of a Postcolumn Reagent for Trace Bromate Analysis*, USEPA, July 2001, EPA 815-B-01-001, EPA Method 326.0, Revision 1.0, *Determination of Inorganic Oxyhalide Disinfection By-products in Drinking Water Using Ion Chromatography Incorporating the Addition of a Suppressor Acidified Postcolumn Reagent for Trace Bromate Analysis*, USEPA, June 2002, EPA 815-R-03-007, EPA Method 327.0, Revision 1.1, "Determination of Chlorine Dioxide and Chlorite Ion in Drinking Water Using Lissamine Green B and Horseradish Peroxidase with Detection by Visible Spectrophotometry", USEPA, May 2005, EPA 815-R-05-008 and EPA Method 552.3, Revision 1.0, "Determination of Haloacetic Acids and Dalapon in Drinking Water by Liquid-liquid Microextraction, Derivatization, and Gas Chromatography with Electron Capture Detection", USEPA, July 2003, EPA-815-B-03-002 can be accessed and downloaded directly on-line at <http://www.epa.gov/safewater/methods/sourcalt.html>. EPA Method 415.3, Revision 1.1, "Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source Water and Drinking Water", USEPA, February 2005, EPA/600/R-05/055 can be accessed and downloaded directly on-line at www.epa.gov/nerlcwww/ordmeth.htm. Standard Methods 4500-C1 D, 4500-C1 E, 4500-C1 F, 4500-C1 G, 4500-C1 H, 4500-C1 I, 4500-C1 O2 D, 4500-C1 O2 E, 6251 B, and 5910 B shall be followed in accordance with Standard Methods for the Examination of Water and Wastewater, 19th or 20th Editions, American Public Health Association, 1995 and 1998, respectively. The cited methods published in either edition may be used. Standard Methods 5310 B, 5310 C, and 5310 D shall be followed in accordance with the Supplement to the 19th Edition of Standard Methods for the Examination of Water and Wastewater, or the Standard Methods for the Examination of Water and Wastewater, 20th Edition, American Public Health Association, 1996 and 1998, respectively. The cited methods published in either edition may be used. Copies may be obtained from the American Public Health Association, 1015 Fifteenth Street, NW., Washington, DC 20005. Standard Methods 4500-C1 D-00, 4500-C1 E-00, 4500-C1 F-00, 4500-C1 G-00, 4500-C1 H-00, 4500-C1 I-00, 4500-C1 O2 E-00, 6251 B-94, 5310 B-00, 5310 C-00, 5310 D-00 and 5910 B-00 are available at <http://www.standardmethods.org> or at EPA's Water Docket. The year in which each method was approved by the Standard Methods Committee is designated by the last two digits in the method number. The methods listed are the only Online versions that are IBR-approved. ASTM Methods D 1253-86 and D 1253-86 (Reapproved 1996) shall be followed in accordance with the Annual Book of ASTM Standards, Volume 11.01, American Society for Testing and Materials International, 1996 or any ASTM edition containing the IBR-approved version of the method may be used. ASTM Method D1253-03 shall be followed in accordance with the Annual Book of ASTM Standards, Volume 11.01, American Society for Testing and Materials International, 2004 or any ASTM edition containing the IBR-approved version of the method may be used. ASTM Method D 6581-00 shall be followed in accordance with the Annual Book of ASTM Standards, Volume 11.01, American Society for Testing and Materials International, 2001 or any ASTM edition containing the IBR-approved version of the method may be used; copies may be obtained from the American Society for Testing and Materials International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.07E: continued

(c) Disinfection Byproducts.

1. Each Supplier of Water shall measure Disinfection byproducts by the methods (as modified by the footnotes) listed in the following table:

APPROVED METHODS FOR DISINFECTION BYPRODUCT COMPLIANCE MONITORING

Contaminant and methodology ¹	EPA method	Standard Method	SM online ⁹	ASTM method ³
TTHM P&T/GC/EICD& PID P&T/GC/MS LLE/GC/ECD	502.2 ⁴ 524.2, 524.3 ¹⁰ , 524.4 ¹⁵ , 551.1			
HAA5 LLE (diazomethane)/GC/ECD SPE (acidic methanol)/GC/ECD LLE (acidic methanol)/GC/ECD Ion Chromatography Electrospray Ionization Tandem Mass Spectrometry (IC-ESI-MS/MS) HAA5 LLE(diazomethane)/GC/ECD SPE	----- 552.1 ⁵ 552.2, 552.3	6251 B ^{2, 5, 11}	6251 B-94	
Bromate Ion chromatography Ion chromatography & post column reaction IC/ICP-MS Ion Chromatography Electrospray Ionization Tandem Mass Spectrometry (IC-ESI-MS/MS) Chemically Suppressed Ion Chromatography Electrolytically Suppressed Ion Chromatography	300.1, 302.0 ^{6, 13} 317.0 Rev. 2.0 ⁶ , 326.0 ⁶ 321.8 ^{6, 7} 557 ^{6, 12}	-----	-----	D 6581-00 ³ D6581-08A ¹⁴ D6581-08B ¹⁴
Chlorite Amperometric titration Spectrophotometry Ion chromatography Chemically Suppressed Ion Chromatography Electrolytically Suppressed Ion Chromatography	----- 327.0 Rev 1.1 ⁸ 300.0, 300.1, 317.0 Rev 2.0, 326.0	4500-CIO ₂ E ^{2, 8} ----- -----	4500-CIO ₂ E-008 -----	D 6581-00 ³ D 6581-08 A ¹⁴ D 6581-08 B ¹⁴
Chlorite - daily monitoring as prescribed in 310 CMR 22.07E(7)(b)2.a.i Amperometric Titration		4500-CIO ₂ E ¹¹		

¹ P&T = purge and trap; GC = gas chromatography; EICD = electrolytic conductivity detector; PID= photoionization detector; MS = mass spectrometer; LLE = liquid/liquid extraction; ECD = electron capture detector; SPE = solid phase extraction; IC = ion chromatography, ICP-MS=inductively coupled plasma/mass spectrometer.
² 19th and 20th editions of Standard Methods for the Examination of Water and Wastewater, 1995 and 1998, respectively, American Public Health Association; either of these editions may be used.
³ Annual Book of ASTM Standards, 2001 or any year containing the cited version of the method, Vol 11.01.
⁴ If TTHMs are the only analytes being measured in the sample, then a PID is not required.

22.07E: continued

- ⁵ The samples must be extracted within 14 days of sample collection.
- ⁶ Ion chromatography & post column reaction or IC/ICP-MS must be used for monitoring of bromate for purposes of demonstrating eligibility of reduced monitoring, as prescribed in 310 CMR 22.07E(7)(b)3.b.
- ⁷ Samples must be preserved at the time of sampling with 50 mg ethylenediamine (EDA)/L of sample and must be analyzed within 28 days.
- ⁸ Amperometric titration may be used for routine daily monitoring of chlorite at the entrance to the Distribution System, as prescribed in 310 CMR 22.07E(7)(b)2.a.i. Ion chromatography shall be used for routine monthly monitoring of chlorite and additional monitoring of chlorite in the Distribution System, as prescribed in 310 CMR 22.07E(7)(b)2.a.ii. and (b)2.b.
- ⁹ The Standard Methods Online version that is approved is indicated by the last two digits in the method number which is the year of approval by the Standard Method Committee. Standard Methods Online are available at <http://www.standardmethods.org>.
- ¹⁰ EPA Method 524.3, Version 1.0 *Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry*, June 2009. EPA 815-B-09-009. Available at http://epa.gov/safewater/methods/analyticalmethods_ogwdw.html.
- ¹¹ Standard Methods for the Examination of Water and Wastewater, 21st edition (2005). Available from American Public Health Association, 800 I Street, NW., Washington, DC 20001-3710.
- ¹² EPA Method 557. *Determination of Haloacetic Acids, Bromate, and Dalapon in Drinking Water by Ion Chromatography Electrospray Ionization Tandem Mass Spectrometry (IC-ESI-MS/MS)*, August 2009. EPA 815-B-09-012. Available at http://epa.gov/safewater/methods/analyticalmethods_ogwdw.html.
- ¹³ EPA Method 302.0. *Determination of Bromate in Drinking Waters using Two-dimensional Ion Chromatography with Suppressed Conductivity Detection*, September 2009. EPA 815-B-09-014. Available at http://epa.gov/safewater/methods/analyticalmethods_ogwdw.html.
- ¹⁴ Available from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 or <http://astm.org>. The methods listed are the only alternative versions that may be used.
- ¹⁵ EPA Method 524.4, Version 1.0. *Measurement of Purgeable Organic Compounds in Water by Gas Chromatography/Mass Spectrometry using Nitrogen Purge Gas*, May 2013. EPA 815-R-13-002. Available at <http://water.epa.gov/drink>.

2. Analysis under 310 CMR 22.07E(6) for Disinfection byproducts shall be conducted by laboratories that have received certification by EPA or the Department, except as specified under 310 CMR 22.07E(6)(c)3.

3. A party approved by EPA or the Department shall measure daily chlorite samples at the entrance to the Distribution System.

(d) Disinfectant Residuals.

1. Each Supplier of Water shall measure the Residual Disinfectant Concentration for free chlorine, combined chlorine (chloramines), and chlorine dioxide by the methods listed in the following table:

22.07E: continued

APPROVED METHODS FOR DISINFECTANT RESIDUAL COMPLIANCE MONITORING

Methodology	Standard Method (19 th , 20 th or 21 st editions)	SM Online ²	EPA method	ASTM Method	Residual Measured ¹			
					Free Cl ₂	Combined Cl ₂	Total Cl ₂	Cl ₂ O ₂
Amperometric Titration	4500-Cl D	4500-Cl D-00		D 1253-86 (96), 03, D 1253-08 ⁴	X	X	X	
Low Level Amperometric Titration	4500-Cl E	4500-Cl E-00					X	
DPD Ferrous Titrimetric	4500-Cl F	4500-Cl F-00			X	X	X	
DPD Colorimetric	4500-Cl G	4500-Cl G-00			X	X	X	
Syringaldazine (FACTS)	4500-Cl H	4500-Cl H-00			X			
Iodometric Electrode	4500-Cl I	4500-Cl I-00					X	
DPD Amperometric Method II	4500-ClO ₂ D 4500-ClO ₂ E	4500-Cl O ₂ E-00						X X
Lissamine Green Spectrophotometric Amperometric Sensor - ChloroSense ⁵			327.0 Rev 1.1		X		X	X
On-line Chlorine Analyzer			334.06		X		X	

¹ X indicates method is approved for measuring specified Disinfectant residual. Free chlorine or total chlorine may be measured for demonstrating compliance with the chlorine MRDL and combined chlorine, or total chlorine may be measured for demonstrating compliance with the chloramine MRDL.

² The Standard Methods Online version that is approved is indicated by the last two digits in the method number which is the year of approval by the Standard Method Committee. Standard Methods Online are available at <http://www.standardmethods.org>.

³ Cl₂ = Chlorine, ClO₂ = Chlorine Dioxide.

⁴ Available from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 or <http://astm.org>. The methods listed are the only alternative versions that may be used.

⁵ ChloroSense. *Measurement of Free and Total Chlorine in Drinking Water by Palintest ChloroSense*, September 2009. Available at <http://www.nemi.gov> or from Palintest Ltd, 21 Kenton Lands Road, P.O. Box 18395, Erlanger, KY 41018.

⁶ EPA Method 334.0. *Determination of Residual Chlorine in Drinking Water Using an On-Line Chlorine Analyzer*, August 2009. EPA 815-B-09-013. Available at http://epa.gov/safewater/methods/analyticalmethods_ogwdw.html.

2. Each Supplier of Water may also measure Residual Disinfectant Concentrations for chlorine, chloramines, and chlorine dioxide by using digital meter versions of DPD colorimetric test kits. Suppliers serving less than or equal to 3,300 persons may use non-digital meter DPD colorimetric test kits.

3. The Department approves all laboratory personnel (both in-house and at Department certified laboratories) as well as certified operators to conduct measurements of Residual Disinfectant Concentrations. All parties conducting these measurements shall be approved by the Department and shall be trained in the relevant methodology and/or the use of the relevant equipment and shall follow procedures outlines by the manufacturer of that equipment.

(e) Additional Analytical Methods. Each Supplier of Water who is required to analyze parameters not included in 310 CMR 22.07E(6)(c) and (d) shall use the following methods. A party approved by the Department as per 310 CMR 22.07E(6)(d)3. shall measure these parameters.

22.07E: continued

1. Alkalinity. All methods allowed in 310 CMR 22.06B(10) for measuring alkalinity.
 2. Bromide. EPA Methods 300.0, 300.1, 317.0 Revision 2.0, 326.0, or ASTM D 6581-00.
 3. Total Organic Carbon (TOC). Standard Method 5310 B (High-Temperature Combustion Method) or 5310 B-00 (High-temperature Combustion Method) or Standard Method 5310 C or 5310 C-00 (Persulfate-ultraviolet or Heated-persulfate Oxidation Method) or Standard Method 5310 D or 5310 D-00 (Wet-oxidation Method) or EPA Method 415.3 Revision 1.1 or Revision 1.2. Inorganic carbon must be removed from the samples prior to analysis. TOC samples may not be filtered prior to analysis. TOC samples shall either be analyzed or shall be acidified at the time of sample collection to achieve pH less than or equal to 2.0 with minimal addition of the acid specified in the method or by the instrument manufacturer. Acidified TOC samples shall be analyzed within 28 days.
 4. Specific Ultraviolet Absorbance (SUVA). SUVA is equal to the UV absorption at 254nm (UV254) (measured in m-1 divided by the dissolved organic carbon (DOC) concentration (measured as mg/l). In order to determine SUVA, it is necessary to separately measure UV254 and DOC. When determining SUVA, systems shall use the methods stipulated in 310 CMR 22.07E(6)(e)4.a. to measure DOC and the method stipulated in 310 CMR 22.07E(6)(e)4.b. to measure UV254. SUVA shall be determined on water prior to the addition of Disinfectants/oxidants by the system. DOC and UV254 samples used to determine a SUVA value shall be taken at the same time and at the same location.
 - a. Dissolved Organic Carbon (DOC). Standard Method 5310 B or 5310 B-00 (High-temperature Combustion Method) or Standard Method 5310 C or 5310 C-00 (Persulfate-ultraviolet or Heated-Persulfate Oxidation Method) or Standard Method 5310 D or 5310 D-00 (Wet-oxidation Method) or EPA Method 415.3 Revision 1.1 or Revision 1.2. DOC samples shall be filtered through a 0.45 µm pore-diameter filter as soon as practical after sampling, not to exceed 48 hours. After Filtration, DOC samples shall be acidified to achieve pH less than or equal to 2.0 with minimal addition of the acid specified in the method or by the instrument manufacturer. Acidified DOC samples shall be analyzed within 28 days of sample collection. Inorganic carbon must be removed from the sample prior to analysis. Water passed through the filter prior to Filtration of the sample shall serve as the filtered blank. This filtered blank shall be analyzed using procedures identical to those used for analysis of the samples and shall meet the following criteria: DOC < 0.5 mg/L. Acidified DOC samples shall be analyzed within 28 days of sample collection.
 - b. Ultraviolet Absorption at 254 nm (UV254). Standard Method 5910 B or 5910 B-00 (Ultraviolet Absorption Method) or EPA Method 415.3 Revision 1.1 or Revision 1.2. UV absorption shall be measured at 253.7 nm (may be rounded off to 254 nm). Prior to analysis, UV254 samples shall be filtered through a 0.45 µm pore-diameter filter. The pH of UV254 samples may not be adjusted. Samples shall be analyzed as soon as practical after sampling, not to exceed 48 hours.
 5. pH. All methods allowed in 310 CMR 22.06B(10) for measuring pH.
 6. Magnesium. All methods allowed in 310 CMR 22.06B(10)(a) for measuring magnesium.
- (7) Monitoring Requirements.
- (a) General Requirements.
 1. Each Supplier of Water shall take all samples during normal operating conditions.
 2. For the purpose of determining the minimum number of required TTHM and HAA5 samples, the Department may allow multiple wells drawing water from the same aquifer but entering the Distribution System at different locations to be considered one treatment plant. Upon written request from a Supplier of Water, the Department will make this determination based on the following criteria:
 - a. The wells must be shown to be in the same aquifer using Department GIS and USGS information.
 - b. The wells must be treated in the same fashion or with processes that can be shown to be equivalent with respect to the potential to form Disinfection byproducts.
 - c. TOC samples from each well under consideration, taken during August, must have comparable results.

22.07E: continued

3. Each Supplier of Water shall monitor in accordance with the monitoring plan required under 310 CMR 22.07E(7)(f).
4. Each Supplier of Water may use only data collected under the provisions of 310 CMR 22.07E to qualify for reduced monitoring.
5. Each Supplier of Water who qualifies for reduced monitoring shall obtain Department approval prior to altering sampling practices.
6. Systems must collect both TTHM and HAA5 samples at the same frequency at each monitoring location.

(b) Monitoring Requirements for Disinfection Byproducts.

1. TTHM and HAA5.

- a. Routine Monitoring. Each Supplier of Water shall monitor at the frequency indicated in the following table:

Routine Monitoring Frequency for TTHM and HAA5

Type of system	Minimum monitoring frequency	Sample location in the Distribution System
Systems using Surface Water or Groundwater Under the Direct Influence of Surface Water serving at least 10,000 persons.	Four water samples per quarter per treatment plant.	At least 25% of all samples collected each quarter at locations representing maximum residence time. Remaining samples taken at locations representative of at least average residence time in the Distribution System and representing the entire Distribution System, taking into account number of persons served, different sources of water, and different treatment methods. ¹
Systems using Surface Water or Groundwater Under the Direct Influence of Surface Water serving from 500 to 9,999 persons.	One water sample per quarter per treatment plant.	Locations representing maximum residence time. ¹
Systems using Surface Water or Groundwater Under the Direct Influence of Surface Water serving fewer than 500 persons.	One sample per year per treatment plant during August.	Locations representing maximum residence time. ¹ If the sample (or average of annual samples, if more than one sample is taken) exceeds the MCL, the system shall increase monitoring to one sample per treatment plant per quarter, taken at a point reflecting the maximum residence time in the Distribution System, until the system meets reduced monitoring criteria in 310 CMR 22.07E(7)(b)1.d.
Systems using only groundwater not under direct influence of surface water using chemical Disinfectant and serving at least 10,000 persons.	One water sample per quarter per treatment plant. ²	Locations representing maximum residence time. ¹
Systems using only groundwater not under direct influence of surface water using chemical Disinfectant and serving fewer than 10,000 persons.	One sample per year per treatment plant during August. ²	Locations representing maximum residence time. ¹ If the sample (or average of annual samples, if more than one sample is taken) exceeds the MCL, the system shall increase monitoring to one sample per treatment plant per quarter, taken at a point reflecting the maximum residence time in the Distribution System, until the system meets reduced monitoring criteria in 310 CMR 22.07E(7)(b)1.d.

22.07E: continued

¹ If a system elects to sample more frequently than the minimum required, at least 25% of all samples collected each quarter (including those taken in excess of the required frequency) shall be taken at locations that represent the maximum residence time of the water in the Distribution System. The remaining samples shall be taken at locations representative of at least average residence time in the Distribution System.

² Multiple wells drawing water from a single aquifer may be considered one treatment plant for determining the minimum number of samples required, with prior Department approval in accordance with criteria developed under 310 CMR 22.07E(7)(a)2.

b. A Supplier of Water may reduce monitoring, except as otherwise provided, in accordance with the following table:

Reduced Monitoring Frequency for TTHM and HAA5

If you are a . . .	You may reduce monitoring if you have monitored at least one year and your . .	To this level
System using Surface Water or Groundwater Under the Direct Influence of Surface Water serving at least 10,000 persons which has a source water annual average TOC level, before any treatment, ≤ 4.0 mg/l.	TTHM annual average ≤ 0.040 mg/l and HAA5 annual average ≤ 0.030 mg/l.	One sample per treatment plant per quarter at Distribution System location reflecting maximum residence time.
System using Surface Water or Groundwater under the Direct Influence of Surface Water serving from 500 to 9,999 persons which has a source water annual average TOC level, before any treatment, ≤ 4.0 mg/l.	TTHM annual average ≤ 0.040 mg/l and HAA5 annual average ≤ 0.030 mg/l.	One sample per treatment plant per year at Distribution System location reflecting maximum residence time during August. NOTE: Any system using Surface Water or Groundwater under the Direct Influence of Surface Water serving fewer than 500 persons may not reduce its monitoring to less than one sample per treatment plant per year.
System using only groundwater not under direct influence of surface water using chemical Disinfectant and serving at least 10,000 persons.	TTHM annual average ≤ 0.040 mg/l and HAA5 annual average ≤ 0.030 mg/l.	One sample per treatment plant per year at Distribution System location reflecting maximum residence time during August.
System using only groundwater not under direct influence of surface water using chemical Disinfectant and serving fewer than 10,000 persons.	TTHM annual average ≤ 0.040 mg/l and HAA5 annual average ≤ 0.030 mg/l for two consecutive years OR TTHM annual average ≤ 0.020 mg/l and HAA5 annual average ≤ 0.015 mg/l for one year.	One sample per treatment plant per three year monitoring cycle at Distribution System location reflecting maximum residence time during August, with the three-year cycle beginning on January 1 st following the quarter in which system qualifies for reduced monitoring.

c. Monitoring Requirements for Source Water TOC. In order to qualify for reduced monitoring for TTHM and HAA5 under 310 CMR 22.07E(7)(b)1.b, Surface Water and Groundwater Under the Direct Influence of Surface Water systems not monitoring under the provisions of 310 CMR 22.07E(7)(d) must take monthly TOC samples every 30 days at a location prior to any treatment, beginning April 1, 2008 or earlier, if specified by the Department. In addition to meeting other criteria for reduced monitoring in 310 CMR 22.07E(7)(b)1.b., the source water TOC Running Annual Average must be 4.0 mg/L (based on the most recent four quarters of monitoring) on a continuing basis at each treatment plant to reduce or remain on reduced monitoring for TTHM and HAA5. Once qualified for reduced monitoring for TTHM and HAA5 under 310 CMR 22.07E(7)(b)1.b., a system may reduce source water TOC monitoring to quarterly TOC samples taken every 90 days at a location prior to any treatment.

22.07E: continued

- d. Each Supplier of Water on a reduced monitoring schedule may remain on that reduced schedule as long as the average of all samples taken in the year (for systems which shall monitor quarterly) or the result of the sample (for systems which shall monitor no more frequently than annually) is no more than 0.060 mg/l and 0.045 mg/l for TTHM and HAA5, respectively. Systems that do not meet these levels shall resume monitoring at the frequency identified in 310 CMR 22.07E(7)(b)1.a. (minimum monitoring frequency column) in the quarter immediately following the monitoring period in which the system exceeds 0.060 mg/l or 0.045 mg/l for TTHM or HAA5, respectively. For each Supplier of Water using groundwater not under the direct influence of surface water and serving fewer than 10,000 people, if either the TTHM annual average is > 0.080 mg/l or the HAA5 annual average is > 0.060 mg/l, the system shall go to increased monitoring identified in 310 CMR 22.07E(7)(b)1.a. (sample location in the Distribution System column) in the quarter immediately following the monitoring period in which the system exceeds 0.080 mg/l or 0.060 mg/l for TTHM or HAA5 respectively.
 - e. Each Supplier of Water on increased monitoring may return to routine monitoring if after at least one year of monitoring their TTHM annual average is 0.060 mg/l and their HAA5 annual average is 0.045 mg/l.
 - f. The Department may return a Supplier of Water to routine monitoring at the Department's discretion.
2. Chlorite. An owner or operator of Community and Non-transient Non-community Water Systems using chlorine dioxide, for Disinfection or oxidation, shall conduct monitoring for chlorite.
- a. Routine Monitoring.
 - i. Daily Monitoring. Each Supplier of Water shall take daily samples at the entrance to the Distribution System. For any daily sample that exceeds the chlorite MCL, the supplier shall take additional samples in the Distribution System the following day at the locations required by 310 CMR 22.07E(7)(b)2.b. in addition to the sample required at the entrance to the Distribution System.
 - ii. Monthly Monitoring. Each Supplier of Water shall take a three-sample set each month in the Distribution System. The supplier shall take one sample at each of the following locations: near the first customer, at a location representative of average residence time, and at a location reflecting maximum residence time in the Distribution System. Any additional routine sampling shall be conducted in the same manner (as three-sample sets, at the specified locations). Each Supplier of Water may use the results of additional monitoring conducted under 310 CMR 22.07E(7)(b)2.b. to meet the requirement for monitoring in 310 CMR 22.07E(7)(b)2.a.ii.
 - b. Additional Monitoring. On each day following a routine sample monitoring result that exceeds the chlorite MCL at the entrance to the Distribution System, the Supplier of Water is required to take three chlorite Distribution System samples at the following locations: as close to the first customer as possible, in a location representative of average residence time, and as close to the end of the Distribution System as possible (reflecting maximum residence time in the Distribution System).
 - c. Reduced Monitoring.
 - i. Chlorite monitoring at the entrance to the Distribution System required by 310 CMR 22.07E(7)(b)2.a.i. may not be reduced.
 - ii. Chlorite monitoring in the Distribution System required by 310 CMR 22.07E(7)(b)2.a.ii. may be reduced to one three-sample set per quarter after one year of monitoring where no individual chlorite sample taken in the Distribution System under 310 CMR 22.07E(7)(b)2.a.ii. has exceeded the chlorite MCL and the supplier has not been required to conduct monitoring under 310 CMR 22.07E(7)(b)2.b. The supplier may remain on the reduced monitoring schedule until either any of the three individual chlorite samples taken quarterly in the Distribution System under 310 CMR 22.07E(7)(b)2.a.ii. exceeds the chlorite MCL or the system is required to conduct monitoring under 310 CMR 22.07E(7)(b)2.b., at which time the supplier shall revert to routine monitoring.

22.07E: continued

3. Bromate.

a. Routine Monitoring. Community and Non-transient Non-community Water Systems using ozone, for Disinfection or oxidation, shall take one sample per month for each treatment plant in the system using ozone. Each Supplier of Water shall take samples monthly at the entrance to the Distribution System while the ozonation system is operating under normal conditions.

b. Reduced Monitoring.

i. Until March 31, 2009, each Supplier of Water who is required to analyze for bromate may reduce monitoring from monthly to quarterly, if the system demonstrates that the average source water bromide concentration is less than 0.05 mg/l based upon representative monthly bromide measurements for one year. The Supplier of Water may remain on reduced bromate monitoring until the Running Annual Average source water bromide concentration, computed quarterly, is equal to or greater than 0.05 mg/l based upon representative monthly measurements. If the Running Annual Average source water bromide concentration is ≥ 0.05 mg/l, the Supplier of Water shall resume routine monitoring required by 310 CMR 22.07E(7)(b)3.a. in the following month.

ii. Beginning April 1, 2009, each Supplier of Water may no longer use the provisions of 310 CMR 22.07E(7)(b)3.b.i. to qualify for reduced monitoring. A Supplier of Water required to analyze for bromate may reduce monitoring from monthly to quarterly, if the system's Running Annual Average bromate concentration is 0.0025 mg/L based on monthly bromate measurements under 310 CMR 22.07E(7)(b)3.a. for the most recent four quarters, with samples analyzed using Method 302.0, 317.0 Revision 2.0, 326.0, 321.8 or 557. If a Supplier of Water has qualified for reduced bromate monitoring under 310 CMR 22.07E(7)(b)3.b.i. that Supplier of Water may remain on reduced monitoring as long as the Running Annual Average of quarterly bromate samples is 0.0025 mg/L based on samples analyzed using Method 302.0, 317.0 Revision 2.0, 326.0, 321.8 or 557. If the Running Annual Average bromate concentration is >0.0025 mg/L, the Supplier of Water must resume routine monitoring required by 310 CMR 22.07E(7)(b)3.a.

(c) Monitoring Requirements for Disinfectant Residuals.1. Chlorine and Chloramines.

a. Routine Monitoring. Community and Non-transient Non-community Water Systems that use chlorine or chloramines shall measure the residual Disinfectant level in the Distribution System at the same point in the Distribution System and at the same time as total coliforms are sampled, as specified in 310 CMR 22.05. Each Supplier of Water who uses a Surface Water Source or groundwater source under the direct influence of surface water may use the results of Residual Disinfectant Concentration sampling conducted under 310 CMR 22.20A(5)(b)6. for unfiltered systems or 310 CMR 22.20A(5)(c)3. for systems which filter, in lieu of taking separate samples.

b. Reduced Monitoring. Monitoring may not be reduced.

2. Chlorine Dioxide.

a. Routine Monitoring. Community, Non-transient Non-community, and Transient Non-community Water Systems that use chlorine dioxide for Disinfection or oxidation shall take daily samples at the entrance to the Distribution System. For any daily sample that exceeds the MRDL, the supplier shall take samples in the Distribution System the following day at the locations required by 310 CMR 22.07E(7)(c)2.b., in addition to the sample required at the entrance to the Distribution System.

22.07E: continued

- b. Additional Monitoring. On each day following a routine sample monitoring result that exceeds the MRDL, the supplier is required to take three chlorine dioxide Distribution System samples. If chlorine dioxide or chloramines are used to maintain a Disinfectant residual in the Distribution System, or if chlorine is used to maintain a Disinfectant residual in the Distribution System and there are no Disinfection addition points after the entrance to the Distribution System (*i.e.*, no booster chlorination), the supplier shall take three samples as close to the first customer as possible, at intervals of at least six hours. If chlorine is used to maintain a Disinfectant residual in the Distribution System and there are one or more Disinfection addition points after the entrance to the Distribution System (*i.e.*, booster chlorination), the supplier shall take one sample at each of the following locations: as close to the first customer as possible, in a location representative of average residence time, and as close to the end of the Distribution System as possible (reflecting maximum residence time in the Distribution System).
- c. Reduced Monitoring. Chlorine dioxide monitoring may not be reduced.
- (d) Monitoring Requirements for Disinfection Byproduct Precursors (DBPP).
1. Routine Monitoring. Each Supplier of Water who uses a Surface Water Source or groundwater source under the direct influence of surface water which use conventional Filtration treatment (as defined in 310 CMR 22.02) shall monitor each treatment plant for TOC no later than the point of combined filter effluent Turbidity monitoring and representative of the treated water. Each Supplier of Water required to monitor under 310 CMR 22.07E(7)(d)1. shall also monitor for TOC in the source water prior to any treatment at the same time as monitoring for TOC in the treated water. The source water TOC sample may be taken at an earlier time than the treated water TOC sample where the difference between the two sampling times is equal to the time it takes the water to pass through the treatment processes. These samples (source water and treated water) are referred to as paired samples. At the same time as the source water sample is taken, the Supplier of Water shall monitor for alkalinity in the source water prior to any treatment. Each Supplier of Water shall take one paired sample and one source water alkalinity sample per month per plant at a time representative of normal operating conditions and influent water quality.
 2. Reduced Monitoring. Each Supplier of Water who uses a Surface Water Source or groundwater source under the direct influence of surface water with an average treated water TOC of less than 2.0 mg/l for two consecutive years, or less than 1.0 mg/l for one year, may reduce monitoring for both TOC and alkalinity to one paired sample and one source water alkalinity sample per plant per quarter. The Supplier of Water shall revert to routine monitoring in the month following the quarter when the annual average treated water TOC is > 2.0 mg/l.
- (e) Bromide. Each Supplier of Water who is required to analyze for bromate may reduce bromate monitoring from monthly to once per quarter, if the Supplier of Water demonstrates that the average source water bromide concentration is < 0.05 mg/l based upon representative monthly measurements for one year. The Supplier of Water shall continue bromide monitoring to remain on reduced bromate monitoring.
- (f) Monitoring Plans. Each Supplier of Water who is required to monitor under 310 CMR 22.07E shall develop and implement a monitoring plan. The Supplier of Water shall maintain the plan and make it available for inspection by the Department and the general public no later than 30 days following the applicable compliance dates in 310 CMR 22.07E(3). Each Supplier of Water who uses a Surface Water Source or groundwater source under the direct influence of surface water that serves more than 3,300 people shall submit a copy of the monitoring plan to the Department no later than the date of the first report required under 310 CMR 22.07E(9). The Department may also require the plan to be submitted by any other supplier. After review, the Department may require changes in any plan elements. The plan shall include at least the following elements.
1. Specific locations and schedules for collecting samples for any parameters included in 310 CMR 22.07E(7).
 2. How the system will calculate compliance with MCLs, MRDLs, and Treatment Techniques.
 3. If approved for monitoring as a consecutive system, or if providing water to a consecutive system, under the provisions of 310 CMR 22.12, the sampling plan shall reflect the entire Distribution System.

22.07E: continued

4. Name, signature and title of system representative and date of signature.
5. System name and system PWSID No.

(8) Compliance Requirements.

(a) General Requirements.

1. Where compliance is based on a Running Annual Average of monthly or quarterly samples or averages and the system fails to monitor for TTHM, HAA5, or bromate, this failure to monitor will be treated as a monitoring violation for the entire period covered by the annual average. Where compliance is based on a Running Annual Average of monthly or quarterly samples or averages and the supplier's failure to monitor makes it impossible to determine compliance with MRDLs for chlorine and chloramines, this failure to monitor will be treated as a monitoring violation for the entire period covered by the annual average.
2. All samples taken and analyzed under the provisions of 310 CMR 22.07E shall be included in determining compliance, even if that number is greater than the minimum required.
3. If, during the first year of monitoring under 310 CMR 22.07E(7), any individual quarter's average will cause the Running Annual Average of that system to exceed the MCL for Total Trihalomethanes, Haloacetic Acids (Five), or bromate; or the MRDL for chlorine or chloramine, the system is out of compliance at the end of that quarter.

(b) Disinfection Byproducts.

1. TTHM and HAA5.
 - a. For each Supplier of Water monitoring quarterly, compliance with MCLs in 310 CMR 22.07E(1) shall be based on a running annual arithmetic average, computed quarterly, of quarterly arithmetic averages of all samples collected by the supplier as prescribed by 310 CMR 22.07E(7)(b)1.
 - b. For each Supplier of Water monitoring less frequently than quarterly, the supplier demonstrates MCL compliance if the average of samples taken that year under the provisions of 310 CMR 22.07E(7)(b)1. does not exceed the MCLs in 310 CMR 22.07E(1). If the average of these samples exceeds the MCL, the supplier shall increase monitoring to once per quarter per treatment plant and such a system is not in violation of the MCL until it has completed one year of quarterly monitoring, unless the result of fewer than four quarters of monitoring will cause the Running Annual Average to exceed the MCL, in which case the Supplier of Water is in violation at the end of that quarter. Each Supplier of Water who is required to increase monitoring frequency to quarterly monitoring shall calculate compliance by including the sample which triggered the increased monitoring plus the following three quarters of monitoring.
 - c. If the running annual arithmetic average of quarterly averages covering any consecutive four-quarter period exceeds the MCL, the Supplier of Water is in violation of the MCL and shall notify the public pursuant to 310 CMR 22.16, in addition to reporting to the Department pursuant to 310 CMR 22.07E(9).
 - d. If a Supplier of Water fails to complete four consecutive quarters of monitoring, compliance with the MCL for the last four-quarter Compliance Period shall be based on an average of the available data.
2. Bromate. Compliance shall be based on a running annual arithmetic average, computed quarterly, of monthly samples (or, for months in which the Supplier of Water takes more than one sample, the average of all samples taken during the month) collected by the Supplier of Water as prescribed by 310 CMR 22.07E(7)(b)3. If the average of samples covering any consecutive four-quarter period exceeds the MCL, the system is in violation of the MCL and shall notify the public pursuant to 310 CMR 22.16, in addition to reporting to the Department pursuant to 310 CMR 22.07E(9). If a Supplier of Water fails to complete 12 consecutive months of monitoring, compliance with the MCL for the last four-quarter Compliance Period shall be based on an average of the available data.
3. Chlorite. Compliance shall be based on an arithmetic average of each three-sample set taken in the Distribution System as prescribed by 310 CMR 22.07E(7)(b)2.a.ii. and b. If the arithmetic average of any three-sample set exceeds the MCL, the supplier is in violation of the MCL and shall notify the public pursuant to 310 CMR 22.16, in addition to reporting to the Department pursuant to 310 CMR 22.07E(9).

22.07E: continued

(c) Disinfectant Residuals.1. Chlorine and Chloramines.

a. Compliance shall be based on a running annual arithmetic average, computed quarterly, of monthly averages of all samples collected by the Supplier of Water under 310 CMR 22.07E(7)(c)1. If the average covering any consecutive four-quarter period exceeds the MRDL, the supplier is in violation of the MRDL and shall notify the public pursuant to 310 CMR 22.16, in addition to reporting to the Department pursuant to 310 CMR 22.07E(9).

b. In cases where the Supplier of Water switches between the use of chlorine and chloramines for residual Disinfection during the year, compliance shall be determined by including together all monitoring results of both chlorine and chloramines in calculating compliance. Reports submitted pursuant to 310 CMR 22.07E(9) shall clearly indicate which residual Disinfectant was analyzed for each sample.

2. Chlorine Dioxide.

a. Acute Violations. Compliance shall be based on consecutive daily samples collected by the system under 310 CMR 22.07E(7)(c)2. If any daily sample taken at the entrance to the Distribution System exceeds the MRDL, and on the following day one (or more) of the three samples taken in the Distribution System exceed the MRDL, the supplier is in violation of the MRDL and shall take immediate corrective action to lower the level of chlorine dioxide below the MRDL and shall notify the public pursuant to the procedures for acute health risks in 310 CMR 22.16 in addition to reporting to the Department pursuant to 310 CMR 22.07E(9). Failure to take samples in the Distribution System the day following an exceedance of the chlorine dioxide MRDL at the entrance to the Distribution System will also be considered an MRDL violation and the supplier shall notify the public of the violation in accordance with the provisions for acute violations under 310 CMR 22.16 in addition to reporting to the Department pursuant to 310 CMR 22.07E(9).

b. Nonacute Violations. Compliance shall be based on consecutive daily samples collected by the Supplier of Water under 310 CMR 22.07E(7)(c)2. If any two consecutive daily samples taken at the entrance to the Distribution System exceed the MRDL and all Distribution System samples taken are below the MRDL, the supplier is in violation of the MRDL and shall take corrective action to lower the level of chlorine dioxide below the MRDL at the point of sampling and will notify the public pursuant to the procedures for nonacute health risks in 310 CMR 22.16 in addition to reporting to the Department pursuant to 310 CMR 22.07E(9). Failure to monitor at the entrance to the Distribution System the day following an exceedance of the chlorine dioxide MRDL at the entrance to the Distribution System is also an MRDL violation and the supplier shall notify the public of the violation in accordance with the provisions for nonacute violations under 310 CMR 22.16 in addition to reporting to the Department pursuant to 310 CMR 22.07E(9).

(d) Disinfection Byproduct Precursors (DBPP). Compliance shall be determined as specified by 310 CMR 22.07E(10)(c). Each Supplier of Water may begin monitoring to determine whether Step 1 TOC removals can be met 12 months prior to the compliance date for the system. This monitoring is not required and failure to monitor during this period is not a violation. However, any Supplier of Water who does not monitor during this period, and then determines in the first 12 months after the compliance date that they are not able to meet the Step 1 requirements in 310 CMR 22.07E(10)(b)2. and shall therefore apply for alternate minimum TOC removal (Step 2) requirements, are not eligible for retroactive approval of alternate minimum TOC removal (Step 2) requirements as allowed pursuant to 310 CMR 22.07E(10)(b)3. and are in violation. A Supplier of Water may apply for alternate minimum TOC removal (Step 2) requirements any time after the compliance date. For each suppliers of water who is required to meet Step 1 TOC removals, if the value calculated under 310 CMR 22.07E(10)(c)1.d. is less than 1.00, the system is in violation of the Treatment Technique requirements and shall notify the public pursuant to 310 CMR 22.16, in addition to reporting to the Department pursuant to 310 CMR 22.07E(9).

22.07E: continued

(9) Reporting and Recordkeeping Requirements.

(a) Each Supplier of Water who is required to sample quarterly or more frequently shall report to the Department within ten days after the end of each quarter in which samples were collected, notwithstanding the provisions of 310 CMR 22.15. Each Supplier of Water who is required to sample less frequently than quarterly shall report to the Department within ten days after the end of each monitoring period in which samples were collected.

(b) Disinfection Byproducts. Each Supplier of Water shall report the information specified in the following table:

If you are a...	You shall report... ¹
1. System monitoring for TTHM and HAA5 under the requirements of 310 CMR 22.07E(7)(b) on a quarterly or more frequent basis.	a. The number of samples taken during the last quarter. b. The location, date, and result of each sample taken during the last quarter. c. The arithmetic average of all samples taken in the last quarter. d. The annual arithmetic average of the quarterly arithmetic averages of 310 CMR 22.07(9)(b)1.c. for the last four quarters. e. Whether, based on 310 CMR 22.07E(8)(b)1., the MCL was violated.
2. System monitoring for TTHM and HAA5 under the requirements of 310 CMR 22.07E(7)(b) less frequently than quarterly (but at least annually).	a. The number of samples taken during the last year. b. The location, date, and result of each sample taken during the last monitoring period. c. The arithmetic average of all samples taken over the last year. d. Whether, based on 310 CMR 22.07E(8)(b)1., the MCL was violated.
3. System monitoring for TTHM and HAA5 under the requirements of 310 CMR 22.07E(7)(b) less frequently than annually.	a. The location, date, and result of the last sample taken. b. Whether, based on 310 CMR 22.07E(8)(b)1., the MCL was violated.
4. System monitoring for chlorite under the requirements of 310 CMR 22.07E(7)(b)	a. The number of entry point samples taken each month for the last three months. b. The location, date, and result of each sample (both entry point and Distribution System) taken during the last quarter. c. For each month in the reporting period, the arithmetic average of all samples taken in each three sample set taken in the Distribution System. d. Whether, based on 310 CMR 22.07E(8)(b)3., the MCL was violated, in which month, and how many times it was violated each month.
5. System monitoring for bromate under the requirements of 310 CMR 22.07E(7)(b).	a. The number of samples taken during the last quarter. b. The location, date, and result of each sample taken during the last quarter. c. The arithmetic average of the monthly arithmetic averages of all samples taken in the last year. d. Whether, based on 310 CMR 22.07E(8)(b)2., the MCL was violated.

¹ The Department may choose to perform calculations and determine whether the MCL was violated.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.07E: continued

(c) Disinfectants. Each Supplier of Water shall report the information specified in the following table:

If you are a...	You shall report... ¹
1. System monitoring for chlorine or chloramines under the requirements of 310 CMR 22.07E(7)(c).	a. The number of samples taken during each month of the last quarter. b. The monthly arithmetic average of all samples taken in each month for the last 12 months. c. The arithmetic average of the monthly averages for the last 12 months. d. Whether, based on 310 CMR 22.07E(8)(c)1., the MRDL was violated.
2. System monitoring for chlorine dioxide under the requirements of 310 CMR 22.07E(7)(c).	a. The dates, results, and locations of samples taken during the last quarter. b. Whether, based on 310 CMR 22.07E(8)(c)2., the MRDL was violated. c. Whether the MRDL was exceeded in any two consecutive daily samples and whether the resulting violation was acute or nonacute.

¹ The Department may choose to perform calculations and determine whether the MRDL was exceeded or violated.

(d) Disinfection Byproduct Precursors and Enhanced Coagulation or Enhanced Softening. Each Supplier of Water shall report the information specified in the following table:

If you are a . . .	You shall report . . . ¹
1. System monitoring monthly or quarterly for TOC under the requirements of 310 CMR 22.07E(7)(d) and required to meet the Enhanced Coagulation or Enhanced Softening requirements in 310 CMR 22.07E(10)(b)2. or (b)3.	a. The number of paired (source water and treated water) samples taken during the last quarter. b. The location, date, and result of each paired sample and associated alkalinity taken during the last quarter. c. For each month in the reporting period that paired samples were taken, the arithmetic average of the percent reduction of TOC for each paired sample and the required TOC percent removal. d. Calculations for determining compliance with the TOC percent removal requirements, as provided in 310 CMR 22.07E(10)(c)1. e. Whether the system is in compliance with the Enhanced Coagulation or Enhanced Softening percent removal requirements in 310 CMR 22.07E(10)(b) for the last four quarters.

¹ The Department may choose to perform calculations and determine whether the Treatment Technique was met.

22.07E: continued

If you are a . . .	You shall report . . . ¹
<p>2. System monitoring monthly or quarterly for TOC under the requirements of Sec. 310 CMR 22.07E(7)(d) and meeting one or more of the alternative compliance criteria in 310 CMR 22.07E(10)(a)2. or (a)3.</p>	<p>a. The alternative compliance criterion that the system is using. b. The number of paired samples taken during the last quarter. c. The location, date, and result of each paired sample and associated alkalinity taken during the last quarter. d. The running annual arithmetic average based on monthly averages (or quarterly samples) of source water TOC for systems meeting a criterion in 310 CMR 22.07E(10)(a)2.a. or (a)2.c. or of treated water TOC for systems meeting the criterion in 310 CMR 22.07E(10)(a)2.b. e. The running annual arithmetic average based on monthly averages (or quarterly samples) of source water SUVA for systems meeting the criterion in 310 CMR 22.07E(10)(a)2.e. or of treated water SUVA for systems meeting the criterion in 310 CMR 22.07E(10)(a)2.f. f. The Running Annual Average of source water alkalinity for systems meeting the criterion in 310 CMR 22.07E(10)(a)2.c. and of treated water alkalinity for systems meeting the criterion in 310 CMR 22.07E(10)(a)3.a. g. The Running Annual Average for both TTHM and HAA5 for systems meeting the criterion in 310 CMR 22.07E(10)(a)2.c. or (a)2.d. h. The Running Annual Average of the amount of magnesium hardness removal (as CaCO₃, in mg/l) for systems meeting the criterion in 310 CMR 22.07E(10)(a)3.b. i. Whether the system is in compliance with the particular alternative compliance criterion in 310 CMR 22.07E(10)(a)2. or (a)3.</p>

¹ The Department may choose to perform calculations and determine whether the Treatment Technique was met.

(10) Treatment Technique for Control of Disinfection Byproduct (DBP) Precursors.

(a) Applicability.

1. Each Supplier of Water who uses a Surface Water Source or groundwater source under the direct influence of surface water using conventional Filtration treatment (as defined in 310 CMR 22.02) shall operate with Enhanced Coagulation or Enhanced Softening to achieve the TOC percent removal levels specified in 310 CMR 22.07E(10)(b) unless the supplier meets at least one of the alternative compliance criteria listed in 310 CMR 22.07E(10)(a)2. or 3.

2. Alternative Compliance Criteria for Enhanced Coagulation and Enhanced Softening Systems. Each Supplier of Water who uses a Surface Water Source or groundwater source under the direct influence of surface water using conventional Filtration treatment may use the alternative compliance criteria in 310 CMR 22.07E(10)(a)2.a. through f. to comply with 310 CMR 22.07E(10) in lieu of complying with 310 CMR 22.07E(10)(b). Each Supplier of Water shall still comply with monitoring requirements in 310 CMR 22.07E(7)(d).

a. The supplier's source water TOC level, measured according to 310 CMR 22.07E(6)(e)3., is less than 2.0 mg/l, calculated quarterly as a Running Annual Average.

b. The supplier's treated water TOC level, measured according to 310 CMR 22.07E(6)(e)3., is less than 2.0 mg/l, calculated quarterly as a Running Annual Average.

22.07E: continued

- c. The supplier's source water TOC level, measured according to 310 CMR 22.07E(6)(e)3., is less than 4.0 mg/l, calculated quarterly as a Running Annual Average; the source water alkalinity, measured according to 310 CMR 22.07E(6)(e)1., is greater than 60 mg/l (as CaCO₃), calculated quarterly as a Running Annual Average; and either the TTHM and HAA5 Running Annual Averages are no greater than 0.040 mg/l and 0.030 mg/l, respectively; or prior to the effective date for compliance in 310 CMR 22.07E(3), the supplier has made a clear and irrevocable financial commitment not later than the effective date for compliance in 310 CMR 22.07E(3), to use technologies that will limit the levels of TTHM and HAA5 to no more than 0.040 mg/l and 0.030 mg/l, respectively. The Supplier of Water shall submit evidence of a clear and irrevocable financial commitment, in addition to a schedule containing milestones and periodic progress reports for installation and operation of appropriate technologies, to the Department for approval not later than the effective date for compliance in 310 CMR 22.07E(3). These technologies shall be installed and operating not later than June 30, 2005. Failure to install and operate these technologies by the date in the approved schedule will constitute a violation of 310 CMR 22.00.
- d. The TTHM and HAA5 Running Annual Averages are no greater than 0.040 mg/l and 0.030 mg/l, respectively, and the system uses only chlorine for primary Disinfection and maintenance of a residual in the Distribution System.
- e. The supplier's source water SUVA, prior to any treatment and measured monthly according to 310 CMR 22.07E(6)(e)4., is less than or equal to 2.0 l/mg-m, calculated quarterly as a Running Annual Average.
- f. The supplier's finished water SUVA, measured monthly according to 310 CMR 22.07E(6)(e)4., is less than or equal to 2.0 l/mg-m, calculated quarterly as a Running Annual Average.

3. Additional Alternative Compliance Criteria for Enhanced Softening Systems. Each Supplier of Water who practices Enhanced Softening who cannot achieve the TOC removals required by 310 CMR 22.07E(10)(b)2. may use the alternative compliance criteria in 310 CMR 22.07E(10)(a)3.a. and b. in lieu of complying with 310 CMR 22.07E(10)(b). Each Supplier of Water shall still comply with monitoring requirements in 310 CMR 22.07E(7)(d).

- a. Softening that results in lowering the treated water alkalinity to less than 60 mg/l (as CaCO₃), measured monthly according to 310 CMR 22.07E(6)(e)1. and calculated quarterly as a Running Annual Average.
- b. Softening that results in removing at least 10 mg/l of magnesium hardness (as CaCO₃), measured monthly according to 310 CMR 22.07E(6)(e)6. and calculated quarterly as an annual running average.

(b) Enhanced Coagulation and Enhanced Softening Performance Requirements.

- 1. Each Supplier of Water shall achieve the percent reduction of TOC specified in 310 CMR 22.07E(10)(b)2. between the source water and the combined filter effluent, unless the Department approves the supplier's request for alternate minimum TOC removal (Step 2) requirements under 310 CMR 22.07E(10)(b)3.
- 2. Required Step 1 TOC reductions, indicated in the following table, are based upon specified source water parameters measured in accordance with 310 CMR 22.07E(6)(e). Each Supplier of Water who practices softening is required to meet the Step 1 TOC reductions in the far-right column (Source water alkalinity >120 mg/l) for the specified source water TOC:

Step 1 Required Removal of TOC by Enhanced Coagulation and Enhanced Softening for Systems Using Surface Water or Groundwater Under the Direct Influence of Surface Water and Using Conventional Treatment ^{1,2}			
Source-water TOC, mg/l	Source-water alkalinity, mg/l as CaCO ₃		
	0-60	> 60-120	> 120 ³
>2.0-4.0	35.0 %	25.0 %	15.0 %
>4.0-8.0	45.0 %	35.0 %	25.0 %
>8.0	50.0 %	40.0 %	30.0 %

¹ Systems meeting at least one of the conditions in 310 CMR 22.07E(10)(a)2. are not required to operate with Enhanced Coagulation.

22.07E: continued

- ² Softening systems meeting one of the alternative compliance criteria in 310 CMR 22.07E(10)(a)3. are not required to operate with Enhanced Softening.
- ³ Systems practicing softening shall meet the TOC removal requirements in this column.

3. Each Supplier of Water who uses a Surface Water Source or groundwater source under the direct influence of surface water using conventional treatment that cannot achieve the Step 1 TOC removals required by 310 CMR 22.07E(10)(b)2. due to water quality parameters or operational constraints shall apply to the Department, within three months of failure to achieve the TOC removals required by 310 CMR 22.07E(10)(b)2., for approval of alternative minimum TOC (Step 2) removal requirements. If the Department approves the alternative minimum TOC removal (Step 2) requirements, the Department may make those requirements retroactive for the purposes of determining compliance. Until the Department approves the alternate minimum TOC removal (Step 2) requirements, the supplier shall meet the Step 1 TOC removals contained in 310 CMR 22.07E(10)(b)2.

4. Alternate Minimum TOC Removal (Step 2) Requirements. Applications made to the Department by a Supplier of Water who practices Enhanced Coagulation for approval of alternate minimum TOC removal (Step 2) requirements under 310 CMR 22.07E(10)(b)3. shall include, at a minimum, results of bench- or pilot-scale testing conducted under 310 CMR 22.07E(10)(b)4.a. The submitted bench- or pilot-scale testing shall be used to determine the alternate Enhanced Coagulation level.

a. Alternate Enhanced Coagulation level is defined as Coagulation at a coagulant dose and pH as determined by the method described in 310 CMR 22.07E(10)(b)4.a. through e. such that an incremental addition of 10 mg/l of alum (or an equivalent amount of ferric salt) results in a TOC removal of 0.3 mg/l. The percent removal of TOC at this point on the "TOC removal versus coagulant dose" curve is then defined as the minimum TOC removal required for the system. After the Department approves this minimum requirement, it shall supersede the minimum TOC removal, which is required by the table in 310 CMR 22.07E(10)(b)2. This minimum requirement will be effective until such time as the Department approves a new value based on the results of a new bench- and pilot-scale test. Failure to achieve Department-set alternative minimum TOC removal levels is a violation of 310 MR 22.00.

b. The Supplier of Water shall conduct bench- or pilot-scale testing of Enhanced Coagulation using representative water samples and adding ten mg/l increments of alum (or equivalent amounts of ferric salt) until the pH is reduced to a level less than or equal to the Enhanced Coagulation Step 2 target pH shown in the following table:

Enhanced Coagulation Step 2 Target pH	
Alkalinity (mg/l as CaCO ₃)	Target pH
0-60	5.5
>60-120	6.3
>120-240	7.0
>240	7.5

c. For waters with alkalinities of less than 60 mg/l for which addition of small amounts of alum coagulant (or the equivalent addition of ferric salts) drives the pH below 5.5 before significant TOC removal occurs, the Supplier of Water shall add chemicals necessary to maintain the pH between 5.3 and 5.7 in samples until the TOC removal of 0.3 mg/l per 10 mg/l alum added (or an equivalent amount of ferric salt) is reached.

d. The Supplier of Water may operate the system at any coagulant dose or pH necessary (consistent with 310 CMR 22.00 requirements) to achieve the minimum TOC percent removal approved under 310 CMR 22.07E(10)(b)3.

e. If the TOC removal is consistently less than 0.3 mg/l of TOC per ten mg/l of incremental alum dose at all dosages of alum (or equivalent doses of ferric salt), the water will be deemed to contain TOC not amenable to Enhanced Coagulation. The Supplier of Water may then apply to the Department for a waiver of Enhanced Coagulation requirements.

22.07E: continued

(c) Compliance Calculations.

1. Each Supplier of Water who uses a Surface Water Source or groundwater source under the direct influence of surface water other than those identified in 310 CMR 22.07E(10)(a)2. or 3. shall comply with requirements contained in 310 CMR 22.07E(10)(b)2. or 3. Each Supplier of Water shall calculate compliance quarterly, beginning after the system has collected 12 months of data, by determining an annual average using the following method:

a. Determine actual monthly TOC percent removal, equal to:
 $(1 - (\text{treated water TOC} / \text{source water TOC})) \times 100$

b. Determine the required monthly TOC percent removal (from either the table in 310 CMR 22.07E(10)(b)2. or 3.).

c. Divide the value in 310 CMR 22.07E(10)(c)1.a. by the value in 310 CMR 22.07E(10)(c)1.b.

d. Add together the results of 310 CMR 22.07E(10)(c)1.c. for the last 12 months and divide by 12.

e. If the value calculated in 310 CMR 22.07E(10)(c)1.d. is less than 1.00, the supplier is not in compliance with the TOC percent removal requirements.

2. Each Supplier of Water may use the provisions in 310 CMR 22.07E(10)(c)2.a. through e. in *lieu* of the calculations in 310 CMR 22.07E(10)(c)1.a. through e to determine compliance with TOC percent removal requirements.

a. In any month that the Supplier of Water's treated or source water TOC level, measured according to 310 CMR 22.07E(6)(e)3., is less than 2.0 mg/l, the supplier may assign a monthly value of 1.0 (in *lieu* of the value calculated in 310 CMR 22.07E(10)(c)1.c.) when calculating compliance under the provisions of 310 CMR 22.07E(10)(c)1.

b. In any month that a Supplier of Water practicing softening removes at least 10 mg/l of magnesium hardness (as CaCO₃), the supplier may assign a monthly value of 1.0 (in *lieu* of the value calculated in 310 CMR 22.07E(10)(c)1.c.) when calculating compliance under the provisions of 310 CMR 22.07E(10)(c)1.

c. In any month that the supplier's source water SUVA, prior to any treatment and measured according to 310 CMR 22.07E(6)(e)4., is ≤ 2.0 l/mg-m, the supplier may assign a monthly value of 1.0 (in *lieu* of the value calculated in 310 CMR 22.07E(10)(c)1.c.) when calculating compliance under the provisions of 310 CMR 22.07E(10)(c)1.

d. In any month that the Supplier of Water's finished water SUVA, measured according to 310 CMR 22.07E(6)(e)4., is ≤ 2.0 l/mg-m, the supplier may assign a monthly value of 1.0 (in *lieu* of the value calculated in 310 CMR 22.07E(10)(c)1.c.) when calculating compliance under the provisions of 310 CMR 22.07E(10)(c)1.

e. In any month that a Supplier of Water practicing Enhanced Softening lowers alkalinity below 60 mg/l (as CaCO₃), the supplier may assign a monthly value of 1.0 (in *lieu* of the value calculated in 310 CMR 22.07E(10)(c)1.c.) when calculating compliance under the provisions of 310 CMR 22.07E(10)(c)1.

3. Each Supplier of Water who uses a Surface Water Source or groundwater source under the direct influence of surface water using conventional treatment may also comply with the requirements of 310 CMR 22.07E(10) by meeting the criteria in 310 CMR 22.07E(10)(a)2. or 3.

(d) Treatment Technique Requirements for DBP Precursors. The EPA Administrator identifies the following as Treatment Techniques to control the level of Disinfection byproduct precursors in drinking water treatment and Distribution Systems: For a Supplier of Water who uses a Surface Water Source or groundwater source under the direct influence of surface water that uses conventional treatment, Enhanced Coagulation or Enhanced Softening.

22.07F: Stage 2 Disinfection Byproducts Requirements (DBPR)

(1) Initial Distribution System Evaluations.

(a) General Requirements. The requirements of 310 CMR 22.07F(1) through (6) establish monitoring and other requirements for identifying Stage 2 DBPR compliance monitoring locations under 310 CMR 22.07(F) for determining compliance with Maximum Contaminant Levels for Total Trihalomethanes (TTHM) and Haloacetic Acids (Five) (HAA5). The Supplier of Water must use an Initial Distribution System Evaluation (IDSE) to determine locations with representative high TTHM and HAA5 concentrations throughout their Distribution System. IDSEs are used in conjunction with, but separate from, compliance monitoring required by 310 CMR 22.07E, to identify and select compliance monitoring locations under 310 CMR 22.07F(6).

(b) Applicability. For Community Water Systems that use a primary or residual Disinfectant other than ultraviolet light or deliver water that has been treated with a primary or residual Disinfectant other than ultraviolet light; or a Non-transient Non-community Water System that serves at least 10,000 people and uses a primary or residual Disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual Disinfectant other than ultraviolet light.

(c) Schedule.

1. Each Supplier of Water must comply with the requirements of the schedule in the table in 310 CMR 22.20F(1)(c).

TABLE 1 – 310 CMR 22.07F
INITIAL DISTRIBUTION SYSTEM EVALUATION SCHEDULE

If you serve this population	Supplier of water must submit their standard monitoring plan or system specific study plan ¹ or 40/30 certification ² to the Department by or receive very small system waiver from the Department	Supplier of water must complete their standard monitoring or system specific study by	Supplier of water must submit their IDSE report to the Department by ³
Systems that are not part of a Combined Distribution System and systems that serve the largest population in the Combined Distribution System			
a. ≥ 100,000	October 1, 2006	September 30, 2008	January 1, 2009
b. 50,000-99,999	April 1, 2007	March 31, 2009	July 1, 2009
c. 10,000-49,999	October 1, 2007	September 30, 2009	January 1, 2010
d. < 10,000 (CWS Only)	April 1, 2008	March 31, 2010	July 1, 2010
Other systems that are part of a Combined Distribution System			
e. Wholesale System or consecutive system	--at the same time as the system with the earliest compliance date in the Combined Distribution System	--at the same time as the system with the earliest compliance date in the Combined Distribution System	--at the same time as the system with the earliest compliance date in the Combined Distribution System

¹ If, within 12 months after the date identified in this column, the Department does not approve the Supplier of Water’s plan or notify them that it has not yet completed its review, the Supplier of Water may consider the plan that was submitted as approved.

² The Supplier of Water must implement that plan and they must complete standard monitoring or a system specific study no later than the date identified in the third column. The supplier of water must submit their 40/30 certification under 310 CMR 22.20F(4) by the date indicated.

³ If, within three months after the date identified in this column (nine months after the date identified in this column if the Supplier of Water must comply on the schedule in 310 CMR 22.07F(1)(c)1.c., the Department does not approve their IDSE report or notify them that it has not yet completed its review, the Supplier of Water may consider the report that was submitted as approved and must implement the recommended monitoring in 310 CMR 22.07F as required.

22.07F: continued

2. For the purpose of the schedule in 310 CMR 22.07F(1)(c)1., the Department may determine that the Combined Distribution System does not include certain consecutive systems based on factors such as receiving water from a Wholesale System only on an Emergency basis or receiving only a small percentage and small volume of water from a Wholesale System. The Department may also determine that the Combined Distribution System does not include certain Wholesale Systems based on factors such as delivering water to a consecutive system only on an Emergency basis or delivering only a small percentage and small volume of water to a consecutive system.
- (d) The Supplier of Water must conduct standard monitoring that meets the requirements in 310 CMR 22.20F(2), or a system specific study that meets the requirements in 310 CMR 22.07F(3), or certify to the Department that they meet 40/30 certification criteria under 310 CMR 22.20F(4), or qualify for a very small system waiver under 310 CMR 22.07F(5).
 1. The Supplier of Water must have taken the full complement of routine TTHM and HAA5 compliance samples required of a system with their population and source water under 310 CMR 22.07E (or they must have taken the full complement of reduced TTHM and HAA5 compliance samples required of a system with their population and source water under 310 CMR 22.07E if they meet reduced monitoring criteria under 310 CMR 22.07E) during the period specified in 310 CMR 22.07F(4)(a) to meet the 40/30 certification criteria in 310 CMR 22.07F(4). The Supplier of Water must have taken TTHM and HAA5 samples under 310 CMR 22.07E(6) and (7) to be eligible for the very small system waiver in 310 CMR 22.07F(5).
 2. If the Supplier of Water has not taken the required samples, they must conduct standard monitoring that meets the requirements in 310 CMR 22.07F(2), or a system specific study that meets the requirements in 310 CMR 22.07F(3).
 - (e) The Supplier of Water must use only the analytical methods specified in 310 CMR 22.07E(6), or otherwise approved by EPA for monitoring under 310 CMR 22.07F, to demonstrate compliance with the requirements of 310 CMR 22.07F.
 - (f) IDSE results will not be used for the purpose of determining compliance with MCLs in 310 CMR 22.07E(1).
- (2) Standard Monitoring.
- (a) Standard Monitoring Plan. The standard monitoring plan must comply with 310 CMR 22.07F(2)(a)1. through 4. The Supplier of Water must prepare and submit their standard monitoring plan to the Department according to the schedule in 310 CMR 22.07F(1)(c).
 1. The standard monitoring plan must include a schematic of the Supplier of Water's Distribution System (including Distribution System entry points and their sources, and storage facilities), with notes indicating locations and dates of all projected standard monitoring, and all projected compliance monitoring required under 310 CMR 22.07E.
 2. The standard monitoring plan must include justification of standard monitoring location selection and a summary of data relied on to justify standard monitoring location selection.
 3. The standard monitoring plan must specify the population served and system type (Surface Water or Groundwater under the Direct Influence of Surface Water or Groundwater).
 4. The Supplier of Water must retain a complete copy of their standard monitoring plan submitted under 310 CMR 22.07F(2)(a), including any Department modification of the standard monitoring plan, for as long as the Supplier of Water is required to retain their IDSE report under 310 CMR 22.07(2)(c)4.
 - (b) Standard Monitoring.
 1. The Supplier of Water must monitor as indicated in the table in 310 CMR 22.07F(2)(b)1. The supplier must collect Dual Sample Sets at each monitoring location. One sample in the Dual Sample Set must be analyzed for TTHM. The other sample in the Dual Sample Set must be analyzed for HAA5. The Supplier of Water must conduct one monitoring period during the peak historical month for TTHM levels or HAA5 levels or the month of warmest water temperature. The Supplier of Water must review available compliance, study, or operational data to determine the peak historical month for TTHM or HAA5 levels or warmest water temperature.

22.07F: continued

TABLE 2 – 310 CMR 22.07F
STANDARD MONITORING

Source water type	Population size category	Monitoring periods and frequency of sampling	Distribution System monitoring locations ¹				
			Total per monitoring period	Near entry points	Average residence Time	High TTHM locations	High HAA5 locations
Surface Water and Groundwater under the Direct Influence of Surface Water	<500 consecutive systems	One (during peak historical month) ²	2	1	.....	1	
	<500 non-consecutive systems	.....	2	.....	.....	1	1
	500-3,300 consecutive systems	Four (every 90 days)	2	1	.....	1	
	500-3,300 non-consecutive systems	.....	2	.....	.....	1	1
	3,301-9,999	.....	4	.....	1	2	1
	10,000-49,999	Six (every 60 days)	8	1	2	3	2
	50,000-249,999	.....	16	3	4	5	4
	250,000-999,999	.....	24	4	6	8	6
	1,000,000-4,999,999	.....	32	6	8	10	8
	≥5,000,000	.....	40	8	10	12	10
Groundwater	<500 consecutive systems	One (during peak historical month) ²	2	1	.....	1	
	<500 non-consecutive systems	.....	2	.....	.....	1	1
	500-9,999	Four (every 90 days)	2	.....	.....	1	1
	10,000-99,999	.....	6	1	.....	2	2
	100,000-499,999	.....	8	1	.....	3	3
	≥500,000	.....	12	2	.....	4	4

¹ A Dual Sample Set (*i.e.*, a TTHM and an HAA5 sample) must be taken at each monitoring location during each monitoring period.

² The peak historical month is the month with the highest TTHM or HAA5 levels or the warmest water temperature.

2. The Supplier of Water must take samples at locations other than the existing monitoring locations required in 310 CMR 22.07E. Monitoring locations must be distributed throughout the Distribution System.

3. If the number of entry points to the Distribution System is fewer than the specified number of entry point monitoring locations, excess entry point samples must be replaced equally at high TTHM and HAA5 locations. If there is an odd extra location number, the Supplier of Water must take a sample at a high TTHM location. If the number of entry points to the Distribution System is more than the specified number of entry point monitoring locations, the Supplier of Water must take samples at entry points to the Distribution System having the highest annual water flows.

4. The Supplier of Water's monitoring under 310 CMR 22.07F(2)(b) may not be reduced under the provisions of 310 CMR 22.12.

(c) IDSE Report. The Supplier of Water's IDSE report must include the elements required in 310 CMR 22.07F(2)(c)1. through 4. The Supplier of Water must submit their IDSE report to the Department according to the schedule in 310 CMR 22.07F(1)(c).

22.07F: continued

1. The Supplier of Water's IDSE report must include all TTHM and HAA5 analytical results from compliance monitoring under 310 CMR 22.07E and all standard monitoring conducted during the period of the IDSE as individual analytical results and LRAAs presented in a tabular or spreadsheet format acceptable to the Department. If changed from their standard monitoring plan submitted under 310 CMR 22.07F(2)(a), the Supplier of Water's report must also include a schematic of their Distribution System, the population served, and system type (Surface Water or Groundwater under the Direct Influence of Surface Water or Groundwater).
 2. The Supplier of Water's IDSE report must include an explanation of any deviations from their approved standard monitoring plan.
 3. The Supplier of Water must recommend and justify compliance monitoring locations under 310 CMR 22.07F and timing based on the protocol in 310 CMR 22.07F(6).
 4. The Supplier of Water must retain a complete copy of their IDSE report submitted under 310 CMR 22.07F(2)(c) for ten years after the date that they submitted their report. If the Department modifies the monitoring requirements of 310 CMR 22.07F that the Supplier of Water recommended in their IDSE report or if the Department approves alternative monitoring locations, the Supplier of Water must keep a copy of the Department's notification on file for ten years after the date of the Department's notification. The Supplier of Water must make the IDSE report and any Department notification available for review by the Department or the public.
- (3) System Specific Studies.
- (a) System Specific Study Plan. The Supplier of Water's system specific study plan must be based on either existing monitoring results as required under 310 CMR 22.07F(3)(a)1. or modeling as required under 310 CMR 22.07F(3)(a)2. The Supplier of Water must prepare and submit their system specific study plan to the Department according to the schedule in 310 CMR 22.07F(1)(c).
1. Existing Monitoring Results. The Supplier of Water may comply by submitting monitoring results collected before they are required to begin monitoring under 310 CMR 22.07F(1)(c). The monitoring results and analysis must meet the criteria in 310 CMR 22.07F(3)(a)1.a and b.
 - a. Minimum Requirements.
 - i. TTHM and HAA5 results must be based on samples collected and analyzed in accordance with 310 CMR 22.07E(6). Samples must be collected no earlier than five years prior to the study plan submission date.
 - ii. The monitoring locations and frequency must meet the conditions identified in 310 CMR 22.07F(3)(a)1.a.ii. Each location must be sampled once during the peak historical month for TTHM levels or HAA5 levels or the month of warmest water temperature for every 12 months of data submitted for that location. Monitoring results must include all monitoring results required under 310 CMR 22.07E plus additional monitoring results as necessary to meet minimum sample requirements.

22.07F: continued

TABLE 3 – 310 CMR 22.07F
EXISTING MONITORING RESULTS REQUIRED

System Type	Population size category	Number of monitoring locations	Number of samples	
			TTHM	HAA5
Surface and Groundwater under the Direct Influence of Surface Water	<500	3	3	3
	500-3,300	3	9	9
	3,301-9,999	6	36	36
	10,000 – 49,999	12	72	72
	50,000-249,999	24	144	144
	250,000-999,999	36	216	216
	1,000,000-4,999,999	48	288	288
	≥5,000,000	60	360	360
Groundwater	<500	3	3	3
	500-9,999	3	9	9
	10,000-99,999	12	48	48
	100,000-499,999	18	72	72
	≥500,000	24	96	96

- b. Reporting Monitoring Results. The Supplier of Water must report the following information:
- i. The Supplier of Water must report previously collected monitoring results and certify that the reported monitoring results include all compliance and non-compliance results generated during the time period beginning with the first reported result and ending with the most recent results required under 310 CMR 22.07E.
 - ii. The Supplier of Water must certify that the samples were representative of the entire Distribution System and that treatment, and Distribution System have not changed significantly since the samples were collected.
 - iii. The Supplier of Water's study monitoring plan must include a schematic of their Distribution System (including Distribution System entry points and their sources, and storage facilities), with notes indicating the locations and dates of all completed or planned system specific study monitoring.
 - iv. The Supplier of Water's system specific study plan must specify the population served and system type (Surface Water or Groundwater under the Direct Influence of Surface Water or Groundwater)
 - v. The Supplier of Water must retain a complete copy of their system specific study plan submitted under 310 CMR 22.07F(3)(a)1., including any Department modification of their system specific study plan, for as long as they are required to retain their IDSE report under 310 CMR 22.07F(3)(b)7.
 - vi. If the Supplier of Water submits previously collected data that fully meets the number of samples required under 310CMR 22.07F(3)(a)1.a.ii. and the Department rejects some of the data, the Supplier of Water must either conduct additional monitoring to replace rejected data on a schedule the Department approves or conduct standard monitoring under 310 CMR 22.07F(2).
2. Modeling. The Supplier of Water may comply through analysis of an extended period simulation hydraulic model. The extended period simulation hydraulic model and analysis must meet the criteria in 310 CMR 22.07F(3)(a)2.
- a. Minimum Requirements.
 - i. The model must simulate 24-hour variation in demand and show a consistently repeating 24 hour pattern of residence time.
 - ii. The model must represent the criteria listed in 310 CMR 22.07F(3)(a)2.a.ii.(A) through (I).
 - (A) 75% of pipe volume;
 - (B) 50% of pipe length;
 - (C) All pressure zones;

22.07F: continued

- (D) All 12-inch diameter and larger pipes;
- (E) All eight-inch and larger pipes that connect pressure zones, influence zones from different sources, storage facilities, major demand areas, pumps, and control valves, or are known or expected to be significant conveyors of water;
- (F) All six-inch and larger pipes that connect remote areas of a Distribution System to the main portion of the system;
- (G) All storage facilities with standard operations represented in the model; and
- (H) All active pump stations with controls represented in the model; and
- (I) All active control valves.

iii. The model must be calibrated, or have calibration plans, for the current configuration of the Distribution System during the period of high TTHM formation potential. All storage facilities must be evaluated as part of the calibration process. All required calibration must be completed no later than 12 months after plan submission.

b. Reporting Modeling. The Supplier of Water's system specific study plan must include the information in 310 CMR 22.07F(3)(a)2.b.

i. Tabular or spreadsheet data demonstrating that the model meets requirements in 310 CMR 22.07F(3)(a)2.a.ii.

ii. A description of all calibration activities undertaken, and if calibration is complete, a graph of predicted tank levels versus measured tank levels for the storage facility with the highest residence time in each pressure zone, and a time series graph of the residence time at the longest residence time storage facility in the Distribution System showing the predictions for the entire simulation period (*i.e.*, from time zero until the time it takes to for the model to reach a consistently repeating pattern of residence time).

iii. Model output showing preliminary 24-hour average residence time predictions throughout the Distribution System.

iv. Timing and number of samples representative of the Distribution System planned for at least one monitoring period of TTHM and HAA5 dual sample monitoring at a number of locations no less than would be required for the system under standard monitoring in 310 CMR 22.07F(2) during the historical month of high TTHM. These samples must be taken at locations other than existing compliance monitoring locations under 310 CMR 22.07E.

v. Description of how all requirements will be completed no later than 12 months after the Supplier of Water submits their system specific study plan.

vi. Schematic of the Supplier of Water's Distribution System (including Distribution System entry points and their sources, and storage facilities), with notes indicating the locations and dates of all completed system specific study monitoring (if calibration is complete) and all compliance monitoring required under 310 CMR 22.07E.

vii. Population served and system type (Surface Water and Groundwater Under the Direct Influence of Surface Water or Groundwater).

viii. The Supplier of Water must retain a complete copy of their system specific study plan submitted under 310 CMR 22.07F(3)(a)2., including any Department modification of the system specific study plan, for as long as the Supplier of Water is required to retain their IDSE report under 310 CMR 22.07F(3)(b)7.

c. If the Supplier of Water submits a model that does not fully meet the requirements under 310 CMR 22.07F(3)(a)2., the Supplier of Water must correct the deficiencies and respond to Department inquiries concerning the model. If the Supplier of Water fails to correct deficiencies or respond to inquiries to the Department's satisfaction, they must conduct standard monitoring under 310 CMR 22.07F(2).

(b) IDSE Report. The Supplier of Water's IDSE report must include the elements required in 310 CMR 22.07F(3)(b)1. through 6. The Supplier of Water must submit their IDSE report according to the schedule in 310 CMR 22.07F(1)(c).

22.07F: continued

1. The Supplier of Water's IDSE report must include all TTHM and HAA5 analytical results from monitoring required under 310 CMR 22.07E and all system specific study monitoring conducted during the period of the system specific study presented in a tabular or spreadsheet format acceptable to the Department. If changed from the Supplier of Water's system specific study plan submitted under 310 CMR 22.07F(3)(a), their IDSE report must also include a schematic of their Distribution System, the population served, and system type (Surface Water and Groundwater under the Direct Influence of Surface Water or Groundwater).
2. If the Supplier of Water used the modeling provision under 310 CMR 22.07F(3)(a)2., they must include final information for the elements described in 310 CMR 22.07F(3)(a)2.b., and a 24-hour time series graph of residence time for each compliance monitoring location selected in 310 CMR 22.07F.
3. The Supplier of Water must recommend and justify compliance monitoring locations in 310 CMR 22.07F and timing based on the protocol in 310 CMR 22.07(6).
4. The Supplier of Water's IDSE report must include an explanation of any deviations from their approved system specific study plan.
5. The Supplier of Water's IDSE report must include the basis (analytical and modeling results) and justification they used to select the recommended monitoring locations in 310 CMR 22.07F(6).
6. The Supplier of Water may submit their IDSE report in lieu of their system specific study plan on the schedule identified in 310 CMR 22.07F(1)(c) for submission of the system specific study plan if they believe that they have the necessary information by the time that the system specific study plan is due. If the Supplier of Water elects this approach, their IDSE report must also include all information required under 310 CMR 22.07F(3)(a).
7. The Supplier of Water must retain a complete copy of their IDSE report submitted under 310 CMR 22.07F(3)(b) for ten years after the date that they submitted their IDSE report. If the Department modifies the monitoring requirements in 310 CMR 22.07F that the Supplier of Water recommended in their IDSE report or if the Department approves alternative monitoring locations, the Supplier of Water must keep a copy of the Department's notification on file for ten years after the date of the Department's notification. The Supplier of Water must make the IDSE report and any Department notification available for review by the Department or the public.

(4) 40/30 Certification.

(a) Eligibility. The Supplier of Water is eligible for 40/30 certification if they had no TTHM or HAA5 monitoring violations under 310 CMR 22.07E and no individual sample exceeded 0.040 mg/L for TTHM or 0.030 mg/L for HAA5 during an eight consecutive calendar quarter period beginning no earlier than the date specified in 310 CMR 22.07F(4)(a).

TABLE 4 – 310 CMR 22.07F
40/30 CERTIFICATION SCHEDULE

If your 40/30 certification is due	Then your eligibility for 40/30 certification is based on eight consecutive calendar quarters of compliance monitoring results under 310 CMR 22.07E beginning no earlier than ¹
1. October 1, 2006	January 2004
2. April 1, 2007	January 2004
3. October 1, 2007	January 2005
4. April 1, 2008	January 2005

¹ Unless the Supplier of Water is on reduced monitoring under 310 CMR 22.07E and was not required to monitor during the specified period. If they did not monitor during the specified period, they must base their eligibility on compliance samples taken during the 12 months preceding the specified period.

22.07F: continued

(b) 40/30 Certification.

1. The Supplier of Water must certify to the Department that every individual compliance sample taken under 310 CMR 22.07E during the periods specified in 310 CMR 22.07F(4)(a) were ≤ 0.040 mg/L for TTHM and ≤ 0.030 mg/L for HAA5, and that they have not had any TTHM or HAA5 monitoring violations during the period specified in 310 CMR 22.07F(4)(a).

2. The Department may require the Supplier of Water to submit compliance monitoring results, Distribution System schematics, and/or recommended compliance monitoring locations as required in 310 CMR 22.07F in addition to their certification. If the Supplier of Water fails to submit the requested information, the Department may require standard monitoring under 310 CMR 22.07F(2) or a system specific study under 310 CMR 22.07F(3).

3. The Department may still require standard monitoring under 310 CMR 22.07F(2) or a system specific study under 310 CMR 22.07F(3) even if the Supplier of Water meets the criteria in 310 CMR 22.07F(4)(a).

4. The Supplier of Water must retain a complete copy of their certification submitted under 310 CMR 22.07F(4)(b) for ten years after the date that they submitted their certification. The Supplier of Water must make the certification, all data upon which the certification is based, and any Department notification available for review by the Department or the public.

(5) Very Small System Waivers.

(a) If the Supplier of Water serves fewer than 500 people and it has taken TTHM and HAA5 samples under 310 CMR 22.07E, the Supplier of Water is not required to comply with 310 CMR 22.07F(1) unless the Department notifies the Supplier of Water that it must conduct standard monitoring under 310 CMR 22.07F(2) or a system specific study under 310 CMR 22.07F(3).

(b) If the Supplier of Water has not taken TTHM and HAA5 samples under 310 CMR 22.07E or if the Department notifies the Supplier of Water that it must comply with 310 CMR 22.07F(1), the Supplier of Water must conduct standard monitoring under 310 CMR 22.07F(2) or a system specific study under 310 CMR 22.07F(3).

(6) Compliance Monitoring Location Recommendations.

(a) The Supplier of Water's IDSE report must include their recommendations and justification for where and during what month(s) TTHM and HAA5 monitoring required under 310 CMR 22.07F(8) should be conducted. They must base their recommendations on the criteria in 310 CMR 22.07F(6)(b) through (e).

(b) The Supplier of Water must select the number of monitoring locations specified in the table in 310 CMR 22.07F(6)(b). The Supplier of Water will use these recommended locations as routine compliance monitoring locations under 310 CMR 22.07F, unless the Department requires different or additional locations. The Supplier of Water should distribute locations throughout the Distribution System to the extent possible.

22.07F: continued

TABLE 5 – 310 CMR 22.07F
DISTRIBUTION SYSTEM MONITORING LOCATIONS

Source water type	Population size category	Monitoring frequency ¹	Distribution System monitoring location				
			Total per monitoring period ²	Highest TTHM locations	Highest HAA5 locations	Existing compliance locations under 310 CMR 22.07E	
Surface or Groundwater under the Direct Influence of Surface Water	<500	Per year	2	1	1	.....
	500-3,300	Per quarter	2	1	1		
	3,301-9,999	Per quarter	2	1	1	.....
	10,000-49,999	Per quarter	4	2	1	1	
	50,000-249,999	Per quarter	8	3	3	2	
	250,000-999,999	Per quarter	12	5	4	3	
	1,000,000-4,999,999	Per quarter	16	6	6	4	
	≥5,000,000	Per quarter	20	8	7	5	
Groundwater	<500	Per year	2	1	1		
	500-9,999	Per year	2	1	1		
	10,000-99,999	Per quarter	4	2	1	1	
	100,000-499,999	Per quarter	6	3	2	1	
		≥500,000	Per quarter	8	3	3	2

¹ All systems must monitor during month of highest DBP concentrations.

² Systems on quarterly monitoring must take Dual Sample Sets every 90 days at each monitoring location, except for Surface Water and Groundwater under the Direct Influence of Surface Water systems serving 500-3,300. Groundwater systems serving 500-9,999 on annual monitoring must take Dual Sample Sets at each monitoring location. All other systems on annual monitoring and Surface Water and Groundwater under the Direct Influence of Surface Water systems serving 500-3,300 are required to take individual TTHM and HAA5 samples (instead of a Dual Sample Set) at the locations with the highest TTHM and HAA5 concentrations, respectively. For systems serving fewer than 500 people, only one location with a Dual Sample Set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location and month.

(c) The Supplier of Water must recommend compliance monitoring locations for 310 CMR 22.07F(6) based on standard monitoring results, system specific study results, and compliance monitoring results required under 310 CMR 22.07E. The Supplier of Water must follow the protocol in 310 CMR 22.07F(6)(c)1. through 8. If required to monitor at more than eight locations, the Supplier of Water must repeat the protocol as necessary. If the Supplier of Water does not have existing compliance monitoring results required under 310 CMR 22.07E or if they do not have enough existing compliance monitoring results required under 310 CMR 22.07E, they must repeat the protocol, skipping the provisions of 310 CMR 22.07F(6)(c)(3) and (7) as necessary, until they have identified the required total number of monitoring locations.

1. Location with the highest TTHM LRAA not previously selected as a monitoring location under 310 CMR 22.07F.
2. Location with the highest HAA5 LRAA not previously selected as a monitoring location under 310 CMR 22.07F.
3. Existing average residence time compliance monitoring location (maximum residence time compliance monitoring location for groundwater systems) under 310 CMR 22.07E with the highest HAA5 LRAA not previously selected as a monitoring location under 310 CMR 22.07F.
4. Location with the highest TTHM LRAA not previously selected as a monitoring location under 310 CMR 22.07F.
5. Location with the highest TTHM LRAA not previously selected as a monitoring location under 310 CMR 22.07F.

22.07F: continued

6. Location with the highest HAA5 LRAA not previously selected as a monitoring location under 310 CMR 22.07F.
 7. Existing average residence time compliance monitoring location (maximum residence time compliance monitoring location for groundwater systems) under 310 CMR 22.07E with the highest TTHM LRAA not previously selected as a monitoring location under 310 CMR 22.07F.
 8. Location with the highest HAA5 LRAA not previously selected as a monitoring location under 310 CMR 22.07F.
- (d) The Supplier of Water may recommend locations other than those specified in 310 CMR 22.07F(6)(c) if they include a rationale for selecting other locations. If the Department approves the alternate locations, they must monitor at these locations to determine compliance under 310 CMR 22.07F.
- (e) The Supplier of Water's recommended schedule must include monitoring required under 310 CMR 22.07F during the peak historical month for TTHM and HAA5 concentration, unless the Department approves another month. Once the Supplier of Water has identified the peak historical month, and if they are required to conduct routine monitoring at least quarterly, they must schedule compliance monitoring required under 310 CMR 22.07F at a regular frequency of every 90 days or fewer.
- (7) General Monitoring Requirements of Stage 2 Disinfection Byproducts Rule.
- (a) General. The requirements of 310 CMR 22.07F(7) through (16) establish monitoring and other requirements for achieving compliance with Maximum Contaminant Levels based on Locational Running Annual Averages (LRAA) for Total Trihalomethanes (TTHM) and Haloacetic Acids (Five) (HAA5), and for achieving compliance with maximum residual Disinfectant residuals for chlorine and chloramine for certain consecutive systems.
 - (b) Applicability. The Supplier of Water is subject to these requirements if their system is a Community Water System or a Non-transient Non-community Water System that uses a primary or residual Disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual Disinfectant other than ultraviolet light.
 - (c) Schedule. The Supplier of Water must comply with the requirements in 310 CMR 22.07F(7) on the schedule in the following table based on their system type.

TABLE 6 – 310 CMR 22.07F
MONITORING SCHEDULE

If you are this type of system	You must comply with monitoring required under 310 CMR 22.07F(7) by: ¹
Systems that are not part of a Combined Distribution System and systems that serve the largest population in the Combined Distribution System	
1. System serving \geq 100,000	April 1, 2012
2. System serving 50,000 99,999	October 1, 2012
3. System serving 10,000 49,999	October 1, 2013
4. System serving < 10,000	October 1, 2013 if no <i>Cryptosporidium</i> monitoring is required under 310 CMR 22.20G(2)(a)4. or October 1, 2014 if <i>Cryptosporidium</i> monitoring is required under 310 CMR 22.20G(2)(a)4. or 310 CMR 22.20G(2)(a)6.
Other systems that are part of a Combined Distribution System	
5. Consecutive system or Wholesale System	at the same time as the system with the earliest compliance date in the Combined Distribution System.

¹ The Department may grant up to an additional 24 months for compliance with MCLs and operational evaluation levels if the Supplier of Water requires capital improvements to comply with an MCL.

22.07F: continued

6. The Supplier of Water's monitoring frequency is specified in 310 CMR 22.07F(8)(a)2.
 - a. If the Supplier of Water is required to conduct quarterly monitoring, they must begin monitoring in the first full calendar quarter that includes the compliance date in the table in 310 CMR 22.07F(7)(c).
 - b. If the Supplier of Water is required to conduct monitoring at a frequency that is less than quarterly, they must begin monitoring in the calendar month recommended in the IDSE report prepared under 310 CMR 22.07F(2) or (3) or the calendar month identified in the monitoring plan developed under 310 CMR 22.07F(9) no later than 12 months after the compliance date in the table in 310 CMR 22.07F(7)(c).
 7. If the Supplier of Water is required to conduct quarterly monitoring, they must make compliance calculations at the end of the fourth calendar quarter that follows the compliance date and at the end of each subsequent quarter (or earlier if the LRAA calculated based on fewer than four quarters of data would cause the MCL to be exceeded regardless of the monitoring results of subsequent quarters). If the Supplier of Water is required to conduct monitoring at a frequency that is less than quarterly, they must make compliance calculations beginning with the first compliance sample taken after the compliance date.
 8. For the purpose of the schedule in 310 CMR 22.07F(7)(c), the Department may determine that the Combined Distribution System does not include certain consecutive systems based on factors such as receiving water from a Wholesale System only on an Emergency basis or receiving only a small percentage and small volume of water from a Wholesale System. The Department may also determine that the Combined Distribution System does not include certain Wholesale Systems based on factors such as delivering water to a consecutive system only on an Emergency basis or delivering only a small percentage and small volume of water to a consecutive system.
- (d) Monitoring and Compliance.
1. Systems Required to Monitor Quarterly. To comply with MCLs required by 310 CMR 22.07F listed in 310 CMR 22.07E(1), the Supplier of Water must calculate LRAAs for TTHM and HAA5 using monitoring results collected under 310 CMR 22.07F and determine that each LRAA does not exceed the MCL. If the Supplier of Water fails to complete four consecutive quarters of monitoring, they must calculate compliance with the MCL based on the average of the available data from the most recent four quarters. If the Supplier of Water takes more than one sample per quarter at a monitoring location, they must average all samples taken in the quarter at that location to determine a quarterly average to be used in the LRAA calculation.
 2. Systems Required to Monitor Yearly or less Frequently. To determine compliance with MCLs required by 310 CMR 22.07F listed in 310 CMR 22.07E(1), the Supplier of Water must determine that each sample taken is less than the MCL. If any sample exceeds the MCL, they must comply with the requirements of 310 CMR 22.07F(12). If no sample exceeds the MCL, the sample result for each monitoring location is considered the LRAA for that monitoring location.
- (e) Violation. The Supplier of Water is in violation of the monitoring requirements for each quarter that a monitoring result would be used in calculating an LRAA if they fail to monitor.
- (8) Routine Monitoring.
- (a) Monitoring.
 1. If the water supplier submitted an IDSE report, they must begin monitoring at the locations and months they have recommended in their IDSE report submitted under 310 CMR 22.07F(6) following the schedule in 310 CMR 22.07F(7)(c), unless the Department requires other locations or additional locations after its review. If the Supplier of Water submitted a 40/30 certification under 310 CMR 22.07F(4) or they qualified for a very small system waiver under 310 CMR 22.07F(5) or they are a Non-transient Non-community Water System serving < 10,000, they must monitor at the location(s) and dates identified in their monitoring plan in 310 CMR 22.07E(7)(f) updated as required by 310 CMR 22.07F(9).
 2. The Supplier of Water must monitor at no fewer than the number of locations identified in 310 CMR 22.07F(8)(a)2.

22.07F: continued

TABLE 7 – 310 CMR 22.07F
ROUTINE MONITORING FREQUENCY

Source Water Type	Population Size Category	Monitoring Frequency ¹	Distribution System monitoring location total per monitoring period ²
Surface Water and Groundwater under the Direct Influence of Surface Water	<500	Per year	2
	500-3,300	Per quarter	2
	3,301-9,999	Per quarter	2
	10,000-49,999	Per quarter	4
	50,000-249,999	Per quarter	8
	250,000-999,999	Per quarter	12
	1,000,000-4,999,999	Per quarter	16
	≥5,000,000	Per quarter	20
Groundwater	<500	Per year	2
	500-9,999	Per year	2
	10,000-99,999	Per quarter	4
	100,000-499,999	Per quarter	6
	≥500,000	Per quarter	8

¹ All systems must monitor during month of highest DBP concentrations.

² Systems on quarterly monitoring must take Dual Sample Sets every 90 days at each monitoring location, except for systems using Surface Water or Groundwater under the Direct Influence of Surface Water systems and serving 500-3,300. Groundwater systems serving 500-9,999 on annual monitoring must take Dual Sample Sets at each monitoring location. All other systems on annual monitoring and systems using Surface Water or groundwater systems under the direct influence of surface water systems serving 500-3,300 are required to take individual TTHM and HAA5 samples (instead of a Dual Sample Set) at the locations with the highest TTHM and HAA5 concentrations, respectively. For systems serving fewer than 500 people, only one location with a Dual Sample Set per monitoring period is needed if highest TTHM and HAA5 concentrations occur at the same location and month.

3. If the Supplier of Water is an undisinfected system that begins using a Disinfectant other than UV light after the dates in 310 CMR 22.07F(1) for complying with the Initial Distribution System Evaluation requirements, they must consult with the Department to identify compliance monitoring locations for 310 CMR 22.07F(8). The Supplier of Water must then develop a monitoring plan under 310 CMR 22.07F(9) that includes those monitoring locations.

(b) Analytical Methods. The Supplier of Water must use an approved method listed in 310 CMR 22.07E(6) for TTHM and HAA5 analyses in 310 CMR 22.07F(8). Analyses must be conducted by laboratories that have received certification by EPA or the Department as specified in 310 CMR 22.07E(6).

(9) Monitoring Plan.

(a) 1. The Supplier of Water must develop and implement a monitoring plan to be kept on file for Department and public review. The monitoring plan must contain the elements in 310 CMR 22.07F(9)(a)1.a. through d. and be completed no later than the date the Supplier of Water conducts their initial monitoring under 310 CMR 22.07F(8).

- a. Monitoring locations;
- b. Monitoring dates;
- c. Compliance calculation procedures; and
- d. Monitoring plans for any other systems in the Combined Distribution System if the Department has reduced monitoring requirements.

22.07F: continued

2. If the Supplier of Water was not required to submit an IDSE report under either 310 CMR 22.07F(2) or (3), and they do not have sufficient monitoring locations required under 310 CMR 22.07E to identify the required number of compliance monitoring locations indicated in 310 CMR 22.07F(6)(b), they must identify additional locations by alternating selection of locations representing high TTHM levels and high HAA5 levels until the required number of compliance monitoring locations have been identified. They must also provide the rationale for identifying the locations as having high levels of TTHM or HAA5. If the Supplier of Water has more monitoring locations required under 310 CMR 22.07E than required for compliance monitoring in 310 CMR 22.07F(6)(b), they must identify which locations they will use for compliance monitoring under 310 CMR 22.07F(8) by alternating selection of locations representing high TTHM levels and high HAA5 levels until the required number of compliance monitoring locations under 310 CMR 22.07F(8) have been identified.
 - (b) If the Supplier of Water is a Surface Water or a Groundwater under the Direct Influence of Surface Water serving > 3,300 people, they must submit a copy of their monitoring plan to the Department prior to the date they conduct their initial monitoring under 310 CMR 22.07F(8), unless their IDSE report submitted under 310 CMR 22.07F(2) contains all the information required by 310 CMR 22.07F(9).
 - (c) The Supplier of Water may revise their monitoring plan to reflect changes in treatment, Distribution System operations and layout (including new service areas), or other factors that may affect TTHM or HAA5 formation, or for Department-approved reasons, after consultation with the Department regarding the need for changes and the appropriateness of changes. If the Supplier of Water changes monitoring locations, they must replace existing compliance monitoring locations with the lowest LRAA with new locations that reflect the current Distribution System locations with expected high TTHM or HAA5 levels. The Department may also require modifications in their monitoring plan. If they are a Surface Water or Groundwater under the Direct Influence of Surface Water system serving > 3,300 people, they must submit a copy of their modified monitoring plan to the Department prior to the date they are required to comply with the revised monitoring plan.
- (10) Reduced Monitoring.
- (a) The Supplier of Water may reduce monitoring to the level specified in the table in 310 CMR 22.07F(10)(a) any time the LRAA is ≤ 0.040 mg/L for TTHM and ≤ 0.030 mg/L for HAA5 at all monitoring locations. They may only use data collected under the provisions of 310 CMR 22.07E or 22.07F to qualify for reduced monitoring. In addition, the source water annual average TOC level, before any treatment, must be ≤ 4.0 mg/L at each treatment plant treating Surface Water or Groundwater Under the Direct Influence of Surface Water, based on monitoring conducted under 310 CMR 22.07E(7)(b)1.c. or (d).

22.07F: continued

TABLE 8 – 310 CMR 22.07F
REDUCED MONITORING FREQUENCY AND LOCATION

Source water type	Population size category	Monitoring frequency ¹	Distribution System monitoring location per monitoring period
Surface Water or Groundwater under the Influence of Surface Water	<500	.....	Monitoring may not be reduced.
	500-3,300	Per year	1 TTHM and 1 HAA5 sample: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement; 1 Dual Sample Set per year if the highest TTHM and HAA5 measurements occurred at the same location and quarter.
	3,301-9,999	Per year	2 Dual Sample Sets: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement.
	10,000-49,999	Per quarter	2 Dual Sample Sets at the locations with the highest TTHM and highest HAA5 LRAAs.
	50,000-249,999	Per quarter	4 Dual Sample Sets at the locations with the two highest TTHM and two highest HAA5 LRAAs.
	250,000-999,999	Per quarter	6 Dual Sample Sets at the locations with the three highest TTHM and three highest HAA5 LRAAs.
	1,000,000-4,999,999	Per quarter	8 Dual Sample Sets at the locations with the four highest TTHM and four highest HAA5 LRAAs.
	≥5,000,000	Per quarter	10 Dual Sample Sets at the locations with the five highest TTHM and five highest HAA5 LRAAs.
Groundwater			
	<500	Every third year	1 TTHM and 1 HAA5 sample: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement; 1 Dual Sample Set per year if the highest TTHM and HAA5 measurements occurred at the same location and quarter.
	500-9,999	Per year	1 TTHM and 1 HAA5 sample: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement; 1 Dual Sample Set per year if the highest TTHM and HAA5 measurements occurred at the same location and quarter.
	10,000-99,999	Per year	2 Dual Sample Sets: one at the location and during the quarter with the highest TTHM single measurement, one at the location and during the quarter with the highest HAA5 single measurement.
	100,000-499,999	Per quarter	2 Dual Sample Sets at the locations with the highest TTHM and highest HAA5 LRAAs.
	≥500,000	Per quarter	4 Dual Sample Sets at the locations with the two highest TTHM and two highest HAA5 LRAAs.

¹ Systems on quarterly monitoring must take Dual Sample Sets every 90 days.

22.07F: continued

(b) The Supplier of Water may remain on reduced monitoring as long as the TTHM LRAA ≤ 0.040 mg/L and the HAA5 LRAA ≤ 0.030 mg/L at each monitoring location (for systems with quarterly reduced monitoring) or each TTHM sample ≤ 0.060 mg/L and each HAA5 sample ≤ 0.045 mg/L (for systems with annual or less frequent monitoring). In addition, the source water annual average TOC level, before any treatment, must be ≤ 4.0 mg/L at each treatment plant treating Surface Water or Groundwater under the Direct Influence of Surface Water, based on monitoring conducted under either 310 CMR 22.07E(7)(b)1.c. or (d).

(c) If the LRAA based on quarterly monitoring at any monitoring location exceeds either 0.040 mg/L for TTHM or 0.030 mg/L for HAA5 or if the annual (or less frequent) sample at any location exceeds either 0.060 mg/L for TTHM or 0.045 mg/L for HAA5, or if the source water annual average TOC level, before any treatment, >4.0 mg/L at any treatment plant treating Surface Water or Groundwater Under the Direct Influence of Surface Water, the Supplier of Water must resume routine monitoring under 310 CMR 22.07F(8) or begin increased monitoring if 310 CMR 22.07F(12) applies.

(d) The Department may return the Supplier of Water to routine monitoring at the Department's discretion.

(11) Additional Requirements for Consecutive Systems. If the Supplier of Water is a consecutive system that does not add a Disinfectant but delivers water that has been treated with a primary or residual Disinfectant other than ultraviolet light, they must comply with analytical and monitoring requirements for chlorine and chloramines in 310 CMR 22.07E(6)(c) and (7)(c)1. and the compliance requirements in 310 CMR 22.07E(8)(c)1. beginning April 1, 2009, unless required earlier by the Department, and report monitoring results under 310 CMR 22.07E(9)(c).

(12) Conditions Requiring Increased Monitoring.

(a) If the Supplier of Water is required to monitor at a particular location annually or less frequently than annually under 310 CMR 22.07F(8) or (10), they must increase monitoring to Dual Sample Sets once per quarter (taken every 90 days) at all locations if a TTHM sample is >0.080 mg/L or a HAA5 sample is >0.060 mg/L at any location.

(b) The Supplier of Water is in violation of the MCL when the LRAA exceeds the Stage 2 Disinfection Byproducts MCLs in 310 CMR 22.07E(1), calculated based on four consecutive quarters of monitoring (or the LRAA calculated based on fewer than four quarters of data if the MCL would be exceeded regardless of the monitoring results of subsequent quarters). The Supplier of Water is in violation of the monitoring requirements for each quarter that a monitoring result would be used in calculating an LRAA if they fail to monitor.

(c) The Supplier of Water may return to routine monitoring once they have conducted increased monitoring for at least four consecutive quarters and the LRAA for every monitoring location is ≤ 0.060 mg/L for TTHM and ≤ 0.045 mg/L for HAA5.

(13) Operational Evaluation Levels.

(a) The Supplier of Water has exceeded the operational evaluation level at any monitoring location where the sum of the two previous quarters' TTHM results plus twice the current quarter's TTHM result, divided by four to determine an average, exceeds 0.080 mg/L, or where the sum of the two previous quarters' HAA5 results plus twice the current quarter's HAA5 result, divided by four to determine an average, exceeds 0.060 mg/L.

(b) 1. If the Supplier of Water exceeds the operational evaluation level, they must conduct an operational evaluation and submit a written report of the evaluation to the Department no later than 90 days after being notified of the analytical result that causes them to exceed the operational evaluation level. The written report must be made available to the public upon request.

2. The Supplier of Water's operational evaluation must include an examination of system treatment and distribution operational practices, including storage tank operations, excess storage capacity, Distribution System flushing, changes in sources or source water quality, and treatment changes or problems that may contribute to TTHM and HAA5 formation and what steps could be considered to minimize future exceedences.

a. The Supplier of Water may request and the Department may allow them to limit the scope of their evaluation if they are able to identify the cause of the operational evaluation level exceedance.

22.07F: continued

- b. The Supplier of Water's request to limit the scope of the evaluation does not extend the schedule in 310 CMR 22.07F(13)(b)1. for submitting the written report. The Department must approve this limited scope of evaluation in writing and the Supplier of Water must keep that approval with the completed report.

(14) Requirements for Remaining on Reduced TTHM and HAA5 Monitoring Based on Results Required under 310 CMR 22.07E. The Supplier of Water may remain on reduced monitoring after the dates identified in 310 CMR 22.07F(7)(c) for compliance with 310 CMR 22.07F(14) only if they qualify for a 40/30 certification under 310 CMR 22.07F(4) or have received a very small system waiver under 310 CMR 22.07F(5), plus they meet the reduced monitoring criteria in 310 CMR 22.07F(10)(a), and they do not change or add monitoring locations from those used for compliance monitoring under 310 CMR 22.07E. If the Supplier of Water's monitoring locations under 310 CMR 22.07F differ from their monitoring locations under 310 CMR 22.07E, they may not remain on reduced monitoring after the dates identified in 310 CMR 22.07F(7)(c) for compliance with 310 CMR 22.07F.

(15) Requirements for Remaining on Increased TTHM and HAA5 Monitoring Based on Results Required under 310 CMR 22.07E. If the Supplier of Water was on increased monitoring under 310 CMR 22.07E(7)(b)1., they must remain on increased monitoring until they qualify for a return to routine monitoring under 310 CMR 22.07F(12)(c). The Supplier of Water must conduct increased monitoring under 310 CMR 22.07F(12) at the monitoring locations in the monitoring plan developed under 310 CMR 22.07F(9) beginning at the date identified in 310 CMR 22.07F(7)(c) for compliance with 310 CMR 22.07F and remain on increased monitoring until they qualify for a return to routine monitoring under 310 CMR 22.07F(12)(c).

(16) Reporting and Recordkeeping Requirements.

(a) Reporting.

1. The Supplier of Water must report the following information for each monitoring location to the Department within ten days of the end of any quarter in which monitoring is required:
 - a. Number of samples taken during the last quarter.
 - b. Date and results of each sample taken during the last quarter.
 - c. Arithmetic average of quarterly results for the last four quarters for each monitoring location (LRAA), beginning at the end of the fourth calendar quarter that follows the compliance date and at the end of each subsequent quarter. If the LRAA calculated based on fewer than four quarters of data would cause the MCL to be exceeded regardless of the monitoring results of subsequent quarters, they must report this information to the Department as part of the first report due following the compliance date or anytime thereafter that this determination is made. If the Supplier of Water is required to conduct monitoring at a frequency that is less than quarterly, they must make compliance calculations beginning with the first compliance sample taken after the compliance date, unless they are required to conduct increased monitoring under 310 CMR 22.07F(12).
 - d. Whether, based on 310 CMR 22.07E(1) and 22.07F, the MCL was violated at any monitoring location.
 - e. Any operational evaluation levels that were exceeded during the quarter and, if so, the location and date, and the calculated TTHM and HAA5 levels.
2. If the Supplier of Water is a Surface Water or Groundwater under the Direct Influence of Surface Water system seeking to qualify for or remain on reduced TTHM/HAA5 monitoring, they must report the following source water TOC information for each treatment plant that treats Surface Water or Groundwater under the Direct Influence of Surface Water to the Department within ten days of the end of any quarter in which monitoring is required:
 - a. The number of source water TOC samples taken each month during last quarter.
 - b. The date and result of each sample taken during last quarter.
 - c. The quarterly average of monthly samples taken during last quarter or the result of the quarterly sample.
 - d. The Running Annual Average (RAA) of quarterly averages from the past four quarters.
 - e. Whether the RAA exceeded 4.0 mg/L.

22.07F: continued

3. The Department may choose to perform calculations and determine whether the MCL was exceeded or the system is eligible for reduced monitoring in *lieu* of having the system report that information.

(b) Recordkeeping. The Supplier of Water must retain any monitoring plans required under 310 CMR 22.07F and their monitoring results as required by 310 CMR 22.07E(8).

22.07G: Per- and Polyfluoroalkyl Substances (PFAS) Monitoring and Analytical Requirements

(1) General Applicability. Every Supplier of Water operating a Community Water System or Non-transient, Non-community Water System shall be subject to 310 CMR 22.07G(3) through (17).

(2) Special Applicability for Transient, Non-community Water Systems. Every Supplier of Water operating a Transient, Non-community Water System shall collect, analyze and report the results of one sample from each Sampling Point, or alternate sampling location required by the Department pursuant to 310 CMR 22.07G(4)(a) or (b), no later than September 30, 2022. All such monitoring shall be performed in compliance with the provisions addressing monitoring protocols, invalidation of PFAS samples, PFAS analytical requirements, PFAS reporting requirements, PFAS6 minimum reporting levels and electronic filing requirement set forth in 310 CMR 22.07G(4), (9), (12), (13), (16) and (17).

(3) Per- and Polyfluoroalkyl Substances.

(a) PFAS. PFAS shall mean per- and polyfluoroalkyl substances.

(b) PFAS Detection. PFAS Detection shall mean a concentration of any PFAS measured in accordance with 310 CMR 22.07G(12) which is greater than or equal to the analytical laboratory's applicable Minimum Reporting Level (or MRL).

(c) PFAS6. PFAS6 shall mean the sum of the concentrations of the six contaminants listed in the following table:

CAS No.	Contaminant
1763-23-1	Perfluorooctane Sulfonic Acid (PFOS)
335-67-1	Perfluorooctanoic Acid (PFOA)
355-46-4	Perfluorohexane Sulfonic Acid (PFHxS)
375-95-1	Perfluorononanoic Acid (PFNA)
375-85-9	Perfluoroheptanoic Acid (PFHpA)
335-76-2	Perfluorodecanoic Acid (PFDA)

(d) PFAS6 Maximum Contaminant Level. The PFAS6 Maximum Contaminant Level (MCL) shall be 0.000020 milligrams per liter (mg/l) or 20 nanograms per liter (ng/l).

(e) Review of PFAS and Drinking Water. Not later than December 31, 2023, and once every three years thereafter, the Department shall perform a review of relevant developments in the science, assessment and regulation of PFAS in drinking water for the purpose of evaluating whether to amend 310 CMR 22.07G(3) in light of any advancements in analytical or treatment technology, toxicology and/or any other relevant information. Information about this review shall be made available to the public.

(4) Monitoring Protocols. For the purpose of determining compliance with the PFAS6 MCL set forth in 310 CMR 22.07G(3)(d), monitoring shall be conducted as follows:

(a) Single Source Entry Points. Each Public Water System that draws water from a single source shall take a minimum of one sample at every entry point to the Distribution System which is representative of each of its sources after treatment (Sampling Point). Each sample shall be taken at the same Sampling Point, unless the Department determines, based upon local conditions (*e.g.*, facility design), that an alternate sampling location(s) would be more representative of each source or treatment plant.

22.07G: continued

(b) Multiple Source Entry Points. Any Public Water System that draws water from more than one source, where the sources are combined before distribution, shall sample at every entry point to the Distribution System which is representative of all such combined sources after treatment (Sampling Point) during periods of normal operating conditions (*i.e.*, when water representative of all sources is being used). If all sources are not operated simultaneously under normal operating conditions, then additional samples shall be collected representing each source that is operated alone and/or each combination of sources that are operated together. Each sample shall be taken at the same Sampling Point unless the Department determines, based upon local conditions (*e.g.*, facility design), that an alternate sampling location(s) would be more representative of each source or treatment plant.

(c) Consecutive Systems. Unless required by the Department to evaluate PFAS levels, each Consecutive Public Water System shall be exempt from conducting compliance monitoring for PFAS under 310 CMR 22.07G for its purchased portion of water, provided that the Public Water System from which the water is obtained has conducted the monitoring required under 310 CMR 22.07G.

(5) Initial Monitoring.

(a) Applicability. 310 CMR 22.07G(5) shall apply to each Sampling Point, or alternate sampling location required by the Department pursuant to 310 CMR 22.07G(4)(a) or (b), where:

1. there have been no PFAS Detections;
2. there has been a PFAS Detection, but the average of the PFAS6 in such detection and of PFAS6 in an associated Confirmatory Sample is less than or equal to 0.000010 mg/l; or
3. subsequent to a PFAS Detection described in 310 CMR 22.07G(5)(a)2., there have been no PFAS Detection(s) where PFAS6 as determined for such detections is greater than 0.000010 mg/l.

(b) Frequency and Timing.

1. Except as provided in 310 CMR 22.07G(5)(b)2. or 3., for each such location required to be sampled pursuant to 310 CMR 22.07G(5), four consecutive quarterly samples shall be collected and each such sample shall be analyzed for PFAS in accordance with 310 CMR 22.07G(12). Each sample shall be collected the first month of every quarter during initial monitoring. A Supplier of Water serving the specified population shall commence initial monitoring on the date set forth in 310 CMR 22.07G(5)(b)1.a. through c.:

- a. greater than 50,000 individuals, January 1, 2021;
- b. 50,000 individuals or fewer, but greater than 10,000 individuals, April 1, 2021; or
- c. 10,000 or fewer individuals, October 1, 2021.

2. If a Supplier of Water meets any of the following conditions after the applicable commencement date described in 310 CMR 22.07G(5)(b)1., it shall commence initial monitoring of such locations within the first full calendar quarter of delivering water to the public:

- a. begins operation of a new Public Water System; or
- b. puts a New Source on-line.

3. If a Supplier of Water reactivates an existing source or opens a Seasonal System after the applicable commencement date described in 310 CMR 22.07G(5)(b)1., it shall commence initial monitoring of such locations within the first month of delivering water to the public.

(c) Waivers. Any Public Water System subject to 310 CMR 22.07G(5), all of whose analytical results for the first two quarters of monitoring described in 310 CMR 22.07G(5)(b) are below the applicable MRLs, may submit a written request to waive the third and fourth quarters of such monitoring, subject to the Department's written approval based upon a determination that there is no known or suspected PFAS contamination in the vicinity of the Public Water System or its sources of water.

(6) Routine Monitoring.

(a) Applicability. 310 CMR 22.07G(6) shall apply to any Sampling Point, or alternate sampling location required by the Department pursuant to 310 CMR 22.07G(4)(a) or (b), at which there are no PFAS Detections during initial monitoring or during three years of annual monitoring.

22.07G: continued

(b) Frequency and Timing. A Public Water System may reduce the monitoring frequency for such locations in each subsequent Compliance Period to the following number of quarters all within any one calendar year, the selection of which quarters shall be subject to the Department's prior written approval:

1. if serving more than 3,300 individuals, to a minimum of one sample taken in the first month of any two selected quarters; or
2. if serving fewer than or equal to 3,300 individuals, to a minimum of one sample taken in the first month of any one selected quarter.

(c) Waivers.

1. Eligibility and Duration. Commencing January 1, 2023, any Supplier of Water subject to 310 CMR 22.07G(6) may submit a written request to the Department for a waiver from the monitoring requirements set forth in 310 CMR 22.07G(6)(b)1. or 2. for up to a single Compliance Period. A Supplier of Water may reapply to the Department for a waiver for each successive Compliance Period, provided however that sampling shall occur at least once during the first Compliance Period of each successive Compliance Cycle.

2. Application. Each waiver request made pursuant to 310 CMR 22.07G(6)(c)1. shall include a description of land uses (both current and prior) within the Watershed, Zone II or IWPA, that may potentially contribute PFAS to the Public Water System's source(s) of water supply including, without limitation, all known manufacture, storage, use or disposal of PFAS or PFAS containing materials.

3. Basis. Approval of a waiver request made pursuant to 310 CMR 22.07G(6)(c)1. shall be subject to the Department's written determination that there is no reason to suspect PFAS contamination in the vicinity of the Public Water System or its sources of water. Such determination shall be based on the information submitted pursuant to 310 CMR 22.07G(6)(c)2. and any other relevant information known to the Department including, without limitation, the following factors:

- a. previous analytical results;
- b. proximity of the Public Water System or its sources of water to potential sources of contamination including but not limited to manufacturing, distribution, or storage facilities; hazardous and solid waste landfills and other waste handling or treatment facilities; locations where fires are known to have been extinguished with aqueous film forming foam; wastewater treatment plants; airports; current and former military bases; facilities where fire training occurs; and areas where the application of bio-solids occurs;
- c. proximity of the Public Water System or its sources of water to known spills or leaks of chemicals including, but not limited to, any release, site or disposal site as defined under 310 CMR 40.0000: *Massachusetts Contingency Plan*;
- d. environmental persistence and transport of PFAS;
- e. how well the source(s) of water supply is protected against contamination due to such factors as the depth of the well, the type of soil, the integrity of the well casing, and other relevant protective measures;
- f. completed remediation activities that removed sources of PFAS;
- g. source operations (e.g., manifold or seasonal sources, blending, flow rates); and
- h. use of existing treatment processes which have the potential to reduce PFAS concentrations in the finished water.

(7) PFAS Detections.

(a) Applicability. 310 CMR 22.07G(7) shall apply to any Sampling Point, or alternate sampling location required by the Department pursuant to 310 CMR 22.07G(4)(a) or (b), following:

1. the first PFAS Detection during either initial or routine monitoring;
2. the second or later PFAS Detection during initial monitoring where PFAS₆ as determined for such second or later detection is greater than 0.000010 mg/l;
3. the second or later PFAS Detection during routine monitoring where PFAS₆ as determined for such second or later detection is greater than 0.000010 mg/l, unless the Department determines in writing that such location is Reliably and Consistently Below the MCL; or
4. the receipt by the Department of an analytical result during quarterly or annual monitoring which the Department determines is outside the historic range of PFAS results.

(b) Reporting. Any PFAS Detection described in 310 CMR 22.07G(7)(a)1., 2., or 3. shall be reported to the Department within seven days of receipt of such result from the laboratory.

22.07G: continued

(c) Confirmatory Sampling. The Supplier of Water shall obtain a Confirmatory Sample for any analytical result described in 310 CMR 22.07G(7)(a), as soon as possible after receipt of such result from the laboratory or notification from the Department, as applicable, and no later than two weeks from such date. Provided, however, a Supplier of Water may request a one-time extension not to exceed two weeks for obtaining such Confirmatory Sample, using a form specified by the Department, upon a demonstration of need due to circumstances beyond its control (*e.g.*, system design, *etc.*) to the satisfaction of and at the sole discretion of the Department.

(d) Source Sampling. If a PFAS Detection described in 310 CMR 22.07G(7)(a)1., 2. or 3. represents multiple sources, then samples representing the individual source water shall also be collected and analyzed for PFAS.

(e) Public Education. Any Supplier of Water subject to 310 CMR 22.07G(7), where there has been a PFAS Detection and the average of such detection and an associated Confirmatory Sample exceeds the PFAS6 MCL, shall provide public education materials regarding the exceedance in accordance with the following requirements:

1. notice of the exceedance shall be provided using materials approved by the Department;
2. such materials shall be provided to all persons served by the affected Public Water System, including without limitation consumers who do not receive water bills;
3. such materials shall be provided as soon as practical and no later than 30 days after receipt of Confirmatory Sample results from the laboratory;
4. in any community where such Supplier of Water's consumers include:
 - a. either:
 - i. 10% or more non-English speaking residents who speak a common language; or
 - ii. more than 1000 non-English speaking residents who speak a common language, such materials must contain information in the language(s) appropriate for each such group of residents regarding the importance of the notice.
 - b. 25% or more non-English speaking residents who speak a common language, such materials must contain a statement in the appropriate language(s) for each such group of residents which includes a telephone number or address where those residents may contact the affected Public Water System to obtain a translated copy of the materials or assistance in the appropriate language(s).
5. such materials shall be provided by mail and/or other method approved by the Department (*e.g.*, a Non-transient Non-community Water System may be permitted to post the materials in one or more conspicuous locations in the facility for a minimum number of days);
6. such materials shall include all results from both the PFAS Detection and the Confirmatory Sample; the average PFAS6 concentration of the samples; the PFAS6 MCL as provided in 310 CMR 22.07G(3)(d) and the definition of MCL as provided in 310 CMR 22.02(1); an explanation of the health effects of PFAS6; steps consumers can take to reduce exposure to PFAS in drinking water; and contact information for the Supplier of Water;
7. until either the Public Water System obtains a monitoring result at or below the PFAS6 MCL at such locations as described in 310 CMR 22.07G(7)(a) or the Supplier of Water takes the contaminated source(s) off-line:
 - a. if such materials were mailed, updated materials shall be re-mailed quarterly;
 - b. if such materials were posted, for an approved minimum number of days, updated materials shall be re-posted quarterly for the same minimum number of days;
 - c. if such materials were published in a local newspaper, updated materials shall be re-published quarterly; and/or
 - d. if such materials were provided by other Department-approved methods, updated materials shall be provided quarterly by the same methods; and
8. a copy of such materials shall be submitted to the Department upon initial and each subsequent issuance if required by 310 CMR 22.07G(7)(e)7. along with a written certification by the Supplier of Water that the materials have been distributed in compliance with 310 CMR 22.07G(7)(e)1. through 6.

(8) Increased Monitoring Frequency Following PFAS Detection.

(a) Applicability. 310 CMR 22.07G(8) shall apply to each Sampling Point, or alternate sampling location required by the Department pursuant to 310 CMR 22.07G(4)(a) or (b), at which there has been a PFAS Detection.

22.07G: continued

(b) Monthly Monitoring.

1. Except as provided in 310 CMR 22.07G(8)(b)2., a Supplier of Water shall monitor such locations on a monthly basis to determine compliance with the PFAS6 MCL as per 310 CMR 22.07G(10), if:

- a. there has been a PFAS Detection and the average of PFAS6 in such detection and of PFAS6 in an associated Confirmatory Sample is greater than 0.000010 mg/l; or
- b. the Department determines in writing that a location subject to quarterly or annual monitoring is no longer Reliably and Consistently Below the MCL.

2. After completing the first quarter of monthly monitoring pursuant to 310 CMR 22.07G(8)(b)1., a Supplier of Water who is in violation of the PFAS6 MCL, determined as per 310 CMR 22.07G(10), may request written approval from the Department to use the results from a single sample taken in the first month of each subsequent quarter to determine compliance with the PFAS6 MCL rather than using the average of the three monthly samples otherwise required, subject to the following:

- a. upon such written approval, if any such single sample alone exceeds the PFAS6 MCL, such Supplier of Water shall be in violation of the PFAS6 MCL immediately and shall provide public notice in accordance with 310 CMR 22.16; and
- b. if any such single sample is less than or equal to the PFAS6 MCL, then such Supplier of Water shall continue monthly monitoring during the remaining two months of the quarter and compliance with the PFAS6 MCL shall be determined as per 310 CMR 22.07G(10).

(c) Quarterly Monitoring. If any such location has had PFAS treatment installed and the Department determines in writing that such location is Reliably and Consistently Below the MCL, then the Supplier of Water shall monitor that location in the first month of each quarter.

(d) Annual Monitoring. A Supplier of Water shall monitor such locations on an annual basis during the first month of the calendar quarter that previously yielded the highest analytical result. A Supplier of Water shall conduct this annual monitoring if:

- 1. all of the following are true:
 - a. all four quarters of initial monitoring pursuant to 310 CMR 22.07G(5)(a) have been completed;
 - b. the first PFAS Detection occurred during such initial monitoring and the average of PFAS6 in such detection and of PFAS6 in an associated Confirmatory Sample is less than or equal to 0.000010 mg/l; and
 - c. for any second or later PFAS Detection occurring during such initial monitoring with PFAS6 greater than 0.000010 mg/l, the average of PFAS6 in such second or later detection and of PFAS6 in the Confirmatory Sample associated with each such detection is less than or equal to 0.000010 mg/l;
- 2. the Department determines in writing that a location subject to monthly monitoring under 310 CMR 22.07G(8)(b), without the installation of PFAS treatment, is Reliably and Consistently Below the MCL;
- 3. the Department determines in writing that a location subject to quarterly monitoring under 310 CMR 22.07G(8)(c), taking into consideration any documentation provided by such Supplier of Water and any other relevant factors, would be Reliably and Consistently Below the MCL without PFAS treatment; or
- 4. a location subject to routine monitoring under 310 CMR 22.07G(6):
 - a. has its first PFAS Detection and the average of PFAS6 in such detection and of PFAS6 in an associated Confirmatory Sample is less than or equal to 0.000010 mg/l; or
 - b. has a second or later PFAS Detection with a PFAS6 less than or equal to 0.000010 mg/l and the Department determines in writing that such location is not Reliably and Consistently Below the MCL.

(9) Invalidation of PFAS Samples. All PFAS results shall be subject to the Department's review and may be invalidated where the associated quality control information indicates a failure in sample collection, sample preparation or analytical measurement. Invalidated results shall not be used in determining compliance with the PFAS6 MCL established in 310 CMR 22.07G(3)(d). Unless waived in writing by the Department as unnecessary (*e.g.*, based upon the frequency of ongoing monitoring), a Supplier of Water shall collect and analyze a replacement sample for each invalidated result of a PFAS listed in 310 CMR 22.07G(3)(c).

22.07G: continued

(10) PFAS6 Compliance Calculations. Compliance with the PFAS6 MCL established in 310 CMR 22.07G(3)(d) shall be determined in accordance with the requirements set forth below. If any one sampling location is in violation, then the Public Water System shall be considered in violation.

(a) For a Supplier of Water monitoring monthly, compliance shall be determined once per calendar quarter:

1. after completing a full quarter of monthly monitoring; and
2. by calculating a quarterly average of that quarter's monthly compliance monitoring result(s) at each Sampling Point, or alternate sampling location required by the Department pursuant to 310 CMR 22.07G(4)(a) or (b), rounded to the same number of significant figures as the Maximum Contaminant Level.

(b) The quarterly average calculation requirements are as follows:

1. If multiple compliance monitoring samples are collected in any given calendar month, then the results of those samples shall be averaged in order to establish a single representative contaminant concentration for that calendar month. (An initial sample and a Confirmatory Sample collected in the same month, shall be averaged both for the purpose of determining whether additional monthly samples would be required, and for the purpose of determining the representative contaminant concentration for the first month. An initial sample and a Confirmatory Sample collected in different months shall still be averaged for the purpose of determining whether additional monthly samples would be required, but shall not be averaged for the purpose of determining the representative contaminant concentration for the first month. Instead, because the Confirmatory Sample was collected in the second month, on the one hand if no other sample was collected in the second month, then it shall serve as the second month's representative contaminant concentration. But, on the other hand if a second sample was collected during the second month, then there would be two samples collected during the second month, namely the Confirmatory Sample (for the first month's initial sample) and the second month's sample, and they shall be averaged together to determine the second month's representative contaminant concentration.)
2. If any Supplier of Water fails to collect the required number of samples, compliance shall be determined based on the total number of samples collected. (*E.g.*, if no samples were collected in one month, then the quarterly average would be the sum of the representative contaminant concentrations from the other two months, divided by two.)
3. If an analytical result is less than the MRL, then the quarterly average shall be calculated using zero as the concentration for that PFAS.

(c) A Supplier of Water monitoring quarterly or less frequently who detects PFAS6 within its Public Water System shall not be in violation, except as provided in 310 CMR 22.07G(10)(d), until:

1. it has conducted monthly sampling pursuant to 310 CMR 22.07G(8)(b); and
2. a calculation made in accordance with 310 CMR 22.07G(10)(a) and (b) would result in a violation.

(d) If any sample result would cause the quarterly average to exceed the PFAS6 MCL at any Sampling Point, or alternate sampling location required by the Department pursuant to 310 CMR 22.07G(4)(a) or (b), then the Public Water System shall be in violation immediately and shall be subject to the requirements 310 CMR 22.07G(11).

(11) When a Quarterly Average Exceeds the PFAS6 MCL. If a quarterly average calculated pursuant to 310 CMR 22.07G(10)(a) and (b) and rounded to the same number of significant figures as the Maximum Contaminant Level, exceeds the PFAS6 MCL, then the Supplier of Water shall:

- (a) report to the Department in accordance with 310 CMR 22.15,
- (b) provide public notice in accordance with 310 CMR 22.16, and
- (c) comply with the requirements of 310 CMR 22.03(14) and such other applicable provisions of 310 CMR 22.00, as specified by the Department.

(12) PFAS Analytical Requirements.

(a) Methods of Analysis. Analysis for PFAS listed in 310 CMR 22.07G(3)(c) shall be conducted using either of the following EPA methods:

1. Method 537. *U.S. Environmental Protection Agency September 2009. Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). Ver. 1.1. EPA Document #: EPA/600/R-08/092; or*

22.07G: continued

2. Method 537.1. *U.S. Environmental Protection Agency November 2018. Determination of Selected Per- and Polyfluorinated Alkyl Substances in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). Ver. 1.0. EPA Document #: EPA/600/R-18/352.*
 - (b) Scope of Analysis. All samples analyzed pursuant to 310 CMR 22.07G shall be analyzed for the full scope of PFAS covered by the method selected in 310 CMR 22.07G(12)(a).
- (13) PFAS Reporting Requirements. All analytical results, for all PFAS within the scope of the analytical method selected in 310 CMR 22.07G(12)(a), whether obtained pursuant to a requirement of 310 CMR 22.00 or on a voluntary basis, shall be reported to the Department in accordance with 310 CMR 22.15.
- (14) Use of Previously Collected PFAS Data.
- (a) Eligibility. A Supplier of Water, prior to the applicable commencement date of initial monitoring specified in 310 CMR 22.07G(5)(b)1., may request the Department's written approval to substitute monitoring data which was obtained during different calendar quarters and prior to such commencement date for up to an equivalent number of sequential quarters of initial monitoring otherwise required pursuant to 310 CMR 22.07G(5).
 - (b) Basis of Approval. Such approval shall be based upon a determination as to whether the substitute monitoring data was collected and analyzed in a manner consistent with or otherwise equivalent to the requirements of 310 CMR 22.07G. A Supplier of Water shall notify the Department, prior to the commencement date of initial monitoring specified in 310 CMR 22.07G(5)(b)1., of its intention to substitute such approved monitoring data.
 - (c) Requirements following Notification. Following the notification required by 310 CMR 22.07G(14)(b), such Supplier of Water shall be subject to the requirements of 310 CMR 22.07G, subject to any Department approved modification taking into account any actions the Supplier of Water has taken in response to such substitute monitoring data (*e.g.*, public notification, installation of treatment, *etc.*), as if the analytical results for such approved monitoring data were received on the date of such notification.
- (15) Monitoring Schedules. A Supplier of Water shall monitor its Public Water System during each Compliance Period in accordance with the requirements 310 CMR 22.07G, unless otherwise directed in writing by the Department based on emergency considerations, laboratory capacity, and Public Water System operational considerations.

22.07G: continued

(16) PFAS6 Minimum Reporting Levels. Laboratories conducting PFAS analysis for each contaminant listed at 310 CMR 22.07G(3)(c) shall be capable of obtaining individual MRLs less than or equal to 0.000020 mg/l or 2.0 ng/l.

(17) Electronic Filing Requirement. All analytical results required to be submitted to the Department pursuant to 310 CMR 22.07G shall be made by electronic submission, in accordance with 310 CMR 22.03(13).

22.08: Maximum Turbidity Contaminant Levels, Monitoring Requirements and Analytical Methods for Unfiltered Systems and for Filtered Systems Not in Compliance with 310 CMR 22.20A

(1) The maximum contaminant level for turbidity, applicable only to public water systems which use water obtained in whole or in any part from surface water sources, shall be measured at representative entry point(s) to the distribution system, and shall be:

(a) One turbidity unit, (one NTU, Nephelometric turbidity unit) as determined by a monthly average rounded to the nearest significant whole number pursuant to 310 CMR 22.08(3) except that five or fewer turbidity units may be allowed if the supplier of water can demonstrate to the Department that the higher turbidity does not do any of the following:

1. Interfere with disinfection;
2. Prevent maintenance of an effective disinfectant agent throughout the distribution system; or
3. Interfere with microbiological determinations.

(b) Five turbidity units, as determined by the arithmetic mean of two consecutive daily samples pursuant to 310 CMR 22.08(3).

(2) All analyses shall be conducted in accordance with the following methods:

(a) Nephelometric Method 2130B, "Standard Methods for the Examination of Water and Wastewater", American Public Health Association, 14th Edition, pages 132-4, 18th, edition (1992), 19th edition (1995), or 20th edition (1998), American Public Health Association, 1015 Fifteenth Street, NW., Washington, DC 20005. The cited methods published in any of these three editions may be used. In addition, the following online versions may also be used: 2130 B-01, 9215 B-00, 9221 A, B, C, E-99, 9222A, B, C, D-97 and 9223 B-97. Standard Methods Online are available at <http://www.standardmethods.org>. The year in which each method was approved by the Standard Methods Committee is designated by the last two digits in the method number. The methods listed are the only Online versions that may be used; or

(b) Nephelometric Method, Method 180.1, "*Methods in the Determination of Inorganic Substances in Environmental Samples*" EPA-600/R-93-100, August 1995, Available at NTISPB94-121811.

(c) GLI Method 2, "*Turbidity*" November 2, 1992, Great Lakes Instrumentation, Inc., 8855 North 55th Street, Milwaukee, Wisconsin

(d) Hach FilterTrak Method 10133. A description of the Hach Filter Trak Method 10133, "*Determination of Turbidity by Laser Nephelometry*", January 2000, Revision 2.0, can be obtained from; Hach Co., P.O. Box 389, Loveland, CO 80539-0389, telephone: 800-227-4224.

(e) Styrene divinyl benzene beads (e.g. AMCO-AEPA-1 or equivalent) and stabilized formazin (e.g. Hach StablCal™ or equivalent) are acceptable substitutes for formazin.

(3) In no event shall the frequency of sampling be less than as set forth in 310 CMR 22.08(3)(a) through (d):

(a) Community water systems subject to 310 CMR 22.08 shall commence sampling by not later than June 24, 1977 and shall take at least one sample per day thereafter. All samples shall be taken at representative entry point(s) to the distribution system.

(b) Non-community water systems subject to 310 CMR 22.08 shall commence sampling by not later than June 24, 1979 and shall take at least one sample per day thereafter. All samples shall be taken at representative entry point(s) to the distribution system.

22.08: continued

(c) If the result of a turbidity analysis pursuant to 310 CMR 22.08(3)(a) and (b) indicates that the maximum contaminant level has been exceeded, the sampling and measurement shall be confirmed by resampling as soon as practicable and preferably within one hour. If the repeat sample confirms that the maximum contaminant level has been exceeded, the supplier of water shall report to the Department by the end of the next business day. The repeat sample shall be the sample used for calculating the monthly average pursuant to 310 CMR 22.08(3)(a) and (b). If the monthly average of the daily samples exceeds one turbidity unit, or if the average of two consecutive daily samples exceeds five turbidity units, the supplier of water shall notify the public pursuant to 310 CMR 22.16.

(d) If the Department determines that a reduced sampling frequency in a non-community system will not pose a risk to public health, it can reduce the required sampling frequency. The option of reducing the turbidity frequency shall be permitted only in those public water systems that practice disinfection and which maintain an active residual disinfectant in the distribution system, and in those cases where the Department has indicated in writing that no unreasonable risk to health existed under the circumstances of this option.

(4) The requirements in 310 CMR 22.08 apply to unfiltered systems that the Department has determined in writing that filtration is required. The requirements in 310 CMR 22.08 also apply to filtered systems until such time that said systems are in compliance with 310 CMR 22.20A. The requirements for unfiltered systems that have met the criteria for avoiding filtration must comply with 310 CMR 22.20A.

22.09A: Maximum Radionuclide Contaminant Levels, Monitoring Requirements and Analytical Methods Effective as of December 8, 2003

(1) Maximum Contaminant Levels for Radionuclides: The maximum contaminant levels for radionuclide contaminants of 310 CMR 22.09A apply only to community water systems. The MCLs for radionuclides are as indicated in 310 CMR 22.09A: *Table A*:

TABLE A MAXIMUM CONTAMINANT LEVELS FOR RADIONUCLIDES	
Contaminant	MCL
Combined radium-226 and radium-228	5 pCi/L
Gross alpha particle activity (excluding radon and uranium)	15 pCi/L
Beta particle and photon radioactivity	4 mrem/year
Uranium	30 µg/L

(a) MCL for Combined Radium-226 And radium-228. The maximum contaminant level for combined radium-226 and radium-228 is 5 pCi/L. The combined radium-226 and radium-228 value is determined by the addition of the results of the analysis for radium-226 and the analysis for radium-228.

(b) MCL for Gross Alpha Particle Activity (Excluding Radon and Uranium). The maximum contaminant level for gross alpha particle activity (including radium-226 but excluding radon and uranium) is 15 pCi/L.

(c) MCL for Beta Particle and Photon Radioactivity.

1. The average annual concentration of beta particle and photon radioactivity from man-made radionuclides in drinking water must not produce an annual dose equivalent to the total body or any internal organ greater than four millirem/year (mrem/year).

2. Except for the radionuclides listed in 310 CMR 22.09A: *Table B*, the concentration of man-made radionuclides causing four mrem total body or organ dose equivalents must be calculated on the basis of two liter per day drinking water intake using the 168 hour data list in “*Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure*” NBS (National Bureau of Standards) Handbook 69 as amended August 1963, U.S. Department of Commerce. Copies of this document are available from the National Technical Information Service, NTIS ADA 280 282, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. The toll-free number is 800-553-6847. Copies may be inspected at EPA’s Drinking Water Docket, 401 M Street, SW., Washington, DC 20460; or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. If two or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed four mrem/year.

22.09A: continued

² A POU, or “point-of-use” technology is a treatment device installed at a single tap used for the purpose of reducing contaminants in drinking water at that one tap. POU devices are typically installed at the kitchen tap. See the April 21, 2000 NODA for more details.

Limitations Footnotes: Technologies for Radionuclides:

- ^a The regeneration solution contains high concentrations of the contaminant ions. Disposal options should be carefully considered before choosing this technology.
- ^b When POU devices are used for compliance, programs for long-term operation, maintenance, and monitoring must be provided by water utility to ensure proper performance.
- ^c Reject water disposal options should be carefully considered before choosing this technology. See other RO limitations described in the SWTR Compliance Technologies Table.
- ^d The combination of variable source water quality and the complexity of the water chemistry involved may make this technology too complex for small surface water systems.
- ^e Removal efficiencies can vary depending on water quality.
- ^f This technology may be very limited in application to small systems. Since the process requires static mixing, detention basins, and filtration, it is most applicable to systems with sufficiently high sulfate levels that already have a suitable filtration treatment train in place.
- ^g This technology is most applicable to small systems that already have filtration in place.
- ^h Handling of chemicals required during regeneration and pH adjustment may be too difficult for small systems without an adequately trained operator.
- ⁱ Assumes modification to a coagulation/filtration process already in place.

TABLE E
COMPLIANCE TECHNOLOGIES BY SYSTEM SIZE CATEGORY FOR RADIONUCLIDES

Contaminant	Compliance technologies ¹ for system size categories (population served) 3,300–10,000		
	25–500	501–3,300	3300-10,000
1. Combined radium-226 and radium-228	1, 2, 3, 4, 5, 6, 7, 8, 9	1, 2, 3, 4, 5, 6, 7, 8, 9	1, 2, 3, 4, 5, 6, 7, 8, 9
2. Gross alpha particle activity	3, 4	3, 4	3, 4
3. Beta particle activity and photon activity	1, 2, 3, 4	1, 2, 3, 4	1, 2, 3, 4
4. Uranium	1, 2, 4, 10, 11	1, 2, 3, 4, 5, 10, 11	1, 2, 3, 4, 5, 10, 11

Note:

¹ Numbers correspond to those technologies found listed in 310 CMR 22.09A(1): *Table D*.

(2) Monitoring Frequency and Compliance Requirements for Radionuclides in Community Water Supplies.

(a) Monitoring Frequency and Compliance Requirements for Gross Alpha Particle Activity, Radium-226, Radium-228, and Uranium.

1. Community water systems must conduct initial monitoring to determine compliance with the maximum contaminant levels listed in 310 CMR 22.09A by December 31, 2007. For the purposes of monitoring for gross alpha particle activity, radium-226, radium-228, uranium, and beta particle and photon radioactivity in drinking water, “detection limit” is defined as in 310 CMR 22.09A(5)(b).

a. Applicability and sampling location for existing community water systems or sources. All existing community water systems using ground water, surface water or systems using both ground and surface water (for the purpose of 310 CMR 22.09A referred to as systems) must sample at every entry point to the distribution system that is representative of all sources being used (called a sampling point) under normal operating conditions. The system must take each sample at the same sampling point unless conditions make another sampling point more representative of each source or the Department has designated a distribution system location, in accordance with 310 CMR 22.09A(2)(b)2.

22.09A: continued

b. Applicability and sampling location for new community water systems or sources. All new community water systems or community water systems that use a new source of water must begin to conduct initial monitoring for the new source within the first quarter after initiating use of the source. Community water systems must conduct more frequent monitoring when ordered by the Department in the event of possible contamination or when changes in the distribution system or treatment processes occur which may increase the concentration of radioactivity in finished water.

(b) Initial Monitoring. The supplier of water must conduct initial monitoring for gross alpha particle activity, radium-226, radium-228, and uranium as follows:

1. Systems without acceptable historical data, as defined in 310 CMR 22.09A(2)(b)1. through 4., must collect four consecutive quarterly samples at all sampling points before December 31, 2007.

2. Grandfathering of Data. The Department may allow historical monitoring data collected at a sampling point to satisfy the initial monitoring requirements for that sampling point, for the following situations.

a. To satisfy initial monitoring requirements, a community water system having only one entry point to the distribution system may use the monitoring data from the last compliance monitoring period that began between June 2000 and December 8, 2003.

b. To satisfy initial monitoring requirements, a community water system with multiple entry points and having appropriate historical monitoring data for each entry point to the distribution system may use the monitoring data from the last compliance monitoring period that began between June 2000 and December 8, 2003.

c. To satisfy initial monitoring requirements, a community water system with appropriate historical data for a representative point in the distribution system may use the monitoring data from the last compliance monitoring period that began between June 2000 and December 8, 2003, provided that the Department finds that the historical data satisfactorily demonstrate that each entry point to the distribution system is expected to be in compliance based upon the historical data and reasonable assumptions about the variability of contaminant levels between entry points. The Department must make a written finding indicating how the data conforms to these requirements.

3. For gross alpha particle activity, uranium, radium-226, and radium-228 monitoring, the Department may waive the final two quarters of initial monitoring for a sampling point if the results of the samples from the previous two quarters are below the detection limit.

4. If the average of the initial monitoring results for a sampling point is above the MCL, the supplier of water must collect and analyze quarterly samples at that sampling point until the system has results from four consecutive quarters that are at or below the MCL, unless the system enters into another schedule as part of a formal compliance agreement with the Department.

(c) Reduced Monitoring. The Department may allow community water systems to reduce the future frequency of monitoring from once every three years to once every six or nine years at each sampling point, based on the following criteria.

1. If the average of the initial monitoring results for each contaminant (*i.e.* gross alpha particle activity, uranium, radium-226, or radium-228) is below the detection limit specified in 310 CMR 22.09A: *Table G*, the supplier of water must collect and analyze for that contaminant using at least one sample at that sampling point every nine years.

2. For gross alpha particle activity and uranium, if the average of the initial monitoring results for each contaminant is at or above the detection limit but at or below $\frac{1}{2}$ the MCL, the supplier of water must collect and analyze for that contaminant using at least one sample at that sampling point every six years. For combined radium-226 and radium-228, the analytical results must be combined. If the average of the combined initial monitoring results for radium-226 and radium-228 is at or above the detection limit but at or below $\frac{1}{2}$ the MCL, the supplier of water must collect and analyze for that contaminant using at least one sample at that sampling point every six years.

22.09A: continued

3. For gross alpha particle activity and uranium, if the average of the initial monitoring results for each contaminant is above $\frac{1}{2}$ the MCL but at or below the MCL, the supplier of water must collect and analyze at least one sample at that sampling point every three years. For combined radium-226 and radium-228, the analytical results must be combined. If the average of the combined initial monitoring results for radium-226 and radium-228 is above $\frac{1}{2}$ the MCL but at or below the MCL, the supplier of water must collect and analyze at least one sample at that sampling point every three years.

4. The supplier of water must use the samples collected during the reduced monitoring period to determine the monitoring frequency for subsequent monitoring periods (*e.g.* if a system's sampling point is on a nine year monitoring period, and the sample result is above $\frac{1}{2}$ the MCL, then the next monitoring period for that sampling point is three years).

5. If a supplier of water has a monitoring result that exceeds the MCL while on reduced monitoring, the system must collect and analyze quarterly samples at that sampling point until the system has results from four consecutive quarters that are below the MCL, unless the supplier of water enters into another schedule as part of a formal compliance agreement with the Department.

(d) Compositing. To fulfill quarterly monitoring requirements for gross alpha particle activity, radium-226, radium-228, or uranium, a supplier of water may composite up to four consecutive quarterly samples from a single entry point if analysis is done within a year of the first sample. The Department will treat analytical results from the composited sample as the average analytical result to determine compliance with the MCLs and the future monitoring frequency. If the analytical result from the composited sample is greater than $\frac{1}{2}$ MCL, the Department may direct the supplier of water to take additional quarterly samples before allowing the supplier of water to sample under a reduced monitoring schedule.

(e) A gross alpha particle activity measurement may be substituted for the required radium-226 measurement provided that the measured gross alpha particle activity does not exceed 5 pCi/l. A gross alpha particle activity measurement may be substituted for the required uranium measurement provided that the measured gross alpha particle activity does not exceed 15 pCi/l. The gross alpha measurement shall have a confidence interval of 95% (1.65σ , where σ is the standard deviation of the net counting rate of the sample) for radium-226 and uranium. When a supplier of water uses a gross alpha particle activity measurement in lieu of a radium-226 and/or uranium measurement, the gross alpha particle activity analytical result will be used to determine the future monitoring frequency for radium-226 and/or uranium. If the gross alpha particle activity result is less than detection, $\frac{1}{2}$ the detection limit will be used to determine compliance and the future monitoring frequency.

(3) Monitoring and Compliance Requirements for Beta Particle and Photon Radioactivity. To determine compliance with the maximum contaminant levels in 310 CMR 22.09A: *Table A* for beta particle and photon radioactivity, a system must monitor at a frequency as follows:

(a) Community water systems (both surface and ground water) designated by the Department as vulnerable must sample for beta particle and photon radioactivity. The supplier of water must collect quarterly samples for beta emitters and annual samples for tritium and strontium-90 at each entry point to the distribution system (hereafter called a sampling point), beginning within one quarter after being notified by the Department. Systems already designated by the Department must continue to sample until the Department reviews and either reaffirms or removes the designation.

1. If the gross beta particle activity minus the naturally occurring potassium-40 beta particle activity at a sampling point has a running annual average (computed quarterly) less than or equal to 50 pCi/L (screening level), the Department may reduce the frequency of monitoring at that sampling point to once every three years. The supplier of water must collect all samples required in 310 CMR 22.09A(3)(a) during the reduced monitoring period.

2. For systems in the vicinity of a nuclear facility, the Department may allow the community water system to utilize environmental surveillance data collected by the nuclear facility in lieu of monitoring at the system's entry point(s), where the Department determines if such data is applicable to a particular water system. In the event that there is a release from a nuclear facility, systems which are using surveillance data must begin monitoring at the community water system's entry point(s) in accordance with 310 CMR 22.09A(3)(a).

22.09A: continued

(b) Community water systems (both surface and ground water) designated by the Department as utilizing waters contaminated by effluents from nuclear facilities must sample for beta particle and photon radioactivity. The supplier of water must collect quarterly samples for beta emitters and iodine-131 and annual samples for tritium and strontium-90 at each entry point to the distribution system (hereafter called a sampling point), beginning within one quarter after being notified by the Department. Systems already designated by the Department as systems using waters contaminated by effluents from nuclear facilities must continue to sample until the Department reviews and either reaffirms or removes the designation.

1. Quarterly monitoring for gross beta particle activity shall be based on the analysis of monthly samples or the analysis of a composite of three monthly samples. The former is recommended.

2. For iodine-131, a composite of five consecutive daily samples shall be analyzed once each quarter. As ordered by the Department, more frequent monitoring shall be conducted when iodine-131 is identified in the finished water.

3. Annual monitoring for strontium-90 and tritium shall be conducted by means of the analysis of a composite of four consecutive quarterly samples or analysis of four quarterly samples. The latter procedure is recommended.

4. If the gross beta particle activity beta minus the naturally occurring potassium-40 beta particle activity at a sampling point has a running annual average (computed quarterly) less than or equal to 15 pCi/L, (screening level), the Department may reduce the frequency of monitoring at that sampling point to every three years. The supplier of water must collect all samples required in 310 CMR 2.09A(3)(b) during the reduced monitoring period.

5. For systems in the vicinity of a nuclear facility, the Department may allow the community water system to utilize environmental surveillance data collected by the nuclear facility in *lieu* of monitoring at the system's entry point(s), where the Department determines if such data is applicable to a particular water system. In the event that there is a release from a nuclear facility, systems which are using surveillance data must begin monitoring at the community water system's entry point(s) in accordance with 310 CMR 22.09A(3)(b).

(c) Community water systems designated by the Department to monitor for beta particle and photon radioactivity can not apply to the Department for a waiver from the monitoring frequencies specified in 310 CMR 22.09A(3)(a) or (b).

(d) Community water systems may analyze for naturally occurring potassium-40 beta particle activity from the same or equivalent sample used for the gross beta particle activity analysis. The supplier of water is allowed to subtract the potassium-40 beta particle activity value from the total gross beta particle activity value to determine if the screening level is exceeded. The potassium-40 beta particle activity must be calculated by multiplying elemental potassium concentrations (in mg/L) by a factor of 0.82.

(e) If the gross beta particle activity minus the naturally occurring potassium-40 beta particle activity exceeds the appropriate screening level, an analysis of the sample must be performed to identify the major radioactive constituents present in the sample and the appropriate doses must be calculated and summed to determine compliance with 310 CMR 22.09A(1)(c)1., using the formula in 310 CMR 22.09A(1)(c)2. Doses must also be calculated and combined for measured levels of tritium and strontium to determine compliance.

(f) The supplier of water must monitor monthly at the sampling point(s) which exceed the maximum contaminant level in 310 CMR 22.09A: *Table A* beginning the month after the exceedance occurs. The supplier of water must continue monthly monitoring until the system has established, by a rolling average of three monthly samples, that the MCL is being met. Systems who establish that the MCL is being met must return to quarterly monitoring until they meet the requirements set forth in 310 CMR 22.09A(3)(a)2. or (b)1.

(4) General Monitoring and Compliance Requirements for Radionuclides.

(a) The Department may require more frequent monitoring than specified in 310 CMR 22.09A(2) and (3), or may require confirmation samples at its discretion. The results of the initial and confirmation samples will be averaged for use in compliance determinations.

22.09A: continued

(b) Each supplier of water shall monitor at the time designated by the Department during each compliance period.

(c) Compliance with 310 CMR 22.09A(1)(a) through (d) will be determined based on the analytical result(s) obtained at each sampling point. If one sampling point is in violation of an MCL, the system is in violation of the MCL.

1. For systems monitoring more than once per year, compliance with the MCL is determined by a running annual average at each sampling point. If the average of any sampling point is greater than the MCL, then the system is out of compliance with the MCL.

2. For systems monitoring more than once per year, if any sample result will cause the running average to exceed the MCL at any sample point, the system is out of compliance with the MCL immediately.

3. Each supplier of water must include all samples taken and analyzed under the provisions of 310 CMR 22.09A in determining compliance, even if that number is greater than the minimum required.

4. If a supplier of water does not collect all required samples when compliance is based on a running annual average of quarterly samples, compliance will be based on the running average of the samples collected.

5. If a sample result is less than the detection limit, zero will be used to calculate the annual average, unless a gross alpha particle activity is being used in *lieu* of radium-226 and/or uranium. If the gross alpha particle activity result is less than detection, $\frac{1}{2}$ the detection limit will be used to calculate the annual average.

(d) The Department has the discretion to delete results of obvious sampling or analytic errors.

(e) If the MCL for radioactivity set forth in 310 CMR 22.09A(1)(a) through (d) is exceeded, the operator of a community water system must give notice to the Department pursuant to 310 CMR 22.15 and shall notify the public as required by 310 CMR 22.16.

(5) Analytical Methods for Radioactivity.

(a) Analysis for the following contaminants shall be conducted to determine compliance with 310 CMR 22.09A(1) in accordance with the methods in 310 CMR 22.09A: *Table F* or their equivalent as determined by USEPA.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.09A: continued

TABLE F
ANALYTICAL METHODS FOR RADIONUCLIDE MONITORING

Contaminant	Methodology	Reference (method or page number)								
		EPA ¹	EPA ²	EPA ³	EPA ⁴	SM ⁵	ASTM ⁶	USGS ⁷	DOE ⁸	Other
Naturally Occurring:										
Gross alpha & beta ¹¹	Evaporation	900	p 1	0	p 1	302, 7110 B 7110 B-00		R-1120-76		
Gross alpha ¹¹	Co-precipitation			0		7110 C 7110 C-00				
Radium 226	Radon emanation	903.1	p 16	Ra-04	p 19	305, 7500-Ra C	D 3454-97	R-1141-76	Ra-04	N.Y. ⁹
	Radiochemical	903	p 13	Ra-03		7500 Ra C-01 304, 7500-Ra B 7500-Ra B-01	D 2460-97	R-1140-76		GA ¹⁴
Radium 228	Radiochemical	904.4	p 24	Ra-05	p 19	7500-Ra D 7500-RaD-01		R-1142-76		N.Y. ⁹ N.J. ¹⁰
Uranium ¹²	Radiochemical	908				7500-U B 7500-U B-00				GA ¹⁴
	Fluorometric	908.1				7500-U C (17 th Ed.)	D 2907-97	R-1180-76	U-04	
								R-1181-76		
	Alpha spectrometry			0	p 33	7500-U C (18 th , 19 th , or 20 th edition) 7500- U C-00	D 3972-97, 02	R-1182-76	U-02	
	Laser phosphorimetry						D 5174-97, 02			
	ICP-MS	200.8 ¹³				3125	D 5673-03			
Man-made:										
Radioactive cesium	Radiochemical	901	p 4			7500-Cs B 7500-Cs B-00	D 2459-72	R-1111-76		
	Gamma ray spectrometry	901.1			p 92	7120, 7120-97	D 3649-91, 98a	R-1110-76	4.5.2.3	
Radioactive iodine	Radiochemical	902	p 6 p 9			7500-1 B 7500-1 B-00 7500-1 C 7500-1C-00 7500-1 D 7500-1 D-00	D 3649-91, 98a			
	Gamma ray spectrometry	901.1			p 92	7120, 7120-97	D 4785-93, 00a		4.5.2.3	
Radioactive Strontium 89, 90	Radiochemical	905	p 29	Sr-04	p 65	303, 7500- Sr B, 7500-Sr B-01		R-1160-76	Sr-01 Sr-02	
Tritium	Liquid scintillation	906	p 34	H-02	p 87	306,7500-3H B, 7500- ³ H B-00	D 4107-91, 98 (Reapproved 2002)	R-1171-76		
Gamma emitters	Gamma ray Spectrometry	901.1			p 92	7120, 7120-97	D 3649-91, 98a	R-1110-76	Ga-01-R	
		902				7500-Cs B 7500-Cs B-00	D 4785-88 93, 00a			
		901				7500-1 B, 7500-1 B-00				

¹ Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA 600/4-80-032 , August 1980. Available at U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 (Telephone 800-553-6847), PB 80-224744, except Method 200.8, "Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma-Mass Spectrometry", Revision 5.4, which is published in "Methods for the Determination of Metals in Environmental Samples-Supplement I", EPA 600-R-94-111, May 1994. Available at NTIS, PB95-125472.

22.09A: continued

- ² *Interim Radiochemical Methodology for Drinking Water*, EPA 600/4-75-008 (revised), March 1976. Available at NTIS, *ibid.* PB 253258.
- ³ *Radiochemistry Procedures Manual*, EPA 520/5-84-006, December 1987. Available at NTIS, *ibid.* PB 84-215581.
- ⁴ *Radiochemical Analytical Procedures for Analysis of Environmental Samples*, U.S. Department of Energy, March 1979. Available at NTIS, *ibid.* EMSL LV 053917.
- ⁵ *Standard Methods for the Examination of Water and Wastewater*, 13th, 17th, 18th, 19th, or 20th editions, 1971, 1989, 1992, 1995 and 1998. Available at American Public Health Association, 1015 Fifteenth Street N.W., Washington, D.C. 20005. Methods 302, 303, 304, 305 and 306 are only in the 13th edition. Methods 7110B, 7500-Ra B, 7500-Ra C, 7500-Ra D, 7500-U B, 7500-Cs B, 7500-IB, 7500-IC, 7500-ID, 7500-Sr B, 7500-3H B are in the 17th, 18th, 19th, and 20th editions. Method 7110C is in the 18th, 19th, and 20th editions. Method 7500-U C Fluorometric Uranium is only in the 17th Edition, and 7500-U C Alpha spectrometry is only in the 18th, 19th, and 20th editions. Method 7120 is only in the 19th and 20th editions. Methods 302, 303, 304, 305 and 306 are only in the 13th edition. Method 3125 is only in the 20th edition. Methods 7110 B-00, 7110 C-00, 7500-Ra B-01, 7500-Ra C-01, 7500 Ra D-01, 7500-U B-00, 7500-U C-00, 7500-1 B-00, 7500-1 C-00, 7500-1 D-00, 7120-97, 7500-Sr B-01, and 7500-³H B-00 are available online at <http://www.standardmethods.org>. The year in which each method was approved by the Standard Methods Committee is designated by the last two digits in the method number. The methods listed are the only online versions that may be used.
- ⁶ Annual Book of ASTM Standards, Vol. 11.01 and 11.02, 1999, 2002; American Society for Testing and Materials International; any year containing the cited version of the method may be used. Copies of these two volumes and the 2003 version of D 5673-03 may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.
- ⁷ *Methods for Determination of Radioactive Substances in Water and Fluvial Sediments*, Chapter A5 in Book 5 of Techniques of Water-Resources Investigations of the United States Geological Survey, 1977. Available at U.S. Geological Survey Information Services, Box 25286, Federal Center, Denver, CO 80225-0425.
- ⁸ *EML Procedures Manual*, 27th (1990), or 28th (1997) Editions, Volume 1 and 2; either edition may be used. In the 27th Edition Method Ra-04 is listed as Ra-05 and Method Ga-01-R is listed as Sect. 4.5.2.3. Available at the Environmental Measurements Laboratory, U.S. Department of Energy (DOE), 376 Hudson Street, New York, NY 10014-3621.
- ⁹ *Determination of Ra-226 and Ra-228 (Ra-02)*, January 1980; Revised June 1982. Available at Radiological Sciences Institute Center for Laboratories and Research, New York State Department of Health, Empire State Plaza, Albany, NY 12201.
- ¹⁰ *Determination of Radium 228 in Drinking Water*, August 1980. Available at State of New Jersey, Department of Environmental Protection, Division of Environmental Quality, Bureau of Radiation and Inorganic Analytical Services, 9 Ewing Street, Trenton, NJ 08625.
- ¹¹ Natural uranium and thorium-230 are approved as gross alpha-particle activity calibration standards for the gross alpha co-precipitation and evaporation methods; americium-241 is approved for use with the gross alpha co-precipitation methods.
- ¹² If uranium (U) is determined by mass-type methods (*i.e.*, fluorometric or laser phosphorimetry), a 0.67 pCi/mg uranium conversion factor must be used. This conversion factor is conservative and is based on the 1:1 activity ratio of U-234 to U-238 that is characteristic of naturally-occurring uranium in rock.
- ¹³ *Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma-Mass Spectrometry, Revision 5.4, which is published in Methods for the Determination of Metals in Environmental Samples-Supplement 1*, EPA 600-R-94-111, May 1994. Available at NTIS, PB 95-125472.
- ¹⁴ *The Determination of Radium-226 and Radium-228 in Drinking Water by Gamma-ray Spectrometry using HPGE or Ge(Li) Detectors*, Revision 1.2, December 2004. Available from the Environmental Resources Center, Georgia Institute of Technology, 620 Cherry Street, Atlanta, GA 30332-0335, USA, Telephone: 404-894-3776. This method may be used to analyze for radium-226 and radium-228 in samples collected after January 1, 2005 to satisfy the radium-226 and radium-228 monitoring requirements specified at 40 CFR 141.26.

(b) To determine compliance with 310 CMR 22.09A(1) the detection limit shall not exceed the concentrations as indicated in 310 CMR 22.09A Table G.

22.09A: continued

TABLE G REQUIRED REGULATORY DETECTION LIMITS FOR VARIOUS RADIOCHEMICAL CONTAMINANTS	
Contaminant	Detection Limit (pCi/L)
Gross alpha	3
Gross beta	4
Radium-226	1
Radium-228	1
Uranium	[ug/L]
Cesium-134	10
Strontium-89	10
Strontium-90	2
Iodine-131	1
Tritium	1000
Other radionuclides and Photon/Gamma Emitters	1/10 th of the rule

(c) To judge compliance with the maximum contaminant levels listed in 310 CMR 22.09A(1), averages of data shall be used and shall be rounded to the same number of significant figures as the maximum contaminant level for the substance in question.

22.10: Alternative Analytical Methods

(1) With the express written permission of the Department, given after a public hearing and the approval of the Administrator or the Administrator's designee, an alternate analytical technique may be employed for any analytical technique prescribed in 310 CMR 22.00. The Department shall give such permission only if the alternative technique is substantially equivalent to the prescribed test in both precision and accuracy as it relates to the determination of compliance with any maximum contaminant level. The use of the alternative analytical technique shall not alter the frequency of monitoring required by 310 CMR 22.00.

(2) The Department shall approve all USEPA Alternative Testing Methods approved for analyses under the Safe Drinking Water Act that are identified in 40 CFR 141, Subpart C, Appendix A. These methods are also listed at <http://www.ecfr.gov/cgi-bin/text-idx?SID=fda778b5ffa108853e7f2eb78b656c5a&mc=true&node=sp40.23.141.c&rgn=div6#ap40.23.141.129.a>. The use of these alternative analytical techniques shall not alter the frequency of monitoring required by 310 CMR 22.00 and laboratories seeking to use the methods must comply with all requirements of 310 CMR 42.00: *Certification and Operation of Environmental Analysis Laboratories*.

22.11A: Laboratory Certification

(1) No laboratory shall conduct the analyses of drinking water required by 310 CMR 22.00 nor report them to the Supplier of Water or to the Department for the purpose of complying with 310 CMR 22.00 unless the Department has certified the laboratory to conduct analytical measurements, pursuant to 310 CMR 42.00: *Certification and Operation of Environmental Analysis Laboratories* except that measurements of Turbidity, chlorine residual, temperature, pH, alkalinity, calcium, conductivity, orthophosphates, silica and other analyses for the control of treatment works for Public Water Systems may be performed by any employee or agent of the Public Water System whom the Department designates as competent and authorized to perform such analyses. No sample shall be considered for the purpose of determining compliance with 310 CMR 22.00 if the sample was analyzed by a laboratory not certified pursuant to 310 CMR 42.00: *Certification and Operation of Environmental Analysis Laboratories*, or analyzed by an unapproved analytical method. All sample results submitted to the Department shall be on forms specified and approved by the Department. Certified laboratories, or other agents approved by the Department, shall provide chain of custody, collection containers of the recommended size, quality and construction for the collection of drinking water samples, as well as any required preservative.

22.11A: continued

(2) The Department may accept results of analyses performed by laboratories which are certified by the EPA or any other certification authority approved by the Department. Such laboratories must continue to participate in performance evaluation studies and in laboratory intercomparison cross check studies which include the analyses for which the laboratory is certified or seeking certification.

22.11B: Public Water Systems Certified Operator Staffing Requirements

(1) Operation. Each Supplier of Water shall ensure that its Public Water System is operated at all times by a Primary and Secondary Operator for the treatment and distribution of drinking water, unless otherwise authorized in writing by the Department. Any Public Water System personnel who make decisions regarding the Public Water System's process control or operational integrity shall be certified pursuant to 236 CMR: *Board of Certification of Operators of Drinking Water Supply Facilities*. Exemptions to this requirement are addressed in 310 CMR 22.11B(5). The Primary Operator shall be directly responsible for the operation of a Treatment Facility and/or Distribution System. The Secondary Operator shall be directly responsible for the operation of a Treatment Facility and/or Distribution System or a major segment of the Public Water System, during the temporary absence of the Primary Operator or during operational shifts when the Primary Operator is not scheduled to work. Persons exercising official general administrative duties such as city engineers exercising engineering design duties, elected water commissioners, clerks or administrative workers involved in customer relations, billing, payroll, timekeeping, *etc.* shall not be considered directly responsible for a Public Water System, unless otherwise authorized in writing by the Department.

(2) Staffing Requirements. In order to ensure the proper management, operation and maintenance of Public Water Systems, every Public Water System, except as provided in 310 CMR 22.11B(5), shall be operated as follows:

(a) Treatment - Primary Operator.

1. A Public Water System utilizing treatment shall be operated, whenever the Treatment Facility is in operation, by a Primary Operator (*i.e.*, a Certified Operator who has a grade certificate at least equal to the class of the Treatment Facility, as further defined in 310 CMR 22.02) who, except when temporarily absent, shall be:

- a. present at the Treatment Facility at least one seven-hour working shift each day for five days during each work week (meaning seven consecutive days); and
- b. available to respond in person to Emergencies at the Treatment Facility within one hour at all times when not present at the Treatment Facility.

2. A Supplier of Water may submit a written request for the Department to approve an alternative work schedule for the Primary Operator. The proposed alternative work schedule shall demonstrate that the Primary Operator will work at least 35 hours and at least four days each work week (as defined in 310 CMR 22.11B(2)(a)1.) at the Treatment Facility to ensure its safe and proper operation.

(b) Treatment - Secondary Operator. A Public Water System utilizing treatment shall be operated, whenever the Treatment Facility is in operation, by a Secondary Operator (*i.e.*, a Certified Operator who has a grade certificate not less than one grade lower than the classification of the Treatment Facility, as more fully defined in 310 CMR 22.02) who shall be:

1. present at the Treatment Facility on all working shifts when the Primary Operator is not required to be present; and
2. present at the Treatment Facility during any working shift when a Primary Operator is required to be present in accordance to 310 CMR 22.11B(2)(a)1. or 2., but is temporarily absent.

(c) Distribution - Primary Operator.

1. A Public Water System's Distribution System shall be operated by a Primary Operator (*i.e.*, a Certified Operator who has a grade certificate at least equal to the class of the Distribution System, as more fully defined in 310 CMR 22.02) who, except for temporary absence, shall be:

- a. present at the Distribution System at least one seven-hour working shift each day for five days during each work week (as defined in 310 CMR 22.11B(2)(a)1.); and
- b. available to respond in person to Emergencies with the Distribution System within one hour at all times when not present at the Distribution System.

22.11B: continued

2. A Supplier of Water may submit a written request for the Department to approve an alternative work schedule for the Primary Operator. The proposed alternative work schedule shall demonstrate that the Primary Operator will work at least 35 hours and at least four days each work week (as defined in 310 CMR 22.11B(2)(a)1.) at the Distribution System to ensure its safe and proper operation.
- (d) Distribution - Secondary Operator. A Public Water System's Distribution System shall be operated by a Secondary Operator (*i.e.*, a Certified Operator who has a certification not less than one grade lower than the classification of the Distribution System, as more fully defined in 310 CMR 22.02) who shall be:
1. present at the Distribution System on all working shifts when the Primary Operator is not required to be present; and
 2. present at the Distribution System during any working shift when a Primary Operator is required to be present in accordance to 310 CMR 22.11B(2)(c)1. or 2., but is not present due to a temporary absence.
- (e) Multiple Treatment Facilities.
1. A Supplier of Water whose Public Water System is classified as Grade 1T or 2T and consists of multiple Treatment Facilities shall not be required to staff each Treatment Facility individually.
 2. A Supplier of Water whose Public Water System is classified as Grade 3T or 4T and consists of multiple Grade 3 or 4 Treatment Facilities shall staff each facility individually, in accordance with its classification.
 3. A Supplier of Water whose Public Water System is classified as Grade 3T or 4T and consists of a single Grade 3 or 4 Treatment Facility and one or more Grade 1 or 2 Treatment Facilities shall staff the higher grade Treatment Facility, but shall not be required to staff each lower grade Treatment Facility.
- (f) Staffing and Comprehensive Operations Plan. A Supplier of Water, upon request from the Department, shall submit to the Department for review a "Staffing and Comprehensive Operations Plan" on a form provided by the Department and, if applicable, a Contract Operator Compliance Notice, demonstrating compliance with 310 CMR 22.11B(2).
- (3) Primary and Secondary Operator Changes. Except for periods of temporary absence of no more than 30 days, whenever a Supplier of Water changes a Certified Operator responsible for primary or secondary supervision under 310 CMR 22.11B(1),
- (a) the Supplier of Water shall report the change to the Department within seven days, thereafter;
 - (b) the Supplier of Water shall submit to the Department for review an updated "Staffing and Comprehensive Operations Plan" and, if applicable, a Contract Operator Compliance Notice, within 30 days of the change described in 310 CMR 22.11B(3)(a); and
 - (c) the Supplier of Water shall obtain a replacement Primary or Secondary Operator(s) of appropriate grade no later than 30 days from the date the current operator(s) ceases to perform the Primary or Secondary Operator duties.
- (4) Classification of Public Water Systems. A Public Water System's Distribution System shall be classified in accordance with 310 CMR 22.11B(4)(c) and its Treatment Facilities, if any, shall be classified in accordance with 310 CMR 22.11B(4)(a). However, if the Public Water System is a free standing vending machine, it shall be classified instead in accordance with 310 CMR 22.11B(4)(b) or (d), as applicable. The overall classification of each Public Water System shall be indicated by the classification of its Distribution System followed by the numerically highest class of its Treatment Facilities, if any (*e.g.*, III-D/II-T) or its vending classification (*e.g.*, II-VNDT). The increasing numerical class indicates an increasing complexity of operation and a higher level of training, knowledge, and experience required for operation. The certification grades for operators established in 236 CMR 3.02: *Classification of Public Water System Operators*, shall correspond to the classification of the system as required under 310 CMR 22.11B(4). The Department shall make the final determination of all such classifications.
- (a) Rating Treatment Facilities. The class of each Treatment Facility within a Public Water System shall be established by adding together all rating values reflecting the complexity of operation for such Treatment Facility's treatment units, as set forth in 310 CMR 22.11B: *Table 1. Treatment Unit Rating Values*.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.11B: continued

310 CMR 22.11B: *TABLE 1*
TREATMENT UNIT RATING VALUES

Item	Points Possible
Size (20 points maximum allowed)	
Design flow average day, or peak month's average day, whichever is larger (1 point per 0.5 MGD. Round up.) Design flow: Consider this to be the design capacity of the plant. Examples: 9.2 MGD = 19 points 4.7 MGD = 10 points	1 - 20
Water Supply Sources (Rating based on public health significance)	
Seawater/saltwater	0
Groundwater	0
Groundwater Under Direct Influence of Surface Water (GWUDI)	8
Surface Water	10
Average Raw Water Quality Variation - Applies to all sources (surface and groundwater) Key is the effect on treatment process changes that would be necessary to achieve optimized performance. <ul style="list-style-type: none"> • Little or no variation - no treatment provided except Disinfection (0 points) • Minor variation - <i>e.g.</i> "high quality" surface source appropriate for Slow Sand Filtration (1 point) • Moderate variation in chemical feed, dosage changes made: monthly (2 points), weekly (3 points), or daily (4 points) • Variation significant enough to require pronounced and/or very frequent changes (5 points) • Severe variation - source subject to non- point discharges, agricultural/ urban storm runoff, flooding (7 points) • Raw Water quality subject to agricultural or municipal waste point source discharges (8 points) • Raw Water quality subject to industrial waste pollution (10 points) 	0 - 10
Raw Water quality is subject to:	
<ul style="list-style-type: none"> • Taste and/or odor for which treatment process adjustments are routinely made - <i>see exceptions in Note 1 at end of table</i> 	2
<ul style="list-style-type: none"> • Color > 15 CU (not due to precipitated metals) - <i>see exceptions in Note 1 at end of table</i> 	3
<ul style="list-style-type: none"> • Iron or/and manganese > SMCL: Fe (2 points), Mn (3 points) (3 points maximum allowed) - <i>see exceptions in Note 1 at end of table</i> 	2 - 3
<ul style="list-style-type: none"> • Algal growths for which treatment process adjustments are routinely made - <i>see exceptions in Note 1 at end of table</i> 	3

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.11B: continued

Item	Points Possible
Chemical Treatment/Addition Processes	
Fluoridation	4
Disinfection/Oxidation (Note: Points are additive to a maximum of 15 points allowed for this category.) <ul style="list-style-type: none"> • Chlorination: <ul style="list-style-type: none"> ○ Hypochlorites (5 points) <ul style="list-style-type: none"> • If generated on site (add 1 point) ○ Chlorine gas (8 points) ○ Chloramination (10 points) ○ Chlorine dioxide (10 points) • Ozonation (10 points) • UV Irradiation (2 points) • Iodine, Peroxide, or similar (5 points) • Potassium permanganate (4 points) <ul style="list-style-type: none"> ○ (If used with green sand filtration do not give 4 points) 	0 - 15
pH adjustment for process control (e.g., pH adjustment aids Coagulation)	4
Stability or Corrosion Control (If the same chemical is used for both Corrosion Control and pH adjustment, count points only once)	4
Coagulation/Flocculation & Filter Aid	
Primary coagulant addition	6
Coagulant aid / Flocculant chemical addition (in addition to primary coagulant use)	2
Flocculation	2
Filter aid addition (Non-ionic/anionic polymers)	2
Clarification/Sedimentation	
Sedimentation (plain, tube, plate)	4
Contact Adsorption	6
Other clarification processes (air flotation, ballasted clarification, etc.)	6
Upflow clarification ("sludge blanket clarifier") - <i>see Note 2 at end of table</i>	8
Filtration	
Granular media filtration (Surface Water/GWUDI) less than or equal to 3 gpm/sq ft	10
Granular media filtration (Surface Water/GWUDI) greater than 3 gpm/sq ft	20
Groundwater Filtration	6
Membrane Filtration <ul style="list-style-type: none"> • For compliance with a primary MCL, Treatment Technique, MRDL, Action Level or any standards specific to an individual Public Water System established pursuant to a health assessment as provided in 310 CMR 22.03(8) (10 points) • For compliance with a Secondary MCL regulation (6 points) 	6-10
Diatomaceous Earth (pre-coat filtration)	10
Cartridge/bag	5
Pre-filtration (staged cartridges, pressure sand w/o Coagulation, etc.): add one point per stage to maximum of 3 points	1-3
Slow sand	5

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.11B: continued

Item	Points Possible
Other Treatment Processes	
Aeration	3
Air stripping (including diffused air, packed tower Aeration)	5
Ion-exchange/softening	5
Green sand Filtration	10
Lime-soda ash softening (includes: chemical addition, mixing/flocculation/clarification/Filtration - do not add points for these processes separately)	20
Granular activated carbon filter (do not assign points when included as a bed layer in another filter)	5
Powdered activated carbon	2
Blending sources with significantly different water quality <ul style="list-style-type: none"> • To achieve MCL, MRDL, Action Level or any standards specific to an individual Public Water System established pursuant to a health assessment as provided in 310 CMR 22.03(8) (4 points) * For aesthetic reasons (2 points) 	2 - 4
Reservoir management employing chemical addition	2
Electrodialysis	15
Other: The Department may assign 2 to 15 additional points for processes not listed elsewhere in this table.	2 - 15
Residuals Disposal	
<ul style="list-style-type: none"> • Discharge to surface, sewer, or equivalent (0 points) • On-site disposal, land application (1 point) • Discharge to lagoon/drying bed, with no recovery/recycling - e.g. downstream outfall (1 point) • Backwash recovery/recycling: discharge to basin or lagoon and then to source (2 points) • Backwash recovery/recycling: discharge to basin or lagoon and then to Plant Intake (3 points) 	0 - 3
Facility Characteristics	
Instrumentation - Use of SCADA or similar instrumentation systems to provide data, with: <ul style="list-style-type: none"> • Monitoring/alarm only, no process operation - plant has no automated shutdown capability (0 points) • Limited process operation - e.g. remote shutdown capability (1 point) • Moderate process operation - alarms and shutdown, plus partial remote operation of plant (2 points) • Extensive or total process operation - alarms and shutdown, full remote operation of plant possible (4 points) 	0 - 4

Notes:

1 - Raw Water quality is subject to:

- Taste and/or odor for which treatment process adjustments are routinely made (2 points): 1) taste and/or odor issue has been identified in a pre-design report, *etc.*, 2) a process has been installed to address, and 3) operational control adjustments are made at least seasonally. Do not give points for taste and/or odor when there is no specific additional impact on operation. *E.g.* if a system is already pre-chlorinating for Disinfection, give no points for taste and/or odor.
- Color > 15 CU (not due to precipitated metals) (3 points) with following exceptions. Color will be considered elevated and points assigned when levels exceed 75 Color Units (CU) for conventional filtration, 40 CU for Direct Filtration, or 15 CU for all other technologies, except Reverse Osmosis (no points given for color for Reverse Osmosis).
- Iron and/or manganese > SMCL: Fe (2 points), Mn (3 points) (3 points maximum allowed) with following exceptions. Iron and manganese levels will be considered elevated and points assigned if they are greater than the SMCL, except for applications of manganese greensand filters. For applications of manganese greensand filters, iron and manganese levels will be considered elevated when their combined level exceeds 1.0 mg/L or if manganese exceeds 0.3 mg/L (3 points allowed).
- Algal growths for which treatment process adjustments are routinely made (3 points): Raw Water will be considered subject to algae growths when treatment processes are specifically adjusted due to the presence of high levels of algae on at least a weekly basis for at least two months each year.

22.11B: continued

2 - Upflow clarification ("sludge blanket clarifier") - 8 points - Also known as sludge blanket clarification. Includes such proprietary units as Super-Pulsator. These units include processes for flocculation and Sedimentation. Important note: these are not the same as Adsorption clarifiers.

1. Each unit process should have points assigned only once.
2. Point System: Treatment Facilities shall be classified according to the following points system:
 - Class I-T 30 Points and less
 - Class II-T 31 to 55 points
 - Class III-T 56 to 75 points
 - Class IV-T 76 points and greater

(b) Water Vending Machines with Treatment. Free standing vending machines consisting of filters with the addition of chemicals and/or Reverse Osmosis system shall be classified as follows:

- | | |
|-------------------------------|-----------------|
| 2000 gal per day and less | Class I-VNDDT |
| 2001 gal per day to 5000 | Class II-VNDDT |
| 5001 gal per day to 50000 | Class III-VNDDT |
| 50001 gal per day and greater | Class IV-VNDDT |

(c) Rating Distribution Systems. Distribution Systems shall be rated according to the population served as follows except for Non-community Water Systems:

- | | |
|--------------------|-------------------------|
| 500 and less | VSS (Very Small System) |
| 501 to 1,500 | Class I-D |
| 1,501 to 15,000 | Class II-D |
| 15,001 to 50,000 | Class III-D |
| 50,001 and greater | Class IV-D |

All Non-community Water Systems shall be classified as Very Small Systems (VSS) regardless of population served.

(d) Water Vending Machines without Treatment. Free standing vending machines consisting of filters, and/or ultra-violet Disinfection systems with no chemical addition shall be classified as follows:

- | | |
|--------------------------|--------------------------------|
| 500 gal per day and less | VND-ID (Water Vending Machine) |
| 501 gal per day and more | VND-IID |

(e) Bulk or Bottled Water. Water that is treated to be distributed in bulk or as bottled water shall be classified as stated in 310 CMR 22.11B(4)(b) and unless otherwise authorized in writing by the Department.

(f) Specific Rating Values. The Department may establish a rating value for any system or unit not shown on the table. The Department may change the classification of a particular facility when there are site-specific factors affecting the operation of the Public Water System or complexity of the treatment process.

(5) Exemptions. The Department may exempt any Supplier of Water from the requirements of 310 CMR 22.11B(1) and (2).

(a) The Department shall not grant any exemption unless the Supplier of Water demonstrates to the Department's satisfaction that:

1. due to compelling factors the Supplier of Water is unable to comply with the requirements of 310 CMR 22.11B(1) or (2);
2. the granting of the requested exemption will not result in an unreasonable risk to health or impair the quality of water which is being delivered to the Public Water System's consumers;
3. the Supplier of Water can ensure the proper operation of the Public Water System and can detect any malfunctions in the operation of the Treatment Facility or Distribution System in the absence of the Primary Operator;
4. the Primary Operator is able to respond to Emergencies within a reasonable period of time. In no event shall an Emergency response time greater than one hour be deemed reasonable;
5. the Primary Operator is responsible for the operation of the Public Water System at all times whether or not present in person; and
6. any individual utilized by the Supplier of Water to operate the Public Water System and to detect any malfunctions in the operation of the Public Water System in the absence of the Primary Operator, is properly trained by, and is acting under the direction of, the Primary Operator.

22.11B: continued

(b) Staffing and Comprehensive Operations Plan. A Supplier of Water requesting an exemption under 310 CMR 22.11B(5) shall submit to the Department for review and approval a "Staffing and Comprehensive Operations Plan" for the Public Water System.

(c) Part-time Operation. With the prior written approval of the Department, a Supplier of Water whose Public Water System includes a Distribution System classified as a I-D or less may reduce the staffing requirements of 310 CMR 22.11B(1) and (2) by operating the Distribution System on a part-time basis. With the prior written approval of the Department, a Supplier of Water whose Public Water System includes a Treatment Facility classified as I-T or less may reduce the staffing requirements of 310 CMR 22.11B(1) and (2) by operating the Treatment Facility on a part-time basis. A Supplier of Water seeking a reduction in the staffing requirements shall be subject to the conditions listed at 310 CMR 22.11B(5)(a)1. through 6. and (b). Subject to such approval(s), the Primary and Secondary Operators or both may be allowed to operate the Treatment Facility or Distribution System on a part-time basis.

(d) Public Water System - Automated Operations. Increased instrumentation, automation and SCADA Systems may be used to reduce the number of on-site staff required during periods of routine operation. A Public Water System which has been designed for off-site monitoring may apply to the Department for an exemption from the requirements of 310 CMR 22.11B(1) and (2).

1. The Department shall use, but not be limited to, the following factors in making its determination to evaluate whether a Treatment Facility or Distribution System can reduce the number of staff required to operate a Treatment Facility or Distribution System:

- a. the complexity and type of the treatment process;
- b. the size of storage tanks and clearwells;
- c. the estimated length of time for water quality to deteriorate from a treatment process failure such that unsafe or impure levels of drinking water are present in the Distribution System;
- d. the variability of source water quality;
- e. the degree of sophistication, reliability and control of the instrumentation monitoring and control system;
- f. the location of the off-site monitoring site with respect to operator response and/or travel time to the Treatment Facility;
- g. the adequacy of the Emergency response plan when alarms or out-of-range parameters are reported by Distribution System or Treatment Facility instrumentation;
- h. the capabilities of a Distribution System or Treatment Facility to be shut down during a critical alarm condition;
- i. the ability of the Public Water System to provide at least 12 hours of safe water for the correction of a process malfunction;
- j. the ability of improperly treated water to be flushed from the Distribution System prior to the first customer without an interruption of water service;
- k. demonstration that the Public Water System has adequate capacity to repair and maintain the automated controls or show that it has an agreement with a third party to do so; and
- l. secured remote access.

2. The Treatment Facility or Distribution System shall include where applicable, but not limited to, instrumentation to continuously monitor, control, record and maintain historical data for critical processes at established regulatory compliance points such as:

- a. water storage tank levels at the Treatment Facility and in the Distribution System;
- b. chemical storage tank levels;
- c. disinfection equipment.
- d. critical chemicals or treatment processes including, but not limited to:
 - i. pH;
 - ii. Turbidity;
 - iii. Disinfectant residual;
 - iv. fluoride (if using hydrofluorosilicic acid); or
 - v. surrogate measures as approved by the Department.

3. The Treatment Facility or Distribution System shall include where applicable, but not limited to, alarms to detect and notify operators in the event of a process failure or condition that could present a concern such as:

22.11B: continued

- a. high and low water storage tank levels at the Treatment Facility and in the Distribution System;
- b. critical chemicals including, but not limited to:
 - i. pH;
 - ii. Turbidity;
 - iii. Disinfectant residual;
 - iv. fluoride (if using hydrofluorosilicic acid); or
 - v. surrogate measures as approved by the Department.
- c. gaseous chlorine leaks;
- d. ozone leaks;
- e. fire and intrusion;
- f. power failures and generator operational status;
- g. critical pumps and motors;
- h. bulk chemical tank volumes (high and low levels); and
- i. loss of communication.

(e) 4T Systems. A Public Water System that includes a Treatment Facility classified as 4T and which meets the requirements of 310 CMR 22.11B(5)(d), with the exception of Satellite Facilities and seasonal Treatment Facilities as described in 310 CMR 22.11B(7), shall be staffed for a minimum of eight hours per day during the days when such Treatment Facility and/or filtration units are in operation. The Treatment Facility shall be staffed in accordance with its classification.

(f) 3T Systems. A Public Water System that includes a Treatment Facility classified as 3T and which meets the requirements of 310 CMR 22.11B(5)(d), with the exception of Satellite Facilities and seasonal Treatment Facilities as described in 310 CMR 22.11B(7), shall be staffed for a minimum of eight hours per day during the days when such Treatment Facility and/or filtration units are in operation, unless otherwise approved by the Department. The Treatment Facility shall be staffed in accordance with its classification.

(g) 2T System or Less. A Public Water System that includes a Treatment Facility classified as 2T or less and which meets the requirements of 310 CMR 22.11B(5)(d), with the exception of Satellite Facilities or seasonal Treatment Facilities as described in 310 CMR 22.11B(7) shall be staffed for a minimum of four hours per day every Monday through Friday when the Treatment Facility is in operation. The Treatment Facility shall be staffed in accordance with its classification.

Weekend/Holiday Coverage. Each operating Treatment Facility must be visited by a Certified Operator at least once per day on weekends and holidays.

(h) Slow Sand Filtration. A Slow Sand Filtration process meeting the requirements of 310 CMR 22.11B(5)(d) shall be staffed by the Primary Operator at a minimum of two hours per day every Monday through Friday when the Filtration process is in operation. Weekend/Holiday Coverage shall be in accordance with 310 CMR 22.11B(5)(g)1.

(i) Very Small Systems and Non-community Water Systems.

1. A Secondary Operator is not required for Public Water Systems classified as a very small system (VSS), Transient Non-community or Non-transient Non-community Water Systems. However, during the times when the Primary Operator is temporarily absent (*i.e.* absences not exceeding 30 days), a Certified Operator who has a certification which corresponds to the class of the facility or higher shall be retained during the absence of the Primary Operator to respond in the event of an Emergency. I

n no event shall an Emergency response time greater than one hour be deemed reasonable.

2. A Public Water System classified as a very small system (VSS), Transient Non-community or Non-transient Non-community Water System, utilizing one or more of the following treatment processes may be operated by a Primary Operator with a VSS Full license and an operator-in-training (OIT) treatment license equal to the classification of the treatment system:

- a. Disinfection (provided Disinfection is not required to meet the treatment requirements of 310 CMR 22.20A, 22.20D, 22.20F, 22.20G or 22.26);
- b. lime contactor;
- c. ion-exchange; or
- d. in-line bag or Cartridge Filter that is not providing pathogen removal.

22.11B: continued

(6) Contract Services.

(a) A Supplier of Water may contract for the services of a Certified Operator to meet the requirements of 310 CMR 22.11B(1) and (2) provided that the Supplier of Water submits for the Department's review a Contract Operator Compliance Notice and "Staffing and Comprehensive Operations Plan" in accordance with 310 CMR 22.11B(5)(b), and in a format specified by the Department, within 30 days of execution of the contract.

(b) A Supplier of Water who contracts for the services of a Certified Operator shall ensure that the Certified Operator conducts, at a minimum, monthly on-site inspections. The Department may require more frequent inspections if it determines an increased frequency to be necessary based on the complexity of the Public Water System or compliance issues. During each inspection, the Certified Operator shall record the details of the inspection in writing. The Supplier of Water shall maintain all inspection forms and records on site for a minimum of five years from the date of the inspection and shall make them available to the Department upon request.

(7) Satellite Facilities and Seasonal Treatment Facilities. A Public Water System, all the Treatment Facilities of which are staffed and which has centralized water treatment operations meeting the requirements of 310 CMR 22.11B, may, subject to the Department's written approval, operate its Satellite Facilities or seasonal Treatment Facilities, if any, from the location of such centralized water treatment operations using remote control of key functions sufficient to permit normally unstaffed operation, provided that such Public Water System complies with the following:

(a) all requirements set forth in 310 CMR 22.11B(5) (a)1. through 5.;

(b) all requirements set forth in 310 CMR 22.11B(5)(b);

(c) all requirements set forth in 310 CMR 22.11B (5)(d);

(d) all maintenance, chemical deliveries and other actions at such Satellite Facilities and seasonal Treatment Facilities requiring the physical presence of Certified Operators shall only be performed in the presence of such Certified Operators provided from the staffed Treatment Facilities; and

(e) all such Satellite Facilities and seasonal Treatment Facilities which are in operation shall be visited by a Certified Operator at least once per day who shall visually check and verify the instrumentation readings between such Satellite Facilities and seasonal Treatment Facilities and such centralized operations.

(8) Treatment Facility and Distribution System Verification. Before and after unstaffed operation periods, a Certified Operator must check and confirm the validity and accuracy of data transmitted between the location of any centralized water treatment operations and any Treatment Facility or Distribution System by verifying such data at the location of such Treatment Facility or Distribution System and must make entry in the Treatment Facility or Distribution System log of any malfunctions. Malfunctions shall be corrected prior to further unstaffed operation of the Treatment Facility or Distribution System.

22.12: Consecutive Public Water Systems

(1) When a public water system supplies water to one or more other consecutive public water systems, the Department may, based on a written request by the consecutive system, modify the monitoring requirements in 310 CMR 22.00 otherwise applicable to the consecutive system based on the extent that the interconnection of the system justifies treating them as a single system for monitoring purposes. Any modified monitoring shall be conducted pursuant to a written schedule approved by the Department.

(2) Any reduced monitoring plan approved by the Department pursuant to 310 CMR 22.12(1) will require a consecutive system to collect, at a minimum, the samples specified at 310 CMR 22.05, and monthly total coliform samples at each entry point to the distribution system.

22.13: Variances

The Department upon receipt of an application from the Public Water System, may grant variances from the requirements of 310 CMR 22.05 through 22.09A, but only subject to the following conditions:

22.13: continued

- (1) The Department may grant one or more variances to one or more Public Water Systems:
- (a) which, because of characteristics of the raw water sources which are reasonably available to the system(s), cannot comply with a prescribed Maximum Contaminant Level or levels despite application of the best technology, Treatment Techniques, or other means, which the Department finds are generally available, taking costs into consideration. The Department shall not grant a variance pursuant to 310 CMR 22.13(1)(a) unless the Department finds in consultation with the Massachusetts Department of Public Health that the variance will not result in an unreasonable risk to health. If the Department grants a Public Water System a variance pursuant to 310 CMR 22.13(1)(a) the Department shall prescribe at the time the variance is granted, a compliance schedule for:
 1. a. Compliance, within the shortest practicable time feasible under the circumstances but not to exceed five years, except as provided in 310 CMR 22.13(1)(a)2., including increments of progress by the Public Water System with each Maximum Contaminant Level requirement with respect to which the variance was granted; and
 - b. Implementation by the Public Water System of such control measures as the Department may require for each contaminant, that is subject to the Maximum Contaminant Level requirement, during the period ending on the date compliance with such requirement is required.
 2. If the compliance schedule exceeds five years from the date of issuance, then the public notice issued pursuant to 310 CMR 22.13(2) shall include a discussion of the rationale for the extension. In no event shall any compliance schedule exceed the shortest practicable time schedule feasible under the circumstances.
 - (b) from any provision of 310 CMR 22.13 which requires the use of a specified Treatment Technique with respect to a contaminant if the Public Water System applying for the variance demonstrates to the Department's satisfaction that such Treatment Technique is not necessary to protect the health of Persons because of the nature of the raw water source of such system. A variance granted pursuant to 310 CMR 22.13(1)(b) shall be conditioned on such monitoring and other requirements as the Department may prescribe.
- (2) Before the Department grants any variance, or prescribes any schedule pursuant to any variance, the Department shall give notice and opportunity for public hearing to the public, to the Massachusetts Department of Public Health, and to the Agency. A notice given pursuant to 310 CMR 22.13(2) may cover the granting of more than one variance or the prescribing of more than one schedule, and a hearing held pursuant to such notice shall include each of the variances and schedules covered by the notice.
- (3) The Department shall not accept any application for a variance unless the Public Water System applying for the variance agrees in writing to all of the following:
- (a) Pay in full the cost of all notices and hearings required by 310 CMR 22.13(2);
 - (b) Comply with any schedule prescribed pursuant to 310 CMR 22.13(1)(a) as expeditiously as possible;
 - (c) Comply with any monitoring or other requirement prescribed pursuant to 310 CMR 22.13(1)(b);
 - (d) Report to the Department, in the manner prescribed in 310 CMR 22.15, the results of all tests, measurements and analyses made in compliance with the variance, and with the schedule and/or monitoring requirements prescribed pursuant to the variance;
 - (e) Report to the Department, in the manner prescribed in 310 CMR 22.15, any failure to comply with the terms of the variance, or with the schedule and/or monitoring requirements prescribed pursuant to the variance;
 - (f) Notify the public, in the manner prescribed in 310 CMR 22.16 of the granting of the variance;
 - (g) Notify the public, in the manner prescribed in 310 CMR 22.16 of any failure to comply with the variance or with any requirement of any schedule or monitoring requirement prescribed pursuant to the variance; and
 - (h) Maintain all the records prescribed in 310 CMR 22.17 in the manner prescribed;
 - (i) The system has the technical, managerial, and financial capacity to adhere to 310 CMR 22.04(3), as determined by the Department.

22.13: continued

- (4) Every variance issued by the Department shall be conditioned on compliance by the Public Water System with the requirements set forth in 310 CMR 22.13(3)(a) through (h). Said requirements shall have the same force and effect they would have if specifically set forth in 310 CMR 22.00.
- (5) The Department shall promptly report to the Administrator or to the Administrator's designee, every variance granted by the Department. Such notification shall contain all of the following:
 - (a) The reason for the variance;
 - (b) The basis for the Department's finding that the granting of the variance will not result in an unreasonable risk to health, in those cases where the Department must make such a finding before granting a variance; and
 - (c) Documentation of the need for the variance.
- (6) All applications for variances shall be made on forms prescribed by the Department.
- (7) Best Available Technologies (BATs).
 - (a) BATs for Organic Compounds. The following technologies listed in 310 CMR 22.13(7)(a)1. through 54. are identified by the EPA Administrator, pursuant to the federal Safe Drinking Water Act, § 1415(a) (1)(A), (effective August 6, 1996) as the best technology, Treatment Techniques, or other means available for achieving compliance with the Maximum Contaminant Levels for organic chemicals as listed in 310 CMR 22.07A(1) and 22.07B(1).

22.13: continued

Best Available Technologies

<u>Contaminant</u>	<u>PTA</u> ¹	<u>GAC</u> ²	<u>OX</u> ³
1. Benzene	X	X	
2. Carbon tetrachloride	X	X	
3. 1,2-Dichloroethane	X	X	
4. Trichloroethylene	X	X	
5. para-Dichlorobenzene	X	X	
6. 1,1-Dichloroethylene	X	X	
7. 1,1,1-Trichloroethane	X	X	
8. Vinyl chloride	X		
9. cis-1,2-Dichloroethylene	X	X	
10. 1,2-Dichloropropane	X	X	
11. Ethylbenzene	X	X	
12. Monochlorobenzene	X	X	
13. o-Dichlorobenzene	X	X	
14. Styrene	X	X	
15. Tetrachloroethylene	X	X	
16. Toluene	X	X	
17. trans-1,2-Dichloroethylene	X	X	
18. Xylenes (total)	X	X	
19. Alachlor		X	
20. Aldicarb		X	
21. Aldicarb sulfoxide		X	
22. Aldicarb sulfone		X	
23. Atrazine		X	
24. Carbofuran		X	
25. Chlordane		X	
26. Dibromochloropropane	X	X	
27. 2,4-D		X	
28. Ethylene dibromide	X	X	
29. Heptachlor		X	
30. Heptachlor epoxide		X	
31. Lindane		X	
32. Methoxychlor		X	
33. PCBs		X	
34. Pentachlorophenol		X	
35. Toxaphene		X	
36. 2,4,5-TP		X	
37. Endrin		X	
38. Benzo(a)pyrene		X	
39. Dalapone		X	
40. Dichloromethane		X	
41. Di(2-ethylhex)adipate	X	X	
42. Di(2-ethylhexyl)phthalate		X	
43. Dinoseb		X	
44. Diquat		X	
45. Endothall		X	
46. Glphosate			X
47. Hexachlorobenzene		X	
48. Hexachlorocyclopentadiene	X	X	
49. Oxamyl		X	
50. Picloram		X	
51. Simazine		X	
52. 1,2,4-Trichlorobenzene	X	X	
53. 1,1,2-Trichloroethane	X	X	
54. 2,3,7,8-TCDD(Dioxin)		X	

22.13: continued

(b) BATs for Inorganic Compounds. The EPA Administrator, pursuant to the federal Safe Drinking Water Act, § 1415(a)(1)(A), (effective August 6, 1996), hereby identifies the following as the best technology, Treatment Techniques, or other means available for achieving compliance with the Maximum Contaminant Levels for the inorganic contaminants listed in 310 CMR 22.13(7)(b):

BAT FOR INORGANIC CONTAMINANTS LISTED IN 310 CMR 22.06(2)

<u>CHEMICAL NAME</u>	<u>BAT(s)</u>
Antimony	2, 7
Asbestos	2, 3, 8
Barium	5, 6, 7, 9
Beryllium	1, 2, 5, 6, 7
Cadmium	2, 5, 6, 7
Chromium	2, 5, 6 ² , 7
<u>CHEMICAL NAME</u>	<u>BAT(s)</u>
Cyanide	5, 7, 10
Mercury	2 ¹ , 4, 6 ¹ , 7 ¹
Nitrate	5, 7, 9
Nitrite	5, 7
Selenium	1, 2 ³ , 6, 7, 9
Thallium	1, 5

Key to BATs in Table

- 1 = Activated Alumina
- 2 = Coagulation/Filtration (Not BAT for Systems <500 service connections)
- 3 = Direct and Diatomite Filtration
- 4 = Granular Activated Carbon
- 5 = Ion Exchange Electrodialysis
- 6 = Lime Softening (not BAT for systems <500 service connections)
- 7 = Reverse Osmosis
- 8 = Corrosion Control
- 9 = Electrodialysis
- 10 = Chlorine
- 11 = Ultraviolet

¹BAT only if influent Hg concentrations ≤10 µg/l.

²BAT for Chromium III only

³BAT for Selenium IV only

(c) Best Available Technologies (BATs) for Radionuclides. The Department shall require Community Water Systems to install and/or use any treatment technology identified in 310 CMR 22.09A: *Table C*, or in the case of Small Water Systems (those serving 10,000 persons or fewer), 310 CMR 22.09A: *Table D* and *Table E*, as a condition for granting a variance under 310 CMR 22.13 or 22.13A, Small System Variances, except as provided in 310 CMR 22.13(7)(e).

(d) Requirement to Install BAT. The Department shall require Community Water Systems and Non-transient, Non-community Water Systems to install and/or use any treatment method identified in 310 CMR 22.13(7)(a) and (b) as a condition for granting a variance except as provided in 310 CMR 22.13(7)(e). If, after the system's installation of the treatment method, the system cannot meet the MCL, that system shall be eligible for a variance under the provisions of 310 CMR 22.13 or 22.13A, if the system serves fewer than 10,000 persons.

(e) Engineering Assessment Option. If a system can demonstrate through comprehensive engineering assessments, which may include pilot plant studies, that the treatment methods identified in 310 CMR 22.13(7)(a) through (c), or (g), would only achieve a *de minimis* reduction in contaminants, the Department may issue a schedule of compliance that requires the system being granted the variance to examine other treatment methods as a condition of obtaining the variance.

(f) Compliance Schedule. If the Department determines that a treatment method identified in 310 CMR 22.13(7)(e) is technically feasible, the Department may require the system to

22.13: continued

install and/or use that treatment method in connection with a compliance schedule issued under the provisions of the federal Safe Drinking Water Act, § 1415(a)(1)(A), (effective August 6, 1996), incorporated in 310 CMR 22.13(7) by reference. The Department's determination shall be based upon studies by the system and other relevant information.

(g) Best Available Technologies (BATs) for PFAS. Any Public Water System subject to 310 CMR 22.07G, as a condition for granting a variance under 310 CMR 22.13 or 22.13A, shall first install and use any of the following treatment technologies, except as provided in 310 CMR 22.13(7)(e):

1. granular activated carbon;
2. powdered activated carbon;
3. ion exchange resins;
4. nanofiltration; and
5. reverse osmosis.

(8) No variances from the requirements set forth in 310 CMR 22.20A are allowed.

22.13A: Small System Variances

For compliance with a requirement specifying a Maximum Contaminant Level or treatment technique contained in 310 CMR 22.00.

(1) Size of Public Water System Eligible for a Small System Variance.

(a) The Department may grant a small system variance to a Public Water System serving:

1. 3,300 persons or fewer, or
2. more than 3,300 persons, but fewer than 10,000 persons, with approval of the Administrator.

(b) In determining the number of persons served by the Public Water System, the Department or the Administrator, as applicable, will include in the number, all persons served by consecutive Public Water System. A small system variance granted to a Public Water System shall also apply to any consecutive Public Water System served by it.

(2) Small System Variances Availability.

(a) A small system variance is not available under 310 CMR 22.13A for a national primary drinking water regulation for a microbial contaminant (including a bacterium, Virus, or other organism) or an indicator or Treatment Technique for a microbial contaminant.

(b) A small system variance under 310 CMR 22.13A is otherwise only available for compliance with the requirement specifying a Maximum Contaminant Level or Treatment Technique for a contaminant with respect to which;

1. a national primary drinking water regulations was promulgated on or after January 1, 1986; and
2. the Administrator has published a small system variance technology pursuant to the federal Safe Drinking Water Act, § 1412(b)(15).

(3) Timing of a Small System Variance. No variance can be granted under 310 CMR 22.13A by the Department until the later of the following:

(a) 90 days after the Department proposes to grant the small system variance;

(b) If the Department is proposing to grant a small system variance to a Public Water System serving 3,300 or fewer persons and the Administrator objects to the small system variance, the date on which the Department makes the recommended modifications or responds in writing to each objection; or

(c) If the Department is proposing to grant a small system variance to a Public Water System serving a population more than 3,300 and fewer than 10,000 persons, the date the Administrator must approve or disapprove the variance within 90 days after it is submitted to the Administrator for review.

(4) Review of Small System Variance Applications.

(a) A Public Water System requesting a small system variance must provide accurate and correct information to the Department or the Administrator to issue a small system variance in accordance with 310 CMR 22.13A. The Department may assist a Public Water System in compiling information required for the Department or the Administrator to issue a small system variance in accordance with 310 CMR 22.13A.

22.13A: continued

(b) Based upon an application for a small system variance and other information, and before a small system variance may be proposed under 310 CMR 22.13A, the Department or the Administrator must find and document the following:

1. The small system is eligible for a small system variance pursuant to 310 CMR 22.13A(1) and (2).
2. The Small Water System cannot afford to comply, in accordance with affordability criteria established by the Department, with the national primary drinking water regulations for which a small system variance is sought, including by:
 - a. Treatment;
 - b. Alternative sources of water supply;
 - c. Restructuring or consolidation changes, including ownership change and/or physical consolidation with another Public Water System; or
 - d. Obtaining financial assistance pursuant to Drinking Water State Revolving Fund loan program, 310 CMR 45.00: *DEP Selection, Approval and Regulation of Drinking Water Projects Receiving Financial Assistance from the State Revolving Fund* or any other Federal or State program.
3. The small system meets the source water quality requirements for installing the small system variance technology developed by the Administrator pursuant to guidance published under the federal Safe Drinking Water Act, § 1412(b)(15) .
4. The small system has the technical, managerial and financial capacity to install, operate and maintain the applicable small system variance technology in compliance with 310 CMR 22.04; and
5. The terms and conditions of the small system variance, as developed through compliance with 310 CMR 22.13A(5), ensure adequate protection of human health, considering the following:
 - a. the quality of the source water for the Public Water System; and
 - b. removal efficiencies and expected useful life of the small system variance technology.
6. The small system has the technical, managerial, and financial capacity to operate its system, as determined by the Department.

(5) Terms and Conditions. The terms and conditions of the small system variance shall include, at a minimum, the following requirements:

- (a) proper and effective installation, operation and maintenance of the applicable small system variance technology in accordance with guidance published by the Administrator pursuant to the federal Safe Drinking Water Act, § 1412(b)(15), taking into consideration any relevant source water characteristics and any other site-specific conditions that may affect proper and effective operation and maintenance of the technology;
- (b) monitoring requirement for the contaminant for which a small system variance is sought, as specified at 310 CMR 22.00; and
- (c) any other terms or conditions that are necessary to ensure adequate protection of public health, which may include:
 1. Public education requirements; and
 2. Source water protection requirements.
- (d) the Department or the Administrator shall establish a schedule for the Public Water System to comply with the terms and conditions of the small system variance which must include , at a minimum, the following requirements:
 1. increments of progress, such as milestone dates for the Public Water System to apply for financial assistance and begin capital improvements;
 2. quarterly reporting to the Department or Administrator, as applicable, of the public system's compliance with the terms and conditions of the small system variance;
 3. schedule for the Department or the Administrator to review the small system variance under 310 CMR 22.13A(5)(e); and
 4. compliance with the terms and conditions of the small system variance as soon as practicable but not later than three years after the date on which the small system variance is granted. The Administrator or the Department may allow up to two additional years in the Administrator of the Department determines that additional time is necessary for the Public Water System to;
 - a. complete necessary capital improvements to comply with small system variance technology, secure an alternative source of water or restructure or consolidate; or

22.13A: continued

- b. obtain financial assistance provided pursuant to the Drinking Water State Revolving Funds loan program, 310 CMR 45.00: *DEP Selection, Approval and Regulation of Drinking Water Projects Receiving Financial Assistance from the State Revolving Fund* or any other federal or state Program.
- (e) The Department or the Administrator must review each small system variance granted not less often than every five years after the compliance date established in the small system variance to determine whether the Public Water System continues to meet the eligibility criteria and remains eligible for the small system variance and is complying with the terms and conditions of the small system variance. If the Public Water System would no longer be eligible for a small system variance, the Department or the Administrator must determine whether continuing the variance is in the public interest. If the Department or the Administrator finds that continuing the variance is not in the public interest, the variance shall be withdrawn.
- (6) Public Participation.
- (a) At least 15 days before the date of variance proposal, and at least 30 days prior to a public meeting to discuss the proposed small system variance, the small waster system as directed by the Department or Administrator, must provide notice to all Persons served by the Public Water System. For billed customers, identified in 310 CMR 22.13A(6)(a)1., this notice must include the information listed in 310 CMR 22.13A(6)(c). For other Persons regularly served by the system, identified in 310 CMR 22.13A(6)(a)2., the notice shall include the information identified in 310 CMR 22.13A(6)(d). Notice must be provided to all Persons served by:
1. Direct mail or other home delivery to billed customers or other service connections; and
 2. Any other method reasonable calculated to notify, in a brief and concise manner, other Persons regularly served by the system. Such methods may include publication in a local newspaper, posting in public places or delivery to community organizations.
- (b) At the time of proposal, the Department will publish a notice in the *State Register* or a newspaper or newspapers of wide circulation in the State, or in the case of the Administrator, in the *Federal Register*. This notice shall include the information listed in 310 CMR 22.13A(6)(c).
- (c) The notice in 310 CMR 22.13A(6)(a)1. and (b) must include, at a minimum, the following:
1. Identification of the contaminant(s) for which a small system variance is sought;
 2. A brief statement of the health effects associated with the contaminant(s) for which a small system variance is sought using the applicable language contained in 310 CMR 22.16A(27);
 3. The address and telephone number at which interested Persons may obtain further information concerning the contaminant and the small system variance;
 4. A brief summary, in easy understandable terms, of the terms and conditions of the small system variance;
 5. A description of the consumer petition process under 310 CMR 22.13A(8)(a) and information on contacting the EPA Regional Office;
 6. A brief statement announcing the public meeting required under 310 CMR 22.13A(7)(a), including a statement of the purpose of the meeting, information regarding the time and location for the meeting, and the address and telephone number at which interested Persons may obtain further information concerning the meeting; and
 7. In communities with a large proportion of non-English-speaking residents, as determined by the Department, information in the appropriate language regarding the content and importance of the notice.
- (d) The notice in 310 CMR 22.13A(6)(a)2. must provide sufficient information to alert readers to the proposed variance and direct them where to receive additional information.
- (e) At its option, the Department or the Administrator may choose to issue separate notices or additional notices related to the proposed small system variance, provided that the requirements in 310 CMR 22.13A(5)(a) through (d) are satisfied.
- (f) Prior to promulgating the final variance, the Department or the Administrator must respond in writing to all significant public comments received relating to the small system variance. Response to public comment and any other documentation supporting the issuance of a variance must be made available to the public after final promulgation.

22.13A: continued

(7) Public Meeting Requirements.

- (a) The Department or the Administrator must provide for at least one public meeting on the small system variance no later than 15 days after the small system variance is proposed.
- (b) At the time of the public meeting, the Department or Administrator must prepare and make publicly available, in addition to the information listed in 310 CMR 22.13A(6)(c), either:
 - 1. The proposed small system variance, if the public meeting occurs after proposal of the small system variance; or
 - 2. A draft of the proposed small system variance, if the public meeting occurs prior to proposal of the proposed small system variance.
 - 3. Notice of the public meeting must be provided in the manner required under 310 CMR 22.13A(6) at least 30 days in advance of the public meeting. The notice shall be provided by the Public Water System, as directed by the Department or Administrator.

(8) Consumer Petition Process.

- (a) Any Person served by the small system may petition the Administrator to object to the granting of a small system variance within 30 days after the Department proposes to grant a small system variance for a Public Water System.
- (b) The Administrator must respond to a petition filed by any Person served by the small system and determine whether to object to the small system variance under 310 CMR 22.13A(9), no later than 60 days after the receipt of the petition.

(9) EPA Review and Approval of Small System Variances.

- (a) At the time the Department proposes to grant a small system variance under 310 CMR 22.13A, the Department must submit to the Administrator the proposed small system variance and all supporting information, including any written public comments received prior to proposal.
- (b) The Administrator may review and object to any proposed small system variance within 90 days of receipt of the proposed small system variance. The Administrator must notify the Department in writing of each basis for the objection and propose a modification to the small system variance to resolve the concerns of the Administrator. The Department must make the recommended modification, respond in writing to each objection, or withdraw the proposal to grant the small system variance.
- (c) If the Department issues the small system variance without resolving the concerns of the Administrator, the Administrator may overturn the Department's decision to grant the variance if the Administrator determines the Department's decision does not comply with the federal Safe Drinking Water Act, or 40 CFR 142.301 through 142.313.

(10) EPA action on a small system variance to a Public Water System serving a population of more than 3,300 and fewer than 10,000 persons.

- (a) At the time the Department proposes to grant a small system variance to a small system serving a population of more than 3,300 and fewer than 10,000 persons, the Department must submit the proposed small system variance and all supporting information, including public comments received prior to proposal, to the Administrator.
- (b) The Administrator must approve or disapprove the small system variance within 90 days of receipt of the proposed small system variance and supporting information. The Administrator must approve the small system variance if it meets each requirement within the federal Safe Drinking Water Act, and 40 CFR 142.301 through 142.313.
- (c) If the Administrator disapproves the small system variance, the Administrator must notify the Department in writing of the reasons for disapproval and the small system variance does not become effective. The Department may resubmit the small system variance for review and approval with modifications to address the objections stated by the Administrator.

22.14: Exemptions

The Department may, upon receipt of an application, exempt any public water system from any maximum contaminant level prescribed in 310 CMR 22.06 through 22.09A, or from any prescribed treatment technique, or from both, but only subject to the following conditions:

22.14: continued

- (1) The Department shall not grant any exemption unless the Department finds all of the following:
 - (a) Due to compelling factors, which may include economic factors, the public water system is unable to comply with the maximum contaminant level requirement or the treatment technique requirement; or to implement measures to develop an alternative source of water supply;
 - (b) The public water system was in operation on the effective date of such maximum contaminant level requirement or treatment technique requirement; or for a public water system that was not in operation by that date, no reasonable alternative source of drinking water is available to such new public water system;
 - (c) The granting of the exemption will not result in an unreasonable risk to health. The Department shall make this finding in consultation with the Massachusetts Department of Public Health; and
 - (d) Management or restructuring changes (or both) cannot reasonably be made that:
 1. will result in compliance with 310 CMR 22.00, taking into consideration the circumstances specified in 40 C.F.R. 142.20(b)(1)(i) (effective September 14, 1998), incorporated by reference); or
 2. if compliance cannot be achieved, will improve the quality of the drinking water.
 - (e) The system has the technical, managerial, and financial capacity to adhere to 310 CMR 22.04(3), as determined by the Department.
- (2) No exemption shall be granted unless the public water system established that it is taking all practicable steps to meet the standards, and
 - (a) The public water system cannot meet the standard without capital improvements that cannot be completed prior to the date established pursuant to 40 C.F.R. 142.50(b)(1) (effective September 14, 1998).
 - (b) In the case of a public water system which needs financial assistance for the necessary improvements, the public water system has entered into an agreement to obtain such financial assistance or assistance provided pursuant to the Drinking Water State Revolving Fund loan program, 310 CMR 45.00: *DEP Selection, Approval and Regulation of Drinking Water Projects Receiving Financial Assistance from the State Revolving Fund*, or any other federal or state Program that is reasonably likely to be available within the period of the exemption; or
 - (c) The public water system has entered into an enforceable agreement to become a part of a regional public water system.
- (3) A public water system may not receive an exemption under 310 CMR 22.14, if the public water system was granted a variance under 310 CMR 22.13A.
- (4) A public water system may submit a joint request for exemptions when it seeks similar exemptions under similar circumstances.
- (5) Any written request for an exemption or exemptions pursuant to 310 CMR 22.14, shall include the following information:
 - (a) The nature and duration of exemption requested;
 - (b) Relevant analytical results of water quality sampling of the system, including results of relevant tests conducted pursuant to the requirements of 310 CMR 22.00;
 - (c) Explanation of the compelling factors such as time or economic factors which prevent such system from achieving compliance;
 - (d) Other information, if any, believed by the applicant to be pertinent to the application;
 - (e) A proposed compliance schedule, including the date when each step toward compliance will be achieved;
 - (f) Such other information as the Department may require.
- (6) The Department shall act on any exemption request submitted pursuant to 310 CMR 22.14 within 90 days of receipt of the request.
- (7) In the Department's consideration of whether the public water system is unable to comply due to compelling factors pursuant to 310 CMR 22.14, the Department shall consider such factors as the following:

22.14: continued

- (a) Construction, installation, or modification of the treatment equipment or system;
- (b) The time needed to put into operation a new treatment facility to replace an existing system, this is not in compliance;
- (c) Economic feasibility of compliance.

(8) If the Department decides to deny the application for an exemption, the Department shall notify the applicant in writing of the Department's intention to issue a denial. Such notice shall include a statement of reasons for the proposed denial, and shall offer the applicant an opportunity to present, within 30 days of receipt of the notice, additional information or argument in writing to the Department. The Department shall make a final determination on the request within 30 days after receiving any such additional written information or argument. If no additional information or argument is submitted by the applicant in writing to the Department, the application shall be denied.

(9) If the Department grants an exemption request submitted pursuant to 310 CMR 22.14, the Department shall notify the applicant of the Department's decision in writing. Such notice shall identify the facility covered, and shall specify the termination date of the exemption. Such notice shall provide that the exemption will be terminated when the system comes into compliance with the applicable regulation, and may be terminated upon a finding by the Department that the system has failed to comply with any requirements of the final schedule issued pursuant to 310 CMR 22.14.

(10) The Department shall propose a schedule for:

- (a) Compliance, including increments of progress or measure to develop an alternative source of water supply, by the public water system with each maximum contaminant level requirement and treatment technique requirement with respect to which the exemption was granted; and
- (b) Implementation by the public water system of such control measures, as the Department may require for each contaminant, subject to the maximum contaminant level requirement or treatment technique requirement, during the period ending on the date compliance with such requirement is required.

(11) The schedule shall be prescribed by the Department at the time the exemption is granted, in accordance with provision of opportunity for a hearing pursuant to 310 CMR 22.14(12).

(12) Before a schedule proposed by the Department pursuant to 310 CMR 22.14(11) may take effect the Department shall provide notice and opportunity for a public hearing on the schedule.

(a) Public notice of an opportunity for hearing on an exemption schedule shall be circulated in a manner designed to inform interested and potentially interested persons of the proposed schedule, and shall include at least the following:

1. Posting of a notice in the principal post office of each municipality or area served by the public water system, and publishing of a notice in a newspaper or newspapers of general circulation in the area served by the public water system.
2. Mailing of a notice to the, the Massachusetts Department of Public Health, the local or regional public health agency in which the system is located and to other appropriate State or local agencies at the Department's discretion.
3. Such notices shall include a summary of the proposed schedule and shall inform interested persons that they may request a public hearing on the proposed schedule.

(b) Requests for a hearing may be submitted by any interested person. Frivolous or insubstantial request for hearing may be denied by the Department. Request must be submitted to the Department within 30 days after issuance of the public notices provided for in 310 CMR 22.14(12)(a). Such request shall include the following:

1. The name, address and telephone number of the individual, organization or other entity requesting a hearing;
2. A brief statement of the interest of the person making the request in the proposed schedule and of the information that the requesting person intends to submit at such hearing; and

22.14: continued

3. The signature of the individual making the request, or, if the request is made on behalf of an organization or other entity, the signature of a responsible official of the organization or other entity.

(c) The Department shall give notice in the manner set forth in 310 CMR 22.14(12)(b) of any hearing to be held pursuant to a request submitted by an interested person or on his own motion. Notice of the hearing shall also be sent to the person requesting the hearing, in any, Notice of the hearing shall include a statement of the purpose of the hearing, information regarding the time and location of the hearing, and the address and telephone number of an office at which interested persons may obtain further information concerning the hearing. All hearing locations specified in the public notice shall be within the state. Notice of the hearing shall be given not less than 15 days prior to the time scheduled for the hearing.

(d) A public hearing convened pursuant to 310 CMR 22.14(12)(d) shall be conducted before a hearing officer to be designated by the Department. The hearing shall be conducted by the hearing officer in an informal, orderly and expeditious manner. The hearing officer shall have authority to call witnesses, receive oral and written testimony and take such action as may be necessary to assure the fair and efficient conduct of the hearing. Following the conclusion of the hearing, the hearing officer shall forward the record of the hearing to the Department.

(13) A notice given pursuant to 310 CMR 22.14(12) may cover the granting of more than one exemption or the prescribing of more than one schedule, and a hearing held pursuant to such notice shall include each of the exemptions and schedules covered by the notice.

(14) Final Schedule. Within 30 days after the termination of the public hearing pursuant to 310 CMR 22.14(12), the Department shall, taking into consideration information obtained during such hearing, revise the proposed schedule as necessary and prescribe the final schedule for compliance and interim measures for the public water system granted an exemption under 310 CMR 22.14.

(15) The final schedule pursuant to 310 CMR 22.14(14) must require compliance with each contaminant level and treatment technique requirement with respect to which the exemption was granted as expeditiously as practicable but not later than three years after the otherwise applicable compliance date established in the federal Safe Drinking Water Act, 1412(b)(10).

(16) Extension of Date for Compliance. In the case of a public water system which serves a population of not more than 3,300 persons and which needs financial assistance for the necessary improvements, an exemption granted under 310 CMR 22.14(2)(a) or (b) may be renewed for one or more additional two-year periods, but not to exceed a total of six additional years, if the public water system established that the public water system is taking all practicable steps to meet the requirements of 310 CMR 22.14(2) and the established compliance schedule.

(17) The Department shall not accept any application for an exemption unless the public water system applying for the exemption agrees in writing to all of the following:

- (a) Pay in full the cost of all notices and hearings required by 310 CMR 22.14(3);
- (b) Comply with any schedule prescribed pursuant to 310 CMR 22.14(2) as expeditiously as possible, and in no event by later than the deadlines prescribed in 310 CMR 22.14(5);
- (c) Report to the department, in the manner prescribed in 310 CMR 22.15, the results of all tests, measurements, and analyses made in compliance with the exemption, and with the schedule prescribed pursuant to the exemption;
- (d) Report to the Department, in the manner prescribed in 310 CMR 22.15, any failure to comply with the terms of the exemption, or with the schedule prescribed pursuant to the exemption;
- (e) Notify the public, in the manner prescribed in 310 CMR 22.16 of the granting of the exemption;
- (f) Notify the public, in the manner prescribed in 310 CMR 22.16, of any failure to comply with the exemption or with any requirement of any schedule prescribed pursuant to the exemption;

22.14: continued

(g) Maintain all the records prescribed in 310 CMR 22.17 in the manner prescribed in 310 CMR 22.17.

(18) The Department shall promptly report to the Administrator or to the Administrator's designee every exemption or extension of an exemption granted by the Department. Such notification shall contain all of the following:

- (a) The reason for the exemption or extension of the exemption;
- (b) The basis for the Department's finding that the granting of the exemption or extension of the exemption will not result in an unreasonable risk to health; and
- (c) Documentation of the need for the exemption or extension of the exemption.

(19) All applications for exemptions shall be made on forms prescribed by the Department.

(20) Exemptions from the requirements set forth at 310 CMR 22.06 through 22.09A will be granted only in accordance with the federal Safe Drinking Water Act, § 1416, (effective August 6, 1996), and with 40 C.F.R. 142.62 (effective January 23, 2006).

(21) No exemptions from the requirements set forth in 310 CMR 22.20A(3)(a)3. and 310 CMR 22.20A(3)(b)2. to provide disinfection are allowed.

(22) No exemptions from the maximum contaminant level for total coliforms in 310 CMR 22.05(8) are allowed.

(23) Bottled Water, Point-of-use, and Point of Entry Devices. The Department may require a public water system to use bottled water, point-of-use devices, point-of-entry devices as a condition of granting an exemption from the requirements of 310 CMR 22.06, 22.06B, 22.07A and 22.07B to avoid an unreasonable risk to health. The Department may require a public water system to use bottled water and point-of-use devices or other means, but not point of entry devices, as a condition for granting an exemption for corrosion control treatment required for lead and copper in 310 CMR 22.06B(2) and (3) to avoid an unreasonable risk to health. The Department may require a public water system to use point-of-entry devices as a condition for granting an exemption from the source water treatment and lead service line replacement requirements for lead and copper under 310 CMR 22.06B(4) and (5) to avoid an unreasonable risk to health.

(24) Public water systems using bottled water as a condition of obtaining an exemption from the requirements of 310 CMR 22.06(16), 22.07A or 22.07B(1) must meet the requirements in 310 CMR 22.14(25)

(25) Bottled Water. Public water systems that use bottled water as a condition for receiving a variance or an exemption from the requirements of 310 CMR 22.06(2), 22.07(A)(1) or 22.07B(1) must meet the requirements specified in either 310 CMR 22.14(25)(a) or (b) and (c):

(a) Monitoring Program. The Department will require and approve a monitoring program for bottled water. The public water system must develop and put in place a monitoring program that provides reasonable assurances that the bottled water meets all MCLs. The public water system must monitor a representative sample of the bottled water for all contaminants regulated under 310 CMR 22.06(2), 22.07A(1) and 22.07B(1) during the first three-month period that it supplies the bottled water to the public, and annually thereafter. Results of the monitoring program shall be provided to the Department annually.

(b) Certification. The public water system must receive a certification from the bottled water company that the bottled water supplied has been taken from an "approved source" as defined in 21 CFR 129.3(a); the bottled water company has conducted monitoring in accordance with 21 CFR 129.80(g)(1) through (3); and the bottled water does not exceed any MCLs or quality limits as set out in 21 CFR 103.35, 110, and 129. The public water system shall provide the certification to the Department the first quarter after it supplies bottled water and annually thereafter. At the Department's option a public water system may satisfy the requirements of 310 CMR 22.14(25) if an approved monitoring program is already in place in another State.

22.14: continued

(c) Responsibility. The public water system is fully responsible for the provision of sufficient quantities of bottled water to every person supplied by the public water system via door-to-door bottled water delivery.

(26) Public water systems that use point-of-use or point-of-entry devices as a condition of receiving an exemption must meet the requirements in 310 CMR 22.14(27).

(27) Public water systems that use point-of-use or point-of-entry devices as a condition for obtaining a variance or and exemption from 310 CMR 22.00 must meet the following requirements:

(a) It is the responsibility of the public water system to operate and maintain the point-of-use and/or point-of-entry treatment system.

(b) Before point-of-use or point-of-entry devices are installed, the public water system must obtain the approval of monitoring plan which ensures that the devices provided health protection equivalent to the provided by central water treatment.

(c) The public water system must apply effective technology under the Department approved plan. The microbiological safety of the water must be maintained at all times.

(d) The Department will require adequate certification of performance, filed testing, and, if not included the certification process, a rigorous engineering design review of the point-of-use and/or point-of-entry devices.

(e) The design and application of the point-of-use and/or point-of-entry devices must consider the potential for increasing concentrations of heterotrophic bacteria in water treated with activated carbon. It may be necessary to use frequent backwashing, post-contractor disinfection, and Heterotrophic Plant Count monitoring to ensure that the microbiological safety of the water is no compromised.

(f) Point-of-use or point-of-entry devices that are properly installed, maintained, and monitored such that all consumers will be protected.

(g) In requiring the use of a point-of entry device as a condition of granting an exemption from the treatment requirement for lead and copper under 310 CMR 22.06B, the Department must be assured that use of the device will not cause increased corrosion of lead and copper bearing materials located between the devices and the tap that could increase contaminates levels at the tap.

22.15: General Reporting Requirements

(1) (a) Except where a different reporting period is specified in 310 CMR 22.00, each Supplier of Water shall report to the Department within 48 hours every failure to comply with any of 310 CMR 22.00 applicable to the Supplier of Water, including failure to comply with any monitoring requirement applicable to the Supplier of Water pursuant to any of 310 CMR 22.00 and every failure to comply with a Treatment Technique approved by the Department.

(b) Nitrate Reporting Requirements. With regard to nitrate, a Supplier of Water shall notify the Department of Public Health and local public health authorities within 30 days of the date the Public Water System first learns of an analysis taken for purposes of 310 CMR 22.06 which indicates nitrate levels in excess of 10 mg/L.

(c) Except where a different reporting period is specified in 310 CMR 22.00, for each acute contaminant specified in 310 CMR 22.16: *Table 3*, or where a single sample result is greater than four times the MCL, each Supplier of Water shall report to the Department an MCL exceedance on the same business day that the Supplier of Water becomes aware of the test results. If the Supplier of Water receives such notification outside of the Department's regular business hours, then the Supplier of Water shall notify and consult with the Department on the next business day. In cases where the Supplier of Water receives such notification, and the following day is a non-business day then it shall provide notification to the Department by calling the Department's Emergency notification telephone number and using any other electronic reporting tool designated by the Department, or other Department designated numbers no later than 24 hours after it receives such notification from the laboratory.

(d) A system must notify the Department as soon as possible but no later than the end of the day (*i.e.* prior to midnight) when the system learns of an *E. coli* MCL violation, in accordance with 310 CMR 22.05(12)(a)1.a., and must notify the public in accordance with 310 CMR 22.16.

22.15: continued

(2) Unless a shorter reporting period is prescribed elsewhere in 310 CMR 22.00, the Supplier of Water shall report to the Department the results of every test, measurement or analysis the Supplier of Water is required by 310 CMR 22.00 to make within the shorter of the following time periods:

- (a) the first ten days following the month in which the results are received; or
- (b) the first ten days following the end of the required monitoring period as stipulated by the Department.

(3) (a) The Supplier of Water is not required to report analytical results to the Department in cases where a Department laboratory performs the analysis.

(b) The Supplier of Water within ten days of completing the public notification requirements under 310 CMR 22.16 for the initial public notice and any repeat notices, shall submit to the Department and local Board of Health a certification that it has fully complied with the public notification regulations. The Supplier of Water shall include with this certification a representative copy of each type of notice distributed, published, posted, and made available to the Persons served by the system and to the media.

(c) When requested, the Supplier of Water shall submit to the Department within the time specified copies of any records required to be maintained under 310 CMR 22.15 or copies of any documents then in existence which the Department is entitled to inspect pursuant to 310 CMR 22.00.

(4) Chemical Addition. Every Supplier of Water shall report to the Department at least once each month the use of chemicals added to the water supply. Such reports shall include, but not be limited to, the name of the chemical, the amount added, the resulting concentration of the chemical in the water, and the reason for adding the chemical to the water.

(5) Annual Statistical Report. Every Supplier of Water shall report electronically to the Department annually, by the due date specified each year on a form prescribed by the Department, full and complete information describing the operation of the Public Water System during the prior year, including but not limited to, the amount of water that passes through their Distribution Systems during the preceding calendar year. A Supplier of Water may request, on a form provided by the Department, approval for a hardship exemption from electronic reporting for the annual report due that year, based on a lack of internet access or service. If granted, the Supplier of Water shall make a paper filing for that year using a form provided by the Department. In no event shall the Supplier of Water fail to file the annual report by the due date specified above. Such reports shall include, at a minimum, the following:

- (a) a monthly breakdown of the amount of water:
 - 1. purchased from other Public Water Systems;
 - 2. sold to other Public Water Systems;
 - 3. sold or otherwise supplied to other consumers; and
 - 4. withdrawn from each source.
- (b) an annual breakdown, to the extent known to the Supplier of Water, of the amount of water furnished during the year to each of the following classes of users:
 - 1. residential users;
 - 2. agricultural users;
 - 3. commercial users;
 - 4. industrial users;
 - 5. other Public Water Systems; and
 - 6. unaccounted for.
- (c) Total number of users served by the system.
- (d) Total number of days the system is operating during the calendar year.
- (e) Any updates to the Public Water Systems' Emergency Response Plan prepared in accordance with 310 CMR 22.04(13).
- (f) Names and Grades of Certified Operators.

(6) Reporting and Public Notification for Certain Unregulated Contaminants. A Community Water System or Non transient, Non community Water System required to monitor under 310 CMR 22.07C shall send to the Department any public notice required under 310 CMR 22.16 and two copies of such monitoring within 30 days of receipt of the analysis report unless 310 CMR 22.15(2) requires submission by an earlier date.

22.15: continued

(7) For each sample analyzed under 310 CMR 22.00, for which the Department requires a submittal or report, every Supplier of Water shall submit or report to the Department the following information:

- (a) Results of all analytical methods, including negatives;
- (b) Name and address of the system that supplied the sample;
- (c) Contaminant(s);
- (d) Analytical method(s) used;
- (e) Date of sample collection and time of sample collection (if applicable);
- (f) Date of analysis;
- (g) Laboratory name and certification number, including subcontracting laboratories;
- (h) Method Detection or other Reporting Limits;
- (i) Name of sample collector;
- (j) QA/QC information, where applicable;
- (k) Point of sample collection;
- (l) Department assigned sample location identifier;
- (m) Laboratory assigned sample identification number(s).

(8) Notification of Imposition of Mandatory Water Use Restrictions and Local Drinking Water Health Advisory.

- (a) All Public Water Systems establishing a mandatory restriction on water use must notify the Department in writing within 14 days of its effective date. In its notice to the Department, the Public Water System establishing a mandatory restriction on water use shall include appropriate regulations, bylaws or ordinances establishing and imposing the restriction.
- (b) Public Water Systems establishing water use restrictions should consider requesting from the Department a declaration of a state of water supply Emergency pursuant to M.G.L. c. 21G.
- (c) Public Water Systems who would issue a local drinking water health advisory shall consult with and notify the Department prior to issuance and provide notification to the Department within 24 hours of termination. At a minimum, all local drinking water health advisories for contaminants regulated by 310 CMR 22.00 shall include the required public notice content information listed at 310 CMR 22.16(5)(a).

(9) Emergency Reporting.

- (a) Except as otherwise determined by the Department in writing, each public water supplier shall notify the Department and its local Board of Health as soon as possible, but not more than two hours after obtaining knowledge of a potential or actual Emergency described in 310 CMR 22.15(9)(b)1., by calling the Department's Emergency notification telephone number or using any other electronic reporting tool designated by the Department, unless the water supplier establishes, by a preponderance of the evidence, that extenuating circumstances prevented notification within such two hour time period. Except as otherwise determined by the Department in writing, each public water supplier shall notify the Department and its local Board of Health as soon as possible but not more than 24 hours after obtaining knowledge of all other potential or actual Emergencies, including those described in 310 CMR 22.15(9)(b)2., by calling the Department's Emergency notification telephone number and using any other electronic reporting tool designated by the Department, unless the water supplier establishes, by a preponderance of the evidence, that extenuating circumstances prevented notification within such 24 hour time period. In the event of such extenuating circumstances, notification to the Department shall be made as soon as possible thereafter, taking into account the extenuating circumstances. Extenuating circumstances shall include, without limitation, the following:
 1. A lack of reasonably available communication equipment at the site of the Emergency;
 2. A need to take action prior to notification in order to mitigate or prevent an actual or potential threat to public health or safety; and/or
 3. A physical injury to the Person responsible for notifying caused by or associated with the Emergency when the injury reasonably prevents that Person from notifying.
- (b) Emergency reporting is required after the occurrence of any of the following incidents or Emergencies that result in the consumers of the system receiving water that does not meet required or routine quantity or quality conditions:

22.15: continued

1. Emergencies or incidents requiring notification within two hours:
 - a. Loss of water or drop in pressure to less than 20 psi, affecting 50% or more of consumers for a system serving less than 10,000 persons;
 - b. Loss of water or drop in pressure to less than 20 psi, affecting 5,000 or more consumers for a system serving 10,000 or more persons;
 - c. Chemical or microbiological contamination of the water supply in exceedence of limits specified by the Department's Office of Research and Standards (ORS), as set forth in ORS' Immediate Action Levels for Water Treatment Plant Chemicals (available on-line at: <http://www.mass.gov/eea/agencies/massdep/water/regulations/immediate-action-levels-water-treatment-plant-chemicals.html>);
 - d. Discovery of malicious intent or an act of vandalism, which may impact a system component;
 - e. Any consumer complaint in which the water may have caused physical injury;
 - f. A pattern of unusual customer complaints about the water quality such as taste, odor, *etc.*; and
 - g. Any other Emergency as determined by the Department in writing.
 2. Emergencies or incidents requiring notification within 24 hours:
 - a. Loss of water supply from a source;
 - b. Loss of water supply due to major component failure;
 - c. Damage to power supply equipment or loss of power;
 - d. Contamination of water in the Distribution System from backflow or cross connection incident;
 - e. Collapse of a reservoir, reservoir roof, or pump house structure;
 - f. Break in a transmission or distribution line that results in a loss of service or drop in pressure to less than 20 psi to more than 100 consumers for more than four hours;
 - g. Chemical or microbiological contamination of the water supply, not specified in 310 CMR 22.15(9)(b)1.c.; and
 - h. Any other failure or potential failure of part or all of the water supply system not listed in 310 CMR 22.15(9)(b)2. that may lead to an Emergency as defined in 310 CMR 22.02.
- (c) Unless otherwise determined by the Department in writing, a water supplier must file an Emergency Response Report within 30 days of any of the Emergencies identified in 310 CMR 22.04(13)(a), a Level III or higher Emergency, as described in *Massachusetts Drinking Water Guidelines and Policies for Public Water Supplies, Appendix O - Handbook for Water Supply Emergencies*, or any cross connection problem that results in contamination of the water provided by the Public Water System. The Emergency Response Report must include the following information at a minimum:
1. Detailed timeline of the incident and response;
 2. Evaluation of the incident;
 3. Recommendations for improvements to Emergency response planning, training and communication;
 4. Recommendations for improvements to water system operations, staffing and budget;
 5. Timeline for making all recommended changes;
 6. Updated Emergency response plan except for those items that are security sensitive; and
 7. A completed Emergency Response Checklist. (A copy of the Emergency Response Checklist form is contained in the *Massachusetts Drinking Water Guidelines and Policies for Public Water Supplies, Appendix O - Handbook for Water Supply Emergencies, Attachment E*).
- (d) Unless otherwise determined by the Department in writing, a water supplier must complete an Emergency Response Checklist within ten days of any Level I or II Emergency, as described in *Massachusetts Drinking Water Guidelines and Policies for Public Water Supplies, Appendix O - Handbook for Water Supply Emergencies*, and maintain on file for five years for the Department's review.
- (e) Each water supplier must annually submit to the Department all updates to its Emergency Response Plan made during the year, except for those items that are security sensitive. At a minimum the annual update must include:

22.15: continued

1. An updated Emergency contact list; and
2. A list and description of all Emergency response training provided to system personnel and local partners during the year.

22.16: Public Notification Requirements

- (1) (a) Public Water Systems Required to Notify. Each Supplier of Water for a Public Water System (Community Water Systems, Non-transient Non-community Water Systems, and Transient Non-community Water Systems) shall give notice for all violations of National Primary Drinking Water Regulations (NPDWR), 310 CMR 22.00 and for other situations, as listed in 310 CMR 22.16: *Table 1* or specified by the Department in writing. The term "violations" is used in 310 CMR 22.16 to include violations of the Maximum Contaminant Level (MCL), maximum residual Disinfection level (MRDL), Treatment Technique (TT), monitoring requirements, and testing procedures defined in 310 CMR 22.00 or specified by the Department in writing. 310 CMR 22.16: *Table 2* identifies the tier assignment for each specific violation or situation requiring a public notice.

310 CMR 22.16: *Table 1*

Violation Categories and other Situations Requiring a Public Notice

1. Violations.
 - a. Failure to comply with an applicable Maximum Contaminant Level (MCL) or Maximum Residual Disinfectant Level (MRDL).
 - b. Failure to comply with a prescribed Treatment Technique (TT).
 - c. Failure to perform water quality monitoring, as required by 310 CMR 22.00.
 - d. Failure to comply with testing procedures as prescribed by 310 CMR 22.00.
 2. Variance and Exemptions under 310 CMR 22.13, 22.13A and 22.14.
 - a. Operation under a variance or an exemption.
 - b. Failure to comply with the requirements of any schedule that has been set under a variance or an exemption.
 3. Special Public Notices.
 - a. Occurrence of a Waterborne Disease Outbreak or other waterborne Emergencies or water supply Emergencies, including those described in 310 CMR 22.04(13).
 - b. Exceedance of the nitrate MCL by Non-community Water Systems (NCWS), where granted permission by the Department under 310 CMR 22.13 and 22.13A.
 - c. Exceedance of the Secondary Maximum Contaminant Level (SMCL) for fluoride.
 - d. Availability of unregulated contaminant monitoring data.
 - e. Other violations and situations determined by the Department to require a public notice under 310 CMR 22.16(1)(a)3., not already listed in 310 CMR 22.16: *Table 1*.
- (b) Tier Classification. Public notice requirements are divided into three tiers, to take into account the seriousness of the violation or situation and of any potential adverse health effects that may be involved. The public notice requirements for each violation or situation listed in 310 CMR 22.16: *Table 1* are determined by the tier to which the violation is assigned. 310 CMR 22.16: *Table 2* provides the definition of each tier. 310 CMR 22.16: *Table 6* identifies the tier assignment for each specific violation or situation.

310 CMR 22.16: *Table 2*

Definition of Public Notice Tiers

1. Tier 1 Public Notice required for violations and situations with significant potential to have serious adverse effects on human health as a result of short-term exposure.
2. Tier 2 Public Notice required for all other violations and situations with potential to have serious adverse effects on human health.
3. Tier 3 Public Notice required for all other violations and situations not included in Tier 1 and Tier 2.

22.16: continued

(c) Persons to be Notified.

1. Each Supplier of Water shall provide public notice to Persons served by the water system, in accordance with 310 CMR 22.16. Public Water Systems that sell or otherwise provide drinking water to other Public Water Systems (*i.e.*, to consecutive systems) are required to give public notice to the owner/operator of the consecutive system; the consecutive system is responsible for providing public notice to the Persons it serves.
2. If a Public Water System has a violation in a portion of the Distribution System that is physically or hydraulically isolated from other parts of the Distribution System, the Department may allow the system to limit distribution of the public notice to only Persons served by that portion of the system which is out of compliance. Permission by the Department for limiting distribution of the notice shall be granted in writing.
3. A copy of the notice shall also be sent to the Department and the local Board of Health, in accordance with the requirements of 310 CMR 22.15(3)(b) and (c).

(2) Tier 1 Public Notice.

- (a) Violations or Situations Requiring Tier 1 Public Notice. 310 CMR 22.16: *Table 3* lists the violation categories and other situations requiring a Tier 1 Public Notice. 310 CMR 22.16: *Table 6* identifies the tier assignment for each specific violation or situation.

310 CMR 22.16: *Table 3*

Violation Categories and Other Situations Requiring a Tier 1 Public Notice

1. Violation of the MCL when *E. coli* are present in the water Distribution System (as specified in 310 CMR 22.05(8)(a)), or when the water system fails to test for *E. coli* when any repeat sample tests positive for coliform (as specified in 310 CMR 22.05);
2. Violation of the MCL for nitrate, nitrite, total nitrate and nitrite or perchlorate, as defined in 310 CMR 22.06, or when the water system fails to take a confirmation sample within 24 hours of the system's receipt of the first sample showing an exceedance of the nitrate, nitrite or perchlorate MCL, as specified in 310 CMR 22.06(10);
3. Exceedance of the nitrate MCL by Non-community Water Systems, where permitted to exceed the MCL by the Department under 310 CMR 22.13 or 22.13A;
4. Violation of the MRDL for chlorine dioxide, as defined in 310 CMR 22.07E, when one or more samples taken in the Distribution System the day following an exceedance of the MRDL at the entrance of the Distribution System exceed the MRDL, or when the water system does not take the required samples in the Distribution System, as specified in 310 CMR 22.07E;
5. Violation of the Turbidity MCL under 310 CMR 22.08 and 22.20A, where the Department determines after consultation that a Tier 1 notice is required or where consultation does not take place within 24 hours after the system learns of the violation;
6. Violation of 310 CMR 22.20A, the Surface Water Treatment Rule (SWTR), or 310 CMR 22.20D, the Interim Enhanced Surface Water Treatment rule (IESWTR), or 310 CMR 22.20F, the Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR), Treatment Technique requirement resulting from a single exceedance of the maximum allowable Turbidity limit (as identified in 310 CMR 22.16: *Table 6*), where the Department determines after consultation that a Tier 1 notice is required or where consultation does not take place within 24 hours after the system learns of the violation;
7. Occurrence of a Waterborne Disease Outbreak, as defined in 310 CMR 22.02(1), or other waterborne Emergency such as:
 - a. a failure or significant interruption in key water treatment processes;
 - b. a natural disaster that disrupts the water supply or Distribution System;
 - c. a chemical spill; or
 - d. an unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination;
8. Other violations or situations with significant potential to have serious adverse effects on human health as a result of short-term exposure, as determined by the Department either in its regulations or on a case-by-case basis;
9. Emergencies identified in 310 CMR 22.04(13);
10. Detection of *E. coli*, enterococci, or coliphage in source water samples as specified in 310 CMR 22.26(3)(a) and (b).

22.16: continued

(b) Timeframe and Additional Requirements for Tier 1 Notification. Each Supplier of Water required to give Tier 1 notification shall:

1. Provide a public notice as soon as practical but no later than 24 hours after the supplier learns of the violation, unless it is an Emergency situation identified in 310 CMR 22.04(13). Emergency situations identified in 310 CMR 22.04(13) must comply with 310 CMR 22.16(2)(b)4.;
2. Initiate consultation with the Department as soon as practical, but no later than 24 hours after the supplier learns of the violation or situation, to determine additional public notice requirements; unless it is an Emergency situation identified in 310 CMR 22.04(13). For Emergency situations identified in 310 CMR 22.04(13), each Supplier of Water must notify the Department within two hours after the supplier learns of the Emergency in accordance with 310 CMR 22.15(9)(a) and initiate consultation within the same time frame;
3. Comply with any additional public notification requirements (including any repeat notices or direction on the duration of the posted notices) that are established as a result of the consultation with the Department. Such requirements may include the timing, form, manner, frequency, and content of repeat notices (if any) and other actions designed to reach all Persons served; and
4. For Emergency situations identified in 310 CMR 22.04(13), each supplier must provide a public notice as soon as practical but no later than two hours after the supplier has consulted with the Department and the Department has determined that an Emergency exists and an Emergency public notice must be issued.

(c) Form and Manner of Public Notice. Each Supplier of Water shall provide the notice within 24 hours in a form and manner reasonably calculated to reach all Persons served unless it is an Emergency situation identified in 310 CMR 22.04(13). For Emergencies identified in 310 CMR 22.04(13), each Supplier of Water shall provide the notice within the time frame specified in 310 CMR 22.16(b)(4) in a form and manner reasonably calculated to reach all Persons served. The form and manner used by the supplier are to fit the specific situation, but shall be designed to reach residential, transient, and non-transient users of the water system and meet the minimum information and format requirements specified by the Department.

1. In order to reach all Persons served, each Supplier of Water is required to use, at a minimum, one or more of the following forms of delivery:
 - a. Appropriate broadcast media (such as radio and television);
 - b. Posting of the notice in conspicuous locations throughout the area served by the water system;
 - c. Hand delivery of the notice to Persons served by the water system; or
 - d. Any other delivery method approved in writing by the Department.
2. Unless directed otherwise by the Department in writing, as in Emergency situations identified in 310 CMR 22.04(13), Community Water Systems shall publish appropriate public notice within the local newspaper as a one day advertisement no later than 14 days after a Tier 1 violation. A copy of said notice shall be submitted to the Department no later than the time published.

(3) Tier 2 Public Notice.

(a) Violations or Situations Requiring Tier 2 Public Notice. 310 CMR 22.16: *Table 4* lists the violation categories and other situations requiring a Tier 2 Public Notice. 310 CMR 22.16: *Table 6* identifies the tier assignment for each specific violation or situation.

310 CMR 22.16: *Table 4*

Violation Categories and Other Situations Requiring a Tier 2 Public Notice

1. All violations of the MCL, MRDL, and Treatment Technique requirements, except where a Tier 1 notice is required under 310 CMR 22.16(2)(a): *Table 3* or where the Department determines that a Tier 1 notice is required;
2. Violations of the monitoring and testing procedure requirements, where the Department determines that a Tier 2 rather than a Tier 3 Public Notice is required, taking into account potential health impacts and persistence of the violation; and
3. Failure to comply with the terms and conditions of any variance or exemption in place.

22.16: continued

4. Failure to take corrective action or failure to maintain at least four log treatment of Viruses (using inactivation, removal, or a Department approved combination of four log Virus inactivation and removal) before or at the first customer under 310 CMR 22.26(4)(a).
 5. Changes in corrosion control treatment practices that persist longer than seven days.
- (b) Timeframe Required for Tier 2 Notification.
1.
 - a. Each Supplier of Water shall provide the public notice as soon as practical, but no later than 30 days after the system learns of the violation.
 - b. If the public notice is posted, the notice shall remain in place for as long as the violation or situation persists, but in no case for less than seven days, even if the violation or situation is resolved.
 - c. The Department may, in appropriate circumstances, allow additional time for the initial notice of up to three months from the date the system learns of the violation. Extensions granted by the Department shall be in writing.
 2.
 - a. Each Supplier of Water shall repeat the notice every three months as long as the violation or situation persists, unless the Department determines in writing that appropriate circumstances warrant a different repeat notice frequency.
 - b. In no circumstance may the repeat notice be given less frequently than once per year.
 - c. In no circumstance may the frequency of a repeat notice for an MCL or Treatment Technique violation under 310 CMR 22.05, the Revised Total Coliform Rule; a Treatment Technique violation under 310 CMR 22.20A, the Surface Water Treatment Rule; 310 CMR 22.20D, the Interim Enhanced Surface Water Treatment Rule; 310 CMR 22.20F, the Long Term 1 Enhanced Surface Water Treatment Rule; or 310 CMR 22.20G, the Long Term 2 Enhanced Surface Water Treatment Rule; be reduced.
 3.
 - a. For the Turbidity violations specified in 310 CMR 22.16: *Table 6*, the Supplier of Water shall consult with the Department as soon as practical but no later than 24 hours after the Public Water System learns of the violation, to determine whether a Tier 1 Public Notice under 310 CMR 22.16(2)(a): *Table 3* is required to protect public health.
 - b. When consultation does not take place within the 24-hour period, the water system shall distribute a Tier 1 notice of the violation within the next 24 hours (*i.e.*, no later than 48 hours after the system learns of the violation), following the requirements under 310 CMR 22.16(2)(b) and (c).
 - c. Consultation with the Department is required for:
 - i. Violation of the Turbidity MCL under 310 CMR 22.08 and 22.20A; or
 - ii. Violation of 310 CMR 22.20A, 22.20D, or 22.20F Treatment Technique requirement resulting from a single exceedance of the maximum allowable Turbidity limit.
 4. For corrosion control treatment changes that last more than seven days, the Public Water Systems must:
 - a. Provide a public notice as soon as practical but no later than 30 days after the supplier learns of the violation, unless it is an Emergency situation identified in 310 CMR 22.04(13). Emergency situations identified in 310 CMR 22.04(13) must comply with 310 CMR 22.16(2)(b)4.
 - b. Initiate consultation with the Department as soon as practical, but no later than 24 hours after the supplier learns of the violation or situation, to determine additional public notice requirements, unless it is an Emergency situation identified in 310 CMR 22.04(13). For Emergency situations identified in 310 CMR 22.04(13), each Supplier of Water must notify the Department within two hours after the supplier learns of the Emergency in accordance with 310 CMR 22.15(9)(a) and initiate consultation within the same timeframe.
 - c. Comply with any additional public notification requirements (including any repeat notices or direction on the duration of the posted notices) that are established as a result of the consultation with the Department. Such requirements may include the timing, form, manner, frequency, and content of repeat notices (if any) and other actions designed to reach all Persons served.

22.16: continued

(c) Form and Manner of Public Notice. Each Supplier of Water shall provide the initial public notice and any repeat notices in a form and manner that is reasonably calculated to reach Persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of water system, but it shall at a minimum meet the following requirements:

1. Unless directed otherwise by the Department in writing, Community Water Systems shall provide notice by:
 - a. Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the Public Water System; and
 - b. Any other method reasonably calculated to reach other Persons regularly served by the system, if they would not normally be reached by the notice required in 310 CMR 22.16(3)(c)1.a. Such Persons may include those who do not pay water bills or do not have service connection addresses (*e.g.*, house renters, apartment dwellers, university students, nursing home patients, prison inmates, *etc.*). Other methods may include: Publication in a local newspaper; delivery of multiple copies for distribution by customers that provide their drinking water to others (*e.g.*, apartment building owners or large private employers); posting in public places served by the system or on the Internet; or delivery to community organizations.
2. Unless directed otherwise by the Department in writing, the owner/operator of a Non-community Water System shall provide notice by:
 - a. Posting the notice in conspicuous locations throughout the Distribution System frequented by Persons served by the system, or by mail or direct delivery to each customer and service connection (where known); and
 - b. Any other method reasonably calculated to reach other Persons served by the system if they would not normally be reached by the notice required in 310 CMR 22.16(3)(c)2.a. Such Persons may include those served who may not see a posted notice because the posted notice is not in a location they routinely pass by. Other methods may include: Publication in a local newspaper or newsletter distributed to customers; use of E-mail to notify employees or students; or, delivery of multiple copies in central locations (*e.g.*, community centers).

(4) Tier 3 Public Notice.

(a) Violations or Situations Requiring Tier 3 Public Notice. 310 CMR 22.16: *Table 5* lists the violation categories and other situations requiring a Tier 3 Public Notice. 310 CMR 22.16: *Table 6* identifies the tier assignment for each specific violation or situation.

310 CMR 22.16: *Table 5*

Violation Categories and Other Situations Requiring a Tier 3 Public Notice

1. Monitoring violations under 310 CMR 22.00, except where a Tier 1 notice is required under 310 CMR 22.16(2) or where the Department determines that a Tier 2 notice is required;
 2. Failure to comply with a testing procedure established in 310 CMR 22.00, except where a Tier 1 notice is required under 310 CMR 22.16(2) or where the Department determines that a Tier 2 notice is required;
 3. Operation under a variance granted under 310 CMR 22.13, 22.13A or an exemption granted under 310 CMR 22.14;
 4. Availability of unregulated contaminant monitoring results, as required under 310 CMR 22.16(7);
 5. Exceedance of the fluoride Secondary Maximum Contaminant Level (SMCL), as required under 310 CMR 22.16(8); and
 6. Reporting and Recordkeeping violations under 310 CMR 22.05.
- (b) Timeframe Required for Tier 3 Notification.
1. a. Unless otherwise determined by the Department, each supplier of water shall provide the public notice not later than one year after the public water system learns of the violation or situation or begins operating under a variance or exemption.
 - b. Following the initial notice, the supplier shall repeat the notice annually for as long as the violation, variance, exemption, or other situation persists.

22.16: continued

- c. If the public notice is posted, the notice shall remain in place for as long as the violation, variance, exemption, or other situation persists, but in no case less than seven days (even if the violation or situation is resolved).
 2. If approved by the Department under 310 CMR 22.16(4)(b)1., instead of individual Tier 3 public notices, a supplier of water may use an annual report detailing all violations and situations that occurred during the previous 12 months, as long as the timing requirements of 310 CMR 22.16(4)(b)1. are met and the format is approved by the Department.
- (c) Form and Manner of Public Notice. Each supplier of water who is required to give Tier 3 notice shall provide the initial public notice and any repeat notices in a form and manner that is reasonably calculated to reach Persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of water system, but it shall at a minimum meet the following requirements:
1. Unless directed otherwise by the Department in writing, community water systems shall provide notice by:
 - a. Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the public water system; and
 - b. Any other method reasonably calculated to reach other Persons regularly served by the system, if they would not normally be reached by the notice required in 310 CMR 22.16(4)(c)1.a. Other Persons may include those who do not pay water bills or do not have service connection addresses (*e.g.*, house renters, apartment dwellers, university students, nursing home patients, prison inmates, *etc.*). Other methods may include: Publication in a local newspaper; delivery of multiple copies for distribution by customers that provide their drinking water to others (*e.g.*, apartment building owners or large private employers); posting in public places served by the system or on the Internet; or delivery to community organizations.
 2. Unless directed otherwise by the Department in writing, the owner/operator of a non-community water system shall provide notice by:
 - a. Posting the notice in conspicuous locations throughout the distribution system frequented by Persons served by the system, or by mail or direct delivery to each customer and service connection (where known); and
 - b. Any other method reasonably calculated to reach other Persons served by the system if they would not normally be reached by the notice required in 310 CMR 22.16(4)(c)2.a. Other Persons may include those served who may not see a posted notice because the posted notice is not in a location they routinely pass by. Other methods may include: Publication in a local newspaper or newsletter distributed to customers; use of E-mail to notify employees or students; or, delivery of multiple copies in central locations (*e.g.*, community centers).
- (d) If approved by the Department, the supplier of water may use the Consumer Confidence Report (CCR) required under 310 CMR 22.16A as a vehicle for the initial Tier 3 public notice and all required repeat notices, as long as:
1. The CCR is provided to Persons served no later than 12 months after the system learns of the violation or situation as required under 310 CMR 22.16(4)(b);
 2. The Tier 3 notice contained in the CCR follows the content requirements under 310 CMR 22.16(5); and
 3. The CCR is distributed following the delivery requirements under 310 CMR 22.16(4)(c)1.
- (5) Public Notice Content.
- (a) When a Supplier of Water violates 310 CMR 22.00 or has a situation requiring public notification, each public notice shall include the following elements:
1. Public Water System name, Public Water System identification number (PWSID#);
 2. A description of the violation or situation, including the contaminant(s) of concern, and (as applicable) the contaminant level(s);
 3. When the violation or situation occurred;
 4. Any potential adverse health effects from the violation or situation, including the standard language under 310 CMR 22.16(5)(d)1. or 2., whichever is applicable;
 5. The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water;

22.16: continued

6. Whether alternative water supplies should be used;
 7. What actions consumers should take, including when they should seek medical help, if known;
 8. What the system is doing to correct the violation or situation;
 9. When the water system expects to return to compliance or resolve the situation;
 - 10 The name, business address, and phone number of the water system owner, operator, or designee of the Public Water System as a source of additional information concerning the notice; and
 11. A statement to encourage the notice recipient to distribute the public notice to other Persons served, using the standard language under 310 CMR 22.16(5)(d)3., where applicable.
- (b) Public Notice Requirements for Systems Operating under a Variance or Exemption.
1. If a Supplier of Water has been granted a variance or an exemption, the public notice shall contain:
 - a. An explanation of the reasons for the variance or exemption;
 - b. The date on which the variance or exemption was issued;
 - c. A brief status report on the steps the system is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption; and
 - d. A notice of any opportunity for public input in the review of the variance or exemption.
 2. If a Supplier of Water violates the conditions of a variance or exemption, the public notice shall contain the 11 elements listed in 310 CMR 22.16(5)(a).
- (c) Public Notice Presentation.
1. Each public notice required by 310 CMR 22.16(5):
 - a. Shall be displayed in a conspicuous way when printed or posted;
 - b. Shall not contain overly technical language or very small print;
 - c. Shall not be formatted in a way that defeats the purpose of the notice;
 - d. Shall not contain language which nullifies the purpose of the notice.
 2. Multilingual Requirements.
 - a. For a Supplier of Water serving a large proportion of non-English speaking consumers, as determined in 310 CMR 22.16A, the public notice shall contain information in the appropriate language(s) regarding the importance of the notice or contain a telephone number or address where Persons served may contact the water system to obtain a translated copy of the notice or to request assistance in the appropriate language.
 - b. In cases where the Department has not determined what constitutes a large proportion of non-English speaking consumers, the Supplier of Water shall include in the public notice the same information as in 310 CMR 22.16(5)(c)2.a., where appropriate to reach a large proportion of non-English speaking Persons served by the water system.
- (d) Standard Language.
1. Standard health effects language for MCL or MRDL violations, Treatment Technique violations, and violations of the condition of a variance or exemption. Each Supplier of Water shall include in each public notice the health effects language specified in 310 CMR 22.16: *Table 7* of corresponding to each MCL, MRDL, and Treatment Technique violation listed in 310 CMR 22.16: *Table 6*, and for each violation of a condition of a variance or exemption.
 2. Standard language for monitoring and testing procedure violations. Each Supplier of Water shall include the following language in their notice, including the language necessary to fill in the blanks, for all monitoring testing procedure violations listed in 310 CMR 22.16: *Table 6*:

"We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During [compliance period], we "did not monitor or test" or "did not complete all monitoring or testing" for [contaminant(s)], and therefore cannot be sure of the quality of your drinking water during that time."

22.16: continued

3. Standard language to encourage the distribution of the public notice to all Persons served. Each Supplier of Water shall include in their notice the following language (where applicable):

"Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail."

(6) Notice to New Billing Units or New Customers.

(a) The owner/operator of a Community Water System shall give a copy of the most recent public notice for any continuing violation, the existence of a variance or exemption, or other ongoing situations requiring a public notice to all new billing units or new customers prior to or at the time service begins.

(b) The owner/operator of a Non-community Water System shall continuously post the public notice in conspicuous locations as specified by the Department in order to inform new consumers of any continuing violation, variance or exemption, or other situation requiring a public notice for as long as the violation, variance, exemption, or other situation persists.

(7) Special Notice of the Availability of Unregulated Contaminant Monitoring Results.

(a) The owner or operator of a community water system or non-transient non-community water system required to monitor under 310 CMR 22.07C or the EPA Unregulated Contaminant Monitoring Rule shall notify Persons served by the system of the availability of the results of such sampling no later than 12 months after the monitoring results are known.

(b) The form and manner of the public notice shall follow the requirements for a Tier 3 public notice prescribed in 310 CMR 22.16(4)(c), (d)1. and (d)3. The notice shall also identify a person and provide the telephone number to contact for information on the monitoring results.

(8) Special Notice for Exceedance of the SMCL for Fluoride.

(a) Community water systems that exceed the fluoride secondary maximum contaminant level (SMCL) of two mg/l as specified in 310 CMR 22.06C (determined by the last single sample taken in accordance with 310 CMR 22.06(6)(h), but do not exceed the maximum contaminant level (MCL) of four mg/l for fluoride (as specified in 310 CMR 22.06(4)1., shall provide the public notice in 310 CMR 22.16(8)(c) to Persons served. Public notice shall be provided as soon as practical but no later than 12 months from the day the supplier of water learns of the exceedance. A copy of the notice shall also be sent to all new billing units and new customers at the time service begins and to the Massachusetts Department of Public Health. The supplier of water shall repeat the notice at least annually for as long as the SMCL is exceeded. If the public notice is posted, the notice shall remain in place for as long as the SMCL is exceeded, but in no case less than seven days (even if the exceedance is eliminated). On a case-by-case basis, the Department may require an initial notice sooner than 12 months and repeat notices more frequently than annually.

(b) The form and manner of the public notice (including repeat notices) shall follow the requirements for a Tier 3 public notice in 310 CMR 22.16(4)(d)3.

(c) The notice shall contain the following language, including the language necessary to fill in the blanks:

"This is an alert about your drinking water and a cosmetic dental problem that might affect children younger than nine years old. At low levels, fluoride can help prevent cavities, but children drinking water containing more than two milligrams per liter (mg/l) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system [name] has a fluoride concentration of [insert value] mg/l.

Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children younger than nine years old should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

22.16: continued

Drinking water containing more than four mg/L of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than four mg/l of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed two mg/l because of this cosmetic dental problem.

For more information, please call [name of water system contact] of [name of community water system] at [phone number]. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP."

(9) Special Notice for Nitrate Exceedance above MCL by Non-community Water Systems, Where Granted Permission by the Department.

(a) The owner or operator of a non-community water system granted permission by the Department under 310 CMR 22.13 and 22.13A to exceed the nitrate MCL shall provide notice to Persons served according to the requirements for a Tier 1 notice under 310 CMR 22.16(2)(b) and (c).

(b) Form and Manner of the Special Notice. The owner/operator of a non-community water system granted permission by the Department to exceed the nitrate MCL under 310 CMR 22.06 shall provide continuous posting of the fact that nitrate levels exceed ten mg/l and the potential health effects of exposure, according to the requirements for Tier 1 notice delivery under 310 CMR 22.16(2)(c) and the content requirements under 310 CMR 22.16(5).

(10) Notice by Department in Behalf of the Supplier of Water.

(a) The Department may give the notice required by 310 CMR 22.16 on behalf of the owner and operator of the public water system if the Department complies with the requirements of 310 CMR 22.16.

(b) The owner or operator of the public water system remains legally responsible for ensuring that the requirements of 310 CMR 22.16 are met.

(11) Public Notification by the Department for any Public Water System Subject to 310 CMR 22.00.

(a) The Department may require a supplier of water or any person subject to 310 CMR 22.00 to provide public notice for any violation of 310 CMR 22.00, the content of which shall either satisfy the requirements of 310 CMR 22.16(5), and/or be approved by the Department, prior to publication. The supplier of water remains legally responsible for ensuring that the requirements of 310 CMR 22.16 are met.

(b) The Department reserves the right to give notice to the public when not required by 310 CMR 22.16 in the event of a significant health problem. The supplier of water shall be responsible for all fees incurred by the Department as a result such notice.

22.16: continued

**310 CMR 22.16 - Table 6
Violations and Other Situations Requiring Public Notice ¹**

Contaminant	MCL/MRDL/TT violations ²		Monitoring & testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
I. Violations of National Primary Drinking Water Regulations and 310 CMR 22.00³				
A. Microbiological Contaminants				
1.a. Total coliform (TT violations resulting from failure to perform assessments or corrective actions, monitoring violations, and reporting violations).	2	310 CMR 22.05(11)(b)1.	3	310 CMR 22.05(11)(c)1. 310 CMR 22.05(11)(d)1.
1.b. Seasonal System failure to follow Department-approved start-up plan prior to serving water to the public or failure to provide certification to the State.	2	310 CMR 22.05(11)(b)(2)	3	310 CMR 22.05(11)(d)3.
2.a. <i>E. coli</i> (MCL, monitoring, and reporting violations).	1	310 CMR 22.05(11)(a)	3	310 CMR 22.05(11)(c)2. 310 CMR 22.05(11)(d)1. 310 CMR 22.05(11)(d)2.
2.b. <i>E. coli</i> (TT violations resulting from failure to perform Level 2 Assessments or corrective action).	2	310 CMR 22.05(11)(b)1.	-----	-----
3. Turbidity MCL.	2	310 CMR 22.08 310 CMR 22.20A 310 CMR 22.20D	3	310 CMR 22.08 310 CMR 22.20A 310 CMR 22.20D
4. Turbidity MCL (average of 2 days' samples > five NTU).	⁵ 2, 1	310 CMR 22.08 310 CMR 22.20A	3	310 CMR 22.08 310 CMR 22.20A
5. Turbidity (for TT violations resulting from a single exceedance of maximum allowable Turbidity level).	⁶ 2, 1	310 CMR 22.08 310 CMR 22.20A 310 CMR 22.20D 310 CMR 22.20F	3	310 CMR 22.08 310 CMR 22.20A 310 CMR 22.20D 310 CMR 22.20F
6. Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. allowable Turbidity level (TT).	2	310 CMR 22.20A	3	310 CMR 22.20A
7. Interim Enhanced Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. Turbidity level (TT).	2	⁷ 310 CMR 22.20D	3	310 CMR 22.20D
8. Filter Backwash Recycling Rule.	2	310 CMR 22.20E(3)	3	310 CMR 22.20E(2) and (4)
9. Long Term 1 Enhanced Surface Water Treatment Rule.	2	310 CMR 22.20F	3	310 CMR 22.20F
10. Long Term 2 Enhanced Surface Water Treatment Rule violations.	2	310 CMR 22.20G (11) through (23)	² 1, 3	310 CMR 22.20G(2) through (6), (9) and (10)
11. Ground Water Rule violations.	2	310 CMR 22.26(5)	3	310 CMR 22.26(3)(h) 310 CMR 22.26(4)(d)

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16: continued

Contaminant	MCL/MRDL/TT violations ²		Monitoring & testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
B. Inorganic Chemicals (IOCs)				
1. Antimony	2	310 CMR 22.06	3	310 CMR 22.06
2. Arsenic	2	⁸ 310 CMR 22.06	3	⁹ 310 CMR 22.06
3. Asbestos (fibers > 10 µm)	2	310 CMR 22.06	3	310 CMR 22.06
4. Barium	2	310 CMR 22.06	3	310 CMR 22.06
5. Beryllium	2	310 CMR 22.06	3	310 CMR 22.06
6. Cadmium	2	310 CMR 22.06	3	310 CMR 22.06
7. Chromium (total)	2	310 CMR 22.06	3	310 CMR 22.06
8. Cyanide	2	310 CMR 22.06	3	310 CMR 22.06
9. Fluoride	2	310 CMR 22.06	3	310 CMR 22.06
10. Mercury (inorganic)	2	310 CMR 22.06	3	310 CMR 22.06
11. Nitrate	1	310 CMR 22.06	3	310 CMR 22.06
12. Nitrite	1	310 CMR 22.06	3	310 CMR 22.06
13. Total Nitrate and Nitrite	1	310 CMR 22.06	3	310 CMR 22.06
14. Perchlorate	1	310 CMR 22.06	3	310 CMR 22.06
15. Selenium	2	310 CMR 22.06	3	310 CMR 22.06
16. Thallium	2	310 CMR 22.06	3	310 CMR 22.06
C. Lead and Copper Rule (Action Level for lead is 0.015 mg/L, for copper is 1.3 mg/L)				
1. Lead and Copper Rule (TT)	2	310 CMR 22.06B	3	310 CMR 22.06B
D. Synthetic Organic Chemicals (SOCs)				
1. 2,4-D	2	310 CMR 22.07A	3	310 CMR 22.07A
2. 2,4,5-TP (Silvex)	2	310 CMR 22.07A	3	310 CMR 22.07A
3. Alachlor	2	310 CMR 22.07A	3	310 CMR 22.07A
4. Atrazine	2	310 CMR 22.07A	3	310 CMR 22.07A
5. Benzo(a)pyrene (PAHs)	2	310 CMR 22.07A	3	310 CMR 22.07A
6. Carbofuran	2	310 CMR 22.07A	3	310 CMR 22.07A
7. Chlordane	2	310 CMR 22.07A	3	310 CMR 22.07A
8. Dalapon	2	310 CMR 22.07A	3	310 CMR 22.07A
9. Di-(2-ethylhexyl) adipate	2	310 CMR 22.07A	3	310 CMR 22.07A
10. Di-(2-ethylhexyl) phthalate	2	310 CMR 22.07A	3	310 CMR 22.07A
11. Dibromochloropropane	2	310 CMR 22.07A	3	310 CMR 22.07A
12. Dinoseb	2	310 CMR 22.07A	3	310 CMR 22.07A
13. Dioxin (2,3,7,8-TCDD)	2	310 CMR 22.07A	3	310 CMR 22.07A
14. Diquat	2	310 CMR 22.07A	3	310 CMR 22.07A
15. Endothall	2	310 CMR 22.07A	3	310 CMR 22.07A
16. Endrin	2	310 CMR 22.07A	3	310 CMR 22.07A
17. Ethylene dibromide	2	310 CMR 22.07A	3	310 CMR 22.07A
18. Glyphosate	2	310 CMR 22.07A	3	310 CMR 22.07A
19. Heptachlor	2	310 CMR 22.07A	3	310 CMR 22.07A
20. Heptachlor epoxide	2	310 CMR 22.07A	3	310 CMR 22.07A
21. Hexachlorobenzene	2	310 CMR 22.07A	3	310 CMR 22.07A
22. Hexachlorocyclo-pentadiene	2	310 CMR 22.07A	3	310 CMR 22.07A
23. Lindane	2	310 CMR 22.07A	3	310 CMR 22.07A
24. Methoxychlor	2	310 CMR 22.07A	3	310 CMR 22.07A
25. Oxamyl (Vydate)	2	310 CMR 22.07A	3	310 CMR 22.07A

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16: continued

Contaminant	MCL/MRDL/TT violations ²		Monitoring & testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
26. Pentachlorophenol	2	310 CMR 22.07A	3	310 CMR 22.07A
27. Picloram	2	310 CMR 22.07A	3	310 CMR 22.07A
28. Polychlorinated biphenyls (PCBs)	2	310 CMR 22.07A	3	310 CMR 22.07A
29. Simazine	2	310 CMR 22.07A	3	310 CMR 22.07A
30. Toxaphene	2	310 CMR 22.07A	3	310 CMR 22.07A
E. Volatile Organic Chemicals (VOCs)				
1. Benzene	2	310 CMR 22.07B	3	310 CMR 22.07B
2. Carbon tetrachloride	2	310 CMR 22.07B	3	310 CMR 22.07B
3. Chlorobenzene (monochlorobenzene)	2	310 CMR 22.07B	3	310 CMR 22.07B
4. o-Dichlorobenzene	2	310 CMR 22.07B	3	310 CMR 22.07B
5. p-Dichlorobenzene	2	310 CMR 22.07B	3	310 CMR 22.07B
6. 1,2-Dichloroethane	2	310 CMR 22.07B	3	310 CMR 22.07B
7. 1,1-Dichloroethylene	2	310 CMR 22.07B	3	310 CMR 22.07B
8. cis-1,2-Dichloroethylene	2	310 CMR 22.07B	3	310 CMR 22.07B
9. trans-1,2-Dichloroethylene	2	310 CMR 22.07B	3	310 CMR 22.07B
10. Dichloromethane	2	310 CMR 22.07B	3	310 CMR 22.07B
11. 1,2-Dichloropropane	2	310 CMR 22.07B	3	310 CMR 22.07B
12. Ethylbenzene	2	310 CMR 22.07B	3	310 CMR 22.07B
13. Styrene	2	310 CMR 22.07B	3	310 CMR 22.07B
14. Tetrachloroethylene	2	310 CMR 22.07B	3	310 CMR 22.07B
15. Toluene	2	310 CMR 22.07B	3	310 CMR 22.07B
16. 1,2,4-Trichlorobenzene	2	310 CMR 22.07B	3	310 CMR 22.07B
17. 1,1,1-Trichloroethane	2	310 CMR 22.07B	3	310 CMR 22.07B
18. 1,1,2-Trichloroethane	2	310 CMR 22.07B	3	310 CMR 22.07B
19. Trichloroethylene	2	310 CMR 22.07B	3	310 CMR 22.07B
20. Vinyl chloride	2	310 CMR 22.07B	3	310 CMR 22.07B
21. Xylenes (total)	2	310 CMR 22.07B	3	310 CMR 22.07B
F. Radioactive Contaminants				
1. Beta/photon emitters	2	310 CMR 22.09A	3	310 CMR 22.09A
2. Alpha emitters	2	310 CMR 22.09A	3	310 CMR 22.09A
3. Combined radium (226 & 228)	2	310 CMR 22.09A	3	310 CMR 22.09A
4. Uranium ^{11, 12}	2	310 CMR 22.09A	3	310 CMR 22.09A
G. Disinfection Byproducts (DBPs), Byproduct Precursors, Disinfectant Residuals. Where Disinfection used in the treatment of drinking water, Disinfectants combine with organic and inorganic matter present in water to form chemicals called Disinfection byproducts (DBPs). EPA sets standards for controlling the levels of Disinfectants and DBPs in drinking water, including Trihalomethanes (THMs) and haloacetic acid (HAAs).¹³				
1. Total Trihalomethanes (TTHMs)	2	310 CMR 22.07E	3	310 CMR 22.07E
2. Haloacetic Acids (HAA5)	2	310 CMR 22.07E	3	310 CMR 22.07E
3. Bromate	2	310 CMR 22.07E	3	310 CMR 22.07E
4. Chlorite	2	310 CMR 22.07E	3	310 CMR 22.07E
5. Chlorine (MRDL)	2	310 CMR 22.07E	3	310 CMR 22.07E
6. Chloramines (MRDL)	2	310 CMR 22.07E	3	310 CMR 22.07E
7. Chlorine dioxide (MRDL) where any two consecutive daily samples at entrance to Distribution System only are above MRDL	2	310 CMR 22.07E	3	310 CMR 22.07E

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16: continued

Contaminant	MCL/MRDL/TT violations ²		Monitoring & testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
8. Chlorine dioxide (MRDL), where sample(s) in Distribution System the next day are also above MRDL	2	310 CMR 22.07E	1	310 CMR 22.07E
9. Control of DBP precursors TOC (TT)	2	310 CMR 22.07E	3	310 CMR 22.07E
10. Bench marking and Disinfection profiling	N/A	N/A	3	310 CMR 22.07F
11. Development of monitoring plan	N/A	N/A	3	310 CMR 22.07E
H. Other Treatment Techniques				
1. Acrylamide (TT)	2	310 CMR 22.04(10)	N/A	310 CMR 22.04(10)
2. Epichlorohydrin (TT)	2	310 CMR 22.04(10)	N/A	310 CMR 22.04(10)
II. Unregulated Contaminant Monitoring: ¹⁶				
A. Unregulated contaminants	N/A	N/A	3	310 CMR 22.07C
B. Nickel	N/A	N/A	3	310 CMR 22.06
III. Public Notification for Variances and Exemptions:				
A. Operation under a variance or exemption	3	¹⁷ 310 CMR 22.13 310 CMR 22.14	N/A	N/A
B. Violation of conditions of a variance or exemption	2	¹⁸ 310 CMR 22.13 310 CMR 22.14	N/A	N/A
IV. Other Situations Requiring Public Notification:				
A. Fluoride Secondary Maximum Contaminant level (SMCL) exceedance	3	310 CMR 22.06C	N/A	N/A
B. Exceedance of nitrate MCL for non-community systems, as allowed by the Department.	1	310 CMR 22.13 310 CMR 22.13A	N/A	N/A
C. Availability of unregulated contaminant monitoring data	3	310 CMR 22.07C	N/A	N/A
D. Waterborne Disease Outbreak	1	N/A	N/A	N/A
E. Other waterborne or water supply emergency ¹⁹ .	1	N/A	N/A	N/A
F. Other situations as determined by the Department	²⁰ 1, 2, 3	N/A	N/A	N/A
G. Sodium	N/A	N/A	3	310 CMR 22.06A
H. Source water sample positive for Ground Water Rule fecal indicators: <i>E.coli</i> , <i>enterococci</i> , or coliphage	1	310 CMR 22.26(3)(g)	N/A	N/A
I. Change or failure of Treatment Technique or practice (TT)	2	310 CMR 22.04(4)	N/A	310 CMR 22.04(4)
J. Ground Water Rule Significant Deficiency or source water fecal contamination	3	310 CMR 22.16(13)	N/A	N/A

Table 6 - Endnotes

- Violations and other situations not listed in this table (e.g. failure to prepare Consumer Confidence Reports), do not require notice, unless otherwise determined by the Department. The Department may, at its option, also require a more stringent public notice tier (e.g., Tier 1 instead of Tier 2 or Tier 2 instead of Tier 3) for specific violations and situations listed in this Table, as authorized under 310 CMR 22.16(2)(a) and (3)(a).

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16: continued

2. MCL-Maximum contaminant level, MRDL-Maximum Residual Disinfectant Level, TT-Treatment Technique.
3. The term Violations of 310 CMR 22.00 is used here to include violations of MCL, MRDL, Treatment Technique, monitoring, and testing procedure requirements.
4. Failure to test for fecal coliform or *E. coli* is a Tier 1 violation if testing is not done after any repeat sample tests positive for coliform. All other total coliform monitoring and testing procedure violations are Tier 3.
5. Systems that violate the Turbidity MCL of five NTU based on an average of measurements over two consecutive days shall consult with the Department within 24 hours after learning of the violation. Based on this consultation, the Department may subsequently decide to elevate the violation to Tier 1. If a system is unable to make contact with the Department in the 24-hour period, the violation is automatically elevated to Tier 1.
6. Systems with Treatment Technique violations involving a single exceedance of a maximum Turbidity limit under 310 CMR 22.20A, the Surface Water Treatment Rule (SWTR), 310 CMR 22.20D, the Interim Enhanced Surface Water Treatment Rule (IESWTR), or 310 CMR 22.20F, the Long Term 1 Enhanced Surface Water Treatment Rule, are required to consult with the Department within 24 hours after learning of the violation. Based on this consultation, the Department may subsequently decide to elevate the violation to Tier 1. If a system is unable to make contact with the Department in the 24-hour period, the violation is automatically elevated to Tier 1.
7. Most of the requirements of the Interim Enhanced Surface Water Treatment Rule 310 CMR 22.20D become effective January 1, 2002 for Surface Water Sources systems (surface water systems and groundwater systems under the direct influence of surface water) serving at least 10,000 persons. However, 310 CMR 22.20D has some requirements that become effective as early as April 16, 1999. The Surface Water Treatment Rule, 310 CMR 22.20A, remains in effect for some systems serving at least 10,000 persons even after 2002; the Interim Enhanced Surface Water Treatment Rule, 310 CMR 22.20D, adds additional requirements and does not in many cases supersede the SWTR.
8. The arsenic MCL citations are effective January 23, 2006.
9. The arsenic Tier 3 violation citations are effective January 23, 2006.
10. Failure to take a confirmation sample within 24 hours for nitrate, nitrite or perchlorate after an initial sample exceeds the MCL is a Tier 1 violation. Other monitoring violations for nitrate, nitrite or perchlorate are Tier 3.
11. The uranium MCL Tier 2 violation citations are effective December 8, 2003 for all Community Water Systems.
12. The uranium MCL Tier 3 violation citations are effective December 8, 2003 for all Community Water Systems.
13. Community and non-transient non-community Surface Water Sources systems (surface water systems and groundwater systems under the direct influence of surface water) serving at least 10,000 persons shall comply with the new DBP MCLs, Disinfectant MRDLs, and related monitoring requirements beginning January 1, 2002. All other Community and Non-transient Non-community Water Systems shall meet the MCLs and MRDLs beginning January 1, 2004. Transient non-community Surface Water Sources systems (surface water systems and groundwater systems under the direct influence of surface water) serving at least 10,000 persons using chlorine dioxide as a Disinfectant or oxidant shall comply with the chlorine dioxide MRDL beginning January 1, 2002. Transient non-community Surface Water Sources systems (surface water systems and groundwater systems under the direct influence of surface water) serving at least 10,000 persons and Transient Non-community Water Systems serving fewer than 10,000 persons and Transient Non-community Water Systems using only groundwater not under the direct influence of surface water and using chlorine dioxide as a Disinfectant or oxidant shall comply with the chlorine dioxide MRDL beginning January 1, 2004.
14. Failure to monitor for chlorine dioxide at the entrance to the Distribution System the day after exceeding the MRDL at the entrance to the Distribution System is a Tier 2 violation.
15. If any daily sample taken at the entrance to the Distribution System exceeds the MRDL for chlorine dioxide and one or more samples taken in the Distribution System the next day exceed the MRDL, Tier 1 notification is required. Failure to take the required samples in the Distribution System after the MRDL is exceeded at the entry point also triggers Tier 1 notification.
16. Some water systems shall monitor for certain unregulated contaminants listed in 310 CMR 22.07C.
17. This citation refers to 310 CMR 22.13 and 22.14 and requires that "a schedule prescribed for a Public Water System granted a variance [or exemption] shall require compliance by the system".
18. In addition, 310 CMR 22.13A specifies the items and schedule milestones that shall be included in a variance for small systems.
19. Other waterborne Emergencies require a Tier 1 Public Notice under 310 CMR 22.16 (2)(a)7. for situations that do not meet the definition of a Waterborne Disease Outbreak given in 310 CMR 22.02(1) but that still have the potential to have serious adverse effects on health as a result of short-term exposure. These could include outbreaks not related to treatment deficiencies, as well as situations that have the potential to cause outbreaks, such as failures or significant interruption in water treatment processes, natural disasters that disrupt the water supply or Distribution System, chemical spills, or unexpected loading of possible pathogens into the source water.
20. The Department may place other situations in any tier they believe appropriate, based on threat to public health.
21. Failure to collect three or more samples for *Cryptosporidium* analysis is a Tier 2 violation requiring special notice as specified in 310 CMR 22.16(12). All other monitoring and testing procedure violations are Tier 3.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16: continued

310 CMR 22.16: Table 7			
Standard Health Effects Language for Public Notification			
Contaminant	MCLG ¹ mg/l	MCL ² mg/l	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR) and Massachusetts Drinking Water Regulations:			
A. Microbiological Contaminants:			
1a. Coliform Assessment and/or Corrective Action Violations	N/A	TT	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments to identify problems and to correct any problems that are found. [THE SYSTEM MUST USE THE FOLLOWING APPLICABLE SENTENCES.] We failed to conduct the required assessment. We failed to correct all identified sanitary defects that were found during the assessment(s).
1b. <i>E. coli</i>	Zero	MCL violation if any of the following: (1) The system has an <i>E. coli</i> -positive repeat sample following a total coliform- positive routine sample. (2) The system has a total coliform-positive repeat sample following an <i>E. coli</i> -positive routine sample. (3) The system fails to take all required repeat samples following an <i>E. coli</i> - positive routine sample. (4) The system fails to test for <i>E. coli</i> when any repeat sample tests positive for total coliform.	<i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.
1c. Fecal indicators (GWR)			
i. <i>E.coli</i>	Zero	TT	Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term, health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
ii. enterococci	None	TT	
iii. coliphage	None	TT	

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16: continued

Contaminant	MCLG ¹ mg/l	MCL ² mg/l	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR) and Massachusetts Drinking Water Regulations:			
1d. Ground Water Rule (GWR) TT violations	None	TT	Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.
1e. <i>E. coli</i> Assessment and/or Corrective Action Violations	N/A	TT	<i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We violated the standard for <i>E. coli</i> , indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct a detailed assessment to identify problems and to correct any problems that are found. [THE SYSTEM MUST USE THE FOLLOWING APPLICABLE SENTENCES.] We failed to conduct the required assessment. We failed to correct all identified sanitary defects that were found during the assessment that we conducted.
1f. Seasonal System TT Violations	N/A	TT	When this violation includes the failure to monitor for total coliforms or <i>E. coli</i> prior to serving water to the public, the mandatory language found at 310 CMR 22.16(5)(d)2. must be used. When this violation includes failure to complete other actions, the appropriate elements found in 310 CMR 22.16(5)(a) to describe the violation must be used.
2a. Turbidity (MCL) ⁴	None	one NTU ⁵ five NTU	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, Viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
2b. Turbidity (SWTR TT) ⁶	None	TT ⁷	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, Viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
2c. Turbidity (IESWTR TT) and LT1ESWTR TT) ⁸	None	TT	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, Viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16: continued

Contaminant	MCLG ¹ mg/l	MCL ² mg/l	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR) and Massachusetts Drinking Water Regulations:			
B. Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), Filter Backwash Recycling Rule (FBRR) and Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR) violations:			
3. <i>Giardia lamblia</i> (SWTR/IESWTR/LT1ESWTR)	Zero	TT ¹⁰	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, Viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
4. Viruses (SWTR/IESWTR/LT1ESWTR).			
5. Heterotrophic plate count (HPC) bacteria ⁹ (SWTR/IESWTR/LT1ESWTR)			
6. <i>Legionella</i> (SWTR/IESWTR/LT1ESWTR)			
7. <i>Cryptosporidium</i> (IESWTR/LT1ESWTR/FBRR).			
C. Inorganics			
8. Antimony	0.01	0.006	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
9. Arsenic ¹¹	None	0.05	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
10. Asbestos (fibers > 10 µm)	7MFL ¹²	7MFL	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
11. Barium	2	2	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
12. Beryllium	0	0.004	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
13. Cadmium	0.01	0.005	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
14. Chromium (total).	0.1	0.1	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
15. Cyanide	0.2	0.2	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
16. Fluoride	4	4	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children younger than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16: continued

Contaminant	MCLG ¹ mg/l	MCL ² mg/l	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR) and Massachusetts Drinking Water Regulations:			
17. Mercury (inorganic)	0	0.002	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
18. Nitrate	10	10	Infants younger than six months old who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
19. Nitrite	1	1	Infants younger than six months old who drink water containing nitrite in excess of the MCL could become seriously ill and, if un-treated, may die. Symptoms include shortness of breath and blue baby syndrome.
20. Total Nitrate and Nitrite	10	10	Infants younger than six months old who drink water containing nitrate and nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
21. Perchlorate	None	0.002	Perchlorate interferes with the normal function of the thyroid gland and thus has the potential to affect growth and development and could cause brain damage and other adverse effects, particularly in fetuses and infants.
22. Selenium	0.05	0.05	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
23. Thallium	0	0.002	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
D. Lead and Copper Rule:			
24. Lead	Zero	TT ¹³	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
25. Copper	1.3	TT ¹⁴	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
E. Synthetic Organic Chemicals (SOCs):			
26. 2,4-D	0.07	0.07	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16: continued

Contaminant	MCLG ¹ mg/l	MCL ² mg/l	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR) and Massachusetts Drinking Water Regulations:			
27. 2,4,5-TP (Silvex)	0.05	0.05	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
28. Alachlor	Zero	0.002	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
29. Atrazine	0	0.003	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
30. Benzo(a)pyrene (PAHs).	Zero	0	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
31. Carbofuran	0.04	0.003	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
32. Chlordane	Zero	0.002	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
33. Dalapon	0.2	0.2	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
34. Di (2-ethylhexyl) adipate	0.4	0.4	Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.
35. Di (2-ethylhexyl) phthalate	Zero	0.006	Some people who drink water containing di (2-ethylhexyl) phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
36. Dibromochloropropane (DBCP)	Zero	0	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
37. Dinoseb	0.01	0.007	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
38. Dioxin (2,3,7,8-TCDD)	Zero	3×10^{-8}	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
39. Diquat	0.02	0.02	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
40. Endothall	0.1	0.1	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16: continued

Contaminant	MCLG ¹ mg/l	MCL ² mg/l	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR) and Massachusetts Drinking Water Regulations:			
41. Endrin	0	0.002	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
42. Ethylene dibromide	Zero	0	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
43. Glyphosate	0.7	0.7	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
44. Heptachlor	Zero	0	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
45. Heptachlor epoxide	Zero	0	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
46. Hexachlorobenzene	Zero	0.001	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
47. Hexachlorocyclopentadiene	0.05	0.05	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
48. Lindane	0	0	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
49. Methoxychlor	0.04	0.04	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
50. Oxamyl (Vydate)	0.2	0.2	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
51. Pentachlorophenol	Zero	0.001	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
52. Picloram	0.5	0.5	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
53. Polychlorinated biphenyls (PCBs).	Zero	0.001	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of cancer.
54. Simazine	0	0.004	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
55. Toxaphene	Zero	0.003	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16: continued

Contaminant	MCLG ¹ mg/l	MCL ² mg/l	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR) and Massachusetts Drinking Water Regulations:			
			may have an increased risk of getting cancer.
F. Volatile Organic Chemicals (VOCs):			
56. Benzene	Zero	0.005	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of cancer.
57. Carbon tetrachloride	Zero	0.005	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
58. Chlorobenzene (monochloro- benzene)	0.1	0.1	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
59. o-Dichlorobenzene	0.6	0.6	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
60. p-Dichlorobenzene	0.01	0.005	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
61. 1,2-Dichloroethane	Zero	0.005	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
62. 1,1-Dichloroethylene	0.01	0.007	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
63. cis-1,2- Dichloroethylene.	0.07	0.07	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
64. trans-1,2- Dichloroethylene.	0.1	0.1	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
65. Dichloromethane	Zero	0.005	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
66. 1,2-Dichloropropane	Zero	0.005	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
67. Ethylbenzene	0.7	0.7	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
68. Styrene	0.1	0.1	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16: continued

Contaminant	MCLG ¹ mg/l	MCL ² mg/l	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR) and Massachusetts Drinking Water Regulations:			
69. Tetrachloroethylene	Zero	0.005	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
70. Toluene	1	1	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
71. 1,2,4-Trichlorobenzene	0.07	0.07	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
72. 1,1,1-Trichloroethane	0.2	0.2	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
73. 1,1,2-Trichloroethane	0	0.005	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
74. Trichloroethylene	Zero	0.005	Some people who drink water containing tri-chloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
75. Vinyl chloride	Zero	0.002	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
76. Xylenes (total)	10	10	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.
G. Radioactive Contaminants:			
77. Beta/photon emitters	Zero	4 mrem/yr ¹⁵	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
78. Alpha emitters	Zero	15 pCi/l ¹⁷	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess the MCL over many years may have an increased risk of getting cancer.
79. Combined radium (226 & 228).	Zero	5 pCi/l	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
80. Uranium	Zero	30 mg/L ¹⁶	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
H. Disinfection Byproducts (DBPs),Byproduct Precursors, Disinfectant Residuals. Where Disinfection used in the treatment of drinking water, Disinfectants combine with organic and inorganic matter present in water to form chemicals called Disinfection byproducts (DBPs). EPA sets standards for controlling the levels of Disinfectants and DBPs in drinking water, including Trihalomethanes (THMs) and haloacetic acid (HAAs). ¹⁸			
81. Total trihalomethanes (TTHMs)	N/A	0.080 ^{19, 20}	Some people who drink water containing (TTHMs) Trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.
82. Haloacetic Acids (HAA)	N/A	0.06021	Some people who drink water containing haloacetic acids in excess of the MCL over many years may

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16: continued

Contaminant	MCLG ¹ mg/l	MCL ² mg/l	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR) and Massachusetts Drinking Water Regulations:			
			have an increased risk of getting cancer.
83. Bromate	Zero	0.01	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
84. Chlorite	0.08	1	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
85. Chlorine	4 (MRDLG) ²²	4.0 (MRDL) ²³	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
86. Chloramines	4 (MRDLG)	4.0 (MRDL)	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
87a. Chlorine dioxide, where any two consecutive daily samples taken at the entrance to the Distribution System are above the MRDL.	0.8 (MRDLG)	0.8 (MRDL)	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia. <i>Add for public notification only:</i> The chlorine dioxide violations reported today are the result of exceedances at the treatment facility only, not within the distribution system which delivers water to consumers. Continued compliance with chlorine dioxide levels within the distribution system minimizes the potential risk of these violations to consumers.
87b. Chlorine dioxide, where one or more Distribution System samples are above the MRDL.	0.8 (MRDLG)	0.8 (MRDL)	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia. <i>Add for public notification only:</i> The chlorine dioxide violations reported today include exceedances of the EPA standard within the distribution system which delivers water to consumers. Violations of the chlorine dioxide standard within the distribution system may harm human health based on short-term exposures. Certain groups, including fetuses, infants, and young children, may be especially susceptible to nervous system effects from excessive chlorine dioxide exposure.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16: continued

Contaminant	MCLG ¹ mg/l	MCL ² mg/l	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR) and Massachusetts Drinking Water Regulations:			
88. Control of DBP precursors (TOC)	None	TT	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include Trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
I. Other Treatment Techniques:			
89. Acrylamide	Zero	TT	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
90. Epichlorohydrin	Zero	TT	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.
J. Per- and Polyfluoroalkyl Substances (PFAS)			
91. PFAS6	None	20 ng/l ²⁴	Some people who drink water containing these PFAS in excess of the MCL may experience certain adverse effects. These could include effects on the liver, blood, immune system, thyroid, and fetal development. These PFAS may also elevate the risk of certain cancers.

1. MCLG-Maximum Contaminant Level Goal.
2. MCL-Maximum Contaminant Level.
3. [Reserved]
4. The MCL for the monthly Turbidity average is one NTU; the MCL for the two-day average is one NTU for systems that are required to filter, but have not yet installed Filtration (310 CMR 22.08).
5. NTU-Nephelometric turbidity unit.
6. Systems subject to the Surface Water Treatment Rule (both filtered and unfiltered) may not exceed one NTU. In addition, in filtered systems, 95% of samples each month shall not exceed 0.5 NTU in systems using conventional or Direct Filtration and shall not exceed one NTU in systems using slow sand or diatomaceous earth filtration or other Filtration technologies approved by the Department.
7. TT-Treatment Technique.
8. For systems subject to 310 CMR 22.20D (systems serving at least 10,000 people, using Surface Water or Groundwater Under the Direct Influence of Surface Water), that use conventional filtration or Direct Filtration, after January 1, 2002, the Turbidity level of a system's combined filter effluent may not exceed 0.3 NTU in at least 95% of monthly measurements, and the Turbidity level of a system's combined filter effluent shall not exceed one NTU at any time. Systems subject to 310 CMR 22.20D using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration shall meet Turbidity limits set by the Department. For systems subject to 310 CMR 22.20F (systems serving fewer than 10,000 people, using Surface Water or Groundwater Under the Influence of Surface Water) that use conventional or Direct Filtration, after January 1, 2005 the Turbidity level of a system's combined filter effluent may not exceed 0.3 NTU in at least 95% of monthly measurements, and the Turbidity level of a system's combined filter effluent must not exceed one NTU at any time. Systems subject to 310 CMR 22.20F using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration must meet Turbidity limits set by the Department.
9. The bacteria detected by heterotrophic plate count (HPC) are not necessarily harmful. HPC is simply an alternative method of determining Disinfectant residual levels. The number of such bacteria is an indicator of whether there is enough Disinfectant in the distribution system.
10. 310 CMR 22.20A, 22.20D, and 22.20F Treatment Technique violations that involve Turbidity exceedances may use the health effects language for Turbidity instead.
11. These arsenic values are effective January 23, 2006.
12. Million fibers per liter.

22.16: continued

13. Action Level = 0.015 mg/L.
14. Action Level = 1.3 mg/L.
15. Millirems per year.
16. The uranium MCL is effective December 8, 2003 for all Community Water Systems.
17. Picocuries per liter.
18. Surface water systems and groundwater systems under the direct influence of surface water are regulated under 310 CMR 22.20A. Community and non-transient non-community Surface Water Sources systems (surface water systems and groundwater systems under the direct influence of surface water) serving at least 10,000 persons shall comply with DBP MCLs and Disinfectant Maximum Residual Disinfectant Levels (MRDLs) beginning January 1, 2002. All other Community and Non-transient Non-community Water Systems shall meet the MCLs and MRDLs beginning January 1, 2004. Transient non-community Surface Water Sources systems (surface water systems and groundwater systems under the direct influence of surface water) serving at least 10,000 or more persons using chlorine dioxide as a Disinfectant or oxidant shall comply with the chlorine dioxide MRDL beginning January 1, 2002. Transient non-community Surface Water Sources systems (surface water systems and groundwater systems under the direct influence of surface water) serving fewer than 10,000 persons and Transient Non-community Water Systems using only groundwater not under the direct influence of surface water and using chlorine dioxide as a Disinfectant or oxidant shall comply with the chlorine dioxide MRDL beginning January 1, 2004.
19. Community and Non-transient Non-community Water Systems must comply with TTHM and HAA5 MCLs listed in 310 CMR 22.07F of 0.080 mg/L and 0.060 mg/L, respectively (with compliance calculated as a Locational Running Annual Average) on the schedule in 310 CMR 22.07F(7).
20. The MCL for Total Trihalomethanes is the sum of the concentrations of the individual Trihalomethanes.
21. The MCL for haloacetic acids is the sum of the concentrations of the individual haloacetic acids.
22. MRDLG-Maximum Residual Disinfectant Level Goal.
23. MRDL-Maximum Residual Disinfectant Level.
24. Nanograms per liter.

(12) Special Notice for Repeated Failure to Conduct Monitoring of the Source Water for *Cryptosporidium* and for Failure to Determine Bin Classification or Mean *Cryptosporidium* Level.

(a) The owner or operator of a Community or Non-community Water System that is required to monitor source water under 310 CMR 22.20G(2) must notify Persons served by the water system that monitoring has not been completed as specified no later than 30 days after the system has failed to collect any three months of monitoring as specified in 310 CMR 22.20G(2)(c). The notice must be repeated as specified in 310 CMR 22.16(3)(b).

(b) The owner or operator of a Community or Non-community Water System that is required to determine a bin classification under 310 CMR 22.20G(11), or to determine mean *Cryptosporidium* level under 310 CMR 22.20G(13), must notify Persons served by the water system that the determination has not been made as required no later than 30 days after the system has failed report the determination as specified in 310 CMR 22.20G(11)(e) or 310 CMR 22.20G(13)(a). The notice must be repeated as specified in 310 CMR 22.16(3)(b). The notice is not required if the system is complying with a Department-approved schedule to address the violation.

(c) The form and manner of the public notice must follow the requirements for a Tier 2 Public Notice prescribed in 310 CMR 22.16(3)(c). The public notice must be presented as required in 310 CMR 22.16(5)(c).

(d) The notice must contain the following language, including the language necessary to fill in the blanks.

1. The special notice for repeated failure to conduct monitoring must contain the following language:

We are required to monitor the source of your drinking water for *Cryptosporidium*. Results of the monitoring are to be used to determine whether water treatment at the (treatment plant name) is sufficient to adequately remove *Cryptosporidium* from your drinking water. We are required to complete this monitoring and make this determination by (required bin determination date). We "did not monitor or test" or "did not complete all monitoring or testing" on schedule and, therefore, we may not be able to determine by the required date what treatment modifications, if any, must be made to ensure adequate *Cryptosporidium* removal. Missing this deadline may, in turn, jeopardize our ability to have the required

22.16: continued

treatment modifications, if any, completed by the deadline required, (date). For more information, please call (name of water system contact) of (name of water system) at (phone number).

2. The special notice for failure to determine bin classification or mean *Cryptosporidium* level must contain the following language:

We are required to monitor the source of your drinking water for *Cryptosporidium* in order to determine by (date) whether water treatment at the (treatment plant name) is sufficient to adequately remove *Cryptosporidium* from your drinking water. We have not made this determination by the required date. Our failure to do this may jeopardize our ability to have the required treatment modifications, if any, completed by the required deadline of (date). For more information, please call (name of water system contact) of (name of water system) at (phone number).

3. Each special notice must also include a description of what the system is doing to correct the violation and when the system expects to return to compliance or resolve the situation.

(13) Special Notice to the Public of Significant Deficiencies or Source Water Fecal Contamination.

(a) In addition to the applicable public notification requirements of 310 CMR 22.16, a community groundwater system that receives notice from the Department of a Significant Deficiency or notification of a fecal indicator positive groundwater source sample that is not invalidated by the Department under 310 CMR 22.26(3)(d) must inform the public served by the water system under 310 CMR 22.16A(8)(g) of the fecal indicator positive source sample or of any Significant Deficiency that has not been corrected. The system must continue to inform the public annually until the Significant Deficiency is corrected or the fecal contamination in the groundwater source is determined by the Department to be corrected under 310 CMR 22.26(4)(a)5.

(b) In addition to the applicable public notification requirements of 310 CMR 22.16, a non-community groundwater system that receives notice from the Department of a Significant Deficiency must inform the public served by the water system in a manner approved by the Department, unless otherwise provided for the system by the Department pursuant to 310 CMR 22.16A, of any Significant Deficiency that has not been corrected within 12 months of being notified by the Department, or earlier if directed by the Department. The system must continue to inform the public annually until the Significant Deficiency is corrected. The information must include:

1. The nature of the Significant Deficiency and the date the Significant Deficiency was identified by the Department;
2. The Department approved plan and schedule for correction of the Significant Deficiency, including interim measures, progress to date, and any interim measures completed; and
3. For systems with a large proportion of non English speaking consumers, as determined by the Department, information in the appropriate language(s) regarding the importance of the notice or a telephone number or address where consumers may contact the system to obtain a translated copy of the notice or assistance in the appropriate language.

(c) If directed by the Department, a Non-community Water System with significant deficiencies that have been corrected must inform its customers of the significant deficiencies, how the deficiencies were corrected, and the dates of correction under 310 CMR 22.26(4)(a)7.b.

22.16A: Consumer Confidence Reporting Requirements

- (1) Each Community Water System in existence as of September 18, 1998, must deliver its first consumer confidence report to its customers by October 19, 1999, its second report by July 1, 2000, and subsequent reports by July 1st annually thereafter. The first report must contain data collected during, or prior to, calendar year 1998, as provided in 310 CMR 22.16A(4)(h). Each report thereafter must contain data collected prior to or during the previous calendar year as specified at 310 CMR 22.16A(4)(h).
- (2) Each Community Water System established after January 1, 1999, must deliver its first consumer confidence report to its customers by July 1st of the year after its first full calendar year in operation and annually thereafter.
- (3) A Public Water System that sells or provides water to another Community Water System shall deliver the applicable information required at 310 CMR 22.16A(4), to the buyer or receiving system:
 - (a) no later than April 19, 1999, by April 1, 2000, and by April 1st annually thereafter, or
 - (b) on a date mutually agreed upon by the seller and the purchaser, and specifically included in a written contract between the parties.
- (4) Content of the Reports. Each Community Water System must provide to its customers an annual report that contains the information specified in 310 CMR 22.16A(4).
 - (a) Each report must identify the source(s) of the water delivered by the Community Water System by providing information on:
 1. The type of the water: *e.g.*, Surface Water, Groundwater; and
 2. The commonly used name and the Department's source water identification number (if any) and location of the body (or bodies) of water.
 - (b) If a source water assessment has been completed, the report must notify consumers of the availability of this information and the means to obtain it. In addition, the Public Water Systems are encouraged to highlight in the report significant sources of contamination in the source water area if they have readily available information. Where a system has received a source water assessment from the Department, the report shall include a brief summary of the Public Water System's susceptibility to potential sources of contamination, using language provided by the Department.
 - (c) Each report must include the following definitions for the purpose of 310 CMR 22.16A:
 1. Maximum Contaminant Level Goal or MCLG. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
 2. Maximum Contaminant Level or MCL. The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
 - (d) A report for a Community Water System operating under a variance or an exemption issued by the Department must include the following definition: Variances and Exemptions. The Department or EPA permission not to meet an MCL or a Treatment Technique under certain conditions.
 - (e) A report that contains data on a contaminant, for which the Department or EPA regulates using any of the following terms, must include the applicable definitions for the purpose of 310 CMR 22.16A:
 1. Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water.
 2. Action Level. The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
 3. Maximum Residual Disinfectant Levels Goal or MRDLG. The level of a drinking water disinfectant below which there is no known or expected risk to health MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
 4. Maximum Residual Disinfectant Level or MRDL. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
 - (f) Information on Detected Contaminants. 310 CMR 22.16A(4) specifies the requirements for information to be included in each report for contaminants subject to mandatory monitoring (except *Cryptosporidium*). It applies to:

22.16A: continued

1. Contaminants subject to an MCL, Action Level, Maximum Residual Disinfectant Level or Treatment Technique (regulated contaminants);
 2. Contaminants for which monitoring is required by 310 CMR 22.07C (unregulated contaminants); and
 3. Disinfection by-products or microbial contaminants for which monitoring is required by 40 CFR 141.142 and 141.143, except as provided at 310 CMR 22.16A(5)(a), and which are detected in the finished water.
- (g) The data relating to these contaminants must be displayed in one table or in several adjacent tables. Any additional monitoring results which a Community Water System chooses to include in its report must be displayed separately.
- (h) The data must be derived from data collected to comply with EPA and Department monitoring and analytical requirements during calendar year 1998 for the first report and subsequent calendar years thereafter except that:
1. Where a system is allowed to monitor for regulated contaminants less often than once a year, the table(s) must include the date and results of the most recent sampling and the report must include a brief statement indicating that the data presented in the report are from the most recent testing done in accordance with the regulations. No data older than five years need be included.
 2. Results of monitoring in compliance with 40 CFR 141.142 and 141.143 need only be included for five years from the date of last sample or until any of the detected contaminants becomes regulated and subject to routine monitoring requirements, whichever comes first.
- (i) For detected regulated contaminants listed in 310 CMR 22.00, including without limitation in 310 CMR 22.16A(27), the table(s) shall contain:
1. The MCL for that contaminant expressed as a number equal to or greater than 1.0, as provided in 310 CMR 22.16A(27);
 2. The MCLG for that contaminant expressed in the same units as the MCL;
 3. If there is no MCL for a detected contaminant, the table must indicate that there is a Treatment Technique, Maximum Residual Disinfectant Level, or specify the Action Level, applicable to that contaminant, and the report must include the definitions for Treatment Technique, Maximum Residual Disinfectant Level and/or Action Level, as appropriate, specified at 310 CMR 22.16A(4)(e);
 4. For contaminants subject to an MCL, except Turbidity and *E. coli*, the highest contaminant level used to determine compliance with 310 CMR 22.00 and the range of detected levels, as follows:
 - a. When compliance with the MCL is based on a single sample or the average of an initial and a confirmation sample: the highest detected level or average at any Sampling Point and the range of detected levels of all Sampling Points expressed in the same units as the MCL.
 - b. When compliance with the MCL is determined annually or less frequently: the highest detected level at any Sampling Point and the range of detected levels expressed in the same units as the MCL.
 - c. When compliance with the MCL is determined by calculating a Running Annual Average of all samples taken at a monitoring location: the highest average of any of the monitoring locations and the range of all Sampling Points expressed in the same units as the MCL. For the MCLs for TTHM and HAA5 in 310 CMR 22.07E(1)(c), Suppliers of Water shall include the highest Locational Running Annual Average for TTHM and HAA5 and the range of individual sample results for all monitoring locations expressed in the same units as the MCL. If more than one location exceeds the TTHM or HAA5 MCL, the Supplier of Water shall include the Locational Running Annual Averages for all locations that exceed the MCL.
 - d. When compliance with the MCL is determined on a system-wide basis by calculating a Running Annual Average of all samples at all monitoring locations: the average and range of detection expressed in the same units as the MCL. The Supplier of Water shall include individual sample results for the IDSE conducted under 310 CMR 22.07F when determining the range of TTHM and HAA5 results to be reported in the annual consumer confidence report for the calendar year that the IDSE samples were taken.

22.16A: continued

- e. When rounding of results to determine compliance with the MCL is allowed by 310 CMR 22.00, rounding shall be done prior to multiplying the results by the factor listed in 310 CMR 22.16A(27).
 - 5. For Turbidity.
 - a. When it is reported pursuant to 310 CMR 22.08, the highest average monthly value.
 - b. When it is reported pursuant to the requirements of 310 CMR 22.20A(2), the highest monthly value. The report shall include an explanation of the reasons for measuring Turbidity.
 - c. When it is reported pursuant to 310 CMR 22.20A(4), 22.20D or 22.20F, the highest single measurement and the lowest monthly percentage of samples meeting the Turbidity limits specified in 310 CMR 22.20A(4), 22.20D or 22.20F for the Filtration technology being used. The report shall include an explanation of the reasons for measuring Turbidity.
 - 6. For Lead and Copper. For each contaminant, the 90th percentile value of the most recent round of sampling, and the number of sampling sites exceeding the Action Level.
 - 7. For Total Coliform analytical results until March 31, 2016.
 - a. The highest monthly number of total coliform-positive samples for Public Water Systems collecting fewer than 40 samples per month; or
 - b. The highest monthly percentage of positive samples for Public Water Systems collecting at least 40 samples per month.
 - 8. For *E. coli*: the total number of *E. coli*-positive samples; and
 - 9. The likely source(s) of detected contaminants to the best of the Supplier of Water's knowledge. Specific information regarding contaminants may be available in Sanitary Surveys and source water assessments, and should be used when available to the Supplier of Water. If the Supplier of Water lacks specific information on the likely source, the report shall include one or more of the typical sources for that contaminant listed in 310 CMR 22.16A(27) that is most applicable to the system.
 - (j) If a Community Water System distributes water to its customers from multiple hydraulically independent Distribution Systems that are fed by different Raw Water sources, the table should contain a separate column for each service area and the report should identify each separate Distribution System. Alternatively, systems could produce separate reports tailored to include data for each service area.
 - (k) The table(s) must clearly identify any data indicating violations of MCLs, MRDLs or Treatment Techniques and the report must contain a clear and readily understandable explanation of the violation including: the length of the violation, the potential adverse health effects, and actions taken by the system to address the violation. To describe the potential health effects, the system must use the relevant language in 310 CMR 22.16A(27).
 - (l) For detected unregulated contaminants for which monitoring is required (except *Cryptosporidium*), the table(s) must contain the average and range at which the contaminant was detected. The report may include a brief explanation of the reasons for monitoring for unregulated contaminants. The report may also include health risk information which may be obtained from the Drinking Water Program's Consumer Confidence Report guidance available on the MassDEP website or by contacting the Drinking Water Program. Drinking Water Contaminant Human Health Effects Information is also available on USEPA's website.
- (5) Information on *Cryptosporidium*, Radon, and other Contaminants.
- (a) If the system performed any monitoring for *Cryptosporidium*, including monitoring performed to satisfy the requirements of 40 CFR 141.143, which indicates that *Cryptosporidium* may be present in the source water or the finished water, the report must include:
 - 1. A summary of the results of the monitoring; and
 - 2. An explanation of the significance of the results.
 - (b) If the system performed any monitoring for radon which indicates that radon may be present in the finished water, the report must include:
 - 1. The results of the monitoring; and
 - 2. An explanation of the significance of the results.
 - (c) If the system performed additional monitoring which indicates the presence of other contaminants in the finished water, the Public Water System is strongly encouraged to report any results which may indicate a health concern. The Department considers detects above a proposed MCL or health advisory level to indicate possible health concerns. For such contaminants, the Department recommends that the report include:

22.16A: continued

1. The results of the monitoring; and
 2. An explanation of the significance of the results noting the existence of a health advisory or a proposed regulation.
- (6) In addition, to the requirements of 310 CMR 22.16A(4)(k), the report must note any violation that occurred during the year covered by the report of a requirement listed in 310 CMR 22.16A(6)(a) through (g), and include a clear and readily understandable explanation of the violation, any potential adverse health effects, and the steps the system has taken to correct the violation.
- (a) Monitoring and reporting of compliance data;
 - (b) Filtration and Disinfection. For systems which have failed to install adequate Filtration or Disinfection equipment or processes, or have had a failure of such equipment or processes which constitutes a violation, the report must include the following language as part of the explanation of potential adverse health effects: Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, Viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
 - (c) Lead and Copper Control. For systems which fail to take one or more actions prescribed by 310 CMR 22.06B(1)(d)(1), (3), (4) or (5), the report must include the applicable language of 310 CMR 22.16A(27) for lead, copper, or both.
 - (d) Treatment Techniques for Acrylamide and Epichlorohydrin. For systems which violate the requirements of 310 CMR 22.04(10), the report must include the relevant language from 310 CMR 22.16A(27).
 - (e) Recordkeeping of compliance data.
 - (f) Special monitoring requirements prescribed by 310 CMR 22.07C and 22.06A; and
 - (g) Violation of the terms of a Variance, an Exemption, or an administrative or judicial order.
- (7) Variances and Exemptions. If a system is operating under the terms of a Variance or an Exemption issued under 310 CMR 22.13, 22.13A or 22.14, the report must contain:
- (a) An explanation of the reasons for the Variance or Exemption;
 - (b) The date on which the Variance or Exemption was issued;
 - (c) A brief status report on the steps the system is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the Variance or Exemption; and
 - (d) A notice of any opportunity for public input in the review, or renewal, of the Variance or Exemption.
- (8) Additional Information.
- (a) The report must contain a brief explanation regarding contaminants which may reasonably be expected to be found in drinking water including bottled water. This explanation may include the language in 310 CMR 22.16A(8)(a)1. through 3., or systems may use their own comparable language with Department approval. The report also must include the language of paragraph 310 CMR 22.16A(8)(a)4.
 1. Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.
 2. Contaminants that may be present in source water include:
 - a. Microbial contaminants, such as Viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
 - b. Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
 - c. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
 - d. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

22.16A: continued

- e. Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.
- 3. In order to ensure that tap water is safe to drink, the Department and EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. FDA and 105 CMR 570.000: *The Manufacture, Collection, and Bottling of Water and Carbonated Nonalcoholic Beverages* establish limits for contaminants in bottled water which must provide the same protection for public health.
- 4. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791) or your local water supplier.
- (b) The report must include the PWSID#, address, telephone number of the owner, operator, or designee of the Community Water System as a source of additional information concerning the report.
- (c) In communities with 10% or greater, or greater than 1000 people (whichever is lesser) of non-English speaking residents, the report must contain information in the appropriate language(s) regarding the importance of the report. In communities serving 25% or greater of non-English speaking residents, the report must contain a statement in the appropriate language(s) which includes a telephone number or address where such residents may contact the system to obtain a translated copy of the report or assistance in the appropriate language.
- (d) The report must include information (*e.g.*, time and place of regularly scheduled board meetings) about opportunities for public participation in decisions that may affect the quality of the water.
- (e) The systems may include such additional information as they deem necessary for public education consistent with, and not detracting from, the purpose of the report.
- (f) The Public Water System shall include any additional language as specified by the Department.
- (g) Systems Required to Comply with 310 CMR 22.26.
 - 1. Any groundwater system that receives notice from the Department of a Significant Deficiency or notice from a laboratory of a fecal indicator-positive groundwater source sample that is not invalidated by the Department under 310 CMR 22.26(3)(d) must inform its customers of any Significant Deficiency that is uncorrected at the time of the next report or of any fecal indicator-positive groundwater source sample in the next report. The system must continue to inform the public annually until the Department determines that particular Significant Deficiency is corrected or the fecal contamination in the groundwater source is addressed under 310 CMR 22.26(4)(a). Each report must include the following elements.
 - a. The nature of the particular Significant Deficiency or the source of the fecal contamination (if the source is known) and the date the Significant Deficiency was identified by the Department or the dates of the fecal indicator-positive groundwater source samples;
 - b. If the fecal contamination in the groundwater source has been addressed under 310 CMR 22.26(4)(a) and the date of such action;
 - c. For each Significant Deficiency or fecal contamination in the groundwater source that has not been addressed under 310 CMR 22.26(4)(a), the Department-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed; and
 - d. If the system receives notice of a fecal indicator-positive groundwater source sample that is not invalidated by the Department under 310 CMR 22.26(3)(d), the potential health effects using the health effects language of 310 CMR 22.16A(27).
 - 2. If directed by the Department a system with significant deficiencies that have been corrected before the next report is issued must inform its customers of the Significant Deficiency, how the deficiency was corrected, and the date of correction under 310 CMR 22.16A(8)(g)1.

22.16A: continued

- (h) Systems Required to Comply with the Revised Total Coliform Rule (310 CMR 22.05).
1. Any Supplier of Water required to perform a Level 1 Assessment or a Level 2 Assessment that is not due to an *E. coli* MCL violation shall include in the report the language provided in 310 CMR 22.16A(8)(h)1.a.; and as appropriate 310 CMR 22.16A(8)(h)1.b. and c., inserting the appropriate information where indicated; and the language provided in 310 CMR 22.16A(8)(h)1.d.i. and ii., if appropriate.
 - a. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.
 - b. During the past year we were required to conduct [INSERT NUMBER OF LEVEL 1 ASSESSMENTS] Level 1 assessment(s). [INSERT NUMBER OF LEVEL 1 ASSESSMENTS] Level 1 assessment(s) were completed. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions.
 - c. During the past year [INSERT NUMBER OF LEVEL 2 ASSESSMENTS] Level 2 assessments were required to be completed for our water system. [INSERT NUMBER OF LEVEL 2 ASSESSMENTS] Level 2 assessments were completed. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions.
 - d. Any Supplier of Water that has failed to complete all the required assessments or correct all identified Sanitary Defects, is in violation of the Treatment Technique requirement and must also include one or both of the following statements, as appropriate:
 - i. During the past year we failed to conduct all of the required assessment(s).
 - ii. During the past year we failed to correct all identified defects that were found during the assessment.
 2. Any Supplier of Water required to perform a Level 2 Assessment due to an *E. coli* MCL violation shall include in the report the language provided in 310 CMR 22.16A(8)(h)2.a. and b., inserting the appropriate information where indicated; and the language provided in 310 CMR 22.16A(8)(h)2.c.i. and ii., if appropriate.
 - a. *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We found *E. coli* bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.
 - b. We were required to complete a Level 2 assessment because we found *E. coli* in our water system. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions.
 - c. Any Supplier of Water that has failed to complete the required assessment or correct all identified Sanitary Defects, is in violation of the Treatment Technique requirement and shall also include one or both of the following statements, as appropriate:
 - i. We failed to conduct the required assessment.
 - ii. We failed to correct all sanitary defects that were identified during the assessment that we conducted.
 3. If a Supplier of Water detects *E. coli* and has violated the *E. coli* MCL, then in addition to completing the table as required in 310 CMR 22.16A(4)(i)4., the Supplier of Water shall also include one or more of the following statements to describe any noncompliance, as applicable:

22.16A: continued

- a. We had an *E. coli*-positive repeat sample following a total coliform- positive routine sample.
 - b. We had a total coliform-positive repeat sample following an *E. coli*-positive routine sample.
 - c. We failed to take all required repeat samples following an *E. coli*-positive routine sample.
 - d. We failed to test for *E. coli* when any repeat sample tests positive for total coliform.
4. If a Supplier of Water detects *E. coli* and has not violated the *E. coli* MCL, in addition to completing the table as required in 310 CMR 22.16A(4)(i)4., the Supplier of Water may include a statement that explains that although they have detected *E. coli*, they are not in violation of the *E. coli* MCL.

(9) Required Additional Health Information. All reports must prominently display the following language:

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

(10) Beginning in the report due by July 1, 2002, a Community Water System which detects arsenic at levels above 0.005 mg/L, and up to and including 0.010 mg/L:

- (a) Shall include in its report a short informational statement about arsenic, using language such as: While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.
- (b) May write its own educational statement, but only in consultation with and approval of the Department.
- (c) Beginning in the report due by July 1, 2002 and ending January 22, 2006, a community water system that detects arsenic above 0.010 mg/L and up to and including 0.05 mg/L shall include the arsenic health effects language prescribed by 310 CMR 22.16A(27).

(11) A Community Water System which detects nitrate at levels above 5 mg/l, but below the MCL:

- (a) Must include a short informational statement about the impacts of nitrate on children using language such as: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of younger than six months old. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.
- (b) May write its own educational statement, but only in consultation with and approval of the Department.

22.16A: continued

- (12) Every report must include the following lead-specific information:
- (a) A short informational statement about lead in drinking water and its effects on children. The statement must include the following information: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [NAME OF UTILITY] is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing, methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline 800-426-4791 or at <http://water.epa.gov/drink/info/lead/index.cfm>.
 - (b) A system may write its own educational statement, but only in consultation with and with written approval of the Department.
- (13) Community Water Systems that detect TTHM above 0.080 mg/l, but below the MCL listed in 310 CMR 22.07 as an annual average, monitored and calculated under the provisions of 310 CMR 22.07, must include health effects language prescribed in 310 CMR 22.16A(27).
- (14) Report Delivery and Recordkeeping. Except as provided in 310 CMR 22.16A(20), each Community Water System must mail or otherwise directly deliver one copy of the Consumer Confidence Report to each customer.
- (15) The Community Water System must make a good faith effort to reach consumers who do not get water bills, and are required to take a minimum of three of the following actions:
- (a) Post report in the lobby of apartment complexes;
 - (b) Place an ad in a local newspaper stating where copies are available;
 - (c) Announce availability of the consumer confidence report on local radio stations;
 - (d) Post consumer confidence report in Town Hall;
 - (e) Place copies of the consumer confidence report in the local public library;
 - (f) Post a notice (in main lobby of apartment complexes) stating that the consumer confidence report is posted on a website, and give the website address;
 - (g) Publish the report in local newspaper(s);
 - (h) Deliver the report to community organizations.
- (16) No later than the date the Community Water System is required to distribute the report to its customers, the system shall submit:
- (a) two copies of the consumer confidence report and the related attachments to the Department, one of which will be submitted to the applicable Department regional office and one will be submitted to the Boston office; and
 - (b) a certification, using the Department's form, that the report has been distributed to customers, and that the information is correct and consistent with the compliance monitoring data previously submitted to the Department.
- (17) No later than the date the system is required to distribute the report to its customers, each Community Water System must deliver the report to its local Board of Health or any other agency identified by the Department.
- (18) Each Community Water System must make its reports available to the public upon request.
- (19) Each Community Water System serving 100,000 or more persons must post its most recent report to a publicly-accessible site on the Internet.
- (20) A Community Water System serving fewer than 10,000 persons has the option of mailing or directly delivering copies of the consumer confidence report to each customer, as provided in 310 CMR 22.16A(14), or, alternatively, such system must comply with the following notice requirements:
- (a) Publish the report in one or more local newspapers serving the area in which the system is located;

22.16A: continued

(b) Inform the customers that the reports will not be mailed. Notification shall be either in the newspapers in which the reports are published or by a statement in a bill or newsletter; and

(c) Make the reports available to the public upon request.

(21) A Community Water System serving 500 or fewer persons may forego the requirements of 310 CMR 22.16A(20)(a) and (b), if the system provides a notice at least once per year to its customers by mail, door-to-door delivery or by posting in an appropriate location, that the report shall be available upon request.

(22) Any system subject to 310 CMR 22.16A, must retain copies of its Consumer Confidence Report for no less than three years.

(23) A Non-community Water System shall comply with the following:

(a) Post a Consumer Confidence Report within 30 days of notification from the Department that the report is available. Posting must be in a conspicuous location(s) for the public to read. The report shall remain posted until a new report is made available.

(b) The Non-community Water System must retain copies of its Consumer Confidence Report for no less than three years and make it available to the public upon request.

(24) Consumer Confidence Reporting Requirements. (Reserved)

(25) Consumer Confidence Report by the Department for Any Public Water System Subject to 310 CMR 22.16A. The Department may prepare and issue to the public a report as required by 310 CMR 22.16A on behalf of the Public Water System. The Public Water System remains legally responsible for ensuring that the requirements of 310 CMR 22.16A are met. The Department reserves the right to issue on behalf of the Public Water System the report to the public when not required by 310 CMR 22.16A in the event of a significant health problem. The Public Water System shall be responsible for all fees incurred by the Department as a result of issuing such report.

(26) A Public Water System receiving water from a source approved by the Department under an Emergency agreement shall comply with 310 CMR 22.16A(4) for the Emergency Source unless otherwise approved in writing by the Department.

22.16A: continued

(27) Charts for Regulated Contaminants, Unregulated Contaminants, and Secondary Contaminants.

(a) Table 1: Regulated Contaminants Chart.

Key:

AL =Action Level	MRDLG =Maximum Residual Disinfectant Level Goal	ppm =parts per million, or milligrams per liter (mg/L)
CCR =Consumer Confidence Report	mrem/year =millirems per year (a measure of radiation absorbed by the body)	ppb =parts per billion, or micrograms per liter (ug/L)
MCL =Maximum Contaminant Level	NTU =Nephelometric Turbidity Units	ppt =parts per trillion, or nanograms per liter
MCLG =Maximum Contaminant Level Goal	pCi/L =picocuries per liter (a measure of radioactivity)	ppq =parts per quadrillion, or picograms per liter
MFL =Million Fibers per Liter		TT =Treatment Technique
MRDL =Maximum Residual Disinfectant Level		

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
Microbiological Contaminants						
1. <i>Cryptosporidium</i>	TT	-	TT	0	Discharged especially where water is contaminated with sewage or animal wastes.	Some people who drink water containing <i>Cryptosporidium</i> could experience severe gastrointestinal effects.
2. <i>Giardia lamblia</i>	TT	-	TT	0	Discharged especially where water is contaminated with sewage or animal wastes.	Some people who drink water containing <i>Giardia lamblia</i> could experience severe gastrointestinal effects.
3. Heterotrophic plate count	TT	-	TT	N/A	Heterotrophic plate count is an indicator method that measures a range of naturally-occurring bacteria in the environment.	Heterotrophic plate count is not associated with health effects, but is a method that measures the bacterial quality of the water as an indicator of the adequacy of water treatment.
4. <i>Legionella</i>	TT	-	TT	0	Natural sources; multiplies in heating and air-conditioning systems.	Some people who use drinking water containing <i>Legionella</i> could experience Legionnaire's Disease, a type of pneumonia.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
5. Total Coliform Bacteria	TT	-	TT	N/A	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.
6. <i>E. coli</i>	Routine and repeat samples are total coliform-positive and either is <i>E. coli</i> -positive or Supplier of Water fails to take repeat samples following <i>E. coli</i> -positive routine sample or Supplier of Water fails to analyze total coliform-positive repeat sample for <i>E. coli</i>			0	Human and animal fecal waste.	<i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
7. Fecal Indicators a. (<i>E. coli</i> , enterococci, or coliphage) Groundwater Rule	TT	-	TT	N/A	Human and animal fecal waste	Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
8. Total organic carbon	TT	-	TT	N/A	Naturally present in the environment	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by products. These byproducts include Trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increase risk of getting cancer.
9. Turbidity	TT	-	TT	N/A	Soil runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, Viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
10. Viruses (enteric)	TT	-	TT	0	Discharged especially where water is contaminated with sewage or animal wastes	Some people who drink water containing Viruses could experience severe gastrointestinal effects.
Radioactive Contaminants						
11. Beta/photon emitters	4 mrem/yr	-	4 mrem/yr	0	Decay of natural and man-made deposits	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
12. Alpha emitters	15 pCi/l	-	15 pCi/l	0	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
13. Combined radium	5 pCi/l	-	5 pCi/l	0	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
14. Uranium	0.030 mg/l	1000	30 ppb ¹	0	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
Inorganic Contaminants						
15. Antimony	0.006 mg/l	1000	6 ppb	6 ppb	Fire retardants; ceramics; electronics; solder	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
16. Arsenic	0.01 mg/l	1000	10 ppb	N/A	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
17. Asbestos	7 MFL	-	7 MFL	7 MFL	Decay of asbestos cement water mains; erosion of natural deposits	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
18. Barium	2 mg/l	-	2 ppm	2 ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
19. Beryllium	0.004 mg/l	1000	4 ppb	4 ppb	Discharge from electrical, aerospace, and defense industries; erosion of natural deposits	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
20. Bromate	0.010 mg/l	1000	10 ppb	0	By-product of drinking water Disinfection	Some people who drink water containing bromate in excess of the MCL over many years have an increased risk of getting cancer.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
21. Cadmium	0.005 mg/l	1000	5 ppb	5 ppb	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
22. Chloramines	MRDL= 4 mg/l	-	MRDL= 4 ppm	MRDLG= 4 ppm	Water additive used to control microbes	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
23. Chlorine	MRDL= 4 mg/l	-	MRDL= 4 ppm	MRDLG= 4 ppm	Water additive used to control microbes	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
24. Chlorine dioxide	MRDL= 0.8 mg/l	1000	800 ppb	MRDLG= 800 ppb	Water additive used to control microbes	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
25. Chlorite	1 mg/l	-	1 ppm	0.8 ppm	By-product of drinking water Disinfection	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
26. Chromium	0.1 mg/l	1000	100 ppb	100 ppb	Discharge from steel and pulp mills; erosion of natural deposits	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
27. Copper	AL=1.3 mg/l	-	AL=1.3 ppm	1.3 ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
28. Cyanide	0.2 mg/l	1000	200 ppb	200 ppb	Discharge from metal factories; discharge from plastic and fertilizer factories	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
29. Fluoride ³	4 mg/l	-	4 ppm	4 ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
30. Lead	AL= 0.015 mg/l	1000	AL=15 ppb	0	Corrosion of household plumbing systems; erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
31. Mercury [inorganic]	0.002 mg/l	1000	2 ppb	2 ppb	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
32. Nitrate	10 mg/l	-	10 ppm	10 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants younger than six months old who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
33. Nitrite	1 mg/l	-	1 ppm	1 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants younger than six months old who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
34. Perchlorate	0.002 mg/l	1000	2 ppb	N/A	Rocket propellants, fireworks, munitions, flares, blasting agents	Perchlorate interferes with the normal function of the thyroid gland and thus has the potential to affect growth and development, causing brain damage and other adverse effects, particularly in fetuses and infants. Pregnant women, the fetus, infants, children younger than 12 years old, and people with a hypothyroid condition are particularly susceptible to perchlorate toxicity.
35. Selenium	0.05 mg/l	1000	50 ppb	50 ppb	Discharge from metal refineries; erosion of natural deposits; discharge from mines	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
36. Thallium	0.002 mg/l	1000	2 ppb	0.5 ppb	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
Synthetic Organic Contaminants Including Pesticides and Herbicides						
37. 2,4-D (ppb)	0.07 mg/l	1000	70 ppb	70 ppb	Runoff from herbicide used on row crops	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
38. 2,4,5-TP [Silvex]	0.05 mg/l	1000	50 ppb	50 ppb	Residue of banned herbicide	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
39. Acrylamide	TT	-	TT	0	Added to water during sewage/ wastewater treatment	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
40. Alachlor	0.002 mg/l	1000	2 ppb	0	Runoff from herbicide used on row crops	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
41. Atrazine	0.003 mg/l	1000	3 ppb	3 ppb	Runoff from herbicide used on row crops	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
42. Benzo(a)pyrene [PAH]	0.0002 mg/l	1,000,000	200 ppt	0	Leaching from linings of water storage tanks and distribution lines	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
43. Carbofuran (ppb)	0.04 mg/l	1000	40 ppb	40 ppb	Leaching of soil fumigant used on rice and alfalfa	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
44. Chlordane	0.002 mg/l	1000	2 ppb	0	Residue of banned termiticide	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
45. Dalapon	0.2 mg/l	1000	200 ppb	200 ppb	Runoff from herbicide used on rights of way	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
46. Di(2-ethylhexyl) adipate	0.4 mg/l	1000	400 ppb	400 ppb	Discharge from chemical factories	Some people who drink water containing di(2-ethylhexyl) adipate well in excess of the MCL over many years could experience toxic effects such as weight loss, liver enlargement, or possible reproductive difficulties.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
47. Di(2-ethylhexyl) phthalate	0.006 mg/l	1000	6 ppb	0	Discharge from rubber and chemical factories	Some people who drink water containing di(2-ethylhexyl) phthalate well in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
48. Dibromochloropropane (DBCP)	0.0002 mg/l	1,000,000	200 ppt	0	Runoff/leaching from soil fumigant used on soybeans, cotton, and orchards	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive problems and may have an increased risk of getting cancer.
49. Dinoseb	0.007 mg/l	1000	7 ppb	7 ppb	Runoff from herbicide used on soybeans and vegetables	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
50. Diquat	0.02 mg/l	1000	20 ppb	20 ppb	Runoff from herbicide use	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
51. Dioxin [2, 3, 7, 8-TCDD] (ppq)	0.00000003 mg/l	1,000,000,000	30 ppq	0	Emissions from waste incineration and other combustion; discharge from chemical factories	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
52. Endothall	0.1 mg/l	1000	100 ppb	100 ppb	Runoff from herbicide use	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
53. Endrin	0.002 mg/l	1000	2 ppb	2 ppb	Residue of banned insecticide	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
54. Epichlorohydrin	TT	-	TT	0	Discharge from industrial chemical factories; an impurity of some water treatment chemicals	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.
55. Ethylene dibromide	0.00002 mg/l	1,000,000	20 ppt	0	Discharge from petroleum refineries	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
56. Glyphosate	0.7 mg/l	1000	700 ppb	700 ppb	Runoff from herbicide use	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
57. Heptachlor	0.0004 mg/l	1,000,000	400 ppt	0	Residue of banned pesticide	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
58. Heptachlor epoxide	0.0002 mg/l	1,000,000	200 ppt	0	Breakdown of heptachlor	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
59. Hexachlorobenzene	0.001 mg/l	1000	1 ppb	0	Discharge from metal refineries and agricultural chemical factories	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
60. Hexachlorocyclopenta-diene	0.05 mg/l	1000	50 ppb	50 ppb	Discharge from chemical factories	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
61. Lindane	0.0002 mg/l	1,000,000	200 ppt	200 ppt	Runoff/leaching from insecticide used on cattle, lumber, gardens	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
62. Methoxychlor	0.04 mg/l	1000	40 ppb	40 ppb	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
63. Oxamyl [Vydate]	0.2 mg/l	1000	200 ppb	200 ppb	Runoff/leaching from insecticide used on apples, potatoes and tomatoes	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
64. PCBs [Polychlorinated biphenyls]	0.0005 mg/l	1,000,000	500 ppt	0	Runoff from landfills; discharge of waste chemicals	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
65. Pentachloro-phenol	0.001 mg/l	1000	1 ppb	0	Discharge from wood preserving factories	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
66. Picloram	0.5 mg/l	1000	500 ppb	500 ppb	Herbicide runoff	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
67. Simazine	0.004 mg/l	1000	4 ppb	4 ppb	Herbicide runoff	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
68. Toxaphene	0.003 mg/l	1000	3 ppb	0	Runoff/leaching from insecticide used on cotton and cattle	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
Volatile Organic Contaminants						
69. Benzene	0.005 mg/l	1000	5 ppb	0	Discharge from factories; leaching from gas storage tanks and landfills	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
70. Carbon tetrachloride	0.005 mg/l	1000	5 ppb	0	Discharge from chemical plants and other industrial activities	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
71. Chlorobenzene	0.1 mg/l	1000	100 ppb	100 ppb	Discharge from chemical and agricultural chemical factories	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
72. o-Dichlorobenzene	0.6 mg/l	1000	600 ppb	600 ppb	Discharge from industrial chemical factories	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
73. p-Dichlorobenzene	0.005 mg/l	1000	5 ppb	5 ppb	Discharge from industrial chemical factories	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
74. 1,2-Dichloroethane	0.005 mg/l	1000	5 ppb	0	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
75. 1,1-Dichloroethylene	0.007 mg/l	1000	7 ppb	7 ppb	Discharge from industrial chemical factories	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
76. cis-1,2-Dichloroethylene	0.07 mg/l	1000	70 ppb	70 ppb	Discharge from industrial chemical factories	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
77. trans-1,2-Dichloroethylene	0.1 mg/l	1000	100 ppb	100 ppb	Discharge from industrial chemical factories	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
78. Dichloromethane	0.005 mg/l	1000	5 ppb	0	Discharge from pharmaceutical and chemical factories	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
79. 1,2-Dichloropropane	0.005 mg/l	1000	5 ppb	9	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
80. Ethylbenzene	0.7 mg/l	1000	700 ppb	700 ppb	Discharge from industrial chemical factories	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
81. Haloacetic Acids (HAA5)	0.060 mg/l	1000	60 ppb	N/A	By-product of drinking water Disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
82. Styrene	0.1 mg/l	1000	100 ppb	100 ppb	Discharge from rubber and plastic factories; leaching from landfills	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.
83. Tetrachloroethylene	0.005 mg/l	1000	5 ppb	0	Discharge from factories and dry cleaners and asbestos cement lined pipes	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
84. 1,2,4-Trichlorobenzene	0.07 mg/l	1000	70 ppb	70 ppb	Discharge from textile-finishing factories	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
85. 1,1,1-Trichloroethane	0.2 mg/l	1000	200 ppb	200 ppb	Discharge from metal degreasing sites and other factories	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
86. 1,1,2-Trichloroethane	0.005 mg/l	1000	5 ppb	3 ppb	Discharge from industrial chemical factories	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
87. Trichloroethylene	0.005 mg/l	1000	5 ppb	0	Discharge from metal degreasing sites and other factories	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
88. TTHMs [Total Trihalomethanes]	0.08 mg/l	1000	80 ppb	N/A	By-product of drinking water Disinfection	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
89. Toluene	1 mg/l	-	1 ppm	1 ppm	Discharge from petroleum factories	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
90. Vinyl Chloride	0.002 mg/l	1000	2 ppb	0	Leaching from PVC piping; discharge from plastics factories	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
91. Xylenes	10 mg/l (10,000 ppb)	1000	10 ppm 10,000 ppb	10 ppm	Discharge from petroleum factories; discharge from chemical factories	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.
Per- and Polyfluoroalkyl Substances (PFAS)						
92. PFAS6	0.000020 mg/l	1,000,000	20 ng/l (or ppt)	None	Discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture and oil resistant coatings on fabrics and other materials. Additional sources include the use and disposal of products containing these PFAS, such as fire-fighting foams.	Some people who drink water containing these PFAS in excess of the MCL may experience certain adverse effects. These could include effects on the liver, blood, immune system, thyroid, and fetal development. These PFAS may also elevate the risk of certain cancers.

(b) Table 2 - Unregulated Contaminants Chart.

Sources to Drinking Water and Health Effects

Key:
 CASRN - Chemical Abstract Services Registry Number ppm - parts per million pCi/L - Picocuries per liter
 CCR - Consumer Confidence Report
 ORSG - Office of Research and Standards Guideline ppb - parts per billion
 mg/L - milligrams per liter (same as ppm) ppt - parts per trillion

Chemical (CASRN)	ORSG	To convert for CCR, multiply by	ORSG in CCR units	Source to Drinking Water	Health Effects
Acetone (67641)	6.3 mg/L	-	6.3 ppm	Discharge from industrial production and use, in automobile exhaust, from landfills and natural sources	Some people who drink water containing acetone at high concentrations for many years could experience effects on the blood, kidney, liver, and reproductive system.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Chemical (CASRN)	ORSG	To convert for CCR, multiply by	ORSG in CCR units	Source to Drinking Water	Health Effects
Aldicarb (116063)	0.003 mg/L	1000	3 ppb	Run-off from use as a pesticide	Some people who drink water containing aldicarb at high concentrations for many years could experience effects on the central nervous system.
Aldicarb sulfone (1646884)	0.002 mg/L	1000	2 ppb	Degraded from aldicarb by plants	Some people who drink water containing aldicarb sulfone in high concentrations for many years could experience effects on the central nervous system.
Aldicarb sulfoxide (74839)	0.004 mg/L	1000	4 ppb	Degraded from aldicarb by plants	Some people who drink water containing aldicarb sulfoxide in high concentrations for many years could experience effects on the central nervous system.
Aldrin	*	-	-	Run-off from insecticide use	Some people who drink water containing aldrin in high concentrations for many years could experience liver damage, kidney effects.
4-androstene-3,17-dione (63058)	*	-	-	-	-
Bromobenzene (108861)	*	-	-	Discharge from use in chemical manufacturing	Some people who drink water containing bromobenzene in high concentrations for many years could experience central nervous system effects.
Bromomethane (methyl bromide) (74839)	0.01 mg/L	1000	10 ppb	Run-off from use as a fumigant	Some people who drink water containing bromomethane at high concentrations for many years could experience digestive tract effects, and headaches.
Bromodichloromethane (75274)	*	-	-	Trihalomethane; by-product of drinking water chlorination	Some people who drink water containing bromodichloromethane at high concentrations for many years could experience liver and kidney problems.
Bromochloromethane (Halon 1001) (74975)	*	-	-	-	-

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Chemical (CASRN)	ORSG	To convert for CCR, multiply by	ORSG in CCR units	Source to Drinking Water	Health Effects
Bromoform (75252)	*	-	-	Trihalomethane; by-product of drinking water chlorination	Some people who drink water containing bromoform at high concentrations for many years could experience liver and kidney problems.
Butachlor (23184669)	*	-	-	Run-off from use as a herbicide	Some people who drink water containing butachlor at high concentrations for many years could experience liver effects.
1,3-Butadiene (106990)	*	-	-	-	-
Butylbenzene isomers (n;sec;tert)	*	-	-	Run-off from industrial use	Some people who drink water containing butylbenzene isomers at high concentrations for many years could experience central nervous system effects.
Carbaryl (63252)	*	-	-	Run-off from use as an insecticide	Some people who drink water containing carbaryl at high concentrations for many years could experience kidney and liver effects.
Chlorate (14866683)	*	-	-	-	-
Chlorodifluoromethane (HCFC-22) (75456)	*	-	-	-	-
Chloroethane (75003)	*	-	-	Discharge from industrial uses	Some people who drink water containing chloroethane at high concentrations for many years could experience dizziness, nausea, and vomiting.
Chloroform (67663)	0.07 mg/L	1000	70 ppb	Trihalomethane; by-product of drinking water chlorination. [In non-chlorinated sources, chloroform may be naturally occurring.]	Some people who drink water containing chloroform at high concentrations for many years could experience liver and kidney problems and may have an increased risk of cancer.
Chloromethane (methyl chloride) (74873)	*	-	-	Discharge from industrial uses	Some people who drink water containing chloromethane at high concentrations for many years could experience dizziness and fatigue.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Chemical (CASRN)	ORSG	To convert for CCR, multiply by	ORSG in CCR units	Source to Drinking Water	Health Effects
o-Chlorotoluene (95498)	*	-	-	Discharge from industrial use	Some people who drink water containing o-chlorotoluene at high concentrations for many years could experience central nervous system effects.
Chromium-6 (18540299)	*	-	-	-	-
Cobalt (7440484)	*	-	-	-	-
Dibromochloromethane (124481)	*	-	-	Trihalomethane; by-product of drinking water chlorination	Some people who drink water containing dibromochloromethane at high concentrations for many years could experience liver and kidney problems.
Dicamba (1918009)	*	-	-	Run-off from use as a herbicide	Some people who drink water containing dicamba at high concentrations for many years could experience central nervous system effects.
m-Dichlorobenzene (541731)	*	-	-	Discharge from use in chemical manufacturing	Some people who drink water containing m-dichlorobenzene at high concentrations for many years could experience damage to red blood cells.
Dichlorodifluoromethane (Freon 12) (75718)	1.4 mg/L	-	1.4 ppm	Discharge from use as a refrigerant	Some people who drink water containing dichlorodifluoromethane at high concentrations for many years could experience dizziness and headaches.
1,1-Dichloroethane (75343)	0.07 mg/L	1000	70 ppb	Discharge from use as a degreasing agent	Some people who drink water containing 1,1-dichloroethane at high concentrations for many years could experience liver and kidney effects.
2,2-Dichloropropane	*	-	-	Discharge from use in chemical manufacturing	Some people who drink water containing 2,2-dichloropropane at high concentrations for many years could experience central nervous system effects.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Chemical (CASRN)	ORSG	To convert for CCR, multiply by	ORSG in CCR units	Source to Drinking Water	Health Effects
1,3-Dichloropropane (142289)	*	-	-	Discharge from use in chemical manufacturing	Some people who drink water containing 1,3-dichloropropane at high concentrations for many years could experience central nervous system effects.
1,1-Dichloropropene	*	-	-	Discharge from use in chemical manufacturing	Some people who drink water containing 1,1-dichloropropene at high concentrations for many years could experience central nervous system effects.
1,3-Dichloropropene (cis,trans) (542756)	0.0004 mg/L	1,000,000	400 ppt	Run-off from use as a nematocide	Some people who drink water containing cis or trans-1.3-dichloropropene at high concentrations for many years could experience irritation of the eyes, ears, nose, and throat or cancer.
Dieldrin (60571)	*	-	-	Run-off from pesticide application	Some people who drink water containing dieldrin at high concentrations for many years could experience liver damage, convulsions, or cancer.
1,4-Dioxane (123911)	0.0003 mg/L	1000	0.3 ppb	Discharge from chemical manufacturing and landfills	Some people who drink water containing 1,4-dioxane at high concentrations for many years could experience chronic kidney and liver effects and liver cancer.
Enteroviruses (N/A)	*	-	-	-	-
Equilin (474862)	*	-	-	-	-
17-B-estradiol (50282)	*	-	-	-	-
Estrone (53167)	*	-	-	-	-
Ethylene glycol (107211)	14 mg/L	-	14 ppm	Run-off from use as a deicing chemical; discharge from antifreeze and industrial solvents	Some people who drink water containing ethylene glycol at high concentrations for many years could experience effects on the kidneys, nervous system, and the heart.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Chemical (CASRN)	ORSG	To convert for CCR, multiply by	ORSG in CCR units	Source to Drinking Water	Health Effects
17-a-ethynylestradiol (ethinyl estradiol) (57636)	*	-	-	-	-
Hexachlorobutadiene (87683)	*	-	-	Discharge from use as an industrial solvent	Some people who drink water containing hexachlorobutadiene at high concentrations for many years could experience kidney effects and effects on a fetus.
3-Hydroxycarbofuran	*	-	-	Breakdown product from the use of the pesticide carboxyuran	Some people who drink water containing 3-hydroxycarbofuran at high concentrations for many years could experience liver effects.
Isopropylbenzene (98828)	*	-	-	Discharge from chemical manufacturing	Some people who drink water containing isopropylbenzene at high concentrations for many years could experience central nervous system effects.
Isopropyltoluene	*	-	-	Discharge from chemical manufacturing	Some people who drink water containing isopropyltoluene at high concentrations for many years may experience central nervous system effects.
Methyl ethyl ketone (78933)	0.35 mg/L	1000	350	Discharge from use as a production solvent and degreaser	Some people who drink water containing methyl ethyl ketone at high concentrations for many years could experience effects on the kidney.
Methyl isobutyl ketone (108101)	4.0 mg/L	-	4 ppm	Discharge from use as a production and extraction solvent	Some people who drink water containing methyl isobutyl ketone at high concentrations for many years could experience effects on the kidney and liver.
Methyl tertiary butyl ether or MTBE (1634044)	0.07 mg/L	1000	70 ppb	Fuel additive; leaks and spills from gasoline storage tanks	Some people who drink water containing methyl tertiary butyl ether at high concentrations for many years could experience chronic effects on the kidney and liver and possible cancer.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Chemical (CASRN)	ORSG	To convert for CCR, multiply by	ORSG in CCR units	Source to Drinking Water	Health Effects
Methomyl (16752775)	*	-	-	Runoff from use as an insecticide	Some people who drink water containing methomyl at high concentrations for many years could experience kidney effects.
Metolachlor (51218452)	0.1 mg/L	1000	100 ppb	Run-off from use as a herbicide	Some people who drink water containing metolochlor at high concentrations for many years could experience cancer.
Metribuzin (21087649)	*	-	-	Run-off from use as a herbicide	Some people who drink water containing metribuzin at high concentrations for many years could experience liver and kidney effects.
Molybdenum (7439987)	*	-	-	-	-
Naphthalene (91203)	0.140 mg/L	1000	140 ppb	Discharge from use in mothballs and other domestic products	Some people who drink water containing naphthalene at high concentrations for many years could experience damage to red blood cells, nausea and vomiting.
Nickel (7440020)	0.1 mg/L	1000	100 ppb	Discharge from domestic wastewater, landfills, and mining and smelting operations	Some people who drink water containing nickel at high concentrations for many years could experience effects on the lung, stomach, blood, liver, kidneys, immune system, reproduction, and development.
N-nitrosodimethylamine (NDMA) (62759)	*	-	-	Discharge from industrial use; as a by-product of drinking water treatment; produced from naturally occurring precursor chemicals	Some people who drink water containing NDMA at high concentrations as well as infants born to pregnant women who drink the water may experience an increased risk of cancer. This chemical may also produce liver disease and kidney effects after short-term exposure to high doses or long-term exposure to lower doses.
Noroviruses (N/A)	*	-	-	-	-
Hexafluoropropylene oxide dimer acid (HFPO-DA) (13252-13-6)	*	-	-	-	-

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Chemical (CASRN)	ORSG	To convert for CCR, multiply by	ORSG in CCR units	Source to Drinking Water	Health Effects
N-ethyl perfluorooctanesulfonamide doacetic acid (NEtFOSAA) (2991-50-6)	*	-	-	-	-
N-methyl perfluorooctanesulfonamide doacetic acid (NMeFOSAA) (2355-31-9)	*	-	-	-	-
Perfluorobutanesulfonic Acid (PFBS) (375735)	*	-	-	-	-
Perfluorododecanoic acid (PFDoA) (307-55-1)	*	-	-	-	-
Perfluorohexanoic acid (PFHxA) (307-24-4)	*	-	-	-	-
Perfluorotetradecanoic acid (PFTA) (376-06-7)	*	-	-	-	-
Perfluorotridecanoic acid (PFTTrDA) (72629-94-8)	*	-	-	-	-
Perfluoroundecanoic acid (PFUnA) (2058-94-8)	*	-	-	-	-
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) (763051-92-9)	*	-	-	-	-
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS) (756426-58-1)	*	-	-	-	-
4,8-dioxa-3H-perfluoronanoic acid (ADONA) (919005-14-4)	*	-	-	-	-
Petroleum hydrocarbons Total P.H. Aliphatics C5-C8 (30080) C9-C12(30089) C9-C18(30092) C19-C36(30057) Aromatics C9-C10(30087) C11-C22(30048)	0.2 mg/L 0.3 mg/L 0.7 mg/L 0.7 mg/L 14.0 mg/L 0.2 mg/L 0.2 mg/L	1000 1000 1000 1000 0 1000 1000	200 ppb 300 ppb 700 ppb 700 ppb 14 ppm 200 ppb 200 ppb	Discharge from the production, distribution, storage, and use of petroleum in transportation and industrial applications	Some people who drink water containing petroleum hydrocarbons at high concentrations for many years could experience effects on the central nervous system, blood, immune system, liver, spleen, kidneys, developing fetus, and lungs.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Chemical (CASRN)	ORSG	To convert for CCR, multiply by	ORSG in CCR units	Source to Drinking Water	Health Effects
Propachlor (1918167)	*	-	-	Runoff from use as a herbicide	Some people who drink water containing propachlor at high concentrations for many years could experience liver effects.
n-propylbenzene (103651)	*	-	-	Discharge from chemical manufacturing	Some people who drink water containing n-propylbenzene at high concentrations for many years may experience central nervous system effects.
Radon-222 (14869677)	10,000 pCi/L	-	10,000 pCi/L	Natural sources	Some people who drink water containing radon-222 at high concentrations for many years could experience cancer of the lung.
Sodium (7440235)	20 mg/L	-	20 ppm	Discharge from the use and improper storage of sodium-containing deicing compounds or in water-softening agents	Some people who drink water containing sodium at high concentrations for many years could experience an increase in blood pressure.
Strontium (7440246)	*	-	-	-	-
Sulfate	*	-	-	Natural sources	Some people who drink water containing sulfate at high concentrations for many years could experience diarrhea.
Tertiary-amyl methyl ether (TAME) (994058)	0.09 mg/L	1000	90 ppb	Discharge from use as an octane enhancer and oxygenate in gasoline	Some people who drink water containing TAME at high concentrations for many years could experience effects on the kidney and liver and possible cancer.
Tertiary butyl alcohol (TBA) (75650)	0.12 mg/L	1000	120 ppb	Degraded from MTBE; discharged from use as an octane enhancer and oxygenate in gasoline	Some people who drink water containing TBA at high concentrations for many years could experience effects on the kidney and bladder and possible cancer.
Testosterone (58220)	*	-	-	-	-

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Chemical (CASRN)	ORSG	To convert for CCR, multiply by	ORSG in CCR units	Source to Drinking Water	Health Effects
1,1,1,2-Tetrachloroethane (630206)	*	-	-	Discharge from use in chemical manufacturing	Some people who drink water containing 1,1,1,2-tetrachloroethane at high concentrations for many years could experience liver effects.
1,1,2,2-Tetrachloroethane (79345)	*	-	-	Discharge from use in dry cleaning	Some people who drink water containing 1,1,2,2-tetrachloroethane at high concentrations for many years could experience nausea, vomiting and liver damage.
Tetrahydrofuran (109999)	1.3 mg/L	-	1.3 ppm	Discharge from use as an adhesive for joining pipes in water treatment systems and as a production solvent	Some people who drink water containing tetrahydrofuran at high concentrations for many years could experience effects on the central nervous system, liver, kidney, and lung and possible cancer.
1,2,3-Trichlorobenzene	*	-	-	Discharge from use in chemical manufacturing	Some people who drink water containing 1,2,3-trichlorobenzene at high concentrations for many years could experience liver effects.
1,1,2-Trichloro-1,2,2-trifluoroethane (76131)	210 mg/L	-	210 ppm	Discharge from use as a cleaning agent, production solvent, and blowing agent	Some people who drink water containing 1,1,2-trichloro-1,2,2-trifluoroethane at high concentrations for many years could experience problems on the nervous system.
Trichlorofluoromethane (Freon 11) (75694)	*	-	-	Discharge from use as a refrigerant	Some people who drink water containing trichlorofluoromethane at high concentrations for many years could experience central nervous system effects.
1,2,3-Trichloropropane (96184)	*	-	-	Discharge from use in paint and varnish removers	Some people who drink water containing 1,2,3-trichloropropane at high concentrations for many years could experience liver damage.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Chemical (CASRN)	ORSG	To convert for CCR, multiply by	ORSG in CCR units	Source to Drinking Water	Health Effects
1,2,4-Trimethylbenzene (95636)	*	-	-	Discharge from use in dyes and paints	Some people who drink water containing 1,2,4-trimethylbenzene at high concentrations for many years could experience central nervous system effects.
1,3,5-Trimethylbenzene (108678)	*	-	-	Discharge from use in chemical manufacturing	Some people who drink water containing 1,3,5-trimethylbenzene at high concentrations for many years could experience central nervous system effects.
Vanadium (7440622)	*	-	-	-	-

* There is no ORS Guideline issued as yet for these contaminants. Health risk information for these chemicals may be obtained from the Drinking Water Program's Consumer Confidence Report guidance available on the MassDEP website or by contacting the Drinking Water Program. Drinking Water Contaminant Human Health Effects Information is also available on USEPA's website.

22.16A: continued

(c) Table 3 - Secondary Contaminants Chart.**Sources to Drinking Water and Health and/or Aesthetic Effects****Key:**

CASRN - Chemical Abstract Services Registry Number

SMCL - Secondary Maximum Contaminant Level

C.U. - Color Unit

T.O.N. - Threshold odor numbers

mg/L - milligram per liter (same as ppm)

ppm - parts per million

ppb - parts per billion

Chemical (CASRN)	SMCL	To convert for CCR, multiply by	SMCL in CCR units	Source to Drinking Water	Health and/or Aesthetic Effects
Aluminum	0.2 mg/L	1000	200 ppb	Residue from water treatment process: erosion of natural deposits	May produce colored water.
Chloride	250 mg/L	-	250 ppm	Runoff and leaching from natural deposits; seawater influence	May produce a salty taste.
Color	15 C.U.	-	15 C.U.	Naturally occurring material	May produce a visible tint.
Copper	1 mg/L	-	1 ppm	Internal corrosion of household plumbing; erosion of natural deposits	May produce a metallic taste; blue-green staining.
Corrosivity	Non-corrosive	-	-	Balance of hydrogen, carbon, and oxygen in water, affected by temperature and other factors	May produce a metallic taste; corroded pipes; fixture staining.
Fluoride	2.0 mg/L	-	2 ppm	Erosion of natural deposits	May produce tooth discoloration.
Foaming agents	0.5 mg/L	1000	500 ppb	Municipal and industrial waste discharge	May produce froth; cloudiness; bitter taste; odor.
Iron	0.3 mg/L	1000	300 ppb	Natural and industrial sources as well as aging and corroding Distribution Systems and household pipes	Use of water containing iron at concentrations above the secondary MCL may result in aesthetic issues, including the staining of laundry and plumbing fixtures and water with an unpleasant metallic taste and rusty odor.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.16A: continued

Chemical (CASRN)	SMCL	To convert for CCR, multiply by	SMCL in CCR units	Source to Drinking Water	Health and/or Aesthetic Effects
Manganese ⁵	0.05 mg/L (0.30 mg/L, ORSG)	1000	50 ppb (300 ppb, ORSG)	Natural sources as well as discharges from industrial uses	Drinking water may naturally have manganese and, when concentrations are greater than 50 ppb, the water may be discolored and taste bad. Over a lifetime, the EPA recommends that people drink water with manganese levels less than 300 ppb and over the short term, EPA recommends that people limit their consumption of water with levels over 1000 ppb, primarily due to concerns about possible neurological effects. Children younger than one year old should not be given water with manganese concentrations over 300 ppb, nor should formula for infants be made with that water for more than a total of ten days throughout the year.
Odor	3 T.O.N.	-	3 T.O.N.	Naturally occurring organic materials that form ions when in water; seawater influence	May produce a "rotten-egg", musty, or chemical smell.
pH	6.5-8.5	-	6.5-8.5	Runoff and leaching from natural deposits; seawater influence	Low pH may produce: bitter metallic taste; corrosion High pH may produce a slippery feel; soda taste; deposits.
Silver	0.10 mg/L	1000	100 ppb	Naturally occurring element	May produce skin discoloration; graying of the white part of the eye.
Sulfate	250 mg/L	-	250 ppm	Runoff and leaching from natural deposits; industrial wastes	May produce a salty taste.
Total dissolved solids (TDS)	500 mg/L	-	500 ppm	Runoff and leaching from natural deposits; seawater influence	May produce hardness; deposits; colored water; staining; salty taste.
Zinc	5 mg/L	-	5 ppm	Corrosion of household plumbing systems; erosion of natural deposits	May produce a metallic taste.

⁵ EPA has established a lifetime "Health Advisory" (HA) of 0.3 mg/L and an acute HA at 1.0 mg/L for Manganese and this HA contains a precautionary statement that "for infants younger than six months, the lifetime Health Advisory of 0.3 mg/L be used even for an acute exposure of ten days, because of the concerns for differences in manganese content in human milk and formula and the possibility of a higher absorption and lower excretion in young infants". MassDEP extended that age to one year out of concerns for formula use up to that age and the potential susceptibility of this early life stage to excessive manganese exposure and potential resultant toxicity.

Please go to <http://water.epa.gov/drink/contaminants/secondarystandards.cfm> for additional information on secondary contaminants.

22.17: continued

- (10) A record of the most recent asbestos repeat monitoring determination, including the monitoring results and other data supporting the determination, the Department's findings based on the supporting data and any additional bases for the determination and the repeat monitoring frequency; except that these records shall be maintained in perpetuity or until a more current repeat monitoring determination has been issued.
- (11) Copies of the public notices issued pursuant to 310 CMR 22.16 and certifications made to the Department pursuant to 310 CMR 22.15(3)(b) shall be kept for three years after issuance.
- (12) Each supplier of water who is subject to the requirements of 310 CMR 22.20F shall, in addition to recordkeeping requirements under 310 CMR 22.20A(6), maintain records as follows:
 - (a) Individual Filter Turbidity Requirements. The results of individual filter monitoring, conducted in accordance with 310 CMR 22.20D(6)(b) and 22.20F(7)(a) through (e), must be kept for at least three years.
 - (b) Disinfection Profiling. The results of the profile (including raw data and analysis), conducted in accordance with 310 CMR 22.20D(3)(b) and 22.20F(4)(a) through (g), must be kept indefinitely.
 - (c) Disinfection Benchmarking. The benchmark (including raw data and analysis), conducted in accordance with 310 CMR 22.20D(3)(c) and 22.20F(5)(a) through (e), must be kept indefinitely.
- (13) Copies of monitoring plans developed pursuant to 310 CMR 22.07F shall be kept for the same period of time as the records of analyses taken under the plan are required to be kept under 310 CMR 22.17(1), except as specified elsewhere in 310 CMR 22.17.

22.18: Right of Entry

All suppliers of water shall authorize agents and employees of the Commonwealth, upon presentation of their credentials, to enter their premises, excluding dwelling places, without a warrant for the purpose of inspecting, surveying and sampling public water systems, whether or not the Commonwealth has evidence that the system is in violation of an applicable legal requirement.

22.19: Distribution System Requirements

In order to protect the distribution system of a public water system from contamination the following requirements shall be applied:

- (1) All service connections shall have a minimum residual water pressure at street level of at least 20 pounds per square inch under all design conditions of flow.
- (2) Water Storage Tanks. All water storage tanks used for the storage of ground or treated water which are connected to a distribution system of a public water system shall be covered and constructed and located so as to adequately protect the water from contamination. Tank vents and overflow pipes shall be properly screened to prevent contamination and not be directly connected to sanitary sewers or to storm drainage systems. Sewers, drains, standing water and similar sources of possible contamination must be kept at least 50 feet from the tank. Water main pipe, pressure tested to 50 pounds per square inch without leakage, may be used for gravity sewers at distances greater than 20 feet and less than 50 feet from said water storage tank.
- (3) Storage Reservoirs. Open or uncovered earth embankment or reinforced concrete reservoirs, which are connected to a distribution system of a public water system, and used to store ground or treated water whose intended purpose is to equalize hourly and daily fluctuations of water, may continue to be used provided that said facility complies with the requirements of 310 CMR 22.20A.

22.19: continued

(4) Construction Materials Evaluation. Community water supply systems shall identify whether the following construction materials are present in their distribution system and report to the Department:

- (a) Lead from piping, solder, caulking, interior lining of distribution mains, alloys and home plumbing;
- (b) Copper from piping and alloys, service lines, and home plumbing;
- (c) Galvanized piping, service lines, and home plumbing;
- (d) Ferrous piping materials such as cast iron and steel; and
- (e) Asbestos cement pipe.

(5) Identification and Reporting of Other Materials of Construction. In addition, the Department may require identification and reporting of other materials of construction present in distribution systems that may contribute contaminants to the drinking water such as:

- (a) Vinyl lined asbestos cement pipe; and
- (b) Coal tar lined pipes and tanks.

(6) All suppliers of water shall develop, update and maintain maps and any relevant associated databases of their water system distribution system that include locations of wells, surface water intakes, treatment facilities, pumping stations, storage tanks, hydrants, direction of flow, pressure zones, sample collection points and other information, such as piping materials and pipe sizes, as requested by the Department. The supplier shall make these maps available to the Department upon request.

22.20A: Surface Water Treatment Rule

(1) General Requirements.

(a) 310 CMR 22.20A establishes criteria under which Filtration is required as a Treatment Technique for Public Water Systems supplied by Surface Water Sources and groundwater sources under the direct influence of surface water. In addition, 310 CMR 22.20A establishes Treatment Technique requirements in *lieu* of Maximum Contaminant Levels for the following contaminants:

1. *Giardia lamblia*;
2. Viruses;
3. Heterotrophic plate count bacteria;
4. *Legionella*; and
5. Turbidity.

(b) Each Supplier of Water with a Surface Water Source, or groundwater source under the direct influence of surface water, must provide treatment of that source water that complies with the Treatment Technique requirements set forth in 310 CMR 22.20A. The Treatment Technique requirements consist of installing and properly operating water treatment processes which reliably achieve:

1. At least 99.9% (3 log) removal and/or inactivation of *Giardia lamblia* cysts between a point where the Raw Water is not subject to recontamination by Surface Water runoff and a point downstream before or at the first customer; and
2. At least 99.99% (4 log) removal and/or inactivation of Viruses between a point where the Raw Water is not subject to recontamination by Surface Water runoff and a point downstream before or at the first customer.

(c) A Supplier of Water using a Surface Water Source or groundwater source under the direct influence of surface water shall be deemed in compliance with the requirements of 310 CMR 22.20A(1)(a) and (b) if:

1. It meets the requirements for avoiding Filtration in 310 CMR 22.20A(2) and the Disinfection requirements in 310 CMR 22.20A(3)(a); or
2. It meets the Filtration requirements in 310 CMR 22.20A(4) and the Disinfection requirements in 310 CMR 22.20A(3)(b).

(d) Each Supplier of Water using a Surface Water Source or a groundwater source under the direct influence of surface water must be operated by a Certified Operator in compliance with 310 CMR 22.11B.

(e) In addition to complying with requirements of 310 CMR 22.20A, systems serving at least 10,000 people shall also comply with the requirements of 310 CMR 22.20D.

22.20A: continued

(f) In addition to complying with the requirements of 310 CMR 22.20A, each Supplier of Water that serves fewer than 10,000 people must also comply with the requirements in 310 CMR 22.20F.

(2) Criteria for Avoiding Filtration. A Supplier of Water that uses a Surface Water Source must meet all of the conditions in 310 CMR 22.20A(2)(a) and (b) and is subject to 310 CMR 22.20A(2)(c) beginning June 29, 1991, unless the Department has notified it in writing that Filtration is required. A Supplier of Water that uses a groundwater source under the direct influence of surface water must meet all of the conditions in 310 CMR 22.20A(2)(a) and (b) and is subject to 310 CMR 22.20A(2)(c) beginning 18 months after the Department determines that it is under the direct influence of surface water, or June 29, 1991, whichever is later, unless the Department has notified it in writing that Filtration is required. If the Department determines in writing, before June 29, 1991 that Filtration is required, the Supplier of Water must have installed Filtration and meet the criteria for filtered systems specified in 310 CMR 22.20A(3)(b) and (4) by June 29, 1993. Within 18 months of the failure of a system using a Surface Water Source or a groundwater source under the direct influence of surface water to meet any one of the requirements in 310 CMR 22.20A(2)(a) and (b) or after June 29, 1993, whichever is later, the Supplier of Water must have installed Filtration and meet the criteria for filtered systems specified in 310 CMR 22.20A(3)(b) and (4).

(a) Source Water Quality Conditions.

1. The fecal coliform concentration must be equal to or less than 20/100 ml, or the total coliform concentration must be equal to or less than 100/100 ml (measured as specified in 310 CMR 22.20A(5)(a)1. and (b)1. in representative samples of the source water immediately prior to the first or only Point of Disinfectant Application in at least 90% of the measurements made for the six previous months that the system served water to the public on an ongoing basis. If a system measures both fecal and total coliform, the fecal coliform criterion, but not the total coliform criterion, in 310 CMR 22.20A(2)(a)1. must be met.
2. The Turbidity level cannot exceed one NTU (measured as specified in 310 CMR 22.20A(5)(a)1. and (b)2. in representative samples of the source water immediately prior to the first or only Point of Disinfectant Application except that five or fewer Turbidity units may be allowed if the Supplier of Water can demonstrate to the Department that the higher Turbidity does not do any of the following:
 - a. Interfere with Disinfection.
 - b. Prevent maintenance of an effective Disinfectant agent throughout the Distribution System; or
 - c. Interfere with microbiological determinations.
3. The Turbidity level cannot exceed five NTU (at any time) unless:
 - a. The Department determines that any such event was caused by circumstances that were unusual and unpredictable; and
 - b. As a result of any such event, there have not been more than two events in the past 12 months the system served water to the public, or more than five events in the past 120 months the system served water to the public, in which the Turbidity level exceeded five NTU. An "event" is a series of consecutive days during which at least one Turbidity measurement each day exceeds five NTU.

(b) Site Specific Conditions.

1. A Supplier of Water must meet the requirements of 310 CMR 22.20A(3)(a)1. at least 11 of the 12 previous months that its system served water to the public on an ongoing basis, unless the system fails to meet the requirements during two of the 12 previous months that the system served water to the public, and the Department determines that at least one of the failures was caused by circumstances that were unusual and unpredictable.
2. A Supplier of Water must meet the requirements of 310 CMR 22.20A(3)(a)2. at all times its system serves water to the public unless otherwise approved by the Department.
3. A Supplier of Water must meet the requirements of 310 CMR 22.20A(3)(a)3. at all times its system serves water to the public unless the Department determines that any such failure was caused by circumstances that were unusual and unpredictable.

22.20A: continued

4. A Supplier of Water must meet the requirements of 310 CMR 22.20A(3)(a)4. on an ongoing basis, unless the Department determines that any such failure was not caused by a deficiency in treatment of the source water.
5. A Supplier of Water must maintain a Watershed Protection/Control Program that adequately minimizes the potential for contamination by *Giardia lamblia* cysts, *Cryptosporidium oocysts* and Viruses. During onsite inspection, the Department will determine whether the Watershed Protection/Control Program is adequate to minimize the potential for contamination by *Giardia lamblia* cysts, *Cryptosporidium oocysts* and Viruses in the source water. The adequacy of the Watershed Protection/Control Program to prevent potential contamination of the source water and other contaminants must be based on:
 - a. The comprehensiveness of the watershed review;
 - b. The effectiveness of the system's program to monitor and control detrimental activities occurring in the Watershed; and
 - c. Extent to which the water system has maximized land ownership and/or controlled land use within the Watershed.
 - d. At a minimum, a Watershed Protection/Control Program shall include the following information:
 - i. a Watershed description, including maps and accompanying narratives of major physical features, components of the water system, and hydrological characteristics;
 - ii. the Watershed characteristics and activities which may have an adverse effect on source water quality;
 - iii. a risk assessment and plan for controlling detrimental activities/events that may have an adverse impact on source water quality;
 - iv. a plan for monitoring Raw Water quality parameters at locations vulnerable to contamination from detrimental activities;
 - v. demonstrated control through land ownership and/or land use restrictions on all human activities within the Watershed which may have an adverse impact on the microbiological quality of the source water; and
 - vi. a management plan for staffing, training and maintaining effective day to day operations (including Emergency response to contamination) and implementing a Department-approved Watershed Control/Protection Program.
 - vii. a description of activities in the Watershed that affect water quality, projects what adverse activities are expected to occur in the future, describes how the Supplier of Water expects to address them and otherwise complies with 310 CMR 22.20B(9) and 22.21(4), if applicable.
 - e. The Supplier of Water shall submit an annual report on Department-approved forms to the Department. The annual report shall identify any special concerns about the Watershed and how they are being handled;
6. The Supplier of Water shall be subject to an annual on site inspection by the Department or a Person designated by the Department to assess the Watershed Protection/Control Program and Disinfection treatment process. A report of the on site inspection which summarizes all findings must be prepared every year. The on site inspection must indicate to the Department's satisfaction that the Watershed Protection/Control Program and Disinfection treatment process are adequately designed and maintained. The on site inspection must include:
 - a. A review of the effectiveness of the Watershed Protection/Control Program Plan;
 - b. A review of the physical condition of the source intake and how well it is protected;
 - c. A review of the system's equipment maintenance program to ensure there is low probability for failure of the Disinfection process;
 - d. An inspection of the Disinfection equipment for physical deterioration;
 - e. A review of operating procedures;
 - f. A review of data records to ensure that all required tests are being conducted and recorded and Disinfection is effectively practiced; and
 - g. Identification of any improvements which are needed in the equipment, system maintenance and operation, or data collection.

22.20A: continued

7. The Public Water System must not have been identified as a source of a Waterborne Disease Outbreak, or if it has been so identified, the system must have been modified sufficiently to prevent another such occurrence, as determined by the Department.

8. A Supplier of Water must comply with the Maximum Contaminant Level (MCL) for *E. coli* in 310 CMR 22.05(8) at least 11 months of the 12 previous months that the system served water to the public, on an ongoing basis, unless the Department determines that failure to meet this requirement was not caused by a deficiency in treatment of the source water.

9. Each Supplier of Water shall comply with the requirements for Trihalomethanes in 310 CMR 22.07(1) and (2) until December 31, 2001. After January 1, 2002, the Public Water System shall comply with the requirements for Total Trihalomethanes, Haloacetic Acids (Five), bromate, chlorite, chlorine, chloramines and chlorine dioxide as appropriate or applicable depending on Disinfectant used and in accordance with 310 CMR 22.07E.

(c) Treatment Technique Violations.

1. A Supplier of Water shall be deemed in violation of a Treatment Technique requirement if it:

- a. fails to meet any one of the criteria in 310 CMR 22.20A(2)(a) or (b) and/or which the Department has notified in writing that Filtration is required; or
- b. fails to install Filtration by the date specified in 310 CMR 22.20A(2).

2. A Supplier of Water that has not installed Filtration is in violation of a Treatment Technique requirement if:

- a. the Turbidity level (measured as specified in 310 CMR 22.20A(5)(a)1. and (b)2.) in a representative sample of the source water immediately prior to the first or only point of Disinfection exceeds one NTU unless five or fewer NTU units have been allowed by the Department; or
- b. its system is identified as a source of a Waterborne Disease Outbreak.

(3) Disinfection. A Supplier of Water that uses a Surface Water Source and does not provide Filtration treatment must provide the Disinfection treatment specified in 310 CMR 22.20A(3)(a) beginning December 29, 1991, unless the Department notifies it in writing that Filtration is required. A Supplier of Water that uses a groundwater source under the direct influence of surface water and does not provide Filtration treatment must provide Disinfection treatment specified in 310 CMR 22.20A(3)(a) beginning December 29, 1991, or 18 months after the Department determines that the groundwater source is under the influence of surface water, whichever is later, unless the Department has notified it in writing that Filtration is required. If the Department has determined that Filtration is required, the Supplier of Water must comply with any interim Disinfection requirements the Department deems necessary before Filtration is installed. A Supplier of Water that uses a Surface Water Source that provides Filtration treatment must provide the Disinfection treatment specified in 310 CMR 22.20A(3)(b) beginning June 29, 1993, or beginning when Filtration is installed, whichever is later. A Supplier of Water that uses a groundwater source under the direct influence of surface water and provides Filtration treatment must provide Disinfection treatment as specified in 310 CMR 22.20A(3)(b) by June 29, 1993, or beginning when Filtration is installed, whichever is later. Failure to meet any requirement in 310 CMR 22.20A(3) after the applicable date is a Treatment Technique violation.

(a) Disinfection requirements for Public Water Systems that do not provide Filtration. A Supplier of Water that does not provide Filtration treatment must provide Disinfection treatment as follows:

1. The Disinfection treatment must be sufficient to ensure at least 99.9% (3 log) inactivation of *Giardia lamblia* cysts and 99.99% (4 log) inactivation of Viruses, every day the system serves water to the public, except any one day each month. Each day a system serves water to the public, the Supplier of Water must calculate the CT value(s) from the system's treatment parameters, using the procedure specified in 310 CMR 22.20A(5)(b)3., and determine whether this value(s) is sufficient to achieve the specified inactivation rates for *Giardia lamblia* cysts and Viruses. If a system uses a Disinfectant other than chlorine, the Supplier of Water may demonstrate to the Department, through the use of a Department approved protocol for on site Disinfection challenge studies or other information satisfactory to the Department, that CT99.9 values other than those specified in 310 CMR 22.20A(5)(b)3.: *Tables 2.1* and *Table 3.1* in or other operational parameters are adequate to demonstrate that the system is achieving the minimum inactivation rates required by 310 CMR 22.20A(3)(a).

22.20A: continued

2. The Disinfection system must have redundant components, including an auxiliary power supply with automatic start up and alarm to ensure that Disinfectant application is maintained continuously while water is being delivered to the Distribution System unless otherwise approved by the Department.
3. The Residual Disinfectant Concentration in the water entering the Distribution System, measured as specified in 310 CMR 22.20A(5)(a)2. and (b)5., cannot be less than 0.2 mg/l for more than four hours.
4. The Residual Disinfectant Concentration in the Distribution System measured as free chlorine, total chlorine, combined chlorine, or chlorine dioxide, as specified in 310 CMR 22.20A(5)(a)2. and (b)6., cannot be undetectable in more than 5% of the samples each month, for any two consecutive months that the system serves water to the public. Water in the Distribution System with a heterotrophic bacteria concentration less than or equal to 500/ml, measured as heterotrophic plate count (HPC) as specified in 310 CMR 22.20A(5)(a)1., is deemed to have a detectable Disinfectant residual for purposes of determining compliance with this requirement. Thus, the value "V" in the following formula cannot exceed 5% in one month, for any two consecutive months.

$$V = \frac{c + d + e}{a + b} \times 100$$

Where:

- a = number of instances where the Residual Disinfectant Concentration is measured;
- b = number of instances where the Residual Disinfectant Concentration is not measured but heterotrophic bacteria plate count (HPC) is measured;
- c = number of instances where the Residual Disinfectant Concentration is measured but not detected and no HPC is measured;
- d = number of instances where the Residual Disinfectant Concentration is measured but not detected and where the HPC is >500/ml; and
- e = number of instances where the Residual Disinfectant Concentration is not measured and HPC is >500/ml.

(b) Disinfection Requirements for Public Water Systems Which Provide Filtration. A Supplier of Water that provides Filtration treatment must provide Disinfection treatment as follows:

1. a. The Disinfection treatment must be sufficient to ensure that the total treatment processes of that system achieve at least 99% (2-log) removal of *Cryptosporidium*, at least 99.9% (3 log) inactivation and/or removal of *Giardia lamblia* cysts and at least 99.99% (4 log) inactivation and/or removal of Viruses, as determined by the Department.
 - b. Failure to provide this Disinfection treatment on a daily basis constitutes a treatment technique violation of 310 CMR 22.20A(3)(b)1. The Department must be notified within 24 hours of the failure to provide Disinfection as required.
2. The Residual Disinfectant Concentration in the water entering the Distribution System, measured as specified in 310 CMR 22.20A(5)(a)2. and (c)2., cannot be less than 0.2 mg/l for more than four hours.
3. The Residual Disinfectant Concentration in the Distribution System, measured as free chlorine, total chlorine, combined chlorine, or chlorine dioxide, as specified in 310 CMR 22.20A(5)(a)2. and (c)3., cannot be undetectable in more than 5% of the samples each month, for any two consecutive months that the system serves water to the public. Water in the Distribution System with a heterotrophic bacteria concentration less than or equal to 500/ml, measured as heterotrophic plate count (HPC) as specified in 310 CMR 22.20A(5)(a)1., is deemed to have a detectable Disinfectant residual for purposes of determining compliance with this requirement. Thus the value "V" in the following formula cannot exceed 5% in one month, for any two consecutive months.

22.20A: continued

$$V = \frac{c + d + e}{a + b} \times 100$$

Where:

- a = number of instances where the Residual Disinfectant Concentration is measured;
- b = number of instances where the Residual Disinfectant Concentration is not measured but heterotrophic bacteria plate count (HPC) is measured;
- c = number of instances where the Residual Disinfectant Concentration is measured but not detected and no HPC is measured;
- d = number of instances where no Residual Disinfectant Concentration is measured but not detected and where the HPC is >500/ml; and
- e = number of instances where the Residual Disinfectant Concentration is not measured and HPC is >500/ml.

(4) Filtration. A Supplier of Water that uses a Surface Water Source or a groundwater source under the direct influence of surface water, and does not meet all of the criteria in 310 CMR 22.20A(2)(a) and (b) for avoiding Filtration, must provide treatment consisting of both Disinfection, as specified in 310 CMR 22.20A(3)(b), and Filtration treatment which complies with the requirements of 310 CMR 22.20A(4) by June 29, 1993, or within 18 months of the failure to meet any one of the criteria for avoiding Filtration in 310 CMR 22.20A(2)(a) and (b), whichever is later. Failure to meet any requirement of 310 CMR 22.20A after the date specified in 310 CMR 22.20A(4) is a Treatment Technique violation.

(a) Conventional Filtration Treatment or Direct Filtration.

1. Beginning January 1, 2002, systems using conventional and Direct Filtration treatment serving at least 10,000 people shall meet the Turbidity requirements in 310 CMR 22.20D(4) and (5).
2. Beginning January 1, 2005, systems serving less than 10,000 people must meet the Turbidity requirements in 310 CMR 22.20F(6) and (7).

(b) Slow Sand Filtration.

1. For systems using Slow Sand Filtration, the Turbidity level of representative samples of a system's filtered water must be less than or equal to one NTU in at least 95% of the measurements taken each month, measured as specified in 310 CMR 22.20A(5)(a)1. and (c)1.
2. The Turbidity level of representative samples of a system's filtered water must at no time exceed five NTU, measured as specified in 310 CMR 22.20A(5)(a)1. and (c)1.

(c) Diatomaceous Earth Filtration.

1. For systems using Diatomaceous Earth Filtration, the Turbidity level of representative samples of a system's filtered water must be less than or equal to one NTU in at least 95% of the measurements taken each month, measured as specified in 310 CMR 22.20A(5)(a)1. and (c)1.
2. The Turbidity level of representative samples of a system's filtered water must at no time exceed five NTU, measured as specified in 310 CMR 22.20A(5)(a)1. and (c)1.

(d) Other Filtration Technologies. Each Supplier of Water may use a Filtration technology not listed in 310 CMR 22.20A(4)(a) through (c), if it demonstrates to the Department, using pilot plant studies or other means, that the alternative Filtration technology, in combination with Disinfection treatment that meets the requirements of 310 CMR 22.20A(3)(b), consistently achieves 99.9% removal and/or inactivation of *Giardia lamblia* cysts and 99.99% removal and/or inactivation of Viruses. For a Supplier of Water that makes this demonstration, the requirements of 310 CMR 22.20A(3)(b) apply. Beginning January 1, 2002, a Supplier of Water serving at least 10,000 people shall meet the requirements for other Filtration technologies as required in 310 CMR 22.20D(4)(b). Beginning January 1, 2005, a Supplier of Water serving fewer than 10,000 people must meet the requirements for other Filtration technologies as required in 310 CMR 22.20F(6)(c).

22.20A: continued

(5) Analytical and Monitoring Requirements.

(a) Analytical Requirements. Only the analytical method(s) specified in 310 CMR 22.20A(5)(a), or otherwise approved by EPA, may be used to demonstrate compliance with the requirements of 310 CMR 22.20A(2), through (4). Measurements for pH, temperature, Turbidity, and Residual Disinfectant Concentrations must be conducted by a certified operator. Measurements for total coliform, fecal coliform, and HPC must be conducted by a laboratory certified by the Department to do such analyses. The following procedures shall be performed in accordance with the publications listed in the 310 CMR 22.20A(6). This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies of the methods published in *Standard Methods for the Examination of Water and Wastewater* may be obtained from the American Public Health Association, 1015 Fifteenth Street, N.W., Washington, D.C. 20005; copies of the Minimal Medium ONPG MUG Method as set forth in the article *National Field Evaluation of a Defined Substrate Method for the Simultaneous Enumeration of Total Coliform and Escherichia coli from Drinking Water: Comparison with the Standard Multiple Tube Fermentation Method* (Edberg *et al.*), *Applied and Environmental Microbiology*, Volume 54, pp.1594-1601, June 1988 (as amended under Erratum, *Applied and Environmental Microbiology*, Volume 54, p. 3197, December 1988), may be obtained from the American Water Works Association Research Foundation, 6666 West Quincy Avenue, Denver, Colorado, 80235; and copies of the Indigo Method as set forth in the article *Determination of Ozone in Water by the Indigo Method* (Bader and Hoigne), may be obtained from Ozone Science & Engineering, Pergamon Press Ltd., Fairview Park, Elmsford, New York 10523. Copies may be inspected at the U.S. Environmental Protection Agency, Room EB15, 401 M Street, S.W., Washington, D.C. 20460 or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700 Washington, D.C.

1. Public Water Systems must conduct analysis of pH and temperature in accordance with one of the methods listed in 310 CMR 22.06B(10). Public Water Systems must conduct analysis of total coliforms, fecal coliforms, Heterotrophic bacteria, and Turbidity in accordance with one of the following analytical methods and by using analytical test procedures contained in Technical Notes on Drinking Water Methods, EPA-600/R-94-173, October 1994, which is available at NTIS PB95-104766.

Organism	Methodology	Citation ¹
Total Coliform ²	Total Coliform Fermentation Technique ^{3,4,5}	9221 A, B, C
	Total Coliform Membrane Filter Technique ⁶	9222 A, B, C
	ONPG-MUG Test ⁷	9223
Fecal Coliforms ²	Fecal Coliform Procedure ⁸	9221 E
	Fecal Coliform Filter Procedure	9222 D
Heterotrophic bacteria ²	Pour Plate Method	9215 B
	SimPlate ¹¹	2130 B
Turbidity ¹³		180.1 ⁹
	Nephelometric Method	Method 2 ¹⁰
	Nephelometric Method	10133 ¹²
	Great Lakes Instruments Hach Filter Trak	

The procedures shall be done in accordance with the documents listed below. The incorporation by reference of the following documents listed in footnotes 1, 6, 7, 9 and 10 was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the documents may be obtained from the sources listed below. Information regarding obtaining these documents can be obtained from the Safe Drinking Water Hotline at 800-426-4791. Documents may be inspected at EPA's Drinking Water Docket, 1200 Pennsylvania Ave., NW., Washington, DC 20460 (Telephone: 202-260-3027); or at the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, D.C. 20408.

22.20A: continued

- ¹ Except where noted, all methods refer to *Standard Methods for the Examination of Water and Wastewater*, 18th edition (1992), 19th edition (1995), or 20th edition (1998), American Public Health Association, 1015 Fifteenth Street NW, Washington, D.C. 20005. The cited methods published in any of these three editions may be used. In addition, the following online versions may also be used: 2130 B-01, 9215 B-00, 9221 A, B, C, E-99, 9222 A, B, C, D-97, and 9223 B-97. Standard Methods Online are available at <http://www.standardmethods.org>. The year in which each method was approved by the standard Methods Committee is designated by the last two digits in the method number. The methods listed are the only Online versions that may be used.
- ² The time from sample collection to initiation of analysis may not exceed eight hours. Systems must hold samples below 10°C during transit.
- ³ Lactose broth, as commercially available, may be used in *lieu* of lauryl tryptose broth, if the system conducts at least 25 parallel tests between this medium and lauryl tryptose broth using the water normally tested, and this comparison demonstrates that the false-positive rate and false-negative rate for total coliform, using lactose broth, is less than 10%.
- ⁴ Media should cover inverted tubes at least $\frac{1}{2}$ to $\frac{2}{3}$ after the sample is added.
- ⁵ No requirement exists to run the completed phase on 10% of all total coliform-positive confirmed tubes.
- ⁶ MI agar also may be used. Preparation and use of MI agar is set forth in the article, *New Medium for the Simultaneous Detection of Total Coliform and Escherichia Coli in Water* by Brenner, K.P., *et al.*, 1993, *Appl. Environ. Microbiol.* 59:3534-3544. Also available from the Office of Water Resource Center (RC-4100), 1200 Pennsylvania Ave., NW, Washington, DC 20460, EPA 600/J-99/225.
- ⁷ The ONPG-MUG Test is also known as the Autoanalysis Colilert System.
- ⁸ A-1 Broth may be held up to seven days in a tightly closed screw cap tube at 4°C.
- ⁹ *Methods for the Determination of Inorganic Substances in Environmental Samples*, EPA/600/R-93/100, August 1993. Available at NTIS, PB94-121811.
- ¹⁰ GLI Method 2, *Turbidity*, November 2, 1992, Great Lakes Instruments, Inc., 8855 North 55th Street, Milwaukee, Wisconsin 53223.
- ¹¹ A description of the SimPlate method, *IDEXX SimPlate TM HPC Test Method for Heterotrophs in Water*, November 2000, can be obtained from IDEXX Laboratories, Inc., 1 IDEXX Drive, Westbrook, ME 04092, telephone 800-321-0207.
- ¹² A description of the Hach Filter Trak Method 10133, *Determination of Turbidity by Laser Nephelometry*, January 2000, Revision 2.0, can be obtained from; Hach Co., P.O. Box 389, Loveland, CO 80539-0389, telephone: 800-227-4224.
- ¹³ Styrene divinyl benzene beads (*e.g.*, AMCO-AEPA-1 or equivalent) and stabilized formazin (*e.g.*, Hach StablCal or equivalent) are acceptable substitutes for formazin.

2. Public Water Systems must measure Residual Disinfectant Concentrations with one of the following methods in the following table. Residual Disinfectant Concentrations for free chlorine and combined chlorine also may be measured by using digital meter versions of DPD colorimetric test kits. Suppliers serving less than or equal to 3,300 persons may use non-digital meter DPD colorimetric test kits. Free chlorine and total chlorine may be measured continuously by adapting a specified chlorine residual method for use with a continuous monitoring instrument provided the chemistry, accuracy, and precision remain the same. Instruments used for continuous monitoring must be calibrated with a grab sample measurement at least every five days, or with a protocol approved by the Department. In addition, Public Water Systems may use the ITS free chlorine test strip for the determination of free chlorine. Use of the test strips is described in Method D99-003, *Free Chlorine Species (HOCL- and OCL-) by Test Strip*, Revision 3.0, November 21, 2003, available from Industrial Test Systems, Inc., 1875 Langston St., Rock Hill, SC 29730.

22.20A: continued

Residual	Methodology	Methods SM ¹	SM Online ²	Other
Free Chlorine	Amperometric Titration	4500-C1 D	4500-C1 D-00	D 1253-033
	DPD Ferrous Titrimetric	4500-C1 F	4500-C1 F-00	
	DPD Colorimetric	4500-C1 G	4500-C1 G-00	
Total Chlorine	Syringaldazine (FACTS)	4500-C1 H	4500 C1 H-00	D 1253-03 ³
	Amperometric Titration	4500-C1 D	4500 C1 D-00	
	Amperometric Titration (low level measurement)	4500-C1 E	4500 C1 E-00	
Chlorine Dioxide	DPD Ferrous Titrimetric	4500-C1 F	4500 C1 F-00	
	DPD Colorimetric	4500-C1 G	4500 C1 G-00	
	Iodometric Electrode	4500-C1 I	4500 C1 I-00	
	Amperometric Titration	4500-C1 O ₂ C	4500-C1 O ₂ C-00	
	DPD Method	4500-C1 O ₂ D		
	Amperometric Titration	4500-C1 O ₂ E	4500 C1 O ₂ E-00	
Ozone	Spectrophotometric	4500-O ₃ B		327.0, Revision 1.1 ⁴
	Indigo Method		4500-O3 B-97	

¹ All the listed Disinfectant residual methods are contained in the 18th, 19th, and 20th editions of *Standard Methods for the Examination of Water and Wastewater*, 1992, 1995, and 1998; the cited methods published in any of these three editions may be used.

² Standard Methods Online are available at <http://www.standardmethods.org>. The year in which each method was approved by the Standard Methods Committee is designated by the last two digits in the method number. The methods listed are the only Online versions that may be used.

³ Annual Book of ASTM Standards, Vol. 11.01, 2004; ASTM International; any year containing the cited version of the method may be used. Copies of this method may be obtained from ASTM International, 100 Barr Harbor Drive, P.O. Box C700 West Conshohocken, PA 19428-2959.

⁴ EPA Method 327.0, Revision 1.1, *Determination of chlorine Dioxide and Chlorite Ion in Drinking Water Using Lissamine Green B and Horseradish Peroxidase with Detection by Visible Spectrophotometry*, USEPA, May 2005, EPA 815-R-05-008.

Available online at <http://www.epa.gov/safewater/methods/sourcalt.html>.

(b) Monitoring Requirements for Systems that Do Not Provide Filtration. A Supplier of Water that uses a Surface Water Source and does not provide Filtration treatment must begin monitoring, as specified in 310 CMR 22.20A(5)(b) beginning May 1, 1990, unless the Department has notified it in writing that Filtration is required, in which case the Department may specify alternative monitoring requirements, as appropriate, until Filtration is in place. A Supplier of Water that uses a groundwater source under the direct influence of surface water and does not provide Filtration treatment must begin monitoring as specified in 310 CMR 22.20A(5)(b) beginning December 31, 1990 or six months after the Department determines that the groundwater source is under the direct influence of surface water, whichever is later, unless the Department has notified it in writing that Filtration is required, in which case the Department may specify alternative monitoring requirements, as appropriate, until Filtration is in place.

1. Fecal coliform or total coliform density measurements as required by 310 CMR 22.20A(2)(a)1. must be performed on representative source water samples immediately prior to the first or only Point of Disinfectant Application. The Supplier of Water must sample for fecal or total coliform at the following minimum frequency each week the system serves water to the public:

22.20A: continued

<u>System Size (Persons Served)</u>	<u>Samples/Week¹</u>
< 500	1
501- 3,300	2
3,301-10,000	3
10,001-25,000	4
> 25,000	5

¹ Must be taken on separate days.

In addition, one fecal or total coliform density measurement must be made every day the system serves water to the public and the Turbidity of the source water exceeds one NTU (these samples count towards the weekly coliform sampling requirement) unless the Department determines that the Supplier of Water for logistical reasons outside of the supplier's control, cannot have the sample analyzed within 30 hours of collection.

2. Turbidity measurements as required by 310 CMR 22.20A(2)(a)2. must be performed on representative grab samples of source water immediately prior to the first or only Point of Disinfectant Application every four hours (or more frequently) that the system serves water to the public. A Supplier of Water may substitute continuous Turbidity monitoring for grab sample monitoring if it validates the continuous measurement for accuracy on a regular basis using a protocol approved by the Department.

3. The total inactivation ratio for each day that the system is in operation must be determined based on the CT_{99.9} values in 310 CMR 22.20A(5)(b)3.: *Tables 1.1 through 1.6, Table 2.1 and Table 3.1.* The parameters necessary to determine the total inactivation ratio must be monitored as follows:

- a. The temperature of the disinfected water must be measured at least once per day at each Residual Disinfectant Concentration Sampling Point.
- b. If the system uses chlorine, the pH of the disinfected water must be measured at least once per day at each chlorine Residual Disinfectant Concentration Sampling Point.
- c. The Disinfectant Contact Time(s) ("T") must be determined for each day during peak hourly flow.
- d. The Residual Disinfectant Concentration(s) ("C") of the water before or at the first customer must be measured each day during peak hourly flow.
- e. If a system uses a Disinfectant other than chlorine, the system may demonstrate to the Department, through the use of a Department approved protocol for on site Disinfection challenge studies or other information satisfactory to the Department, that CT_{99.9} values other than those specified in 310 CMR 22.20A(5)(b)3.: *Table 2.1 and Table 3.1* in are adequate to demonstrate that the system is achieving the minimum inactivation rates required by 310 CMR 22.20A(3)(a)1.

TABLE 1.1 - 310 CMR 22.20A
CT VALUES (CT_{99.9}) FOR 99.9% INACTIVATION OF
GIARDIA LAMBLIA CYSTS BY FREE CHLORINE AT 0.5°C OR LOWER*

Free Residual (mg/l)	pH						
	< 6.0	6.5	7.0	7.5	8.0	8.5	< 9.0
< 0.4	137	163	195	237	277	329	390
0.6	141	168	200	239	286	342	407
0.8	145	172	205	246	295	354	422
1.0	148	176	210	253	304	365	437
1.2	152	180	215	259	313	376	451
1.4	155	184	221	266	321	387	464
1.6	157	189	226	273	329	397	477
1.8	162	193	231	279	338	407	489
2.0	165	197	236	286	346	417	500
2.2	169	201	242	297	353	426	511
2.4	172	205	247	298	361	435	522
2.6	175	209	252	304	368	444	533
2.8	178	213	257	310	375	452	543
3.0	181	217	261	316	382	460	552

22.20A: continued

* These CT values achieve greater than a 99.99% inactivation of Viruses. CT values between the indicated pH values may be determined by linear interpolation. CT values between the indicated temperatures of different tables may be determined by linear interpolation. If no interpolation is used, use the CT_{99.9} value at the lower temperature and at the higher pH.

TABLE 1.2 - 310 CMR 22.20A
CT VALUES (CT_{99.9}) FOR 99.9% INACTIVATION OF *GIARDIA*
LAMBLIA CYSTS BY FREE CHLORINE AT 5.0°C*

		pH						
Free Residual								
(mg/l)		≤ 6.0	6.5	7.0	7.5	8.0	8.5	≤ 9.0
≤	0.4	97	117	139	166	198	236	279
	0.6	100	120	143	171	204	244	291
	0.8	103	122	146	175	210	252	301
	1.0	105	125	149	179	216	260	312
	1.2	107	127	152	183	221	267	320
	1.4	109	130	155	187	227	274	329
	1.6	111	132	158	192	232	281	337
	1.8	114	135	162	196	238	287	345
	2.0	116	138	165	200	243	294	353
	2.2	118	140	169	204	248	300	361
	2.4	120	143	172	209	253	306	368
	2.6	122	146	175	213	258	312	375
	2.8	124	148	178	217	263	318	382
	3.0	126	151	182	221	268	324	389

* These CT values achieve greater than a 99.99% inactivation of Viruses. CT values between the indicated pH values may be determined by linear interpolation. CT values between the indicated temperatures of different tables may be determined by linear interpolation. If no interpolation is used, use the CT_{99.9} value at the lower temperature, and at the higher pH. If no interpolation is used, use the CT_{99.9} value at the lower temperature, and at the higher pH.

TABLE 1.3 - 310 CMR 22.20A
CT VALUES (CT_{99.9}) FOR 99.9% INACTIVATION OF *GIARDIA*
LAMBLIA CYSTS BY FREE CHLORINE AT 10°C*

		pH						
Free Residual								
(mg/l)		≤ 6.0	6.5	7.0	7.5	8.0	8.5	≤ 9.0
≤	0.4	73	88	104	125	149	177	209
	0.6	75	90	107	128	153	183	218
	0.8	78	92	110	131	158	189	226
	1.0	79	94	112	134	162	195	234
	1.2	80	95	114	137	166	200	240
	1.4	82	98	116	140	170	206	247
	1.6	83	99	119	144	174	211	253
	1.8	86	101	122	147	179	215	259
	2.0	87	104	124	150	182	221	265
	2.2	89	105	127	153	186	225	271
	2.4	90	107	129	157	190	230	276
	2.6	92	110	131	160	194	234	281
	2.8	93	111	134	163	197	239	287
	3.0	95	113	137	166	201	243	292

22.20A: continued

* These CT values achieve greater than a 99.99% inactivation of Viruses. CT values between the indicated pH values may be determined by linear interpolation. CT values between the indicated temperatures of different tables may be determined by linear interpolation. If no interpolation is used, use the CT_{99.9} value at the lower temperature, and at the higher pH.

TABLE 1.4 - 310 CMR 22.20A
CT VALUES (CT_{99.9}) FOR 99.9% INACTIVATION OF *GIARDIA*
LAMBLIA CYSTS BY FREE CHLORINE AT 15°C*

		pH						
Free Residual								
(mg/l)		<u>≤ 6.0</u>	6.5	7.0	7.5	8.0	8.5	<u>≤ 9.0</u>
≤	0.4	49	59	70	83	99	118	140
	0.6	50	60	72	86	102	122	146
	0.8	52	61	73	88	105	126	151
	1.0	53	63	75	90	108	130	156
	1.2	54	64	76	92	111	134	160
	1.4	55	65	78	94	114	137	165
	1.6	56	66	79	96	116	141	169
	1.8	57	68	81	98	119	144	173
	2.0	58	69	83	100	122	147	177
	2.2	59	70	85	102	124	150	181
	2.4	60	72	86	105	127	153	184
	2.6	61	73	88	107	129	156	188
	2.8	62	74	89	109	132	159	191
	3.0	63	76	91	111	134	162	195

* These CT values achieve greater than a 99.99% inactivation of Viruses. CT values between the indicated pH values may be determined by linear interpolation. CT values between the indicated temperatures of different tables may be determined by linear interpolation. If no interpolation is used, use the CT_{99.9} value at the lower temperature, and at the higher pH.

TABLE 1.5 - 310 CMR 22.20A
CT VALUES (CT_{99.9}) FOR 99.9% INACTIVATION OF *GIARDIA*
LAMBLIA CYSTS BY FREE CHLORINE AT 20°C*

		pH						
Free Residual								
(mg/l)		<u>≤ 6.0</u>	6.5	7.0	7.5	8.0	8.5	<u>≤ 9.0</u>
≤	0.4	36	44	52	62	74	89	105
	0.6	38	45	54	64	77	92	109
	0.8	39	46	55	66	79	95	113
	1.0	39	47	56	67	81	98	117
	1.2	40	48	57	69	83	100	120
	1.4	41	49	58	70	85	103	123
	1.6	42	50	59	72	87	105	126
	1.8	43	51	61	74	89	108	129
	2.0	44	52	62	75	91	110	132
	2.2	44	53	63	77	93	113	135
	2.4	45	54	65	78	95	115	138
	2.6	46	55	66	80	97	117	141
	2.8	47	56	67	81	99	119	143
	3.0	47	57	68	83	101	122	146

22.20A: continued

* These CT values achieve greater than a 99.99% inactivation of Viruses. CT values between the indicated pH values may be determined by linear interpolation. CT values between the indicated temperatures of different tables may be determined by linear interpolation. If no interpolation is used, use the CT_{99.9} value at the lower temperature, and at the higher pH.

TABLE 1.6 - 310 CMR 22.20A
CT VALUES (CT_{99.9}) FOR 99.9% INACTIVATION OF *GIARDIA LAMBLIA* CYSTS BY FREE CHLORINE AT 25°C* AND HIGHER
pH

Free Residual (mg/l)	pH						
	≤ 6.0	6.5	7.0	7.5	8.0	8.5	≤ 9.0
≤ 0.4	24	29	35	42	50	59	70
0.6	25	30	36	43	51	61	73
0.8	26	31	37	44	53	63	75
1.0	26	31	37	45	54	65	78
1.2	27	32	38	46	55	67	80
1.4	27	33	39	47	57	69	82
1.6	28	33	40	48	58	70	84
1.8	29	34	41	49	60	72	86
2.0	29	35	41	50	61	74	88
2.2	30	35	42	51	62	75	90
2.4	30	36	43	52	63	77	92
2.6	31	37	44	53	65	78	94
2.8	31	37	45	54	66	80	96
3.0	32	38	46	55	67	81	97

* These CT values achieve greater than a 99.99% inactivation of Viruses. CT values between the indicated pH values may be determined by linear interpolation. CT values between the indicated temperatures of different tables may be determined by linear interpolation. If no interpolation is used, use the CT_{99.9} value at the lower temperature, and at the higher pH.

TABLE 2.1 - 310 CMR 22.20A
CT VALUES (CT_{99.9}) FOR 99.9% INACTIVATION OF *GIARDIA LAMBLIA* CYSTS BY CHLORINE DIOXIDE AND OZONE*

	Temperature					
	≤ 1°C	5°C	10°C	15°C	20°C	≥ 25°C
Chlorine dioxide	63	26	23	19	15	11
Ozone	2.9	1.9	1.4	0.95	0.72	0.48

* These CT values achieve greater than 99.99% inactivation of Viruses. CT values between the indicated temperatures may be determined by linear interpolation. If no interpolation is used, use the CT_{99.9} value at the lower temperature for determining CT_{99.9} values between indicated temperatures.

TABLE 3.1 - 310 CMR 22.20A
CT VALUES (CT_{99.9}) FOR 99.9% INACTIVATION OF *GIARDIA LAMBLIA* CYSTS BY CHLORAMINE*

Temperature					
≤ 1°C	5°C	10°C	15°C	20°C	≥ 25°C
3,800	2,200	1,850	1,500	1,100	750

22.20A: continued

* These values are for pH values of 6 through 9. These CT values may be assumed to achieve greater than 99.99% inactivation of Viruses only if chlorine is added and mixed in the water prior to the addition of ammonia. If this condition is not met, the system must demonstrate, based on on-site studies or other information, as approved by the State, that the system is achieving at least 99.99% inactivation of Viruses. CT values between the indicated temperatures may be determined by linear interpolation. If no interpolation is used, use the $CT_{99,9}$ value at the lower temperature for determining $CT_{99,9}$ values between indicated temperatures.

4. The total inactivation ratio must be calculated as follows:
- a. If the system uses only one Point of Disinfectant Application, the Supplier of Water may determine the total inactivation ratio based on either of the following two methods:

- i. One inactivation ratio ($CT_{calc}/CT_{99,9}$) is determined before or at the first customer during peak hourly flow and if the $CT_{calc}/CT_{99,9} > 1.0$, the 99.9% *Giardia lamblia* inactivation requirement has been achieved; or
- ii. Successive $CT_{calc}/CT_{99,9}$ values, representing sequential inactivation ratios, are determined between the Point of Disinfectant Application and a point before or at the first customer during peak hourly flow. Under this alternative, the following method must be used to calculate the total inactivation ratio:

A. Determine $\frac{CT_{calc}}{CT_{99,9}}$ for each sequence.

B. Add the values together $\frac{(CT_{calc})}{(CT_{99,9})}$

C. If, then the $\frac{(CT_{calc})}{CT_{99,9}} \geq 1.0$ 99.9% *Giardia lamblia* inactivation

requirement has been achieved.

- b. If the system uses more than one Point of Disinfectant Application before or at the first customer, the Supplier of Water must determine the CT value of each Disinfection sequence immediately prior to the next Point of Disinfectant Application during peak hourly flow. The $CT_{calc}/CT_{99,9}$ value of each sequence and

$$\frac{CT_{calc}}{CT_{99,9}}$$

must be calculated using the method in 310 CMR 22.20A(5)(b)4.a.ii. to determine if the Supplier of Water is in compliance with 310 CMR 22.20A(3)(a).

- c. Although not required, the total percent inactivation for a system with one or more points of Residual Disinfectant Concentration following equation:

$$\text{Percent Inactivation} = 100 - \frac{100}{10^z}$$

$$\text{where } z = 3 \times \sum \frac{(CT_{calc})}{(CT_{99,9})}$$

22.20A: continued

5. The Residual Disinfectant Concentration of the water entering the Distribution System must be monitored continuously, and the lowest value must be recorded each day, except that if there is a failure in the continuous monitoring equipment, grab sampling every four hours may be conducted in lieu of continuous monitoring, but for no more than five working days following the failure of the equipment. Systems serving 3,300 or fewer persons may take grab samples in lieu of providing continuous monitoring on an ongoing basis at the frequencies prescribed below:

<u>System size by population</u>	<u>Samples/day*</u>
≤ 500	1
501-1,000	2
1,001-2,500	3
2,501-3,300	4

* The day's samples cannot be taken at the same time. The sampling intervals are subject to Department review and approval.

If at any time the Residual Disinfectant Concentration falls below 0.2 mg/l in a system using grab sampling in lieu of continuous monitoring, the Supplier of Water must take a grab sample every four hours until the Residual Disinfectant Concentration is equal to or greater than 0.2 mg/l.

6. The Residual Disinfectant Concentration must be measured at least at the same points in the Distribution System and at the same time as total coliform are sampled, as specified in 310 CMR 22.05, except that the Department may allow a Supplier of Water which uses both a Surface Water Source or a groundwater source under direct influence of surface water, and a groundwater source, to take Disinfectant residual samples at points other than the total coliform Sampling Points if the Department determines that such points are more representative of treated (disinfected) water quality within the Distribution System. Heterotrophic bacteria, measured as heterotrophic plate count (HPC) as specified in 310 CMR 22.20A(5)(a)1., may be measured in lieu of Residual Disinfectant Concentration.

(c) Monitoring Requirements for Systems Using Filtration Treatment. A Supplier of Water that uses a Surface Water Source or a groundwater source under the influence of surface water and provides Filtration treatment must monitor in accordance with 310 CMR 22.20A(5)(c) beginning June 29, 1993, or when Filtration is installed, whichever is later.

1. Turbidity measurements as required by 310 CMR 22.20A(4) must be performed on representative samples of the system's filtered water every four hours (or more frequently) that the system serves water to the public. A Supplier of Water may substitute continuous Turbidity monitoring for grab sample monitoring if it validates the continuous measurement for accuracy on a regular basis using a protocol approved by the Department. For any systems using Slow Sand Filtration, the Department may reduce the sampling frequency to no less than once per day if it determines that less frequent monitoring is sufficient to indicate effective Filtration performance.

2. The Residual Disinfectant Concentration of the water entering the Distribution System must be monitored continuously, and the lowest value must be recorded each day, except that if there is a failure in the continuous monitoring equipment, grab sampling every four hours may be conducted in lieu of continuous monitoring, but for no more than five working days following the failure of the equipment. Systems serving 3,300 or fewer persons may take grab samples in lieu of providing continuous monitoring on an ongoing basis at the frequencies each day prescribed below:

<u>System size by population</u>	<u>Samples/day*</u>
≤500	1
501-1,000	2
1,001-2,500	3
2,501-3,300	4

* The day's samples cannot be taken at the same time. The sampling intervals are subject to Department review and approval.

22.20A: continued

3. The Residual Disinfectant Concentration must be measured at least at the same points in the Distribution System and at the same time as total coliform are sampled, as specified in 310 CMR 22.05, except that the Department may allow a Supplier of Water which uses both a Surface Water Source or a groundwater source under direct influence of surface water, and a groundwater source to take Disinfectant residual samples at points other than the total coliform Sampling Points if the Department determines that such points are more representative of treated (disinfected) water quality within the Distribution System. Heterotrophic bacteria, measured as heterotrophic plate count (HPC) as specified in 310 CMR 22.20A(5)(a)1., may be measured in *lieu* of Residual Disinfectant Concentration.

(6) Reporting and Recordkeeping Requirements.

(a) A Supplier of Water that uses a Surface Water Source and does not provide Filtration treatment must report monthly to the Department the information specified in 310 CMR 22.20A(6)(a) beginning May 1, 1990, unless the Department has notified the Supplier of Water in writing that Filtration is required in writing, in which case the Department may specify alternative reporting requirements, as appropriate, until Filtration is in place. A Supplier of Water that uses a groundwater source under the direct influence of surface water and does not provide Filtration treatment must report monthly to the Department the information specified in 310 CMR 22.20A(6)(a) beginning December 31, 1990 or six months after the Department determines that the groundwater source is under the direct influence of surface water, whichever is later, unless the Department has notified it in writing that Filtration is required in which case the Department may specify alternative reporting requirements, as appropriate, until Filtration is in place.

1. Source water quality information must be reported to the Department within ten days after the end of each month the system serves water to the public. Information that must be reported includes:

- a. The cumulative number of months for which results are reported.
- b. The number of fecal and/or total coliform samples, whichever are analyzed during the month (if a system monitors for both, only fecal coliform must be reported), the dates of sample collection, and the dates when the Turbidity level exceeded one NTU.
- c. The number of samples during the month that had equal to or less than 20/100 ml fecal coliform and/or equal to or less than 100/100 ml total coliform, whichever are analyzed.
- d. The cumulative number of fecal or total coliform samples, whichever are analyzed, during the previous six months the system served water to the public.
- e. The cumulative number of samples that had equal to or less than 20/100 ml fecal coliform or equal to or less than 100/100 ml total coliform, whichever are analyzed, during the previous six months the system served water to the public.
- f. The percentage of samples that had equal to or less than 20/100 ml fecal coliform or equal to or less than 100/100 ml total coliform, whichever are analyzed, during the previous six months the system served water to the public.
- g. The maximum Turbidity level measured during the month, the date(s) of occurrence for any measurement(s) which exceeded five NTU, and the date(s) the occurrence(s) was reported to the Department.
- h. For the first 12 months of recordkeeping, the dates and cumulative number of events during which the Turbidity exceeded five NTU, and after one year of recordkeeping for Turbidity measurements, the dates and cumulative number of events during which the Turbidity exceeded five NTU in the previous 12 months the system served water to the public.
- i. For the first 120 months of recordkeeping, the dates and cumulative number of events during which the Turbidity exceeded five NTU, and after ten years of recordkeeping for Turbidity measurements, the dates and cumulative number of events during which the Turbidity exceeded five NTU in the previous 120 months the system served water to the public.

2. Disinfection information specified in 310 CMR 22.20A(5)(b) must be reported to the Department within ten days after the end of each month the system serves water to the public. Information that must be reported includes:

22.20A: continued

- a. For each day, the lowest measurement of Residual Disinfectant Concentration in mg/l in water entering the Distribution System.
- b. The date and duration of each period when the Residual Disinfectant Concentration in water entering the Distribution System fell below 0.2 mg/l and when the Department was notified of the occurrence.
- c. The daily Residual Disinfectant Concentration(s) (in mg/l) and Disinfectant Contact Time(s) (in minutes) used for calculating the CT value(s).
- d. If chlorine is used, the daily measurement(s) of pH of disinfected water following each point of chlorine Disinfection.
- e. The daily measurement(s) of water temperature in C following each point of Disinfection.
- f. The daily CT_{calc} and CT_{calc}/CT_{99,9} values for each Disinfectant measurement or sequence and the sum of all CT_{calc}/CT_{99,9} values ((CT_{calc}/CT_{99,9})) before or at the first customer.
- g. The daily determination of whether Disinfection achieves adequate *Giardia* cyst and Virus inactivation, *i.e.*, whether (CT_{calc}/CT_{99,9}) is at least 1.0 or, where Disinfectants other than chlorine are used, other indicator conditions that the Department determines are appropriate, are met.
- h. The following information on the samples taken in the Distribution System in conjunction with total coliform monitoring pursuant to 310 CMR 22.20A(3):
 - i. Number of instances where the Residual Disinfectant Concentration is measured;
 - ii. Number of instances where the Residual Disinfectant Concentration is not measured but heterotrophic bacteria plate count (HPC) is measured;
 - iii. Number of instances where the Residual Disinfectant Concentration is measured but not detected and no HPC is measured;
 - iv. Number of instances where the Residual Disinfectant Concentration is measured but not detected and where HPC is >500/ml;
 - v. Number of instances where the Residual Disinfectant Concentration is not measured and HPC is >500/ml;
 - vi. For the current and previous month the system served water to the public, the value of "V" in the following formula:

$$V = \frac{c + d + e}{a + b} \times 100$$

Where

- a = the value in 310 CMR 22.20A(6)(a)2.h.i.
 - b = the value in 310 CMR 22.20A(6)(a)2.h.ii.
 - c = the value in 310 CMR 22.20A(6)(a)2.h.iii.
 - d = the value in 310 CMR 22.20A(6)(a)2.h.iv.
 - e = the value in 310 CMR 22.20A(6)(a)2.h.v.
- i. A system need not report the data listed in 310 CMR 22.20A(6)(a)2.a., and c. through f., if all data listed in 310 CMR 22.20A(6)(a)2.a. through f. remains on file at the system, and the Department determines that:
 - i. The Supplier of Water has submitted to the Department all the information required by 310 CMR 22.20A(6)(a)2.a. through h. for at least 12 months; and
 - ii. The Department has determined that the system is not required to provide Filtration treatment.
3. No later than January 10th of each year, each Supplier of Water must provide to the Department a report which summarizes its compliance with all watershed control program requirements specified in 310 CMR 22.20A(2)(b)5.
 4. No later than January 10th of each year each system must provide to the Department a report on the on site inspection conducted during that year pursuant to 310 CMR 22.20A(2)(b)6. unless the on site inspection was conducted by the Department.
 5. Each Supplier of Water, upon discovering that a Waterborne Disease Outbreak potentially attributable to its water system has occurred, must report that occurrence to the Department as soon as possible, but no later than by the end of the next business day.

22.20A: continued

6. If at any time the Turbidity exceeds five NTU, the Supplier of Water must consult with the Department as soon as practical, but not later than 24 hours after the exceedance is known, in accordance with the public notification requirements under 310 CMR 22.16(3)(b)3.
7. If at any time the residual falls below 0.2 mg/l in the water entering the Distribution System, the Supplier of Water must notify the Department as soon as possible, but no later than by the end of the next business day. The Supplier of Water also must notify the Department by the end of the next business day whether or not the residual was restored to at least 0.2 mg/l within four hours.
- (b) A Supplier of Water that uses a Surface Water Source or a groundwater source under the direct influence of surface water and provides Filtration treatment must report monthly to the Department the information specified in 310 CMR 22.20A(6)(b) beginning June 29, 1993, or when Filtration is installed, whichever is later.
1. Turbidity measurements as required by 310 CMR 22.20A(5)(c)1. must be reported within ten days after the end of each month the system serves water to the public. Information that must be reported includes:
 - a. The total number of filtered water Turbidity measurements taken during the month.
 - b. The number and percentage of filtered water Turbidity measurements taken during the month which are less than or equal to the Turbidity limits specified in 310 CMR 22.20A(4) for the Filtration technology being used.
 - c. The date and value of any Turbidity measurements taken during the month which exceed five NTU.
 2. Disinfection information specified in 310 CMR 22.20A(5)(c) must be reported to the Department within ten days after the end of each month the system serves water to the public. Information that must be reported includes:
 - a. For each day, the lowest measurement of Residual Disinfectant Concentration in mg/l in water entering the Distribution System.
 - b. The date and duration of each period when the Residual Disinfectant Concentration in water entering the Distribution System fell below 0.2 mg/l and when the Department was notified of the occurrence.
 - c. The following information on the samples taken in the Distribution System in conjunction with total coliform monitoring pursuant to 310 CMR 22.20A(3):
 - i. Number of instances where the Residual Disinfectant Concentration is measured;
 - ii. Number of instances where the Residual Disinfectant Concentration is not measured but heterotrophic bacteria plate count (HPC) is measured;
 - iii. Number of instances where the Residual Disinfectant Concentration is measured but not detected and no HPC is measured;
 - iv. Number of instances where Residual Disinfectant Concentration is measured but not detected and where HPC is >500/ml;
 - v. Number of instances where the Residual Disinfectant Concentration is not measured and HPC is >500/ml;
 - vi. For the current and previous month the system serves water to the public, the value of "V" in the following formula:

$$V = \frac{c + d + e}{a + b} \times 100$$

Where

- a = the value in 310 CMR 22.20A(6)(b)2.c.i.
 - b = the value in 310 CMR 22.20A(6)(b)2.c.ii.
 - c = the value in 310 CMR 22.20A(6)(b)2.c.iii.
 - d = the value in 310 CMR 22.20A(6)(b)2.c.iv.
 - e = the value in 310 CMR 22.20A(6)(b)2.c.v.
- d. A Supplier of Water need not report the data listed in 310 CMR 22.20A(6)(b)2.a. if all data listed in 310 CMR 22.20A(6)(b)2.a. through c. remains on file at the system and the Department determines that the system has submitted all the information required by 310 CMR 22.20A(6)(b)2.a. through c. for at least 12 months.

22.20A: continued

3. A Supplier of Water, upon discovering that a Waterborne Disease Outbreak potentially attributable to its water system has occurred, must report that occurrence to the Department as soon as possible, but no later than by the end of the next business day.
4. If at any time the Turbidity exceeds five NTU, the Supplier of Water must consult with the Department as soon as practical, but not later than 24 hours after the exceedance is known, in accordance with the public notification requirements under 310 CMR 22.16(3)(b)3.
5. If at any time the residual falls below 0.2 mg/l in the water entering the Distribution System, the Supplier of Water must notify the Department as soon as possible, but no later than by the end of the next business day. The system also must notify the Department by the end of the next business day whether or not the residual was restored to at least 0.2 mg/l within four hours.

(7) Review of Filtration Determinations.

- (a) The Department's determination whether a Supplier of Water must provide Filtration will be made in writing based on the criteria set forth in 310 CMR 22.20A(2). The Supplier of Water shall publish a copy of the Department's determination in a newspaper of general circulation in the area served by the Supplier of Water within ten days of receipt of the same. The determination will include a statement that the Supplier of Water and Persons served by the system may request a hearing in accordance with 310 CMR 22.20A(7)(b). Within ten days of publication, the Supplier of Water shall submit an affidavit to the Department attesting to the fact that the determination has been published.
- (b) The Supplier of Water, and any Person served by the system, may request review of the determination at a public hearing by submitting a written request to the Regional Director at the Department's Regional Office that serves the area where the Public Water System at issue is located within 15 days of the date of publication.
- (c) Following receipt of a request for a public hearing, the Department will give notice of the hearing by mail to the Supplier of Water and, if the request was made by a Person other than the Supplier of Water, to the Person who submitted the request. The Supplier of Water shall publish a copy of the notice of hearing in a newspaper of general circulation in the area served by the system within ten days of receipt of the same. Within ten days of publication, the Supplier of Water shall submit an affidavit to the Department attesting to the fact that the notice has been published.
- (d) The Department will accept written comments from the public relevant to the determination up to at least 14 days following the hearing. A determination following the hearing that a Supplier of Water must provide Filtration will not be subject to further review; a determination that a Supplier of Water meets all of the criteria for avoiding Filtration will be subject to the Department's on going review. In the event the Department finds that a Supplier of Water no longer meets any one of the criteria for avoiding Filtration, the Department will issue a determination in writing that will be subject to review at a public hearing in accordance with 310 CMR 22.20A(7).

22.20B: Surface Water Supply Protection

- (1) To protect surface waters used as sources of drinking water supply from contamination, the requirements of 310 CMR 22.20B shall apply to Zones A, B, C of a surface water source, except at:
 - (a) Rivers and streams designated as Class B waters pursuant to 314 CMR 4.00: *Massachusetts Surface Water Quality Standards* which are used as drinking water sources and are not impounded at some point by means of a dam or dike to create a reservoir at which the water supply intake is located;
 - (b) Emergency sources approved by the Department under the provisions of M.G.L. c. 21G.
- (2) On and after January 1, 2001, a public water system shall prohibit the following new or expanded land uses within the Zone A of its surface water sources.
 - (a) All underground storage tanks,
 - (b) Above-ground storage of liquid hazardous material as defined in M.G.L. c. 21E, or liquid propane or liquid petroleum products, except as follows:
 1. The storage is incidental to:
 - a. normal household use, outdoor maintenance, or the heating of a structure;

22.20B: continued

- b. use of emergency generators;
 - c. a response action conducted or performed in accordance with M.G.L. c. 21E and 310 CMR 40.000: *Massachusetts Contingency Plan* and which is exempt from a ground water discharge permit pursuant to 314 CMR 5.05(14); and
2. The storage is either in container(s) or above-ground tank(s) within a building, or outdoors in covered container(s) or above-ground tank(s) in an area that has a containment system designed and operated to hold either 10% of the total possible storage capacity of all containers, or 110% of the largest container's storage capacity, whichever is greater. However, these storage requirements do not apply to the replacement of existing tanks or systems for the keeping, dispensing or storing of gasoline provided the replacement is performed in accordance with applicable state and local requirements;
- (c) Treatment or disposal works subject to 314 CMR 3.00: *Surface Water Discharge Permit Program* or 5.00: *Ground Water Discharge Permit Program*, except the following:
- 1. the replacement or repair of an existing treatment or disposal works that will not result in a design capacity greater than the design capacity of the existing treatment or disposal works;
 - 2. treatment or disposal works for sanitary sewage if necessary to treat existing sanitary sewage discharges in non-compliance with 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*, provided the facility owner demonstrates to the Department's satisfaction that there are no feasible siting locations outside of the Zone A. Any such facility shall be permitted in accordance with 314 CMR 5.00: *Ground Water Discharge Permit Program* and shall be required to disinfect the effluent. The Department may also require the facility to provide a higher level of treatment prior to discharge;
 - 3. treatment works approved by the Department designed for the treatment of contaminated ground or surface waters and operated in compliance with 314 CMR 5.05(3) or (13).
 - 4. discharge by public water system of waters incidental to water treatment processes.
- (3) (a) All on-site subsurface sewage disposal systems, as defined in 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*, within Zones A, B, and C, shall be in compliance with the requirements of 310 CMR 15.000.
- (b) Within the Zone A of all surface water supplies and tributaries as defined in 310 CMR 22.02, all sewer lines and appurtenances are prohibited, except as required to eliminate existing or potential pollution to the water supply, or where the crossing of tributaries is necessary to construct a public sewer system. Where the exception is met, watertight construction of sewer lines and manholes shall be used.
- (c) Within 1,000 feet of surface water supplies and tributaries, all pumping stations shall have standby power and high water alarms telemetered to an appropriate location that is manned at all times. An emergency contingency plan must be developed by the owner of the wastewater treatment facility and submitted to the Department for approval.
- (d) Beyond 1,000 feet, and within the watershed of surface water supplies, the Department may in specific circumstances, after review, require additional controls when deemed necessary for protection of public health.
- (4) No stabling, hitching, standing, feeding or grazing of livestock or other domestic animals shall be located, constructed, or maintained within 100 feet of the bank of a surface water source or tributary thereto. Owners and operators of agricultural operations should consult the Massachusetts Department of Agricultural Resources *On-farm Strategies to Protect Water Quality - An Assessment & Planning Tool for Best Management Practices* (December 1996) for information about technical and financial assistance programs related to erosion and sediment control and nutrient, pest, pesticide, manure, waste, grazing, and irrigation management.

22.20B: continued

(5) No burial shall be made, except by permission in writing by the Board of Water Commissioners or like body having jurisdiction over such source of supply, in any cemetery or other place within 100 feet of the high water mark of a source of public water supply or tributary thereto. No lands not under the control of cemetery authorities and used for cemetery purposes, from which lands the natural drainage flows into said source of water supply or tributary thereto, shall be taken or used for cemetery purposes until a plan and sufficient description of the lands is presented to the Department and until such taking or use is expressly approved in writing by the Department.

(6) No person shall swim, wade or bathe in any public surface water source and no person shall, unless permitted by written permit by the Board of Water Commissioners or like body having jurisdiction over such source, fish in; enter or go in any boat, seaplane, or other vehicle; enter upon the ice for any purpose, including the cutting or taking of ice; or cause or allow any animal to go into, or upon, any surface water source or tributary thereto.

(7) Enforcement. A public water system has the following enforcement responsibilities with respect to protection of the Zone A, B, and C of its surface water source(s)

(a) A public water system shall conduct regular and thorough inspections of Zones A, B, and C to determine and enforce compliance with 310 CMR 22.20B. The public water system shall take prompt enforcement actions against persons violating 310 CMR 22.20B, and report all such enforcement actions to the Department in the system's Annual Statistical Report the results of the regular inspections made during the preceding calendar year. The report shall include the number and dates of the inspections, the number, nature and outcome of violations found, and enforced against by the public water system, and the general condition of the watershed at the time of the last inspection.

(b) the public water system shall document on a form provided by the Department and submitted to the Department in calendar year 2001, that the public water system has established a protocol that provides the system with an opportunity to review and comment on all proposed new or expanded land uses or activities within the watershed of its surface water source(s) to local boards, commissions and other authorities with primary responsibilities for approving such uses and activities.

(c) The Department may take enforcement actions against any public water system which fails to carry out its enforcement responsibilities under 310 CMR 22.20B, or may enforce directly against persons violating 310 CMR 22.20B.

(8) No person shall apply herbicides to any surface water body including but not limited to any reservoir and their tributaries, which serve as a source of public water supply without a permit issued by the Department pursuant to M.G.L. c. 111, § 5E. This requirement does not apply to the application of algaecides containing copper by the public water system. However, the public water system shall notify the Department in writing prior to the application of such algaecides.

22.20C: Surface Water Supply Protection for New and Expanded Class A Surface Water Sources

(1) Source Approval.

(a) A public water system shall obtain prior written approval of the Department for:

1. the development of a new surface water source;
2. the physical expansion of an existing surface water source or the replacement or modification of an existing intake structure;
3. any increase in withdrawal from an existing surface water source in excess of the permitted threshold volume as defined in 310 CMR 36.00: *Massachusetts Water Resources Management Program*; or
4. placing an existing unapproved or inactive surface water on-line.

(b) Persons seeking Department approval for any of the activities described in 310 CMR 22.20C(1)(a) are required to follow the procedures set forth in the "Guidelines and Policies for Public Water System".

(c) In determining whether to grant such approval, the Department will apply the criteria set forth in 310 CMR 22.20C and the *Guidelines and Policies for Public Water Systems*.

(d) The Department will not grant its approval pursuant to 310 CMR 22.20C(1), unless the public water system demonstrates to the Department's satisfaction that the system:

22.20C: continued

1. complies with the applicable *Guidelines and Policies for Public Water Systems*;
 2. meets all applicable water quality standards set forth in 310 CMR 22.00, and will meet the requirements of 310 CMR 22.20A through 22.20C;
 3. has delineated and mapped Zones A, B and C of the proposed surface water source and provided a map depicting existing land uses existing within Zones A, B and C;
 4. has developed a Surface Water Supply Protection Plan in accordance with the *Department's Guidelines and Policies for Public Water Systems* and *Developing a Local Surface Water Supply Protection Plan* (revised May 2000), which shall be updated by the public water system, with a copy submitted to the Department, every three years thereafter; and
 5. has developed a reservoir and watershed public control plan, to specify allowable and non-allowable uses on existing public surface water sources and within adjacent public surface water supplier-owned lands at new and existing sources, and contains provisions for public education, inspection, and enforcement;
 6. obtain a permit or permit amendment for any withdrawal, in accordance with the Water Management Act, M.G.L. c. 21G, and 310 CMR 36.00: *Massachusetts Water Resources Management Program*.
- (e) Municipal Source.
1. No new municipal surface water source, or physical expansion of an existing surface water source shall be placed on line or allowed to expand, unless:
 - a. For those portions of Zone A that are within the municipal boundaries, has adopted and has in effect surface water protection zoning or nonzoning controls that prohibit siting within the Zone A of each source the land uses set forth in 310 CMR 22.20C(2) unless the land uses are designed in accordance with the performance standards specified in 310 CMR 22.20C(2); and
 - b. Those portions of Zone A that are outside of the municipal boundaries have zoning or nonzoning controls in effect that prohibit the siting within Zone A of land uses set forth in 310 CMR 22.20C(2) unless the land uses are designed in accordance with the performance standards specified in 310 CMR 22.20C(2), or the municipal supplier of water demonstrates to the Department's satisfaction that it has used best efforts to have such zoning or nonzoning controls adopted and in effect; and
 - c. the municipality has submitted to the Department a copy of the adopted zoning or nonzoning controls, if any, including any local legislation that provides a variance, waiver or exemption process related to surface water protection zoning and nonzoning controls applicable to the Zone A of the municipal source.
 2. An owner or operator of a municipal surface water source that will increase its withdrawal of water by more than the threshold volume, as defined in 310 CMR 36.00: *Massachusetts Water Resources Management Program*, shall, within two years of the effective date of a Water Management Act permit or permit amendment that authorizes the increase:
 - a. For those portions in the Zone A that are within the municipal boundaries, adopt and have in effect surface water protection zoning or nonzoning controls that prohibit siting within the Zone A of the source the land uses set forth in 310 CMR 22.20C(2), unless the land uses are designed in accordance with the performance standards specified in 310 CMR 22.20C(2); and
 - b. for those portions of the Zone A that are outside of the municipal boundaries have zoning or nonzoning controls in effect that prohibit the siting within Zone A of land uses set forth in 310 CMR 22.20C(2) unless the land uses are designed in accordance with performance standards specified in 310 CMR 22.20C(2), or the municipal supplier of water demonstrates to the Department's satisfaction that it has used best efforts to have such zoning or nonzoning controls adopted and in effect; and
 - c. submit to the department a copy of the zoning or nonzoning controls in effect and any local legislation that provides a variance or exemption process related the surface water protection zoning and nonzoning controls.

22.20C: continued

(f) Non-municipal Sources. No new surface water source, or existing surface water source physically expanding that will be used in a non-municipal public water system owned or operated by a non-municipal entity shall be placed on-line or allowed to expand until the public water system has demonstrated to the Department's satisfaction that it has used its best efforts to have all municipalities in which Zone A of the surface water source is located establish zoning or nonzoning controls that prohibit siting within Zone A the land uses set forth in 310 CMR 22.20C(2), unless the land uses are designed in accordance with the performance standards specified in 310 CMR 22.02C(2). An owner or operator of a non-municipal surface water source that will increase its withdrawal of water by more than the threshold volume, as defined in 310 CMR 36.00: *Massachusetts Water Resources Management Program*, shall, within two years of the effective date of a Water Management Act permit or permit amendment that authorizes the increase, meet these same best effort requirements.

(g) The proponent may meet the requirements set forth in 310 CMR 22.20C(1)(e) and 310 CMR 22.20C(1)(f) by demonstrating that the water supplier has acquired land for water supply purposes or the existing rights in perpetuity or for a specific period of years stated in the form of a restriction, easement, covenant or condition in a deed or other instrument, or other mechanism approved by the Department, prohibiting the siting within Zone A of the land uses set forth in 310 CMR 22.20C(2).

(h) Amendment or Repeal of Zoning/Nonzoning Controls. No public water system surface water source shall remain on-line more than 120 days following the amendment or repeal of surface water protection zoning or nonzoning controls protecting that surface water source, or the expiration of any rights stated in a deed or other instrument approved pursuant to 310 CMR 22.20C(1)(g), unless the Department finds in writing that the water supplier meets the requirements set forth in 310 CMR 22.20C(1)(e) or (f), whichever is applicable, or grants a variance in accordance with 310 CMR 22.20C(3).

(i) Water Supply Emergency. The Department may exempt a water supplier from any of the requirements set forth in 310 CMR 22.20C(1) while a declaration of a state of water supply emergency pursuant to M.G.L. c. 21G is in effect. In the event that the Department declares a state of water supply emergency, the surface water source shall operate, for the duration of the state of water supply emergency, as directed by the Department.

(2) Restricted Activities upon Surface Water Sources and Within Protection Zones. Required Surface Water Protection Controls Applicable to Zone A: Surface water protection zoning and nonzoning controls submitted to the Department in accordance with 310 CMR 22.20C(1), shall collectively prohibit the siting of the following new land uses within Zone A:

- (a) land uses described in 310 CMR 22.20B(2);
- (b) facilities that, through their acts or processes, generate, treat, store or dispose of hazardous waste that are subject to M.G.L. c. 21C and 310 CMR 30.000: *Hazardous Waste*, except for the following:
 1. very small quantity generators, as defined by 310 CMR 30.000: *Hazardous Waste*;
 2. treatment works approved by the Department designed in accordance with 314 CMR 5.00: *Ground Water Discharge Permit Program* for the treatment of contaminated ground or surface waters;
- (c) sand and gravel excavation operations;
- (d) uncovered or uncontained storage of fertilizers;
- (e) uncovered or uncontained storage of road or parking lot de-icing and sanding materials;
- (f) storage or disposal of snow or ice, removed from highways and streets outside the Zone A, that contains deicing chemicals;
- (g) uncovered or uncontained storage of manure;
- (h) junk and salvage operations;
- (i) motor vehicle repair operations;
- (j) cemeteries (human and animal) and mausoleums;
- (k) solid waste combustion facilities or handling facilities as defined at 310 CMR 16.00: *Site Assignment Regulations for Solid Waste Facilities*;
- (l) land uses that result in the rendering impervious of more than 15%, or more than 20% with artificial recharge, or 2500 square feet of any lot, whichever is greater; and
- (m) commercial outdoor washing of vehicles, commercial car washes.

22.20C: continued

(3) Department Variances.

(a) The Department may grant a variance from the requirements of 310 CMR 22.20C(1)(f) to a proponent that, despite its best efforts, is unable to adopt one or more of the requirements set forth in 310 CMR 22.20C(2) if the Department finds that strict compliance with such requirements would result in an undue hardship and would not serve to further the intent of 310 CMR 22.20A through 22.20C.

(b) The Department will consider the following factors in making the finding necessary to grant a variance pursuant to 310 CMR 22.20C(3):

1. the reasonableness of available alternatives to the proposed surface water source;
2. the overall effectiveness of existing land use controls and other measures on the protection of the proposed surface water source and any other water sources used by the supplier of water;
3. the nature and extent of the risk of contamination to the proposed surface water source that would result from the granting of the variance; and
4. whether the variance is necessary to accommodate an overriding community, regional, state, or national public interest;
5. These factors need not be weighed equally, nor must all of these factors be present for the Department to grant a variance. The presence of any single factor may be sufficient for the granting of a variance.

(c) A variance granted pursuant to 310 CMR 22.20C(3) shall be conditioned on such monitoring, public education or other requirements as the Department may prescribe.

(d) Requests for variances shall be made in writing and clearly state the provision or requirement from which the variance is sought and the reasons and facts that support the granting of a variance, and shall include an evaluation of the reasonableness of alternatives to the proposed surface water source.

(e) Within 14 days of filing a request for variance under 310 CMR 22.20C(3)(a), the proponent filing the request shall notify persons served by the supplier of water by direct mail and by publication on not less than three consecutive days in a newspaper of general circulation in the service area of the supplier of water. The notice shall include:

1. the provision or requirement from which the variance is being sought;
2. the identity of the proponent of the surface water source;
3. the identity of the person requesting the variance, the address where a copy of the request for variance will be available for public inspection, and the times it will be available; and
4. a statement that the Department will receive written comments concerning the request from the public for a 30 day period commencing on the last date of newspaper publication.

(f) Each proponent submitting a request for variance shall submit to the Department a copy of the public notice required by 310 CMR 22.20C(3)(e) and affidavits attesting to the fact that the notices have been given. The Department will receive written comments concerning the request from the public for a 30-day period commencing on the last date of newspaper publication.

(g) Within 30 days of the close of the comment period, each proponent requesting a variance under 310 CMR 22.20C(3)(a) shall respond in writing to all reasonable public comments received by the Department.

(h) The Department may schedule a public hearing on any request for variance submitted in accordance with 310 CMR 22.20C(3) if it determines on the basis of the public comments received that such a hearing is in the public interest. In the event that the Department schedules a hearing, the proponent filing the request shall notify persons served by the supplier of water of the hearing by publication on not less than three consecutive days in a newspaper of general circulation in the service area of the supplier of water. In addition, the proponent filing the request shall notify each person who submitted written comment concerning the request to the Department by direct mail. The proponent filing the request shall submit to the Department a copy of the public notices required by 310 CMR 22.20C(3)(h), and an affidavit attesting to the fact that the notices have been given, prior to the hearing. Proponents filing a request for a variance under 310 CMR 22.20C(3) shall pay in full the cost of any hearing scheduled.

22.20C: continued

(i) Within 30 days of the grant of a variance under 310 CMR 22.20C(3), any proponent who receives a variance shall notify persons served by the supplier of water of the granting of the variance, including any conditions imposed by the Department, by direct mail and by publication on not less than three consecutive days in a newspaper of general circulation in the service area of the supplier of water. The proponent who receives the variance shall submit to the Department a copy of the public notices and an affidavit attesting to the fact that the notices have been given upon completion of the public notification.

22.20D: Interim Enhanced Surface Water Treatment Rule

(1) General Requirements.

(a) 310 CMR 22.20D establishes requirements for filtration and disinfection that are in addition to criteria established under 310 CMR 22.20A. The requirements of 310 CMR 22.20D apply to all public water supplies serving at least 10,000 people, beginning January 1, 2002 unless otherwise specified. 310 CMR 22.20D establishes or extends treatment technique requirements in lieu of maximum contaminant levels for the following contaminants:

1. *Giardia lamblia*;
2. Viruses;
3. Heterotrophic plate count bacteria;
4. *Legionella*;
5. *Cryptosporidium*; and
6. Turbidity.

(b) Each supplier of water serving at least 10,000 people using a surface water source, or ground water source under the direct influence of surface water shall provide treatment of its source water that complies with the treatment technique requirements set forth in 310 CMR 22.20D in addition to the requirements identified in 310 CMR 22.20A. The treatment technique requirements set out in 310 CMR 22.20D consist of installing and properly operating water treatment processes which reliably achieve:

1. At least 99% (2-log) removal of *Cryptosporidium* between a point where water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer for filtered systems, or *Cryptosporidium* control under the watershed control plan for unfiltered systems.
2. Compliance with the profiling and benchmark requirements under the provisions of 310 CMR 22.20D(3).

(c) A public water system subject to the requirements of 310 CMR 22.20D is deemed to be in compliance with the requirements of 310 CMR 22.20D(1)(a) and (b) if:

1. It meets the requirements for avoiding filtration in 310 CMR 22.20A(2) and 22.20D(2) and the disinfection requirements in 310 CMR 22.20A(3) and 22.20D(3); or,
2. It meets the applicable filtration requirements in either 310 CMR 22.20A(4) or 22.20D(4) and the disinfection requirements in 310 CMR 22.20A(3) and 22.20D(3).

(d) A supplier of water is not permitted to construct uncovered finished water storage facilities.

(e) A supplier of water that uses a surface water source or ground water source under the direct influence of surface water that did not conduct disinfection profiling under 310 CMR 22.20D(3)(b) because they served fewer than 10,000 persons when such monitoring was required, but serve more than 10,000 persons prior to January 14, 2005 must comply with 310 CMR 22.20D(1), (2) and (4) through (6). These systems must also consult with the Department to establish a disinfection benchmark. A supplier of water that decides to make a significant change to its disinfection practice, as described in 310 CMR 22.20D(3)(c)1.a. through e. must consult with the Department prior to making such change.

(2) Criteria for Avoiding Filtration. 310 CMR 22.20D(2) establishes criteria for avoiding filtration for a supplier of water that uses a surface water source or a ground water source under the influence of surface water to serve a population of at least 10,000 people in addition to the requirements of 310 CMR 22.20A(2). Each supplier of water shall meet all of the following conditions:

(a) Site-specific Conditions. In addition to site-specific conditions in 310 CMR 22.20A(2)(b), a supplier of water shall maintain the watershed control program under 310 CMR 22.20A(2)(b)5. to minimize the potential for contamination by *Cryptosporidium oocysts* in the source water. The watershed control program shall, for *Cryptosporidium*:

22.20D: continued

1. Identify watershed characteristics and activities which may have an adverse effect on source water quality; and,
2. Monitor the occurrence of activities that may have an adverse effect on source water quality.

(b) During the onsite inspection conducted under the provisions of 310 CMR 22.20A(2)(b)(3), the Department will determine whether the watershed control program established under 310 CMR 22.20A(2)(b)5. is adequate to limit potential contamination by *Cryptosporidium oocysts*.

(3) Disinfection Profiling and Benchmarking. 310 CMR 22.20D(3) establishes criteria that the Department will use to determine public water systems that are required to profile. A supplier of water subject to the requirements of 310 CMR 22.20D(3) had to determine its TTHM annual average using the procedure in 310 CMR 22.20D(3)(a) and its HAA5 annual average using the procedure of 310 CMR 22.20D(3)(b). The annual average is the arithmetic average of the quarterly averages of four consecutive quarters of monitoring.

(a) Determination of Systems Required to Profile.

1. The TTHM annual average is the annual average determined during the same period as was used for the HAA5 annual average:
 - a. A supplier of water who collected data under the provisions of the "Information Collection Rule"(ICR) was required to use the results of the samples collected during the last four quarters of required monitoring under the "disinfection byproduct and related monitoring" of the ICR.
 - b. A supplier of water who used "grandfathered" HAA5 occurrence data that met the provisions of 310 CMR 22.20D(3)(a)2.b. shall use TTHM data collected at the same time under the provisions of 310 CMR 22.07E.
 - c. A supplier of water who used HAA5 occurrence data that met the provisions of 310 CMR 22.20D(3)(a)2.c.(i) was required to use TTHM data collected at the same time under the provisions of 310 CMR 22.07(2) and 22.07E.
2. The HAA5 annual average is the annual average during the same period as was used for the TTHM annual average with the following provisions:
 - a. A supplier of water who collected data under the Information Collection Rule shall have used the results of the samples collected during the last four quarters of required monitoring under the ICR.
 - b. A supplier of water who collected four quarters of HAA5 occurrence data that met the routine monitoring sample number and location requirements for TTHMs in 310 CMR 22.07E(1), (2) and the handling and analytical method requirements of the ICR may use that data to determine whether the requirements of 310 CMR 22.20D(3) apply.
 - c. A supplier of water who did not collect four quarters of HAA5 occurrence data that met the provisions of either 310 CMR 22.20D(3)(a)2.a. and b. by March 31, 1999 must either:
 - (i) have conducted monitoring for HAA5 that met the routine monitoring sample number and location requirements for TTHM in 310 CMR 22.07(2) and 22.07E and the handling and analytical method requirements of 310 CMR 22.07E to determine the HAA5 annual average and whether the requirements of 310 CMR 22.07C(3) apply, which monitoring shall have been completed so that the applicability determination could be made no later than March 31, 2000; or,
 - (ii) comply with all other provisions of 310 CMR 22.20D(3)(b)2. as if the HAA5 monitoring had been conducted and the results required compliance with 310 CMR 22.20D(3)(b).
3. The supplier of water may request the Department approve a more representative annual data set than the data set determined in 310 CMR 22.20D(3)(a)1. or 2. for the purpose of determining applicability of the requirements of 310 CMR 22.20D(3). A representative data set was to be determined based on the following:
 - a. Whether the method of collection was in accordance with 310 CMR 22.07(2), 22.07E and 22.20D(3);
 - b. Whether the annual set presented is representative of the plant's current and/or long-term disinfection practices.
4. The Department may require that a system use a more representative annual data set than the data set determined under 310 CMR 22.20D(3)(a)1. or 2. for the purpose of determining applicability of the requirements of 310 CMR 22.20D.

22.20D: continued

5. The supplier of water must have submitted data to the Department on the schedule as shown below:
 - a. A supplier of water who collected TTHM and HAA5 data under the provisions of Information Collection Rule (ICR), as was required by 310 CMR 22.20D(3)(a)1.a. and 2.a., must have submitted the results of the samples collected during the last 12 months of required monitoring under the ICR not later than December 31, 1999.
 - b. A supplier of water who collected four consecutive quarters of data that met the routine monitoring sample number and location for TTHM in 310 CMR 22.07A and 310 CMR 22.07E for handling and analytical method requirements, as was allowed by 310 CMR 22.20D(3)(a)1.b. and 2.b., must have submitted that data to the Department not later than April 16, 1999. Until the Department has approved the data, the system shall conduct monitoring for HAA5 using the monitoring requirements specified under 310 CMR 22.20D(3)(a) 2.c.
 - c. A supplier of water who conducted monitoring for HAA5 using the monitoring requirements specified by 310 CMR 22.20D(3)(a)1.c. and 2.c.(i), must have submitted TTHM and HAA5 data not later than March 31, 2000.
 - d. A supplier of water who elected to comply with all other provisions of 310 CMR 22.20D(3) as if the HAA5 monitoring had been conducted and the results required compliance with 310 CMR 22.20D(3)(a), as was allowed under 310 CMR 22.20D(3)(a)2.c.(i), must have notified the Department in writing of their election not later than March 31, 2000.
 - e. If the supplier of water elected to request that the Department approve a more representative annual data set than the data set determined under 310 CMR 22.20D(3)(a)2.a., the system must have submitted this request in writing not later than March 31, 2000.
 6. Any supplier of water having either a TTHM annual average greater than or equal to 0.064 mg/L or an HAA5 annual average greater than or equal to 0.048 mg/L during the period identified in 310 CMR 22.20D(3)(a)1. and 2. shall comply with 310 CMR 22.20D(3)(b).
 7. An owner or operator of a consecutive systems was not required to develop a disinfection profile; however, they are required to meet the requirements of 310 CMR 22.07E.
- (b) Disinfection Profiling.
1. A supplier of water who meets the criteria in 310 CMR 22.20D(3)(a)6. shall develop a disinfection profile of their disinfection practice for a period of up to three years.
 2. A supplier of water shall monitor daily for a period of 12 consecutive calendar months to determine the total logs of inactivation for each day of operation, based on the $CT_{99,9}$ values in 310 CMR 22.20A(5)(b): *Tables 1.1 through 1.6, 2.1, and 3.1* and 310 CMR 22.20D(3): *Tables C1 through C13*, as appropriate, through the entire treatment plant. The supplier of water shall have begun this monitoring not later than April 1, 2000. As a minimum, the supplier of water using a single point of disinfectant application prior to entrance to the distribution system shall conduct monitoring in accordance with 310 CMR 22.20D(3)(b)2.a. through d. A supplier of water using a system with more than one point of disinfectant application shall conduct the monitoring in accordance with 310 CMR 22.20D(3)(b)2.a. through d. for each disinfection segment. The supplier of water shall monitor the parameters necessary to determine the total inactivation ratio, using analytical methods in 310 CMR 22.20A(5), as follows:
 - a. The temperature of the disinfected water shall be measured once daily at each residual disinfectant concentration sampling point during peak hourly flow.
 - b. If the system uses chlorine, the pH of the disinfected water shall be measured once daily at each chlorine residual disinfectant concentration sampling point during peak hourly flow.
 - c. The disinfectant contact time(s) ("T") shall be determined for each day during peak hourly flow.
 - d. The residual disinfectant concentration(s) ("C") of the water before or at the first customer and prior to each additional point of disinfection shall be measured daily during peak hourly flow.

22.20D: continued

3. In lieu of the monitoring conducted under the provisions of 310 CMR 22.20D(3)(b)2. to develop the disinfection profile, the supplier of water may have elected to meet the requirements of paragraph 310 CMR 22.20D(3)(b)3.a. In addition to the monitoring conducted under the provisions of 310 CMR 22.20D(3)(b)2. to develop the disinfection profile, the system may elect to meet the requirements of 310 CMR 22.20D(3)(b)3.b.

a. A supplier of water who has three years of existing operational data could have submitted that data, a profile generated using that data, and a request that the Department approve the use of that data in lieu of monitoring under the provisions of 310 CMR 22.20D(3)(b)2. not later than March 31, 2000. This data shall be representative of *Giardia lamblia* inactivation through the entire treatment plant and not just of certain treatment segments. Until the Department approves this request, the supplier of water is required to conduct monitoring under the provisions of 310 CMR 22.20D(3)(b)2.

b. In addition to the disinfection profile generated under 310 CMR 22.20D(3)(b)2., a supplier of water who has existing operational data may use that data to develop a disinfection profile for additional years. The supplier of water may use these additional yearly disinfection profiles to develop a benchmark under the provisions of 310 CMR 22.20D(3)(c). The Department will determine whether these operational data are substantially equivalent to data collected under the provisions of 310 CMR 22.20D(3)(b)2. These data shall be representative of inactivation through the entire treatment plant, and not just of certain treatment segments.

4. The supplier of water shall calculate the total inactivation ratio as follows:

a. If the supplier of water uses only one point of disinfectant application, the supplier of water may determine the total inactivation ratio for the disinfection segment based on either of the methods below:

(i) Determine one inactivation ratio $CT_{calc}/CT_{99.9}$ before or at the first customer during peak hourly flow; or,

(ii) Determine successive $CT_{calc}/CT_{99.9}$ values, representing sequential inactivation ratios, between the point of disinfectant application and a point before or at the first customer during peak hourly flow. Under this alternative, the supplier of water shall calculate the total inactivation ratio by determining $CT_{calc}/CT_{99.9}$ for each sequence and then add the $CT_{calc}/CT_{99.9}$ values together:

$$\sum \frac{(CT_{calc})}{(CT_{99.9})}$$

b. If the supplier of water uses more than one point of disinfectant application before the first customer, the supplier of water shall determine the CT value of each disinfection segment immediately prior to the next point of disinfectant application, or for the final segment, before or at the first customer, during peak hourly flow. The supplier of water shall calculate the $CT_{calc}/CT_{99.9}$ value of each segment and $S(CT_{calc}/CT_{99.9})$ using the method in 310 CMR 22.20D(3)(b)4.a.

c. The supplier of water shall determine the total logs of inactivation (z) by multiplying the value calculated in 310 CMR 22.20D(3)(b)4.a. or b. by 3.0 as shown below:

$$z = 3 \times \sum \frac{(CT_{calc})}{(CT_{99.9})}$$

$$\text{Percent Inactivation} + 100 - \frac{100}{10^z}$$

5. Each supplier of water who uses either chloramines or ozone for primary disinfection shall also calculate the logs of inactivation for Viruses using a method approved by the Department.

6. A supplier of water who uses mixed oxidants shall calculate the overall "CT" by finding the summation of the individual "CTs" of each disinfectant within the mix.

7. Each supplier of water shall retain the disinfection profile data in graphic form, as a spreadsheet, or in some other format acceptable to the Department for review as part of sanitary surveys conducted by the Department.

22.20D: continued

(c) Disinfection Benchmarking.

1. Each supplier of water required to develop a disinfection profile under the provisions of 310 CMR 22.20D(a) and (b) who decides to make a significant change to a disinfection practice shall consult with the Department prior to making the change. A significant change to disinfection practice is any of the following:
 - a. A change to the point of disinfection;
 - b. A change to the disinfectant(s) used in the treatment plant;
 - c. A change to the disinfection process;
 - d. A physical modification(s) that directly or indirectly effects the detention time of any unit process;
 - e. Any other modification identified by the Department.
2. Each supplier of water who proposes to modify its disinfection practice shall calculate the disinfection benchmark using the following procedure:
 - a. For each year of profiling data collected and calculated under 310 CMR 22.20D(3)(b), the supplier of water shall determine the lowest average monthly *Giardia lamblia* inactivation in each year of profiling data. The supplier of water shall determine the average *Giardia lamblia* inactivation for each calendar month for each year of profiling data by dividing the sum of daily *Giardia lamblia* of inactivation by the number of values calculated for that month.
 - b. The disinfection benchmark is the lowest monthly average value (for systems with one year of profiling data) or average of lowest monthly average values (for systems with more than one year of profiling data) of the monthly logs of *Giardia lamblia* inactivation in each year of profiling data.
3. Each supplier of water who uses either chloramines or ozone for primary disinfection shall also calculate the disinfection benchmark for Viruses using a method approved by the Department.
4. Each supplier of water shall submit the information required in 310 CMR 22.20D(3)(c) and the information required in 310 CMR 22.20D(3)(c)4.a. through c. to the Department as part of the consultation process including:
 - a. A description of the proposed change
 - b. The disinfection profile for *Giardia lamblia* (and, if necessary, Viruses) under 310 CMR 22.20D(3)(b) and benchmark as required by 310 CMR 22.20D(3)(c)2.; and
 - c. An analysis of how the proposed change will affect the current levels of disinfection.

(4) Filtration. Each supplier of water using a system subject to the requirements of 310 CMR 22.20D that does not meet all of the criteria of 310 CMR 22.20D(2) and the criteria in 310 CMR 22.20A(2) for avoiding filtration shall provide treatment consisting of both disinfection, as specified in 310 CMR 22.20A(3)(b), and filtration treatment that complies with the requirements of 310 CMR 22.20A(4)(b) or (c) and 22.20D(4)(a) or (b) and by December 31, 2001.

(a) Conventional Filtration Treatment or Direct Filtration.

1. Each supplier of water using conventional filtration or direct filtration, shall maintain a turbidity level in representative samples of a system's filtered water of less than or equal to 0.3 NTU in at least 95% of the measurements taken each month, measured as specified in 310 CMR 22.20A(5)(a) and (c).
2. Each supplier of water must maintain a turbidity level of representative samples of a system's filtered water that at no time exceed one NTU, measured as specified in 310 CMR 22.20A(5)(a) and (c).
3. A supplier of water who uses lime softening may acidify representative samples prior to analysis in accordance with a protocol approved by the Department.

(b) Filtration technologies other than conventional filtration treatment, direct filtration, slow sand filtration, or diatomaceous earth filtration.

1. A supplier of water may use a filtration technology not listed in 310 CMR 22.20A(4)(b) or (c) or 22.20D(4)(a) if the supplier of water demonstrates to the Department, using pilot plant studies or other means, that the alternative filtration technology, in combination with disinfection treatment that meets the requirements of 310 CMR 22.20A(3)(b), consistently achieves 99.9% removal and/or inactivation of *Giardia lamblia* cysts and 99.99% removal and/or inactivation of Viruses, and 99% removal of *Cryptosporidium oocysts*, and the Department approves the use of the filtration technology. For each approval, the supplier of water shall maintain the turbidity level of representative samples of the system's filtered water at less than or equal to 0.3 NTU at least 95% of the time and that the system shall not exceed one NTU at any time.

22.20D: continued

2. The performance standards of slow sand filters and diatomaceous earth filters are the same as indicated in 310 CMR 22.20A.

(5) Monitoring Requirements for Systems Using Filtration Treatment.

(a) In addition to monitoring required by 310 CMR 22.20A(5), a supplier of water who relies upon a public water system subject to the requirements of 310 CMR 22.20D that provides conventional filtration treatment or direct filtration shall conduct continuous monitoring of turbidity for each individual filter using an approved method in 310 CMR 22.20A(5)(a), and shall calibrate turbidimeters using the procedure specified by the manufacturer. The supplier of water shall record the results of individual filter monitoring every 15 minutes.

(b) If there is a failure in the continuous turbidity monitoring equipment, the supplier of water shall conduct grab sampling every four hours in lieu of continuous monitoring, but for no more than five working days following the failure of the equipment.

(6) Reporting and Recordkeeping Requirements. In addition to the reporting and recordkeeping requirements in 310 CMR 22.20A(6), a supplier of water who is subject to the requirements of 310 CMR 22.20D who provides conventional filtration treatment or direct filtration shall report monthly to the Department the information specified in 310 CMR 22.20D(6)(a) and (b) beginning January 1, 2002. In addition to the reporting and recordkeeping requirements in 310 CMR 22.20A(6), a supplier of water who is subject to the requirements of 310 CMR 22.20D that provides filtration approved under 310 CMR 22.20D(4)(b) shall report monthly to the Department the information specified in 310 CMR 22.20D(6)(a) beginning January 1, 2002. This reporting in 310 CMR 22.20D(6)(a) is in *lieu* of the reporting specified in 310 CMR 22.20A(6).

(a) The supplier of water shall report turbidity measurements as required by 310 CMR 22.20D(4) within ten days after the end of each month the system serves water to the public. Information that shall be reported to the Department includes:

1. The total number of filtered water turbidity measurements taken during the month.
2. The number and percentage of filtered water turbidity measurements taken during the month which are less than or equal to the turbidity limits specified in 310 CMR 22.20D(4)(a) or (b).
3. The date and value of any turbidity measurements taken during the month which exceed one NTU for systems using conventional filtration treatment or direct filtration, or exceed the maximum level set by the Department in 310 CMR 22.20D(4)(b).

(b) The supplier of water shall maintain the results of individual filter monitoring taken as required in 310 CMR 22.20D(5) for at least three years. Each supplier of water shall report that individual filter turbidity monitoring was conducted in accordance with 310 CMR 22.20D(5) within ten days after the end of each month the system serves water to the public. Each supplier of water shall report individual filter turbidity measurement results taken under 310 CMR 22.20D(5) within ten days after the end of each month the system serves water to the public only if measurements demonstrate one or more of the conditions in 310 CMR 22.20D(6)(b)1. through 3. Each supplier of water who uses lime softening may apply to the Department for alternative exceedance levels for the levels specified in 310 CMR 22.20D(6)(b)1. through 4. if the supplier can demonstrate that higher turbidity levels in individual filters are due to lime carryover only and not due to degraded filter performance. A supplier of water shall report the filter number, the turbidity measurement, and the date(s) on which an exceedance occurred for any individual filter that has a measured turbidity level of greater than 1.0 NTU in two consecutive measurements taken 15 minutes apart. In addition, the supplier of water shall either produce a filter profile for the filter within seven days of the exceedance (if the supplier is not able to identify an obvious reason for the abnormal filter performance) and report that the profile has been produced or report the obvious reason for the exceedance.

1. For any individual filter that has a measured turbidity level of greater than 0.5 NTU in two consecutive measurements taken 15 minutes apart at the end of the first four hours of continuous filter operation after the filter has been backwashed or otherwise taken offline, the supplier of water shall report the filter number, the turbidity, and the date(s) on which the exceedance occurred. In addition, the supplier of water shall either produce a filter profile for the filter within seven days of the exceedance (if the system is not able to identify an obvious reason for the abnormal filter performance) and report that the profile has been produced or report the obvious reason for the exceedance.

22.20D: continued

2. For any individual filter that has a measured turbidity level of greater than 1.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of three consecutive months, the supplier of water shall report the filter number, the turbidity measurement, and the date(s) on which the exceedance occurred. In addition, the supplier of water shall conduct a self-assessment of the filter within 14 days of the exceedance and report that the self-assessment was conducted. The self-assessment shall consist of at least the following components: assessment of filter performance; development of a filter profile; identification and prioritization of factors limiting filter performance; assessment of the applicability of corrections; and preparation of a filter self-assessment report.
 3. For any individual filter that has a measured turbidity level of greater than 2.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of two consecutive months, the supplier of water shall report the filter number, the turbidity measurement, and the date(s) on which the exceedance occurred. In addition, the supplier of water shall arrange for the Department to conduct a Comprehensive Performance Evaluation no later than 30 days following the exceedance and have the evaluation completed no later than 90 days following the exceedance.
- (c) Additional Reporting Requirements.
1. If at any at time the turbidity exceeds one NTU in representative samples of filtered water in a system using conventional treatment or direct filtration, the supplier of water shall inform the Department as soon as possible, but not later than the end of the next business day.
 2. If at any at time the turbidity exceeds one NTU in representative samples of filtered water in a system using filtration technologies other than conventional filtration treatment, direct filtration, slow sand filtration, or diatomaceous earth filtration, the supplier of water shall inform the Department as soon as possible, but not later than the end of the next business day.

22.20E: Filter Backwash Recycling Rule

- (1) Applicability. Each supplier of water using a surface water source or ground water source under direct influence of surface water that employs conventional filtration, direct filtration, softening, or contact clarification treatment and that recycles spent filter backwash water, thickener supernatant, or liquids from dewatering processes shall meet the requirements in 310 CMR 22.20E(2) through (4).
- (2) Reporting. Each supplier of water using a surface water source or ground water source under direct influence of surface water that employs conventional filtration, direct filtration, softening, or contact clarification treatment shall notify the Department in writing by December 8, 2003, if the system recycles spent filter backwash water, thickener supernatant, or liquids from dewatering processes. This notification shall include, at a minimum, the information specified in 310 CMR 22.20E(2)(a) and (b).
 - (a) A plant schematic showing the origin of all flows that are recycled (including, but not limited to, spent filter backwash water, thickener supernatant, and liquids from dewatering processes), the hydraulic conveyance used to transport them, and the location where they are re-introduced back into the treatment plant.
 - (b) Typical recycle flow in gallons per minute (gpm), the highest observed plant flow experienced in the previous year (gpm), design flow for the treatment plant (gpm), and Department-approved operating capacity for the plant where the Department has made such determinations.
- (3) Treatment Technique Requirement. Each supplier of water using a surface water source or ground water source under direct influence of surface water that employs conventional filtration, direct filtration, softening, or contact clarification treatment that recycles spent filter backwash water, thickener supernatant, or liquids from dewatering processes must return these flows through the processes of a system's existing conventional filtration, direct filtration, softening, or contact clarification system or at an alternate location approved by the Department by June 8, 2004. If capital improvements are required to modify the recycle location to meet this requirement, all capital improvements shall be completed no later than June 8, 2006.

22.20E: continued

(4) Recordkeeping. The system shall collect and retain on file recycle flow information specified in 310 CMR 22.20E(4)(a) through (f) for review and evaluation by the Department beginning June 8, 2004:

- (a) Copy of the recycle notification and information submitted to the Department under 310 CMR 22.20E(2),
- (b) List of all recycle flows and the frequency with which they are returned,
- (c) Average and maximum backwash flow rate through the filters and the average and maximum duration of the filter backwash process in minutes,
- (d) Typical filter run length and a written summary of how filter run length is determined,
- (e) The type of treatment provided for the recycle flow, and
- (f) Data on the physical dimensions of the equalization and/or treatment units, typical and maximum hydraulic loading rates, type of treatment chemicals used and average dose and frequency of use, and frequency at which solids are removed, if applicable.

22.20F: Long Term 1 Enhanced Surface Water Treatment Rule

(1) General Requirements.

(a) 310 CMR 22.20F establishes requirements for filtration and disinfection that are in addition to criteria under 310 CMR 22.20A. The requirements of 310 CMR 22.20F apply to public water systems serving fewer than 10,000 people using a surface water source or ground water source under the direct influence of surface water, beginning January 1, 2005 unless otherwise specified. 310 CMR 22.20F establishes or extends treatment technique requirements in *lieu* of maximum contaminant levels for the following contaminants:

1. *Giardia lamblia*;
2. Viruses;
3. Heterotrophic plate count bacteria;
4. *Legionella*;
5. *Cryptosporidium*; and
6. Turbidity.

(b) Each supplier of water serving fewer than 10,000 people using a surface water source or ground water source under the direct influence of surface water shall provide treatment of its source water that complies with the treatment technique requirements set forth in 310 CMR 22.20F in addition to the requirements identified in 310 CMR 22.20A. The treatment technique requirements set out in 310 CMR 22.20F consist of installing and properly operating water treatment processes that reliably achieve:

1. At least 99% (2-log) removal of *Cryptosporidium* between a point where water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer for filtered systems, or *Cryptosporidium* control under the watershed control plan for unfiltered systems.
2. Compliance with the profiling and benchmark requirements in 310 CMR 22.20F(4)(a) through (5)(e).

(c) A public water system subject to the requirements of 310 CMR 22.20F shall also meet the following requirements:

1. It shall cover any finished water reservoir that started construction on or after March 15, 2002 as described in 310 CMR 22.20F(2)(a) and (b).
2. If it is an unfiltered system, it shall comply with the updated watershed control requirements described in 310 CMR 22.20F(3)(a) through (c).
3. If it is a community or non-transient non-community water systems, it shall develop a disinfection profile as described in 310 CMR 22.20F(4)(a) through (g).
4. If it is considering making a significant change to its disinfection practices, it shall develop a disinfection benchmark and consult with the Department for approval of the change as described in 310 CMR 22.20F(5)(a) through (e).
5. If it is a filtered system, it shall comply with the combined filter effluent requirements as described in 310 CMR 22.20F(6)(a) through (d).
6. If it is a filtered system that uses conventional or direct filtration, it shall comply with the individual filter turbidity requirements as described in 310 CMR 22.20F(7)(a) through (e).
7. It shall comply with the applicable reporting and record keeping requirements as described in 310 CMR 22.20F(8)(a) and (b).

22.20F: continued

(2) Finished Water Reservoirs.

(a) Each supplier of water serving fewer than 10,000 people using a surface water source or ground water source under the direct influence of surface water is subject to 310 CMR 22.20F(2)(b).

(b) If the supplier of water begins construction of a finished water reservoir on or after March 15, 2002 the reservoir shall be covered. Finished water reservoirs for which the supplier of water began construction prior to March 15, 2002 are not subject to 310 CMR 22.20F(2), but are subject to 310 CMR 22.20A.

(3) Additional Watershed Control Requirements for Unfiltered Systems.

(a) Each supplier of water serving fewer than 10,000 people using a surface water source or ground water source under the direct influence of surface water which does not provide filtration shall continue to comply with all of the filtration avoidance criteria in 310 CMR 22.20A(2), as well as the additional watershed control requirements in 310 CMR 22.20F(3)(b).

(b) The supplier of water must take any additional steps necessary to minimize the potential for contamination by *Cryptosporidium oocysts* in the source water. The supplier of water's watershed control program shall, for *Cryptosporidium*:

1. Identify watershed characteristics and activities which may have an adverse effect on source water quality; and
2. Monitor the occurrence of activities, which may have an adverse effect on source water quality.

(c) During an onsite inspection conducted under the provisions of 310 CMR 22.20A(2)(b)5., the Department will determine whether the watershed control program is adequate to limit potential contamination by *Cryptosporidium oocysts*. The adequacy of the program will be based on the comprehensiveness of the watershed review; the effectiveness of the program to monitor and control detrimental activities occurring in the watershed; and the extent to which the supplier of water has maximized land ownership and/or controlled land use within the watershed.

(4) Disinfection Profiling.

(a) Each supplier of water, community or non-transient non-community water system, serving fewer than 10,000 people using a surface water source or ground water source under the direct influence of surface water shall develop a disinfection profile unless the Department determines that the system's profile is unnecessary. The Department may approve the use of a more representative data set for disinfection profiling than the data set required in 310 CMR 22.20F(4)(c) through (g).

(b) The Department may only determine that a system's profile is unnecessary if a system's TTHM and HAA5 levels are below 0.064 mg/L and 0.048 mg/L, respectively. To determine these levels, TTHM and HAA5 samples must be collected after January 1, 1998, during the month with the warmest water temperature, and at the point of maximum residence time in the distribution system.

(c) A disinfection profile shall be developed using the following three steps:

1. The supplier of water shall collect data for several parameters from the plant as required in 310 CMR 22.20F(4)(d) over the course of 12 months. If the system serves between 500 and 9,999 persons the supplier of water must begin to collect data no later than July 1, 2003. If the system serves fewer than 500 persons the supplier of water must begin to collect data no later than January 1, 2004;
2. The supplier of water shall use the data to calculate weekly log inactivation as required in 310 CMR 22.20F(4)(e) and (f); and
3. The supplier of water shall use these weekly log inactivations to develop a disinfection profile as specified in 310 CMR 22.20F(4)(g).

(d) The supplier of water shall monitor the following parameters to determine the total log inactivation using the analytical methods in 310 CMR 22.20A(5)(a), once per week on the same calendar day, over 12 consecutive months:

1. The temperature of the disinfected water at each residual disinfectant concentration sampling point during peak hourly flow;
2. If the system uses chlorine, the pH of the disinfected water at each residual disinfectant concentration sampling point during peak hourly flow;

22.20F: continued

3. The disinfectant contact time(s) (“T”) during peak hourly flow; and
 4. The residual disinfectant concentration(s) (“C”) of the water before or at the first customer and prior to each additional point of disinfection during peak hourly flow.
- (e) Use the tables in 310 CMR 22.20A(5)(b)3.e. to determine the appropriate $CT_{99,9}$ value. The supplier of water shall calculate the total inactivation ratio as follows, and multiply the value by 3.0 to determine the log inactivation of *Giardia lamblia*:
1. If the supplier of water uses only one point of disinfectant application, the supplier of water shall determine the total inactivation ratio for the disinfection segment based on either of the following methods:
 - a. Determine one inactivation ratio ($CT_{calc}/CT_{99,9}$) before or at the first customer during peak hourly flow; or
 - b. Determine successive $CT_{calc}/CT_{99,9}$ values, representing sequential inactivation ratios, between the point of disinfectant application and a point before or at the first customer during peak hourly flow. Under this alternative, the system must calculate the total inactivation ratio by determining ($CT_{calc}/CT_{99,9}$) for each sequence and then add the ($CT_{calc}/CT_{99,9}$) values together to determine ($3CT_{calc}/CT_{99,9}$).
 2. If the supplier of water uses more than one point of disinfectant application before the first customer, the supplier of water shall determine the ($CT_{calc}/CT_{99,9}$) value of each disinfection segment immediately prior to the next point of disinfectant application, or for the final segment, before or at the first customer, during peak hourly flow using the procedure specified in 310 CMR 22.20F(4)(e)1.b.
- (f) If the supplier of water uses chloramines, ozone, or chlorine dioxide for primary disinfection, the supplier of water shall also calculate the logs of inactivation for Viruses and develop an additional disinfection profile for Viruses using methods approved by the Department.
- (g) Each supplier of water will use each log inactivation as a data point in the disinfection profile. The supplier of water will have obtained 52 measurements (one for every week of the year). This will allow the supplier of water and the Department the opportunity to evaluate how microbial inactivation varied over the course of the year by looking at all 52 measurements (the Disinfection Profile). The supplier of water shall retain the Disinfection Profile data in graphic form, such as a spreadsheet, which must be available for review by the Department as part of a sanitary survey. The supplier of water shall use this data to calculate a benchmark if they are considering changes to disinfection practices.
- (5) Disinfection Benchmark.
- (a) A supplier of water serving fewer than 10,000 people using a surface water source or ground water source under the direct influence of surface water required to develop a disinfection profile under 310 CMR 22.20F(4), shall develop a Disinfection Benchmark if the supplier of water decides to make a significant change to the disinfection practice. The supplier of water shall consult with the Department for approval before implementing a significant disinfection practice change.
 - (b) Significant changes to disinfection practice include:
 1. Changes to the point of disinfection;
 2. Changes to the disinfectant(s) used in the treatment plant;
 3. Changes to the disinfection process; or
 4. Any other modification identified by the Department.
 - (c) If the supplier of water is considering a significant change to its disinfection practice, the supplier of water shall calculate a disinfection benchmark(s) as described in 310 CMR 22.20F(5)(d) and (e) and provide the benchmark(s) to the Department. The supplier of water may only make a significant disinfection practice change after consulting with and obtaining the approval of the Department. The system shall submit the following information to the Department as part of the consultation and approval process:
 1. A description of the proposed change,
 2. The disinfection profile for *Giardia lamblia* (and, if necessary, Viruses) and disinfection benchmark,
 3. An analysis of how the proposed change will affect the current levels of disinfection, and
 4. Any additional information requested by the Department.

22.20F: continued

(d) If the supplier of water is making a significant change to its disinfection practice, the supplier of water shall calculate a disinfection benchmark using the following procedure:

1. Using the data the supplier of water collected to develop the Disinfection Profile, determine the average *Giardia lamblia* inactivation for each calendar month by dividing the sum of all *Giardia lamblia* inactivations for that month by the number of values calculated for that month.
2. Determine the lowest monthly average value out of the twelve values. This value becomes the disinfection benchmark.

(e) If the supplier of water uses chloramines, ozone or chlorine dioxide for primary disinfection, the supplier of water shall calculate the disinfection benchmark from the data the system collected for Viruses to develop the disinfection profile in addition to the *Giardia lamblia* disinfection benchmark calculated under 310 CMR 22.20F(5)(d). This viral benchmark shall be calculated in the same manner used to calculate the *Giardia lamblia* disinfection benchmark in 310 CMR 22.20F(5)(d).

(6) Combined Filter Effluent Requirements.

(a) Each supplier of water that serves fewer than 10,000 people using a surface water source or ground water source under the direct influence of surface water is required to filter, and each supplier of water that utilizes filtration other than slow sand filtration or diatomaceous earth filtration shall meet the combined filter effluent (CFE) turbidity requirements of 310 CMR 22.20F(6)(b) through (d). If the supplier of water uses slow sand or diatomaceous earth filtration the supplier of water is not required to meet the CFE turbidity limits of 310 CMR 22.20F, but such supplier of water shall continue to meet the CFE turbidity limits in 310 CMR 22.20A(4).

(b) Each supplier of water that serves fewer than 10,000 people using a surface water source or ground water source under the direct influence of surface water is required to filter, and each supplier of water that utilizes filtration other than slow sand filtration or diatomaceous earth filtration shall meet two strengthened CFE turbidity limits as follows:

1. The first CFE turbidity limit is a “95th percentile” turbidity limit that the system shall meet in at least 95% of the turbidity measurements taken each month. Measurements must continue to be taken as described in 310 CMR 22.20A(5)(b)1. and 3. Monthly reporting shall be completed according to 310 CMR 22.20F(8).

- a. If the supplier of water uses conventional filtration or direct filtration, the turbidity level of representative samples of a system's filtered water shall be less than or equal to 0.3 NTU in at least 95% of the measurements taken each month, measured as specified in 310 CMR 22.20A(5)(a) and (c).

- b. If the supplier of water uses “alternative filtration” the turbidity level of representative samples of the system's filtered water shall be less than or equal to 0.3 NTU in at least 95% of the measurements taken each month, measured as specified in 310 CMR 22.20A(5)(a) and (c).

2. The second CFE turbidity limit is a “maximum” turbidity limit that the system may not exceed at any time during the month. Measurements shall continue to be taken as described in 310 CMR 22.20A(5)(b)1. and 3. Monthly reporting shall be completed according to 310 CMR 22.20F(8)(a). The following is a description of the required limits for specific filtration technologies:

- a. If the supplier of water uses conventional filtration or direct filtration, the “maximum” turbidity level is one NTU.

- b. If the supplier of water uses “alternative filtration” the “maximum” turbidity level is one NTU.

(c) Each supplier of water that serves fewer than 10,000 people using a surface water source or ground water source under the direct influence of surface water that uses a system that consists of alternative filtration (filtration other than slow sand filtration, diatomaceous earth filtration, conventional filtration, or direct filtration) is required to conduct a demonstration. The supplier of water shall demonstrate to the Department, using pilot plant studies or other means, that the system's filtration, in combination with disinfection treatment, consistently achieves:

1. 99% removal of *Cryptosporidium oocysts*;
2. 99.9% removal and/or inactivation of *Giardia lamblia* cysts; and
3. 99.99% removal and/or inactivation of Viruses.

22.20F: continued

(d) Each supplier of water serving fewer than 10,000 people using a surface water source or ground water source under the direct influence of surface water that practices lime softening, may acidify representative CFE turbidity samples prior to analysis using a protocol approved by the Department.

(7) Individual Filter Turbidity Requirements.

(a) Each supplier of water serving fewer than 10,000 people using a surface water source or ground water source under the direct influence of surface water that utilizes conventional filtration or direct filtration, shall conduct continuous monitoring of turbidity for each individual filter at the filtration facility. The following requirements apply to continuous turbidity monitoring:

1. Monitoring must be conducted using an approved method in 310 CMR 22.20A(5)(a);
2. Calibration of turbidimeters shall be conducted using procedures specified by the manufacturer;
3. Results of turbidity monitoring shall be recorded at least every 15 minutes;
4. Monthly reporting must be completed according to 310 CMR 22.20F(8)(a); and
5. Records shall be maintained according to 310 CMR 22.20F(8)(b).

(b) If there is a failure in the continuous turbidity monitoring equipment, the supplier of water shall conduct grab sampling every four hours in lieu of continuous monitoring until the turbidimeter is back on-line. The system has 14 days to resume continuous monitoring before a violation is incurred.

(c) If the system only consists of one or two, the supplier of water may conduct continuous monitoring of the CFE turbidity in lieu of individual filter effluent turbidity monitoring. Continuous monitoring shall meet the same requirements set forth in 310 CMR 22.20F(7)(a)1. through 4. and (b).

(d) If the supplier of water conducts continuous turbidity monitoring, follow-up action is required as follows:

1. If the turbidity of an individual filter or the turbidity of the CFE for systems with two filters that monitor CFE in *lieu* of individual filters exceeds 1.0 NTU in two consecutive recordings 15 minutes apart, the supplier of water shall report to the Department by the tenth day of the following month and include the filter number(s), corresponding date(s), turbidity value(s) which exceeded 1.0 NTU, and the cause (if known) for the exceedance(s).
2. If the supplier of water was required to report to the Department for three months in a row and turbidity exceeded 1.0 NTU in two consecutive recordings 15 minutes apart at the same filter or CFE for systems with two filters that monitor CFE in *lieu* of individual filters, the supplier of water shall conduct a self-assessment of the filter(s) within 14 days of the day the filter exceeded 1.0 NTU in two consecutive measurements for the third straight month unless a Comprehensive Performance Evaluation (CPE) as specified in 310 CMR 22.20F(7)(d)3. was required. Systems with two filters that monitor CFE in *lieu* of individual filters shall conduct a self-assessment on both filters. The self-assessment must consist of at least the following components: assessment of filter performance; development of a filter profile; identification and prioritization of factors limiting filter performance; assessment of the applicability of corrections; and preparation of a filter self-assessment report. If a self-assessment is required, the date that it was triggered and the date that it was completed shall be included.
3. If the supplier of water was required to report to the Department for two months in a row and turbidity exceeded 2.0 NTU in two consecutive recordings 15 minutes apart at the same filter or CFE for systems with two filters that monitor CFE in *lieu* of individual filters, the supplier of water shall arrange to have a CPE conducted by the Department no later than 60 days following the day the filter exceeded 2.0 NTU in two consecutive measurements for the second straight month. If a CPE has been completed by the Department within the 12 prior months or the supplier of water and the Department are jointly participating in an ongoing Comprehensive Technical Assistance (CTA) project at the system, a new CPE is not required. If conducted, a CPE must be completed and submitted to the Department no later than 120 days following the day the filter exceeded 2.0 NTU in two consecutive measurements for the second straight month.

22.20F: continued

(e) If the supplier of water practices lime softening, the supplier of water may apply to the Department for alternative turbidity exceedance levels for the levels specified in 310 CMR 22.20F(7)(d). The supplier of water shall be able to demonstrate to the Department that higher turbidity levels are due to lime carryover only, and not due to degraded filter performance.

(8) Reporting and Recordkeeping.

(a) In addition to the reporting and recordkeeping requirements in 310 CMR 22.20A, each supplier of water who is subject to the requirements of 310 CMR 22.20F shall report the following information to the Department at the frequency specified, if the supplier of water is subject to the specific requirement.

1. Combined filter requirements that shall be reported within ten days after the end of each month shall include:

a. The total number of filtered water turbidity measurements taken during the month.

b. The number and percentage of filtered water turbidity measurements taken during the month which are less than or equal to the turbidity limits specified in 310 CMR 22.20F(7).

c. The date and value of any turbidity measurements taken during the month which exceed 1.0 NTU for systems using conventional filtration treatment or direct filtration, or exceed the maximum level set by the Department 310 CMR 22.20F(7).

2. The individual turbidity requirements that shall be reported within ten days after the end of each month, except as otherwise provided in 310 CMR 22.20F(8)2.c. and 310 CMR 22.20F(8)2.e., shall include:

a. That the supplier of water conducted individual filter turbidity monitoring during the month.

b. The filter number(s), corresponding date(s), and turbidity value(s) that exceeded 1.0 NTU during the month, and the cause (if known) for the exceedance(s) but only in if two consecutive measurements exceeded 1.0 NTU.

c. If a self-assessment is required, the date that it was triggered and the date that it was completed. If the self-assessment was triggered during the last four days of the month, the date that it was triggered and the date that it was completed shall be reported within 14 days after the date the self-assessment was triggered.

d. If a CPE is required and the date that it was triggered.

e. Copy of completed CPE report within 120 days after the CPE was triggered.

3. Disinfection Profiling shall include:

a. Results of optional monitoring that show TTHM levels <0.064 mg/l and HAA5 levels <0.048 mg/l (only if the system wishes to forgo profiling) or that the system has begun disinfection profiling.

i. For systems serving 500–9,999 by July 1, 2003;

ii. For systems serving fewer than 500 by January 1, 2004.

4. Disinfection Benchmarking shall include: A description of the proposed change in disinfection, the system's disinfection profile for *Giardia lamblia* (and, if necessary, Viruses) and disinfection benchmark, and an analysis of how the proposed change will affect the current levels of disinfection anytime a significant change in disinfection practices is being considered.

(b) Each supplier of water who is subject to the requirements of 310 CMR 22.20F shall, in addition to recordkeeping requirements under 310 CMR 22.20A(6), maintain records in accordance with 310 CMR 22.17(12).

22.20G: Long Term Two Enhanced Surface Water Treatment Rule(1) General Requirements.

(a) 310 CMR 22.20G establishes or extends Treatment Technique requirements in lieu of Maximum Contaminant Levels for *Cryptosporidium*. These requirements are in addition to requirements for Filtration and Disinfection in 310 CMR 22.20A, 22.20D, and 22.20F.

(b) Applicability. 310 CMR 22.20G applies to all suppliers of water using a Surface Water Source, or groundwater source under the direct influence of surface water.

22.20G: continued

1. Wholesale Systems, as defined in 310 CMR 22.02, must comply with the requirements of 310 CMR 22.20G based on the population of the largest system in the Combined Distribution System.
 2. The requirements of 310 CMR 22.20G for filtered systems apply to systems required by National Primary Drinking Water Regulations and 310 CMR 22.00 to provide Filtration treatment, whether or not the system is currently operating a Filtration system.
 3. The requirements of 310 CMR 22.20G for unfiltered systems apply only to unfiltered systems that timely met and continue to meet the Filtration avoidance criteria in 310 CMR 22.20A, 22.20D, and 22.20F, as applicable.
- (c) Requirements. Systems subject to 310 CMR 22.20G must comply with the following requirements:
1. Systems must conduct an initial and a second round of source water monitoring for each plant supplied by a Surface Water Source, or groundwater source under the direct influence of surface water. This monitoring may include sampling for *Cryptosporidium*, *E. coli*, and Turbidity as described in 310 CMR 22.20G(2) through (7), to determine what level, if any, of additional *Cryptosporidium* treatment the public water supplier must provide.
 2. Systems that plan to make a significant change to their Disinfection practice must develop Disinfection Profiles and calculate Disinfection benchmarks, as described in 310 CMR 22.20G(9) through (10).
 3. Filtered systems must determine their *Cryptosporidium* treatment bin classification as described in 310 CMR 22.20G(11) and provide additional treatment for *Cryptosporidium*, if required, as described in 310 CMR 22.20G(12). All unfiltered systems must provide treatment for *Cryptosporidium* as described in 310 CMR 22.20G(13). Filtered and unfiltered systems must implement *Cryptosporidium* treatment according to the schedule in 310 CMR 22.20G(14).
 4. Systems with uncovered finished water storage facilities must comply with the requirements to cover the facility or treat the discharge from the facility as described in 310 CMR 22.20G(15).
 5. Systems required to provide additional treatment for *Cryptosporidium* must implement microbial toolbox options that are designed and operated as described in 310 CMR 22.20G(19) through (23).
 6. Systems must comply with the applicable recordkeeping and reporting requirements described in 310 CMR 22.20G(16) and (17).
- (2) Source Water Monitoring.
- (a) Initial Round of Source Water Monitoring. Systems must conduct the following monitoring on the schedule in 310 CMR 22.20G(2)(c) unless they meet the monitoring exemption criteria in 310 CMR 22.20G(2)(d).
1. Filtered systems serving at least 10,000 people must sample their source water for *Cryptosporidium*, *E. coli*, and Turbidity at least monthly for 24 months.
 2. Unfiltered systems serving at least 10,000 people must sample their source water for *Cryptosporidium* at least monthly for 24 months.
 3.
 - a. Filtered systems serving fewer than 10,000 people must sample their source water for *E. coli* at least once every two weeks for 12 months.
 - b. A filtered system serving fewer than 10,000 people may avoid *E. coli* monitoring if the system notifies the Department that it will monitor for *Cryptosporidium* as described in 310 CMR 22.20G(2)(a)4. The system must notify the Department no later than three months prior to the date the system is otherwise required to start *E. coli* monitoring under 310 CMR 22.20G(2)(c).
 4. Filtered systems serving fewer than 10,000 people must sample their source water for *Cryptosporidium* at least twice per month for 12 months or at least monthly for 24 months if they meet one of the following, based on monitoring conducted in accordance with the requirements of 310 CMR 22.20G(2)(a)3.:
 - a. For systems using Lake/Reservoir sources, the annual mean *E. coli* concentration is greater than 10 *E. coli*/ 100 mL.
 - b. For systems using flowing stream sources, the annual mean *E. coli* concentration is greater than 50 *E. coli*/ 100 mL.

22.20G: continued

- c. The system does not conduct *E. coli* monitoring as described in 310 CMR 22.20G(2)(a)3.
- d. Systems using Groundwater under the Direct Influence of Surface Water must comply with the requirements of 310 CMR 22.20G(2)(a)4. based on the *E. coli* level that applies to the nearest Surface Water body. If no Surface Water body is nearby, the system must comply based on the requirements that apply to systems using Lake/Reservoir sources.
- 5. For filtered systems serving fewer than 10,000 people, the Department may approve monitoring for an indicator other than *E. coli* under 310 CMR 22.20G(2)(a)3. The Department also may approve an alternative to the *E. coli* concentration as specified in 310 CMR 22.20G(2)(a)4.a., b. or d. to trigger *Cryptosporidium* monitoring. This approval by the Department will be provided to the system in writing and will include the basis for the Department's determination that the alternative indicator and/or trigger level will provide a more accurate identification of whether a system will exceed the Bin 1 *Cryptosporidium* level in 310 CMR 22.20G(11).
- 6. Unfiltered systems serving fewer than 10,000 people must sample their source water for *Cryptosporidium* at least twice per month for 12 months or at least monthly for 24 months.
- 7. Systems may sample more frequently than required under 310 CMR 22.20G(2) if the sampling frequency is evenly spaced throughout the monitoring period.
- (b) Second Round of Source Water Monitoring. Systems must conduct a second round of source water monitoring that meets the requirements for monitoring parameters, frequency, and duration described in 310 CMR 22.20G(2)(a), unless they meet the monitoring exemption criteria in 310 CMR 22.20G(2)(d). Systems must conduct this monitoring on the schedule in 310 CMR 22.20G(2)(c).
- (c) Monitoring Schedule. Systems must begin the monitoring required in 310 CMR 22.20G(2)(a) and (b) no later than the month beginning with the date listed in 310 CMR 22.20G: *Table 1*.

310 CMR 22.20G: *Table 1*
SOURCE WATER MONITORING STARTING DATES

Systems that serve:	Must begin the first round of source water monitoring no later than the month beginning:	And must begin the second round of source water monitoring no later than the month beginning:
At least 100,000 people	October 1, 2006	April 1, 2015
From 50,000 to 99,999 people	April 1, 2007	October 1, 2015
From 10,000 to 49,999 people	April 1, 2008	October 1, 2016
Fewer than 10,000 and monitor for <i>E. coli</i> ¹	October 1, 2008	October 1, 2017
Fewer than 10,000 and monitor for <i>Cryptosporidium</i> ²	April 1, 2010	April 1, 2019

¹ Applies only to filtered systems.

² Applies to filtered systems that meet the conditions of 310 CMR 22.20G(2)(a)4. and unfiltered systems.

(d) Monitoring Avoidance.

- 1. Filtered systems are not required to conduct source water monitoring under 310 CMR 22.20G if the system will provide a total of at least 5.5-log of treatment for *Cryptosporidium*, equivalent to meeting the treatment requirements of Bin 4 in 310 CMR 22.20G(12).
- 2. Unfiltered systems are not required to conduct source water monitoring under 310 CMR 22.20G if the system will provide a total of at least 3-log *Cryptosporidium* inactivation, equivalent to meeting the treatment requirements for unfiltered systems with a mean *Cryptosporidium* concentration of greater than 0.01 oocysts/L in 310 CMR 22.20G(13).

22.20G: continued

3. If a system chooses to provide the level of treatment in 310 CMR 22.20G(2)(d)1. or 2., as applicable, rather than start source water monitoring, the system must notify the Department in writing no later than the date the system is otherwise required to submit a sampling schedule for monitoring under 310 CMR 22.20G(3). Alternatively, a system may choose to stop sampling at any point after it has initiated monitoring if it notifies the Department in writing that it will provide this level of treatment. Systems must install and operate technologies to provide this level of treatment by the applicable treatment compliance date in 310 CMR 22.20G(14).
- (e) Plants Operating Only Part of the Year. Suppliers of water with plants served by a Surface Water Source or groundwater source under the direct influence of surface water that operate for only part of the year must conduct source water monitoring in accordance with 310 CMR 22.20G, but with the following modifications:
1. Systems must sample their source water only during the months that the plant operates unless the Department specifies another monitoring period based on plant operating practices.
 2. Systems with plants that operate less than six months per year and that monitor for *Cryptosporidium* must collect at least six *Cryptosporidium* samples per year during each of two years of monitoring. Samples must be evenly spaced throughout the period the plant operates.
- (f) 1. New Sources. A system that begins using a New Source of Surface Water or groundwater under the direct influence of surface water after the system is required to begin monitoring under 310 CMR 22.20G(2)(c) must monitor the New Source on a schedule the Department approves. Source water monitoring must meet the requirements of 310 CMR 22.20G. The system must also meet the bin classification and *Cryptosporidium* treatment requirements of 310 CMR 22.20G(11) and (12) or (13), as applicable, for the New Source on a schedule the Department approves.
2. The requirements of 310 CMR 22.20G(2)(f) apply to suppliers of water with a Surface Water Source or groundwater source under the direct influence of surface water that begin operation after the monitoring start date applicable to the system's size under 310 CMR 22.20G(2)(c).
 3. The system must begin a second round of source water monitoring no later than six years following initial bin classification under 310 CMR 22.20G(11) or determination of the mean *Cryptosporidium* level under 310 CMR 22.20G(13), as applicable.
- (g) Failure to collect any source water sample required under 310 CMR 22.20G(2) in accordance with the sampling schedule, sampling location, analytical method, approved laboratory, and reporting requirements of 310 CMR 22.20G(3) through (7) is a monitoring violation.
- (h) Grandfathering Monitoring Data. Systems may use (grandfather) monitoring data collected prior to the applicable monitoring start date in 310 CMR 22.20G(2)(c) to meet the initial source water monitoring requirements in 310 CMR 22.20G(a). Grandfathered data may substitute for an equivalent number of months at the end of the monitoring period. All data submitted under 310 CMR 22.20G(2)(h) must meet the requirements in 310 CMR 22.20G(8).
- (3) Sampling Schedules.
- (a) Systems required to conduct source water monitoring under 310 CMR 22.20G(2) must submit a sampling schedule that specifies the calendar dates when the system will collect each required sample.
1. Systems must submit sampling schedules no later than three months prior to the applicable date listed in 310 CMR 22.20G(2)(c) for each round of required monitoring.
 2. a. Systems serving at least 10,000 people must submit their sampling schedule for the initial round of source water monitoring under 310 CMR 22.20G(2)(a) to EPA electronically at <https://intranet.epa.gov/lt2/>.
 - b. If a system is unable to submit the sampling schedule electronically, the system may use an alternative approach for submitting the sampling schedule that EPA or the Department approves.

22.20G: continued

3. Systems serving fewer than 10,000 people must submit their sampling schedules for the initial round of source water monitoring 310 CMR 22.20G(2)(a) to the Department.
 4. Systems must submit sampling schedules for the second round of source water monitoring 310 CMR 22.20G(2)(b) to the Department.
 5. If the Department does not respond to a system regarding its sampling schedule, the system must sample at the reported schedule.
- (b) Systems must collect samples within two days before or two days after the dates indicated in their sampling schedule (*i.e.*, within a five-day period around the schedule date) unless one of the conditions of 310 CMR 22.20G(3)(b)1. or 2. applies.
1. If an extreme condition or situation exists that may pose danger to the sample collector, or that cannot be avoided and causes the system to be unable to sample in the scheduled five-day period, the system must sample as close to the scheduled date as is feasible unless the Department approves an alternative sampling date. The system must submit an explanation for the delayed sampling date to the Department concurrent with the shipment of the sample to the laboratory.
 2.
 - a. If a system is unable to report a valid analytical result for a scheduled sampling date due to equipment failure, loss of or damage to the sample, failure to comply with the analytical method requirements, including the quality control requirements in 310 CMR 22.20G(5), or the failure of an approved laboratory to analyze the sample, then the system must collect a replacement sample.
 - b. The system must collect the replacement sample not later than 21 days after receiving information that an analytical result cannot be reported for the scheduled date unless the system demonstrates that collecting a replacement sample within this time frame is not feasible or the Department approves an alternative resampling date. The system must submit an explanation for the delayed sampling date to the Department concurrent with the shipment of the sample to the laboratory.
- (c) Systems that fail to meet the criteria of 310 CMR 22.20G(3)(b) for any source water sample required under 310 CMR 22.20G(2) must revise their sampling schedules to add dates for collecting all missed samples. Systems must submit the revised schedule to the Department for approval prior to when the system begins collecting the missed samples.
- (4) Sampling Locations.
- (a) Systems required to conduct source water monitoring under 310 CMR 22.20G(2) must collect samples for each plant that treats a Surface Water Source, or a groundwater source under the direct influence of surface water. Where multiple plants draw water from the same influent, such as the same pipe or intake, the Department may approve one set of monitoring results to be used to satisfy the requirements of 310 CMR 22.20G(2) for all plants.
 - (b)
 1. Systems must collect source water samples prior to chemical treatment, such as coagulants, oxidants and disinfectants, unless the system meets the condition specified in 310 CMR 22.20G(4)(b)2.
 2. The Department may approve a system to collect a source water sample after chemical treatment. To grant this approval, the Department will determine that collecting a sample prior to chemical treatment is not feasible for the system and that the chemical treatment is unlikely to have a significant adverse effect on the analysis of the sample.
 - (c) Systems that recycle filter backwash water must collect source water samples prior to the point of filter backwash water addition.
 - (d) Bank Filtration.
 1. Systems that receive *Cryptosporidium* treatment credit for Bank Filtration under 310 CMR 22.20D(4)(b) or 22.20F(6)(c), as applicable, must collect source water samples in the Surface Water prior to Bank Filtration.
 2. Systems that use Bank Filtration as pretreatment to a Filtration plant must collect source water samples from the well (*i.e.*, after Bank Filtration). Use of Bank Filtration during monitoring must be consistent with routine operational practice. Systems collecting samples after a Bank Filtration process may not receive treatment credit for the bank filtration under the *Massachusetts Drinking Water Guidelines and Policies, Appendix N, Requirements for Microbial Toolbox Options for Meeting Cryptosporidium Treatment Requirements under the Long Term 2 Enhanced Surface Water Treatment Rule for Public Water Systems.*

22.20G: continued

(e) Multiple Sources. Systems with plants that use multiple water sources, including multiple Surface Water Sources and blended Surface Water and groundwater sources, must collect samples as specified in 310 CMR 22.20G(4)(e)1. or 2. The use of multiple sources during monitoring must be consistent with routine operational practice.

1. If a sampling tap is available where the sources are combined prior to treatment, systems must collect samples from the tap.

2. If a sampling tap where the sources are combined prior to treatment is not available, systems must collect samples at each source near the intake on the same day and must follow either 310 CMR 22.20G(4)(e)2.a. or b. for sample analysis.

a. Systems may composite samples from each source into one sample prior to analysis. The volume of sample from each source must be weighted according to the proportion of the source in the total plant flow at the time the sample is collected.

b. Systems may analyze samples from each source separately and calculate a weighted average of the analysis results for each sampling date. The weighted average must be calculated by multiplying the analysis result for each source by the fraction the source contributed to total plant flow at the time the sample was collected and then summing these values.

(f) Additional Requirements. Systems must submit a description of their sampling location(s) to the Department at the same time as the sampling schedule required under 310 CMR 22.20G(3). This description must address the position of the sampling location in relation to the system's water source(s) and treatment processes, including pretreatment, points of chemical treatment, and filter backwash recycle. If the Department does not respond to a system regarding sampling location(s), the system must sample at the reported location(s).

(5) Analytical Methods.

(a) Cryptosporidium. Systems must analyze for *Cryptosporidium* using *Method 1623: Cryptosporidium and Giardia in Water by Filtration/IMS/FA*, 2005, United States Environmental Protection Agency, EPA-815-R-05-002 or *Method 1622: Cryptosporidium in Water by Filtration/IMS/FA*, 2005, United States Environmental Protection Agency, EPA-815-R-05-001, which are incorporated by reference.

1. Systems must analyze at least a 10 L sample or a packed pellet volume of at least 2 mL as generated by the methods listed in 310 CMR 22.20G(5)(a). Systems unable to process a 10 L sample must analyze as much sample volume as can be filtered by two filters approved by EPA and the Department for the methods listed in 310 CMR 22.20G(5)(a), up to a packed pellet volume of at least 2 mL.

2. Matrix spike (MS) samples, as required by the methods in 310 CMR 22.20G(5)(a), must be spiked and filtered by a laboratory approved for *Cryptosporidium* analysis under 310 CMR 22.20G(6). If the volume of the MS sample is greater than 10 L, the system may filter all but 10 L of the MS sample in the field, and ship the filtered sample and the remaining 10 L of source water to the laboratory. In this case, the laboratory must spike the remaining 10 L of water and filter it through the filter used to collect the balance of the sample in the field.

3. Flow cytometer-counted spiking suspensions must be used for MS samples and ongoing precision and recovery (OPR) samples.

(b) E. coli. Systems must use methods for enumeration of *E. coli* in source water approved in accordance with 310 CMR 22.26(3)(c).

1. The time from sample collection to initiation of analysis may not exceed 30 hours unless the system meets the condition of 310 CMR 22.20G(5)(b)2.

2. The Department may approve on a case-by-case basis the holding of an *E. coli* sample for up to 48 hours between sample collection and initiation of analysis if the Department determines that analyzing an *E. coli* sample within 30 hours is not feasible. *E. coli* samples held between 30 to 48 hours must be analyzed by the Colilert reagent version of Standard Method 9223B as listed in 310 CMR 22.26(3)(c).

3. Systems must maintain samples between 0°C and 10°C during storage and transit to the laboratory.

(c) Turbidity. Systems must use methods for Turbidity measurement approved in 310 CMR 22.20A(5)(a)1.

22.20G: continued

(6) Approved Laboratories.

(a) Cryptosporidium. Systems must have *Cryptosporidium* samples analyzed by a laboratory that is approved under EPA's Laboratory Quality Assurance Evaluation Program for Analysis of *Cryptosporidium* in Water or a laboratory that has been certified for *Cryptosporidium* analysis by an equivalent Department laboratory certification program.

(b) E. coli. Any laboratory certified by the EPA, the National Environmental Laboratory Accreditation Conference or the Department for total coliform or fecal coliform analysis under 310 CMR 22.20A(5) is approved for *E. coli* analysis under 310 CMR 22.20G when the laboratory uses the same technique for *E. coli* that the laboratory uses for 310 CMR 22.20A(5).

(c) Turbidity. Measurements of Turbidity must be made by a party approved by the Department.

(7) Reporting Source Water Monitoring Results.

(a) Systems must report results from the source water monitoring required under 310 CMR 22.20G(2) no later than ten days after the end of the first month following the month when the sample is collected.

(b) All systems serving at least 10,000 people must report the results from the initial source water monitoring required under 310 CMR 22.20G(2)(a) to EPA electronically at <https://intranet.epa.gov/lt2/>. If a system is unable to report monitoring results electronically, the system may use an alternative approach for reporting monitoring results that EPA approves.

(c) Systems serving fewer than 10,000 individuals must report results from the initial source water monitoring required under 310 CMR 22.20G(2)(a) to the Department.

(d) All systems must report results from the second round of source water monitoring required under 310 CMR 22.20G(2)(b) to the Department.

(e) Systems must report the applicable information in paragraphs 310 CMR 22.20G(7)(e)1. and 2. for the source water monitoring required under 310 CMR 22.20G(2).

1. Systems must report the following data elements for each *Cryptosporidium* analysis:

- a. PWS ID;
- b. Facility ID;
- c. Sample collection date;
- d. Sample type (field or matrix spike);
- e. Sample volume filtered (L), to nearest ¼ L;
- f. Was 100% of filtered volume examined; and
- g. Number of *oocysts* counted.
 - i. For matrix spike samples, systems must also report the sample volume spiked and estimated number of *oocysts* spiked. These data are not required for field samples.
 - ii. For samples in which less than 10 L is filtered or less than 100% of the sample volume is examined, systems must also report the number of filters used and the packed pellet volume.
 - ii. For samples in which less than 100% of sample volume is examined, systems must also report the volume of resuspended concentrate and volume of this resuspension processed through immunomagnetic separation.

2. Systems must report the following data elements for each *E. coli* analysis:

- a. PWS ID;
- b. Facility ID;
- c. Sample collection date;
- d. Analytical method number;
- e. Method type;
- f. Source type (flowing stream, Lake/Reservoir, GWUDI);
- g. *E. coli*/100 mL; and
- h. Turbidity.¹

¹ Systems serving fewer than 10,000 individuals that are not required to monitor for Turbidity as specified in 310 CMR 22.20G(2) are not required to report Turbidity with their *E. coli* results.

22.20G: continued

(8) Grandfathering Previously Collected Data.

(a) 1. Systems may comply with the initial source water monitoring requirements of 310 CMR 22.20G(2)(a) by grandfathering sample results collected before the system is required to begin monitoring (*i.e.*, previously collected data). To be grandfathered, the sample results and analysis must meet the criteria in 310 CMR 22.20G(8) and the Department must approve.

2. A filtered system may grandfather *Cryptosporidium* samples to meet the requirements of 310 CMR 22.20G(2)(a) when the system does not have corresponding *E. coli* and Turbidity samples. A system that grandfathers *Cryptosporidium* samples without *E. coli* and Turbidity samples is not required to collect *E. coli* and Turbidity samples when the system completes the requirements for *Cryptosporidium* monitoring under 310 CMR 22.20G(2)(a).

(b) *E. coli* Sample Analysis. The analysis of *E. coli* samples must meet the analytical method and approved laboratory requirements of 310 CMR 22.20G(5) through (6).

(c) *Cryptosporidium* Sample Analysis. The analysis of *Cryptosporidium* samples must meet the criteria in 310 CMR 22.20G(8)(c).

1. Laboratories analyzed *Cryptosporidium* samples using one of the analytical methods in 310 CMR 22.20G(8)(c)1.a. through f., which are incorporated by reference.

a. Method 1623: *Cryptosporidium* and *Giardia* in Water by Filtration/IMS/ FA, 2005, United States Environmental Protection Agency, EPA-815-R-05-002.

b. Method 1622: *Cryptosporidium* in Water by Filtration/IMS/FA, 2005, United States Environmental Protection Agency, EPA-815-R-05-001.

c. Method 1623: *Cryptosporidium* and *Giardia* in Water by Filtration/IMS/ FA, 2001, United States Environmental Protection Agency, EPA-821-R-01-025.

d. Method 1622: *Cryptosporidium* in Water by Filtration/IMS/FA, 2001, United States Environmental Protection Agency, EPA-821--R-01-026.

e. Method 1623: *Cryptosporidium* and *Giardia* in Water by Filtration/IMS/ FA, 1999, United States Environmental Protection Agency, EPA-82 1-R-99-006.

f. Method 1622: *Cryptosporidium* in Water by Filtration/IMS/FA, 1999, United Departments Environmental Protection Agency, EPA-821-R-99-001.

2. For each *Cryptosporidium* sample, the laboratory analyzed at least 10 L of sample or at least 2 mL of packed pellet or as much volume as could be filtered by two filters that EPA and the Department approved for the methods listed in 310 CMR 22.20G(8)(c)1.

(d) Sampling Location. The sampling location must meet the conditions as specified in 310 CMR 22.20G(4).

(e) Sampling Frequency. *Cryptosporidium* samples were collected no less frequently than each calendar month on a regular schedule, beginning no earlier than January 1999. Sample collection intervals may vary for the conditions specified in 310 CMR 22.20G(3)(b)1. and 2. if the system provides documentation of the condition when reporting monitoring results.

1. The Department may approve grandfathering of previously collected data where there are time gaps in the sampling frequency if the system conducts additional monitoring the Department specifies to ensure that the data used to comply with the initial source water monitoring requirements of 310 CMR 22.20G(2)(a) are seasonally representative and unbiased.

2. Systems may grandfather previously collected data where the sampling frequency within each month varied. If the *Cryptosporidium* sampling frequency varied, systems must follow the monthly averaging procedure in 310 CMR 22.20G(11)(b)5. or 310 CMR 22.20G(13)(a)3., as applicable, when calculating the bin classification for filtered systems or the mean *Cryptosporidium* concentration for unfiltered systems.

(f) Reporting Monitoring Results for Grandfathering. Systems that request to grandfather previously collected monitoring results must report the following information by the applicable dates listed in 310 CMR 22.20G(3).

1. Systems must report that they intend to submit previously collected monitoring results for grandfathering. This report must specify the number of previously collected results the system will submit, the dates of the first and last sample, and whether a system will conduct additional source water monitoring to meet the requirements of 310 CMR 22.20G(2)(a). Systems must report this information no later than the date required by the sampling schedule under 310 CMR 22.20G(3).

22.20G: continued

2. Systems must report previously collected monitoring results for grandfathering, along with the associated documentation listed in 310 CMR 22.20G(8)(f)(2)a. through d., no later than two months after the applicable date listed in 310 CMR 22.20G(2)(c).
 - a. For each sample result, systems must report the applicable data elements in 310 CMR 22.20G(7).
 - b. Systems must certify that the reported monitoring results include all results the system generated during the time period beginning with the first reported result and ending with the final reported result. This applies to samples that were collected from the sampling location specified for source water monitoring under 310 CMR 22.20G, not spiked, and analyzed using the laboratory's routine process for the analytical methods listed in 310 CMR 22.20G.
 - c. Systems must certify that the samples were representative of a plant's source water(s) and the source water(s) have not changed. Systems must report a description of the sampling location(s), which must address the position of the sampling location in relation to the system's water source(s) and treatment processes, including points of chemical addition and filter backwash recycle.
 - d. For *Cryptosporidium* samples, the laboratory or laboratories that analyzed the samples must provide a letter certifying that the quality control criteria specified in the methods listed in 310 CMR 22.20G(8)(c)1. were met for each sample batch associated with the reported results. Alternatively, the laboratory may provide bench sheets and sample examination report forms for each field, matrix spike, IPR, OPR, and method blank sample associated with the reported results.
 - (g) If the Department determines that a previously collected data set submitted for grandfathering was generated during source water conditions that were not normal for the system, such as a drought, the Department may disapprove the data. Alternatively, the Department may approve the previously collected data if the system reports additional source water monitoring data, as determined by the Department, to ensure that the data set used under 310 CMR 22.20G(11) or (13) represents average source water conditions for the system.
 - (h) If a system submits previously collected data that fully meet the number of samples required for initial source water monitoring under 310 CMR 22.20G(2)(a) and some of the data are rejected due to not meeting the requirements of 310 CMR 22.20G(8), systems must conduct additional monitoring to replace rejected data on a schedule the Department approves. Systems are not required to begin this additional monitoring until two months after notification that data have been rejected and additional monitoring is necessary.
- (9) Requirements When Making a Significant Change in Disinfection Practice.
- (a) Following the completion of initial source water monitoring under 310 CMR 22.20G(2)(a), a system that plans to make a significant change to its Disinfection practice, as defined in 310 CMR 22.20G(9)(b), must develop Disinfection Profiles and calculate Disinfection benchmarks for *Giardia lamblia* and Viruses as described in 310 CMR 22.20G(10). Prior to changing the Disinfection practice, the system must notify the Department and must include in this notice the information in 310 CMR 22.20G(9)(a)1. through 3.
 1. A completed Disinfection Profile and Disinfection benchmark for *Giardia lamblia* and Viruses as described in 310 CMR 22.20G(10).
 2. A description of the proposed change in Disinfection practice.
 3. An analysis of how the proposed change will affect the current level of Disinfection.
 - (b) Significant changes to Disinfection practice are defined as follows:
 1. Changes to the point of Disinfection;
 2. Changes to the Disinfectant(s) used in the treatment plant;
 3. Changes to the Disinfection process; or
 4. Any other modification identified by the Department as a significant change to Disinfection practice.

22.20G: continued

(10) Developing the Disinfection Profile and Benchmark.

(a) Systems required to develop Disinfection Profiles under 310 CMR 22.20G(9) must follow the requirements of 310 CMR 22.20G(10). Systems must monitor at least weekly for a period of 12 consecutive months to determine the total log inactivation for *Giardia lamblia* and Viruses. If systems monitor more frequently, the monitoring frequency must be evenly spaced. Systems that operate for fewer than 12 months per year must monitor weekly during the period of operation. Systems must determine log inactivation for *Giardia lamblia* through the entire plant, based on CT_{99.9} values in 310 CMR 22.20A(5)(b): *Tables 1.1 through 1.6, 2.1, and 3.1* as applicable. Systems must determine log inactivation for Viruses through the entire treatment plant based on a protocol approved by the Department.

(b) Systems with a single Point of Disinfectant Application prior to the entrance to the Distribution System must conduct the monitoring in 310 CMR 22.20G(10)(b)1. through 4. Systems with more than one Point of Disinfectant Application must conduct the monitoring in 310 CMR 22.20G(10)(b)1. through 4. for each Disinfection segment. Systems must monitor the parameters necessary to determine the total inactivation ratio, using analytical methods in 310 CMR 22.20A(5)(a).

1. For systems using a Disinfectant other than UV, the temperature of the disinfected water must be measured at each Residual Disinfectant Concentration Sampling Point during peak hourly flow or at an alternative location approved by the Department.

2. For systems using chlorine, the pH of the disinfected water must be measured at each chlorine Residual Disinfectant Concentration Sampling Point during peak hourly flow or at an alternative location approved by the Department.

3. The Disinfectant Contact Time(s) (t) must be determined during peak hourly flow.

4. The Residual Disinfectant Concentration(s) (C) of the water before or at the first customer and prior to each additional Point of Disinfectant Application must be measured during peak hourly flow.

(c) In lieu of conducting new monitoring under 310 CMR 22.20G(10)(b), systems may elect to meet the requirements of 310 CMR 22.20G(10)(c)1. or 2.

1. Systems that have at least one year of existing data that are substantially equivalent to data collected under the provisions of 310 CMR 22.20G(10)(b) may use these data to develop Disinfection Profiles as specified in 310 CMR 22.20G(10) if the system has neither made a significant change to its treatment practice nor changed sources since the data were collected. Systems may develop Disinfection Profiles using up to three years of existing data.

2. Systems may use Disinfection Profile(s) developed under 310 CMR 22.20D(3) or (4) in lieu of developing a new profile if the system has neither made a significant change to its treatment practice nor changed sources since the profile was developed. Systems that have not developed a Virus profile under 310 CMR 22.20D(3) or 22.20F(4) must develop a Virus profile using the same monitoring data on which the *Giardia lamblia* profile is based.

(d) Systems must calculate the total inactivation ratio for *Giardia lamblia* as specified in 310 CMR 22.20G(10)(d)1. through 3.

1. Systems using only one Point of Disinfectant Application may determine the total inactivation ratio for the Disinfection segment based on either of the methods in 310 CMR 22.20G(10)(d)1.a. or b.

a. Determine one inactivation ratio (CT_{calc}/CT_{99.9}) before or at the first customer during peak hourly flow.

b. Determine successive CT_{calc}/CT_{99.9} values, representing sequential inactivation ratios, between the Point of Disinfectant Application and a point before or at the first customer during peak hourly flow. The system must calculate the total inactivation ratio by determining (CT_{calc}/CT_{99.9}) for each sequence and then adding the (CT_{calc}/CT_{99.9}) values together to determine (Σ (CT_{calc}/CT_{99.9})).

2. Systems using more than one Point of Disinfectant Application before the first customer must determine the CT value of each Disinfection segment immediately prior to the next Point of Disinfectant Application, or for the final segment, before or at the first customer, during peak hourly flow. The (CT_{calc}/CT_{99.9}) value of each segment and ((CT_{calc}/CT_{99.9})) must be calculated using the method in 310 CMR 22.20G(10)(d)1.b.

22.20G: continued

3. The system must determine the total logs of inactivation by multiplying the value calculated in 310 CMR 22.20G(10)(d)1. or 2. by 3.0.
 4. Systems must calculate the log of inactivation for Viruses using a protocol approved by the Department.
- (e) Systems must use the procedures specified in 310 CMR 22.20G(10)(e)1. and 2. to calculate a Disinfection benchmark.
1. For each year of profiling data collected and calculated under 310 CMR 22.20G(10)(a) through (d), systems must determine the lowest mean monthly level of both *Giardia lamblia* and Virus inactivation. Systems must determine the mean *Giardia lamblia* and Virus inactivation for each calendar month for each year of profiling data by dividing the sum of daily or weekly *Giardia lamblia* and Virus log inactivation by the number of values calculated for that month.
 2. The Disinfection benchmark is the lowest monthly mean value (for systems with one year of profiling data) or the mean of the lowest monthly mean values (for systems with more than one year of profiling data) of *Giardia lamblia* and Virus log inactivation in each year of profiling data.

(11) Bin Classification for Filtered Systems.

- (a) Following completion of the initial round of source water monitoring required under 310 CMR 22.20G(2)(a), filtered systems must calculate an initial *Cryptosporidium* bin concentration for each plant for which monitoring was required. Calculation of the bin concentration must use the *Cryptosporidium* results reported under 310 CMR 22.20G(2)(a) and must follow the procedures in 310 CMR 22.20G(11)(b)1. through 5.
- (b) 1. For systems that collect a total of at least 48 samples, the bin concentration is equal to the arithmetic mean of all sample concentrations.
2. For systems that collect a total of at least 24 samples, but not more than 47 samples, the bin concentration is equal to the highest arithmetic mean of all sample concentrations in any 12 consecutive months during which *Cryptosporidium* samples were collected.
3. For systems that serve fewer than 10,000 people and monitor for *Cryptosporidium* for only one year (*i.e.*, collect 24 samples in 12 months), the bin concentration is equal to the arithmetic mean of all sample concentrations.
4. For systems with plants operating only part of the year that monitor fewer than 12 months per year under 310 CMR 22.20G(2)(e) the bin concentration is equal to the highest arithmetic mean of all sample concentrations during any year of *Cryptosporidium* monitoring.
5. If the monthly *Cryptosporidium* sampling frequency varies, systems must first calculate a monthly average for each month of monitoring. Systems must then use these monthly average concentrations, rather than individual sample concentrations, in the applicable calculation for bin classification in 310 CMR 22.20G(11)(b)1. through 4.
- (c) Filtered systems must determine their initial bin classification from 310 CMR 22.20G: *Table 2* and using the *Cryptosporidium* bin concentration calculated under 310 CMR 22.20G(11)(a) and (b):

22.20G: continued

310 CMR 22.20G: *Table 2*
BIN CLASSIFICATION TABLE FOR FILTERED SYSTEMS

For Systems that are:	With a <i>Cryptosporidium</i> bin concentration of ... ¹	The bin classification is...
Required to monitor for <i>Cryptosporidium</i> under 310 CMR 22.20G (2)	<i>Cryptosporidium</i> <0.075 oocysts/L	Bin 1
	0.075 oocysts/L < <i>Cryptosporidium</i> <1.0 oocysts/L	Bin 2
	1.0 oocysts/L < <i>Cryptosporidium</i> <3.0 oocysts/L	Bin 3
	<i>Cryptosporidium</i> ≥3.0 oocysts/L	Bin 4
Serving fewer than 10,000 people and NOT required to monitor for <i>Cryptosporidium</i> under 310 CMR 22.20G(2)(a)4.	N/A	Bin 1

¹ Based on calculations in 310 CMR 22.20G(11)(a) or (d), as applicable.

(d) Following completion of the second round of source water monitoring required under 310 CMR 22.20G(2)(b) filtered systems must recalculate their *Cryptosporidium* bin concentration using the *Cryptosporidium* results reported under 310 CMR 22.20G(7)(d) and following the procedures in 310 CMR 22.20G(11)(b)1. through 4. Systems must then redetermine their bin classification using this bin concentration and the table in 310 CMR 22.20G(11)(c).

(e) 1. Filtered systems must report their initial bin classification under 310 CMR 22.20G(11)(c) to the Department for approval no later than six months after the system is required to complete initial source water monitoring based on the schedule in 310 CMR 22.20G(2)(c).

2. Systems must report their bin classification under 310 CMR 22.20G(11)(d) to the Department for approval no later than six months after the system is required to complete the second round of source water monitoring based on the schedule in 310 CMR 22.20G(2)(c).

3. The bin classification report to the Department must include a summary of source water monitoring data and the calculation procedure used to determine bin classification.

(f) Failure to comply with the conditions of 310 CMR 22.20G(11)(e) is a violation of the Treatment Technique requirement.

(12) Filtered System Additional *Cryptosporidium* Treatment Requirements.

(a) Filtered systems must provide the level of additional treatment for *Cryptosporidium* specified in 310 CMR 22.20G(12)(a) based on their bin classification as determined under 310 CMR 22.20G(11) and according to the schedule in 310 CMR 22.20G(14).

22.20G: continued

310 CMR 22.20G: Table 3

FILTERED SYSTEM ADDITIONAL *CRYPTOSPORIDIUM* TREATMENT REQUIREMENTS

If the system bin classification is ...	And the system uses the following Filtration treatment in full compliance with 310 CMR 22.20A, 310 CMR 22.20D, and 310 CMR 22.20F (as applicable), then the additional <i>Cryptosporidium</i> treatment requirements are ...			
	Conventional Filtration treatment (including softening)	Direct Filtration	Slow Sand or Diatomaceous Earth Filtration	Alternative Filtration technologies
Bin 1	No additional treatment	No additional treatment	No additional treatment	No additional treatment
Bin 2	1-log treatment	1.5-log treatment	1-log treatment	-1
Bin 3	2-log treatment	2.5-log treatment	2-log treatment	-2
Bin 4	2.5-log treatment	3-log treatment	2.5-log treatment	-3

¹ As determined by the Department such that the total *Cryptosporidium* removal and inactivation is at least 4.0-log

² As determined by the Department such that the total *Cryptosporidium* removal and inactivation is at least 5.0-log.

³ As determined by the Department such that the total *Cryptosporidium* removal and inactivation is at least 5.5-log.

(b) 1. Filtered systems must use one or more of the treatment and management options listed in 310 CMR 22.20G(18) to comply with the additional *Cryptosporidium* treatment required in 310 CMR 22.20G(12)(a).

2. Systems classified in Bin 3 and Bin 4 must achieve at least 1-log of the additional *Cryptosporidium* treatment required under 310 CMR 22.20G(12)(a) using either one or a combination of the following: Bag Filters, Bank Filtration, Cartridge Filters, chlorine dioxide, membranes, ozone, or UV, in accordance with 310 CMR 22.20G(19) through (23).

(c) Failure by a system in any month to achieve treatment credit by meeting criteria in 310 CMR 22.20G(19) through (23), that is at least equal to the level of treatment required in 310 CMR 22.20G(12)(a) is a violation of the Treatment Technique requirement.

(d) If the Department determines during a Sanitary Survey or an equivalent source water assessment that after a system completed the monitoring conducted under 310 CMR 22.20G(2)(a) or (b), significant changes occurred in the system's Watershed that could lead to increased contamination of the source water by *Cryptosporidium*, the system must take actions specified by the Department to address the contamination. These actions may include additional source water monitoring and/or implementing microbial toolbox options in accordance with 310 CMR 22.20G(18) through (23).

(13) Unfiltered System *Cryptosporidium* Treatment Requirements.

(a) Determination of Mean *Cryptosporidium* Level.

1. Following completion of the initial source water monitoring required under 310 CMR 22.20G(2)(a) unfiltered systems must calculate the arithmetic mean of all *Cryptosporidium* sample concentrations reported under 310 CMR 22.20G(2)(a). Systems must report this value to the Department for approval no later than six months after the month the system is required to complete initial source water monitoring based on the schedule in 310 CMR 22.20G(2)(c).

2. Following completion of the second round of source water monitoring required under 310 CMR 22.20G(2)(b) unfiltered systems must calculate the arithmetic mean of all *Cryptosporidium* sample concentrations reported under 310 CMR 22.20G(2)(b). Systems must report this value to the Department for approval no later than six months after the month the system is required to complete the second round of source water monitoring based on the schedule in 310 CMR 22.20G(2)(c).

22.20G: continued

3. If the monthly *Cryptosporidium* sampling frequency varies, systems must first calculate a monthly average for each month of monitoring. Systems must then use these monthly average concentrations, rather than individual sample concentrations, in the calculation of the mean *Cryptosporidium* level in 310 CMR 22.20G(13)(a)1. or 2.
 4. The report to the Department of the mean *Cryptosporidium* levels calculated under 310 CMR 22.20G(13)(a)1. and 2. must include a summary of the source water monitoring data used for the calculation.
 5. Failure to comply with the conditions of 310 CMR 22.20G(13)(a) is a violation of the Treatment Technique requirement.
- (b) Cryptosporidium Inactivation Requirements. Unfiltered systems must provide the level of inactivation for *Cryptosporidium* specified in 310 CMR 22.20G(13)(b)1. and 2., based on their mean *Cryptosporidium* levels as determined under 310 CMR 22.20G(13)(a) and according to the schedule in 310 CMR 22.20G(14).
1. Unfiltered systems with a mean *Cryptosporidium* level of 0.01 oocysts/L or less must provide at least 2-log *Cryptosporidium* inactivation.
 2. Unfiltered systems with a mean *Cryptosporidium* level of greater than 0.01 oocysts/L must provide at least 3-log *Cryptosporidium* inactivation.
- (c) Inactivation Treatment Technology Requirements. Unfiltered systems must use chlorine dioxide, ozone, or UV; in accordance with 310 CMR 22.20G(23); in order to meet the *Cryptosporidium* inactivation requirements of 310 CMR 22.20G(13).
1. Systems that use chlorine dioxide or ozone and fail to achieve the *Cryptosporidium* inactivation required in 310 CMR 22.20G(13)(b) on more than one day in the calendar month are in violation of the Treatment Technique requirement.
 2. Systems that use UV light, and fail to achieve the *Cryptosporidium* inactivation required in 310 CMR 22.20G(13)(b) by meeting the criteria in 310 CMR 22.20G(23)(b)1.d., are in violation of the Treatment Technique requirement.
- (d) Use of Two Disinfectants. Unfiltered systems must meet the combined *Cryptosporidium* inactivation requirements of 310 CMR 22.20G(13) and *Giardia lamblia* and Virus inactivation requirements of 310 CMR 22.20A(3)(a) using a minimum of two Disinfectants, and each of two Disinfectants must separately achieve the total inactivation required for *Cryptosporidium*, *Giardia lamblia*, or Viruses.

(14) Schedule for Compliance with *Cryptosporidium* Treatment Requirements.

- (a) Following initial bin classification under 310 CMR 22.20G(11)(c), filtered systems must provide the level of treatment for *Cryptosporidium* required under 310 CMR 22.20G(12) according to the schedule in 310 CMR 22.20G(14)(c).
- (b) Following initial determination of the mean *Cryptosporidium* level under 310 CMR 22.20G(13)(a)1., unfiltered systems must provide the level of treatment for *Cryptosporidium* required under 310 CMR 22.20G(13) according to the schedule in 310 CMR 22.20G(14)(c).
- (c) *Cryptosporidium* Treatment Compliance Dates.

310 CMR 22.20G: Table 4

Cryptosporidium TREATMENT COMPLIANCE DATES TABLE

Systems that serve ...	Must comply with <i>Cryptosporidium</i> treatment requirements no later than...*
(1) At least 100,000 individuals	April 1, 2012
(2) From 50,000 to 99,999 individuals	October 1, 2012
(3) From 10,000 to 49,999 individuals	October 1, 2013
(4) Fewer than 10,000 individuals	October 1, 2014

* The Department may allow up to an additional two years for complying with the treatment requirement for systems making capital improvements.

- (d) If the bin classification for a filtered system changes following the second round of source water monitoring, as determined under 310 CMR 22.20G(11)(d), the system must provide the level of treatment for *Cryptosporidium* required under 310 CMR 22.20G(12) on a schedule the Department approves.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.20G: continued

(e) If the mean *Cryptosporidium* level for an unfiltered system changes following the second round of monitoring, as determined under 310 CMR 22.20G(13)(a)2. and if the system must provide a different level of *Cryptosporidium* treatment under 310 CMR 22.20G(13) due to this change, the system must meet this treatment requirement on a schedule the Department approves.

(15) Requirements for Uncovered Finished Water Storage Facilities.

(a) Systems using uncovered finished water storage facilities must comply with the conditions of 310 CMR 22.20G(15).

(b) Systems must notify the Department of the use of each Uncovered Finished Water Storage Facility no later than April 1, 2008.

(c) Systems must meet the conditions of 310 CMR 22.20G(15)(c)1. or 2. for each Uncovered Finished Water Storage Facility or be in compliance with a Department-approved schedule to meet these conditions no later than April 1, 2009.

1. Systems must cover any Uncovered Finished Water Storage Facility.

2. Systems must treat the discharge from the Uncovered Finished Water Storage Facility to the Distribution System to achieve inactivation and/or removal of at least 4-log Virus, 3-log *Giardia lamblia*, and 2-log *Cryptosporidium* using a protocol approved by the Department.

(d) Failure to comply with the requirements of 310 CMR 22.20G(15) is a violation of the Treatment Technique requirement.

(16) Reporting Requirements.

(a) Systems must report sampling schedules under 310 CMR 22.20G(3) and source water monitoring results under 310 CMR 22.20G(7) unless they notify the Department that they will not conduct source water monitoring due to meeting the criteria of 310 CMR 22.20G(2)(d).

(b) Systems must report the use of uncovered finished water storage facilities to the Department as described in 310 CMR 22.20G(15).

(c) Filtered systems must report their *Cryptosporidium* bin classification as described in 310 CMR 22.20G(11).

(d) Unfiltered systems must report their mean source water *Cryptosporidium* level as described in 310 CMR 22.20G(13).

(e) Systems must report Disinfection Profiles and benchmarks to the Department as described in 310 CMR 22.20G(9) through (10) prior to making a significant change in disinfection practice.

(f) Systems must report to the Department in accordance with the following table for any microbial toolbox options used to comply with treatment requirements under 310 CMR 22.20G(12) or (13). Alternatively, the Department may approve a system to certify operation within required parameters for treatment credit rather than reporting monthly operational data for toolbox options.

310 CMR 22.20G: Table 5

MICROBIAL TOOLBOX REPORTING REQUIREMENTS

Toolbox option	Systems must submit the following information	On the following schedule
(1) Watershed control program.	(i) Notice of intention to develop a new or continue an existing watershed control program... (ii) Watershed control plan... (iii) Annual watershed control program status report..... (iv) Watershed sanitary survey report.....	No later than two years before the applicable treatment compliance date in 310 CMR 22.20G(14). No later than one year before the applicable treatment compliance date in 310 CMR 22.20G(14). Every 12 months, beginning one year after the applicable treatment compliance date in 310 CMR 22.20G(14). For Community Water Systems, every three years beginning three years after the applicable treatment compliance date in 310 CMR 22.20G(14). For Noncommunity Water Systems, every five years beginning five years after the applicable treatment compliance date in 310 CMR 22.20G(14).

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.20G: continued

Toolbox option	Systems must submit the following information	On the following schedule
(2) Alternative source/intake management	Verification that system has relocated the intake or adopted the intake withdrawal procedure reflected in monitoring results.	No later than the applicable treatment compliance date in 310 CMR 22.20G(14).
(3) Pre-sediments	Monthly verification of the following: (i) Continuous basin operation (ii) Treatment of 100% of the flow (iii) Continuous addition of a coagulant (iv) At least 0.5-log mean reduction of influent Turbidity or compliance with alternative Department approved performance criteria.	Monthly reporting within ten days following the month in which the monitoring was conducted beginning on the applicable treatment compliance date in 310 CMR 22.20G(14).
(4) Two-stage Lime Softening	Monthly verification of the following: (i) Chemical addition and hardness precipitation occurred in two separate and sequential softening stages prior to Filtration (ii) Both stages treated 100% of the plant flow.	Monthly reporting within ten days following the month in which the monitoring was conducted beginning on the applicable treatment compliance date in 310 CMR 22.20G(14).
(5) Bank Filtration	(i) Initial demonstration of the following: (A) Unconsolidated, predominantly sandy aquifer (B) Setback distance of at least 25 ft. (0.5-log credit) or 50 ft. (1.0-log credit). (ii) If monthly average of daily max Turbidity is greater than one NTU then system must report result and submit an assessment of the cause.	No later than the applicable treatment compliance date in 310 CMR 22.20G(14). Report within 30 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in 310 CMR 22.20G(14).
(6) Combined filter performance	Monthly verification of combined filter effluent (CFE) Turbidity levels less than or equal to 0.15 NTU in at least 95% of the four hour CFE measurements taken each month.	Monthly reporting within ten days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in 310 CMR 22.20G(14).
(7) Individual filter performance	Monthly verification of the following: (i) Individual filter effluent (IFE) Turbidity levels less than or equal to 0.15 NTU in at least 95% of samples each month in each filter. (ii) No individual filter greater than 0.3 NTU in two consecutive readings 15 minutes apart.	Monthly reporting within ten days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in 310 CMR 22.20G(14).
(8) Demonstration of performance	(i) Results from testing following a Department-approved protocol. (ii) As required by the Department, monthly verification of operation within conditions of Department approval for demonstration of performance credit.	No later than the applicable treatment compliance date in 310 CMR 22.20G(14). Within ten days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in 310 CMR 22.20G(14).
(9) Bag Filters and Cartridge Filters	(i) Demonstration that the following criteria are met: (A) Process meets the definition of bag or cartridge Filtration; (B) Removal efficiency established through challenge testing that meets criteria in 310 CMR 22.20G(22)(a). (ii) Monthly verification that 100% of plant flow was filtered.	No later than the applicable treatment compliance date in 310 CMR 22.20G(14). Within ten days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in 310 CMR 22.20G(14).
(10) Membrane Filtration	(i) Results of verification testing demonstrating the following: (A) Removal efficiency established through challenge testing that meets criteria in 310 CMR 22.20G(22)(b). (B) Integrity test method and parameters, including resolution, sensitivity, test frequency, control limits, and associated baseline. (ii) Monthly report summarizing the following:	No later than the applicable treatment compliance date in 310 CMR 22.20G(14). Within ten days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in 310 CMR 22.20G(14).

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.20G: continued

Toolbox option	Systems must submit the following information	On the following schedule
	(A) All direct integrity tests above the control limit; (B) If applicable, any Turbidity or alternative Department approved indirect integrity monitoring results triggering direct integrity testing and the corrective action that was taken.	
(11) Second stage Filtration	Monthly verification that 100% of flow was filtered through both stages and that first stage was preceded by Coagulation step.	Within ten days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in 310 CMR 22.20G(14).
(12) Slow Sand Filtration (as secondary filter)	Monthly verification that both a slow sand filter and a preceding separate stage of Filtration treated 100% of flow from Surface Water Sources or Groundwater Under the Direct Influence of Surface Water.	Within ten days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in 310 CMR 22.20G(14).
(13) Chlorine dioxide	Summary of CT values for each day as described in 310 CMR 22.20G(23), as applicable.	Within ten days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in 310 CMR 22.20G(14).
(14) Ozone	Summary of CT values for each day as described in 310 CMR 22.20G(23), as applicable.	Within ten days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in 310 CMR 22.20G(14).
(15) UV	(i) Validation test results demonstrating operating conditions that achieve required UV dose. (ii) Monthly report summarizing the percentage of water entering the Distribution System that was not treated by UV reactors operating within validated conditions for the required dose as specified in 310 CMR 22.20G(23), as applicable.	No later than the applicable treatment compliance date in 310 CMR 22.20G(14). Within ten days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in 310 CMR 22.20G(14).

(17) Recordkeeping Requirements.

- (a) Systems must keep results from the initial round of source water monitoring under 310 CMR 22.20G(2)(a) and the second round of source water monitoring under 310 CMR 22.20G(2)(b) until three years after bin classification under 310 CMR 22.20G(11) for filtered systems or determination of the mean *Cryptosporidium* level under 310 CMR 22.20G(11) for unfiltered systems for the particular round of monitoring.
- (b) Systems must keep any notification to the Department that they will not conduct source water monitoring due to meeting the criteria of 310 CMR 22.20G(2)(d) for three years.
- (c) Systems must keep the results of treatment monitoring associated with microbial toolbox options under 310 CMR 22.20G(18) through (23) and with uncovered finished water reservoirs under 310 CMR 22.20G(15), as applicable, for three years.

22.20G: continued

(18) Microbial Toolbox Options for Meeting *Cryptosporidium* Treatment Requirements.

(a) A Public Water System may receive the *Cryptosporidium* treatment credits listed in 310 CMR 22.20G(18)(b) *Table 6*, by meeting the conditions for microbial toolbox options described in 310 CMR 22.20G(19) through (23), provided however that unfiltered systems shall only be eligible for *Cryptosporidium* treatment credits for the microbial toolbox options described in 310 CMR 22.20G(23). A Supplier of Water may apply these *Cryptosporidium* treatment credits to meet the treatment requirements set forth in 310 CMR 22.20G(12) and (13), as applicable.

(b) The following table summarizes options in the microbial toolbox set forth in 310 CMR 22.20G(19) through (23). In the event of conflict between this table and the provisions of 310 CMR 22.20G(19) through (23), the latter shall control.

310 CMR 22.20G: *Table 6*

MICROBIAL TOOLBOX SUMMARY TABLE: OPTIONS, TREATMENT CREDITS AND CRITERIA

Toolbox Option	Log Credit	<i>Cryptosporidium</i> treatment credit with design and implementation criteria
SOURCE PROTECTION AND MANAGEMENT TOOLBOX OPTIONS		
1. Watershed control program	0.5-log	For Department-approved program comprising required elements, annual program status report to Department, and regular watershed survey. Unfiltered systems are not eligible for credit. Specific criteria are in 310 CMR 22.20G(19)(a).
2. Alternative source/intake management	No prescribed credit	Suppliers of Water may conduct simultaneous monitoring for treatment bin classification at alternative intake locations or under alternative intake management strategies. Specific criteria are in 310 CMR 22.20G(19)(b).
PRE FILTRATION TOOLBOX OPTIONS		
3. Pre-sedimentation basin with Coagulation	0.5-log credit	Credit is given during any month that pre-sedimentation basins achieve a monthly mean reduction of 0.5-log or greater in Turbidity or alternative Department-approved performance criteria. To be eligible, basins must be operated continuously with coagulant addition and all plant flow must pass through basins. Specific criteria are in 310 CMR 22.20G(20)(a).
4. Two-stage Lime Softening	0.5-log credit	Credit for two-stage softening where chemical addition and hardness precipitation occur in both stages. All plant flow must pass through both stages. Single-stage softening is credited as equivalent to conventional treatment. Specific criteria are in 310 CMR 22.20G(20)(b).

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.20G: continued

Toolbox Option	Log Credit	<i>Cryptosporidium</i> treatment credit with design and implementation criteria
5. Bank Filtration	0.5-log	For 25-foot setback ¹ . Specific criteria are in 310 CMR 22.20G(20)(c).
	1.0-log	For 50-foot setback ¹ . Specific criteria are in 310 CMR 22.20G(20)(c).
TREATMENT PERFORMANCE TOOLBOX OPTIONS		
6. Combined filter performance	0.5-log	Credit for combined filter effluent Turbidity less than or equal to 0.15 NTU in at least 95% of measurements each month. Specific criteria are in 310 CMR 22.20G(21)(a).
7. Individual filter performance	0.5-log	Credit is given in addition to 0.5-log combined filter performance credit. Credit is given if individual filter effluent Turbidity is less than or equal to 0.15 NTU in at least 95% of samples each month in each filter and is never greater than 0.3 NTU in two consecutive measurements in any filter. Specific criteria are in 310 CMR 22.20G(21)(b).
8. Demonstration of performance	Credit awarded	Credit awarded to unit process or treatment train based on a demonstration to the Department with a Department-approved protocol. Specific criteria are in 310 CMR 22.20G(21)(c).
ADDITIONAL FILTRATION TOOLBOX OPTIONS		
9. Bag or Cartridge Filters (individual filters)	Up to 2-log	Up to 2-log credit based on the removal efficiency demonstrated during challenge testing with a 1.0-log factor of safety. Specific criteria are in 310 CMR 22.20G(22)(a).
10. Bag or Cartridge Filters (in series)	Up to 2.5-log	Up to 2.5-log credit based on the removal efficiency demonstrated during challenge testing with a 0.5-log factor of safety. Specific criteria are in 310 CMR 22.20G(22)(a).
11. Membrane Filtration	Log credit	Log credit equivalent to removal efficiency demonstrated in challenge test for device if supported by direct integrity testing. Specific criteria are in 310 CMR 22.20G(22)(b).
12. Second stage Filtration	0.5-log	0.5-log credit for second separate granular media Filtration stage if treatment train includes Coagulation prior to first filter. Specific criteria are in 310 CMR 22.20G(22)(c).

22.20G: continued

Toolbox Option	Log Credit	<i>Cryptosporidium</i> treatment credit with design and implementation criteria
13. Slow sand filters	2.5-log	Credit as a secondary Filtration step ² . Specific criteria are in 310 CMR 22.20G(22)(d).
	3.0-log	Credit as a primary Filtration process ² . Specific criteria are in 310 CMR 22.20G(22)(d).
INACTIVATION TOOLBOX OPTIONS		
14. Chlorine dioxide	CT table	Log credit based on measured CT in relation to CT table. Specific criteria in 310 CMR 22.20G(23)(a).
15. Ozone	CT table	Log credit based on measured CT in relation to CT table. Specific criteria in 310 CMR 22.20G(23)(a).
16. UV	UV dose	Log credit based on validated UV dose in relation to UV dose table; reactor validation testing required to establish UV dose and associated operating conditions. Specific criteria in 310 CMR 22.20G(23)(b).

¹ Aquifer must be unconsolidated sand containing at least 10% fines; average Turbidity in wells must be less than one NTU. Suppliers of Water using wells followed by Filtration when conducting source water monitoring must sample the well to determine bin classification and are not eligible for additional credit.

² No prior chlorination for either option.

(19) Source Toolbox Components.

(a) Watershed Control Program. Suppliers of Water may apply for a 0.5-log *Cryptosporidium* treatment credit for implementing an approved watershed control program, in accordance with the following requirements:

1. provide advance written notice to the Department of the intent to apply for the watershed control program credit no later than two years prior to the treatment compliance date applicable to the Public Water System in 310 CMR 22.20G(14), Schedule for Compliance with *Cryptosporidium* Treatment requirements.
2. if no approved watershed control program is in place, then submit to the Department for approval a proposed, written watershed control plan no later than one year before the applicable treatment compliance date in 310 CMR 22.20G(14). The availability of the watershed control program treatment credit shall be contingent on Department approval of the watershed control plan based on the inclusion and adequacy of all of the following elements:
 - a. identification of an area outside of which the likelihood of *Cryptosporidium* or fecal contamination affecting the treatment Plant Intake is not significant ("area of influence"). The area of influence shall be evaluated in future watershed surveys, as required in 310 CMR 22.20G(19)(a)5.b.
 - b. identification of both potential and actual sources of *Cryptosporidium* contamination and an assessment of the relative impact of these sources on the system's source water quality.
 - c. an analysis of the effectiveness and feasibility of control measures that could reduce *Cryptosporidium* loading from sources of contamination to the system's source water.
 - d. a statement of goals and specific actions the Supplier of Water will undertake to reduce source water *Cryptosporidium* levels, including:

22.20G: continued

- i. an explanation of how the actions are expected to contribute to specific goals;
 - ii. identification of Watershed resource requirements and commitments; and
 - iii. a schedule for implementing the watershed control plan, once approved, including deadlines for completing specific actions identified in the watershed control plan.
3. if an approved watershed control program is in place as of January 5, 2006, then submit to the Department for approval written documentation demonstrating that the existing watershed control plan complies with the following:
 - a. the existing watershed control plan must meet the above criteria listed in 310 CMR 22.20G(19)(a)2. in addition to any criteria met in the existing approval; and
 - b. the existing watershed control plan must specify ongoing and future actions that will reduce source water *Cryptosporidium* levels.
4. Credit in the Absence of Department Response. If within 90 days of the Department's receipt of a watershed control plan submitted under 310 CMR 22.20G(19)(a), the Department does not respond to the Supplier of Water regarding approval of that watershed control plan, and the Supplier of Water otherwise meets the requirements of 310 CMR 22.20G(19)(a), the watershed control plan will be considered approved and 0.5 log *Cryptosporidium* treatment credit will be awarded, unless and until the Department subsequently withdraws such approval.
5. Maintaining the 0.5-log *Cryptosporidium* treatment credit for implementing an approved watershed control program. In order to maintain a 0.5-log *Cryptosporidium* treatment credit for implementing an approved watershed control program, the Supplier of Water shall satisfy the following requirements:
 - a. submit an annual watershed control program status report to the Department. The annual watershed control program status report shall describe the Supplier of Water's implementation of the approved plan and assess the adequacy of the plan to meet its goals. It must explain how the Supplier of Water is addressing any shortcomings in plan implementation, including those previously identified by the Department or as the result of the watershed survey conducted under 310 CMR 22.20G(19)(a)5.b. The Supplier of Water shall also describe any significant changes that have occurred in the Watershed since the last watershed sanitary survey. If a Supplier of Water, based upon implementation of an approved watershed control program, believes that a significant change to the approved watershed control program is necessary, the Supplier of Water shall notify the Department in writing of the changes it proposes to make to its approved watershed control plan. Any such change to an approved watershed control plan shall be subject to:
 - i. the Department's approval based upon the plan's continued inclusion of and adequacy of the elements in 310 CMR 22.20G(19)(a)2.; and
 - ii. if any change is likely to reduce the level of source water protection, the Supplier of Water's notification shall include a plan and strategy indicating how the proposed actions will mitigate this effect.

If within 60 days of the Department's receipt of a notification of a change to an approved watershed control plan, the Department does not respond to the Supplier of Water regarding approval of that change, and the Supplier of Water otherwise meets the requirements of 310 CMR 22.20G(19)(a)5.a.i. and ii., then the changes to the approved watershed control plan will be considered approved, unless and until the Department subsequently withdraws such approval, based upon failure to meet such requirements.
 - b. undergo a watershed sanitary survey every three years for Community Water Systems and every five years for Non-community Water Systems which:
 - i. encompasses the area of influence identified in the Department-approved watershed control plan;
 - ii. assesses the implementation of actions to reduce source water *Cryptosporidium* levels; and
 - iii. identifies any significant New Sources of *Cryptosporidium*;

22.20G: continued

iv. unless performed by the Department, is performed by a qualified Person approved by the Department, based on demonstrated knowledge and experience in:

- A. conducting watershed inspections and reviewing and assessing impacts to public water supplies from existing land use practices, stormwater discharges, aquatic and terrestrial invasive species, wildlife, public access and recreation, agriculture, local zoning and non zoning controls;
- B. recommending source water protection measures to address impacts; and
- C. assisting with multi-town coordination and public education for water supply protection.

Suppliers of Water shall submit the survey report to the Department, unless the survey is performed by the Department. If the Department determines that significant changes have occurred in the Watershed since the previous watershed sanitary survey, the Department may establish an earlier date than otherwise required in 310 CMR 22.20G(19)(a)5.b. by which Public Water Systems shall undergo another watershed sanitary survey.

c. The Supplier of Water shall make the watershed control plan, annual status reports, and watershed sanitary survey reports available to the public in electronic or printed form, upon request. These documents shall be in plain language and include criteria by which to evaluate the success of the program in achieving plan goals. A Supplier of Water may request in writing the Department's written approval to withhold from the public portions of the annual status report, watershed control plan, and watershed sanitary survey based on water supply security considerations. Any such request must identify with specificity the security considerations relevant to each portion proposed to be withheld.

6. A Supplier of Water's watershed control program treatment credit shall be subject to withdrawal if the Department determines that the Supplier of Water is not performing the approved watershed control plan.

(b) Alternative Source.

1. A Supplier of Water may conduct source water monitoring that reflects a different intake location (either in the same source or for an alternate source) or a different procedure for the timing or level of withdrawal from the source (alternative source monitoring). A Supplier of Water, subject to the Department's written approval, may determine its bin classification under 310 CMR 22.20G(11) based on the alternative source monitoring results.

2. If a Supplier of Water conducts alternative source monitoring under 310 CMR 22.20G(19)(b), the Supplier of Water shall also monitor its current Plant Intake concurrently, as described in 310 CMR 22.20G(2).

3. Alternative source monitoring under 310 CMR 22.20G (19)(b)1. shall meet the requirements for source monitoring to determine bin classification, as described in 310 CMR 22.20G(2) through (7). The Supplier of Water shall report the alternative source monitoring results in writing to the Department, along with supporting information documenting the operating conditions under which the samples were collected.

4. If a Supplier of Water determines its bin classification under 310 CMR 22.20G(11) using alternative source monitoring results that reflect a different intake location or a different procedure for managing the timing or level of withdrawal from the source, the Supplier of Water shall relocate the intake or permanently adopt the withdrawal procedure, as applicable, no later than the applicable treatment compliance date in 310 CMR 22.20G(14)(c).

(20) Pre-filtration Treatment Toolbox Components.

(a) Pre-sedimentation. A Supplier of Water using Pre-sedimentation, subject to the Department's review and written approval, shall receive a 0.5-log *Cryptosporidium* treatment credit for any month the Public Water System meets the following criteria:

- 1. the Pre-sedimentation is in continuous operation and treats the entire plant flow taken from a Surface Water Source or a Groundwater under the Direct Influence of Surface Water source;

22.20G: continued

2. the Supplier of Water continuously adds a coagulant to the Pre-sedimentation basin; and
 3. the Pre-sedimentation basin achieves the following performance criteria:
 - a. demonstrates at least 0.5-log mean reduction of influent Turbidity. This reduction must be determined using daily Turbidity measurements in the Pre-sedimentation influent and effluent and must be calculated as follows: $\log_{10}(\text{monthly mean of daily influent Turbidity}) - \log_{10}(\text{monthly mean of daily effluent Turbidity})$; or
 - b. demonstrates at least 0.5-log mean removal of micron-sized particulate material through the Pre-sedimentation, in accordance with 310 CMR 22.20G(22)b.2.
- (b) Two-stage Lime Softening. A Supplier of Water using Two-stage Lime Softening, subject to the Department's satisfactory review and written approval, shall receive a 0.5-log *Cryptosporidium* treatment credit, if chemical addition and hardness precipitation occur in two separate and sequential softening stages prior to Filtration, and both softening stages treat the entire plant flow taken from a Surface Water Source or a Groundwater under the Direct Influence of Surface Water Source.
- (c) Bank Filtration. A Supplier of Water using Bank Filtration that serves as pretreatment to a Filtration plant, subject to the Department's satisfactory review and written approval of the Bank Filtration data, shall receive *Cryptosporidium* treatment credit, as set forth in 310 CMR 22.20G(2)(c)1. through 8., by meeting the following criteria:
1. Suppliers of Water shall receive either 0.5-log treatment credit for wells with a groundwater flow path of at least 25 feet or a 1.0-log treatment credit for wells with a groundwater flow path of at least 50 feet, whichever is less. The groundwater flow path shall be determined as specified in 310 CMR 22.20G(20)(c)4.;
 2. the wells must be located in granular aquifers. Granular aquifers are comprised of sand, clay, silt, rock fragments, pebbles or larger particles, and minor cement. A Supplier of Water must characterize the aquifer at the well site to determine aquifer properties. A Supplier of Water must extract a core from the aquifer and demonstrate that in at least 90% of the core length, grains less than 1.0 mm in diameter constitute at least 10% of the core material;
 3. the wells must be horizontal or vertical;
 4. for vertical wells, the groundwater flow path is the measured distance from the edge of the Surface Water body under high flow conditions (determined by the 100 year floodplain elevation boundary or by the floodway, as defined in Federal Emergency Management Agency flood hazard maps effective as of March 31, 2016) to the well screen. For horizontal wells, the groundwater flow path is the measured distance from the bed of the river under normal flow conditions to the closest horizontal well lateral screen;
 5. each wellhead must be monitored for Turbidity at least once every four hours while the Bank Filtration is in operation and shall be subject to the following requirements:
 - a. if monthly average Turbidity levels, based on daily maximum values in any of the wells being monitored, exceed one NTU, the Supplier of Water shall report this result to the Department and conduct an assessment within 30 days to determine the cause of the high Turbidity levels in the well; and
 - b. the Supplier of Water's treatment credit shall be subject to revocation if the Department determines that microbial removal has been compromised, until such time as the Supplier of Water implements corrective actions, as approved by the Department, to remediate the problem;
 6. Springs and Infiltration Galleries.
 - a. Springs and infiltration galleries shall not be eligible for a Bank Filtration treatment credit;
 - b. Springs and infiltration galleries shall be eligible for credit pursuant to 310 CMR 22.20G(21)(c);
 7. Bank Filtration Demonstration of Performance. A Supplier of Water, subject to the Department's review and written approval, shall receive *Cryptosporidium* treatment credit for Bank Filtration based on submittal of a demonstration of performance study meeting the following criteria:

22.20G: continued

a. the study must follow a Department-approved protocol and must involve the collection of data on the removal of *Cryptosporidium* or a surrogate for *Cryptosporidium* and related hydrogeologic and water quality parameters during the full range of operating conditions; and

b. the study must include sampling both from the production well(s) and from monitoring wells that are screened and located along the shortest flow path between the Surface Water Source and the production well(s).

Treatment credit based on a performance study may be greater than 1.0-log and may be awarded for Bank Filtration that does not meet the criteria in 310 CMR 22.20G(20)(c)1. through 5.; and

8. Suppliers of Water using Bank Filtration when they begin source water monitoring under 310 CMR 22.20G(2)(a) shall collect samples as described in 310 CMR 22.20G(4)(d), but shall not be eligible for this credit.

(21) Treatment Performance Toolbox Components.

(a) Combined Filter Performance. A Supplier of Water using Conventional Filtration Treatment or Direct Filtration, subject to the Department's review and written approval, shall receive a 0.5 log *Cryptosporidium* treatment credit during any month the combined filter effluent (CFE) Turbidity is less than or equal to 0.15 NTU in at least 95% of the measurements. Turbidity must be measured as described in 310 CMR 22.20A(5)(a) and (c). Such credit shall be in addition to any other *Cryptosporidium* treatment credit granted to the Public Water System pursuant to 310 CMR 22.20G.

(b) Individual Filter Performance.

1. A Supplier of Water using conventional Filtration treatment or Direct Filtration treatment, subject to the Department's review and written approval, shall receive 0.5-log *Cryptosporidium* treatment credit during any month the Public Water System meets the following criteria:

a. the filtered water Turbidity for each individual filter must be less than or equal to 0.15 NTU in at least 95% of the measurements recorded each month; and

b. no individual filter has a measured Turbidity greater than 0.3 NTU in two consecutive measurements taken 15 minutes apart.

2. A Public Water System that has received *Cryptosporidium* treatment credit for individual filter performance that fails to meet the requirements as specified in 310 CMR 22.20G(21)(b)1.a. or b. during any month shall not receive a Treatment Technique violation as a result of such failure, for the month in which the failure occurred, under 310 CMR 22.20G(12)(c), if the Supplier of Water demonstrates both of the following to the Department's satisfaction:

a. the failure was due to unusual and short-term circumstances that could not reasonably be prevented through optimizing treatment plant design, operation and maintenance; and

b. the Public Water System has experienced no more than two such failures in any calendar year.

3. Compliance with these criteria shall be based on individual filter Turbidity monitoring as described in 310 CMR 22.20A(5) or 22.20D, as applicable. Such credit shall be in addition to any other *Cryptosporidium* treatment credit granted to the Public Water System pursuant to 310 CMR 22.20G(21)(a).

(c) Demonstration of Performance.

1. A Supplier of Water, subject to the Department's review and written approval, may be granted *Cryptosporidium* treatment credit for drinking water treatment processes based on a demonstration of performance study that meets the following criteria:

a. the demonstration of performance study must follow a Department-approved protocol and must demonstrate the level of reduction the treatment process will achieve under the full range of expected operating conditions for the Public Water System; and

b. the Supplier of Water must demonstrate and report on any monitoring and treatment performance criteria designated by the Department, where necessary to verify that the conditions under which the demonstration of performance credit was approved are maintained during routine operation.

22.20G: continued

2. The *Cryptosporidium* treatment credit may be greater than or less than the prescribed treatment credits in 310 CMR 22.20G(12) or (20) through (23) and may be awarded to treatment processes that do not meet the criteria for the prescribed credits.
3. A Public Water System that receives a *Cryptosporidium* treatment credit pursuant to 310 CMR 22.20G(21)(c) shall be subject to revocation if the Department determines that the Public Water System no longer satisfies the criteria set forth in 310 CMR 22.20G(21)(c)1.
4. A Public Water System that receives a *Cryptosporidium* treatment credit for a demonstration of performance study shall not receive a *Cryptosporidium* treatment credit for any toolbox option specified in 310 CMR 22.20G(20) through (23).

(22) Additional Filtration Toolbox Components.

(a) Bag Filters and Cartridge Filters. A Supplier of Water using Bag Filters or Cartridge Filters that treat the entire plant flow taken from a Surface Water Source, or Groundwater under the Direct Influence of Surface Water Source, subject to the Department's review and written approval, shall receive *Cryptosporidium* treatment credit, in accordance with the following:

1. Calculation of Credit. A *Cryptosporidium* treatment credit of up to 2.0-log for an individual Bag Filter or Cartridge Filter and up to a 2.5-log for Bag Filters or Cartridge Filters operated in series shall be granted based on the removal efficiency demonstrated during challenge testing conducted according to the criteria in 310 CMR 22.20G(22)(a)2.a. through i. A factor of safety equal to 1-log for individual Bag Filters or Cartridge Filters and 0.5-log for Bag Filters or Cartridge Filters in series shall be applied to challenge testing results to determine the *Cryptosporidium* treatment credit. Suppliers of Water may use results from challenge testing conducted prior to January 5, 2006, if the prior testing was consistent with the criteria specified in 310 CMR 22.20G(22)(a)2.a. through i.
2. Challenge Testing and Reporting Procedures.
 - a. challenge testing must be performed on full-scale Bag Filters or Cartridge Filters, and the associated filter housing or pressure vessel, that are identical in material and construction to the filters and housings the system will use for removal of *Cryptosporidium*. Bag Filters or Cartridge Filters must be challenge tested in the same configuration that the Public Water System will use, either as individual filters or as a series configuration of filters;
 - b. challenge testing must be conducted using *Cryptosporidium* or a surrogate that is removed no more efficiently than *Cryptosporidium*. The microorganism or surrogate used during challenge testing is referred to as the "challenge particulate". The concentration of the challenge particulate must be determined using a method capable of discreetly quantifying the specific microorganism or surrogate used in the test; gross measurements such as Turbidity may not be used;
 - c. the maximum feed water concentration that may be used during a challenge test must be based on the detection limit of the challenge particulate in the filtrate (*i.e.*, filtrate detection limit) and must be calculated using the following equation: Maximum Feed Concentration = $1 \times 10^4 \times (\text{Filtrate Detection Limit})$;
 - d. challenge testing must be conducted at the maximum design flow rate for the filter as specified by the manufacturer;
 - e. each filter evaluated must be tested for a duration sufficient to reach 100% of the terminal pressure drop, which establishes the maximum pressure drop under which the filter may be used while remaining in compliance with the requirements of 310 CMR 22.20G(22)(a);

22.20G: continued

f. removal efficiency of a filter must be determined from the results of the challenge test and expressed in terms of log removal values using the following equation:

$$\text{LRV} = \log^{10}(C_f) - \log^{10}(C_p),$$

Where:

LRV = log removal value demonstrated during challenge testing;

C_f = the feed concentration measured during the challenge test; and

C_p = the filtrate concentration measured during the challenge test.

In applying this equation, the same units must be used for the feed and filtrate concentrations. If the challenge particulate is not detected in the filtrate, then the term C_p must be set equal to the detection limit;

g. each filter tested must be challenged with the challenge particulate during three periods over the filtration cycle: within two hours of start-up of a new filter; when the pressure drop is between 45% and 55% of the terminal pressure drop; and at the end of the cycle after the pressure drop has reached 100% of the terminal pressure drop. An LRV shall be calculated for each of these challenge periods for each filter tested. The LRV for the filter ($\text{LRV}_{\text{filter}}$) shall be assigned the value of the minimum LRV observed during the three challenge periods for that filter;

h. if fewer than 20 filters are tested, the overall removal efficiency for the filter product line must be set equal to the lowest $\text{LRV}_{\text{filter}}$ among the filters tested. If 20 or more filters are tested, the overall removal efficiency for the filter product line must be set equal to the tenth percentile of the set of $\text{LRV}_{\text{filter}}$ values for the various filters tested. The percentile is defined by $(i/(n+1))$ where i is the rank of n individual data points ordered lowest to highest. If necessary, the tenth percentile may be calculated using linear interpolation; and

i. the results of challenge testing must be reported to the Department.

3. Retesting Requirement. If a previously tested filter is modified in a manner that could change the removal efficiency of the filter product line, challenge testing to demonstrate the removal efficiency of the modified filter must be conducted and submitted to the Department for a determination of whether such change will result in an adjustment to the overall *Cryptosporidium* treatment credit previously awarded.

(b) Membrane Filtration. A Supplier of Water using Membrane Filtration, subject to the Department's review and written approval, shall receive *Cryptosporidium* treatment credit, in accordance with the following:

1. Calculation of Credit. The level of *Cryptosporidium* treatment credit a Public Water System receives shall be equal to the lower of the values determined in 310 CMR 22.20G(22)(b)1.a. and b.

a. The removal efficiency demonstrated during challenge testing conducted under the conditions in 310 CMR 22.20G(22)(b)2.a.

b. The maximum removal efficiency that can be verified through direct integrity testing used with Membrane Filtration under the conditions in 310 CMR 22.20G(22)(b)2.b.

2. Testing and Reporting Procedures.

a. Challenge Testing. The membrane used by the Public Water System must undergo challenge testing to evaluate removal efficiency and the Supplier of Water must report the results of challenge testing to the Department. Suppliers of Water may use data from challenge testing conducted prior to January 5, 2006, if the prior testing was consistent with the criteria specified in 310 CMR 22.20G(22)(b)2.a.i. through viii. Challenge testing must be conducted in accordance with the following:

i. challenge testing must be conducted on either a full-scale membrane module, identical in material and construction to the membrane modules used in the Public Water System's treatment facility, or a smaller-scale membrane module, identical in material and similar in construction to the full-scale module. "Module" as used herein means the smallest component of a membrane unit in which a specific membrane surface area is housed in a device with a filtrate outlet structure;

22.20G: continued

- ii. challenge testing must be conducted using *Cryptosporidium oocysts* or a surrogate that is removed no more efficiently than *Cryptosporidium oocysts*. The organism or surrogate used during challenge testing is referred to as the "challenge particulate". The concentration of the challenge particulate, in both the feed and filtrate water, must be determined using a method capable of discretely quantifying the specific challenge particulate used in the test; gross measurements such as Turbidity may not be used;
- iii. the maximum feed water concentration that may be used during a challenge test must be based on the detection limit of the challenge particulate in the filtrate and must be determined according to the following equation: Maximum Feed Concentration = $3.16 \times 10^6 \times$ (Filtrate Detection Limit);
- iv. challenge testing must be conducted under representative hydraulic conditions at the maximum design flux and maximum design process recovery specified by the manufacturer for the membrane module. "Flux" as used in 310 CMR 22.20G means the throughput of a pressure driven membrane process expressed as flow per unit of membrane area. "Recovery" as used in 310 CMR 22.20G means the volumetric percent of feed water that is converted to filtrate over the course of an operating cycle uninterrupted by events such as chemical cleaning or a solids removal process (*i.e.*, backwashing);
- v. removal efficiency of a membrane module must be calculated from the challenge test results and expressed as a log removal value according to the following equation:

$$\text{LRV} = \log^{10}(C_f) - \log^{10}(C_p),$$

Where:

LRV = log removal value demonstrated during the challenge test;

C_f = the feed concentration measured during the challenge test; and

C_p = the filtrate concentration measured during the challenge test.

Equivalent units must be used for the feed and filtrate concentrations. If the challenge particulate is not detected in the filtrate, the term C_p must be set equal to the detection limit for the purpose of calculating the LRV. An LRV must be calculated for each membrane module evaluated during the challenge test;

- vi. the removal efficiency of a Membrane Filtration process demonstrated during challenge testing must be expressed as a log removal value ($\text{LRV}_{\text{C-Test}}$). If fewer than 20 modules are tested, then $\text{LRV}_{\text{C-Test}}$ must be equal to the lowest of the representative LRVs among the modules tested. If 20 or more modules are tested, then $\text{LRV}_{\text{C-Test}}$ is equal to the tenth percentile of the representative LRVs among the modules tested. The percentile is defined by $(i/(n+1))$ where i is the rank of n individual data points ordered lowest to highest. If necessary, the tenth percentile may be calculated using linear interpolation;
- vii. the challenge test must establish a quality control release value (QCRV) for a non-destructive performance test that demonstrates the *Cryptosporidium* removal capability of the Membrane Filtration module. This performance test must be applied to each production membrane module used in the Public Water System's treatment facility that was not directly challenge tested in order to verify *Cryptosporidium* removal capability. Production modules that do not meet the established QCRV are not eligible for the *Cryptosporidium* treatment credit demonstrated during the challenge test; and
- viii. if a previously tested membrane is modified in a manner that could change the removal efficiency of the membrane or the applicability of the non-destructive performance test and associated QCRV, challenge testing to demonstrate the removal efficiency of, and determine a new QCRV for, the modified membrane must be conducted and submitted to the Department for a determination of whether such change will result in an adjustment to the previously awarded LRV, and an award of a new $\text{LRV}_{\text{C-Test}}$.

22.20G: continued

- b. Direct Integrity Testing. The membrane used by the Public Water System must undergo direct integrity testing in a manner that demonstrates a removal efficiency equal to or greater than the *Cryptosporidium* treatment credit received pursuant to 310 CMR 22.20G(22)(b)2.a. A "direct integrity test" as used in 310 CMR 22.00G means a physical test applied to a membrane unit in order to identify and isolate integrity breaches (*i.e.*, one or more leaks that could result in contamination of the filtrate). Direct integrity testing must be conducted in accordance with the following:
- i. the direct integrity test must be independently applied to each membrane unit in service. A "membrane unit" as used herein means a group of membrane modules that share common valving that allows the unit to be isolated from the rest of the Public Water System for the purpose of integrity testing or other maintenance;
 - ii. the direct integrity method must have a resolution of three micrometers or less, where "resolution" as used in 310 CMR 22.20G means the size of the smallest integrity breach that contributes to a response from the direct integrity test;
 - iii. the direct integrity test must have sensitivity sufficient to verify the *Cryptosporidium* treatment credit received pursuant to 310 CMR 22.20G(22)(b)2.a, where "sensitivity" as used in 310 CMR 22.20G means the maximum log removal value that can be reliably verified by a direct integrity test. Sensitivity must be determined using the approach in 310 CMR 22.20G(22)(b)2.b.iii.A. or B., as applicable to the type of direct integrity test the system uses.

A. For direct integrity tests that use an applied pressure or vacuum, the direct integrity test sensitivity must be calculated according to the following equation:

$$LRV_{DIT} = \log_{10} (Q_p / (VCF \times Q_{breach}))$$

Where:

LRV_{DIT} = the sensitivity of the direct integrity test;

Q_p = total design filtrate flow from the membrane unit;

Q_{breach} = flow of water from an integrity breach associated with the smallest integrity test response that can be reliably measured; and

VCF = volumetric concentration factor. The volumetric concentration factor is the ratio of the suspended solids concentration on the high pressure side of the membrane relative to that in the feed water.

B. For direct integrity tests that use a particulate or molecular marker, the direct integrity test sensitivity shall be calculated according to the following equation:

$$LRV_{DIT} = \log_{10}(C_f) - \log_{10}(C_p)$$

Where:

LRV_{DIT} = the sensitivity of the direct integrity test;

C_f = the typical feed concentration of the marker used in the test; and

C_p = the filtrate concentration of the marker from an integral membrane unit;

- iv. Suppliers of Water must establish a control limit within the sensitivity limits of the direct integrity test that is indicative of an integral membrane unit capable of meeting the *Cryptosporidium* treatment credit awarded by the Department;
- v. if the result of a direct integrity test exceeds the control limit established under 310 CMR 22.20G(22)(b)2.b.iv., the Supplier of Water must remove the membrane unit from service. The Supplier of Water must conduct a direct integrity test to verify any repairs, and may return the membrane unit to service only if the direct integrity test is within the established control limit; and

22.20G: continued

vi. Suppliers of Water must conduct direct integrity testing on each membrane unit at a frequency of not less than once each day that the membrane unit is in operation, unless otherwise approved by the Department, based on demonstrated process reliability, the use of multiple barriers effective for *Cryptosporidium*, or reliable process safeguards.

c. Indirect Integrity Monitoring. Each membrane used by the Public Water System must undergo continuous indirect integrity monitoring according to the criteria specified in 310 CMR 22.20G(22)(b)2.c.i. through v. "Indirect integrity monitoring" as used in 310 CMR 22.20G means monitoring some aspect of filtrate water quality that is indicative of the removal of particulate matter. A Supplier of Water that implements continuous direct integrity testing of membrane units in accordance with the criteria in 310 CMR 22.20G(22)(b)2.b.i. through v. is not subject to the requirements for continuous indirect integrity monitoring. Monthly reports must be submitted to the Department summarizing all continuous indirect integrity monitoring results triggering direct integrity testing and the corrective action that was taken in each case. Indirect integrity monitoring must be conducted in accordance with the following:

- i. unless the Department approves an alternative parameter, continuous indirect integrity monitoring must include continuous filtrate Turbidity monitoring;
- ii. continuous monitoring must be conducted at a frequency of no less than once every 15 minutes;
- iii. continuous monitoring must be separately conducted on each membrane unit;
- iv. if indirect integrity monitoring includes Turbidity and if the filtrate Turbidity readings are above 0.15 NTU for a period greater than 15 minutes (*i.e.*, two consecutive 15-minute readings above 0.15 NTU), direct integrity testing must immediately be performed on the associated membrane unit as specified in 310 CMR 22.20G(22)(b)2.b.i. through v.; and
- v. if indirect integrity monitoring includes a Department-approved alternative parameter and if the alternative parameter exceeds a Department-approved control limit for a period greater than 15 minutes, direct integrity testing must immediately be performed on the associated membrane units as specified in 310 CMR 22.20G(22)(b)2.b.i. through v.

(c) Second stage Filtration. A Supplier of Water using second stage Filtration that consists of sand, dual media, GAC, or other fine grain media following granular media Filtration, subject to the Department's review and written approval based on an assessment of the design characteristics of the Filtration process, shall receive 0.5-log *Cryptosporidium* treatment credit, in accordance with the following:

1. the first stage of Filtration must be preceded by a Coagulation step;
2. both Filtration stages must treat the entire plant flow taken from a Surface Water Source or Groundwater under the Direct Influence of Surface Water Source; and
3. a cap, such as GAC, on a single stage of Filtration shall not be eligible for this *Cryptosporidium* treatment credit.

(d) Slow Sand Filtration (as Secondary Filter). A Supplier of Water using Slow Sand Filtration (as secondary filter) that follows a separate stage of Filtration, subject to the Department's review and written approval based on an assessment of the design characteristics of the Filtration process, shall receive 2.5-log *Cryptosporidium* treatment credit, in accordance with the following:

1. both Filtration stages must treat the entire plant flow taken from a Surface Water Source or Groundwater Under the Direct Influence of Surface Water Source;
2. no Disinfectant residual may be present in the influent water to the Slow Sand Filtration process; and
3. Slow Sand Filtration used as a primary Filtration process shall not be eligible for this *Cryptosporidium* treatment credit.

(23) Inactivation Toolbox Components.

(a) Inactivation by Chlorine Dioxide and Ozone. A Supplier of Water using chlorine dioxide or ozone, subject to the Department's review and written approval, shall receive *Cryptosporidium* treatment credit, in accordance with the following:

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.20G: continued

1. Calculation of Credit.

a. A Public Water System meeting the chlorine dioxide CT value in 310 CMR 22.20G(23): *Table 7* for the applicable water temperature shall receive the corresponding *Cryptosporidium* treatment credit.

310 CMR 22.20G: *Table 7*
CT VALUES (MG ·MIN/L) FOR *Cryptosporidium* INACTIVATION BY CHLORINE DIOXIDE¹

Log credit	Water Temperature, °C										
	≤0.5	1	2	3	5	7	10	15	20	25	30
0.25	159	153	140	128	107	90	69	45	29	19	12
0.5	319	305	279	256	214	180	138	89	58	38	24
1.0	637	610	558	511	429	360	277	179	116	75	49
1.5	956	915	838	767	643	539	415	268	174	113	73
2.0	1275	1220	1117	1023	858	719	553	357	232	150	98
2.5	1594	1525	1396	1278	1072	899	691	447	289	188	122
3.0	1912	1830	1675	1534	1286	1079	830	536	347	226	147

¹ A Supplier of Water may use this equation to determine log credit between the indicated values: $\log \text{ credit} = (0.001506 \times (1.09116)\text{Temp}) \times \text{CT}$.

b. A Public Water System meeting the ozone CT value in 310 CMR 22.20G: *Table 8* for the applicable water temperature shall receive the corresponding *Cryptosporidium* treatment credit.

310 CMR 22.20G: *Table 8*
CT VALUES (MG MIN/L) FOR *Cryptosporidium* INACTIVATION BY OZONE¹

Log credit	Water Temperature, °C										
	≤0.5	1	2	3	5	7	10	15	20	25	30
0.25	6.0	5.8	5.2	4.8	4.0	3.3	2.5	1.6	1.0	0.6	0.39
0.5	12	12	10	9.5	7.9	6.5	4.9	3.1	2.0	1.2	0.78
1.0	24	23	21	19	16	13	9.9	6.2	3.9	2.5	1.6
1.5	36	35	31	29	24	20	15	9.3	5.9	3.7	2.4
2.0	48	46	42	38	32	26	20	12	7.8	4.9	3.1
2.5	60	58	52	48	40	33	25	16	9.8	6.2	3.9
3.0	72	69	63	57	47	39	30	19	12	7.4	4.7

¹ A Supplier of Water may use this equation to determine log credit between the indicated values: $\log \text{ credit} = (0.0397 \times (1.09757)\text{Temp}) \times \text{CT}$.

c. CT must be calculated at least once each day, with both C and T being measured during peak hourly flow as specified in 310 CMR 22.20A(5)(a) through (b).

d. for a Public Water System which includes several Disinfection segments in sequence, CT must be calculated for each segment. "Disinfection segment" as used herein means a treatment unit process with a measurable Disinfectant residual level and a liquid volume.

22.20G: continued

2. Site-specific Study. A Supplier of Water may conduct a site-specific study, using a protocol pre-approved by Department, demonstrating a higher inactivation in support of a greater *Cryptosporidium* treatment credit than shown in 310 CMR 22.20G: *Table 7* or *Table 8*.

(b) Inactivation by Ultraviolet Light. A Supplier of Water using UV light, subject to the Department's review and written approval, shall receive *Cryptosporidium*, *Giardia lamblia*, and Virus treatment credits, in accordance with the following:

1. Calculation of credits.

a. achieve the UV dose values in 310 CMR 22.20G: *Table 9* to receive the corresponding *Cryptosporidium*, *Giardia lamblia*, and Virus treatment credits;

310 CMR 22.20G: *Table 9*

UV DOSE TABLE FOR *Cryptosporidium*, *Giardia lamblia*, and VIRUS INACTIVATION CREDIT

Log credit	<i>Cryptosporidium</i> UV dose (mJ/cm ²)	<i>Giardia lamblia</i> UV dose (mJ/cm ²)	Virus UV dose (mJ/cm ²)
0.5	1.6	1.5	39
1.0	2.5	2.1	58
1.5	3.9	3.0	79
2.0	5.8	5.2	100
2.5	8.5	7.7	121
3.0	12	11	143
3.5	15	15	163
4.0	22	22	186

b. the treatment credits listed in 310 CMR 22.20G: *Table 9* shall apply to UV light at a wavelength of 254 nm as produced by a low-pressure mercury vapor lamp. To receive treatment credit for other lamp types, demonstrate an equivalent germicidal dose through reactor validation testing, as described in 310 CMR 22.20G(23)(b)4.;

c. the UV dose values in 310 CMR 22.20G: *Table 9* are applicable only to post-filter applications of UV in filtered Public Water Systems, and to unfiltered Public Water Systems; and

d. treat at least 95% of the water delivered to the public during each month by UV reactors operating within validated conditions for the required UV dose, as described in 310 CMR 22.20G(23)(b)1.a. and 4.

2. Water Quality Monitoring. Prior to validation testing, a Supplier of Water shall satisfy the following requirements:

a. sample the water quality at a location that is immediately upstream from where the UV reactor is to be installed.

b. ensure monitoring:

i. represents storm events, reservoir turnover, seasonal changes, source blending and any variation in upstream treatment;

ii. is conducted up to the period of time specified in 310 CMR 22.20G: *Table 10*. The Department may approve a shorter period of monitoring if the Supplier of Water can demonstrate that the water quality is stable and does not change seasonally; and

22.20G: continued

iii. meets the water quality limits, specified in 310 CMR 22.20G: *Table 10*:310 CMR 22.20G: *Table 10*
UV RAW WATER QUALITY CRITERIA

Parameter	Frequency ¹	Limits
pH (field measurement)	Monthly	NA
Temp. (field measurement)	Bi-weekly for one year	NA
Dissolved iron (mg/L)	Quarterly for one year	0.1
Dissolved manganese (mg/L)	Quarterly for one year	0.05
Turbidity (NTU)	Bi-weekly for one year	0.3
Color (color units)	Monthly	15
Total Hardness (mg/L as CaCO ₃)	Quarterly for one year	120
Hydrogen Sulfide ² (mg/L)	Quarterly for one year	0.2
Alkalinity (mg/L as CaCO ₃)	Quarterly for one year	NA
Suspended Solids (mg/L)	Quarterly for one year	10.0
UV Transmittance at 254nm	Bi-weekly for one year	NA
Spectral Absorbance ³	Bi-weekly for one year	NA
Algae Counts (cells/mL) ⁴	Bi-weekly for one year	NA ⁵

¹ The Department may allow the use of historical data collected at higher frequencies² Groundwater only³ For the use of medium pressure reactors only. Absorbance to be measured at 200 - 300 nm⁴ Unfiltered supplies only⁵ At algae concentration > 70,000 cells/mL additional piloting may be required as part of the UV validation testing

3. **Additional Raw Water Treatment.** If a Public Water System fails to satisfy the requirements set forth in 310 CMR 22.20G(23)(b)2.b.iii., the Supplier of Water may propose and, subject to Department approval pursuant to 310 CMR 22.04, implement additional treatment for raw water in order to achieve the limits specified in 310 CMR 22.20G: *Table 10*.

4. **Reactor Validation Testing.** A Supplier of Water must use UV reactors that have undergone validation testing to determine the operating conditions under which the reactors deliver the UV dose required in 310 CMR 22.20G(23)(b)1.a. for the applicable credit, subject to the following:

- a. validation testing must include either full scale testing of a reactor that conforms uniformly to the UV reactors used by the Public Water System and inactivation of a test microorganism whose dose response characteristics have been quantified with a low pressure mercury vapor lamp, or an alternative approach in accordance with 310 CMR 22.20G(23)(b)4.b.; or
- b. any alternative approach to UV validation using protocols established in:
 - i. *Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse*, 3rd Edition, August 2012, published by National Water Research Institute in collaboration with AWWA Research Foundation, pp 1-78; or
 - ii. *Ultraviolet Microbiological Water Treatment Systems*, NSF/ANSI 55-2014, October 16, 2014, Appendix A and B, pp.1-36, published by NSF/ANSI; and
- c. operating conditions must include flow rate, UV intensity as measured by a UV sensor, and UV lamp status; which must account for the following factors: UV absorbance of the water; lamp fouling and aging; measurement uncertainty of on-line sensors; UV dose distributions arising from the velocity profiles through the reactor; failure of UV lamps or other critical system components; and inlet and outlet piping or channel configurations of the UV reactor.

22.20G: continued

5. Reactor Monitoring, Verification and Calibration.
 - a. A Supplier of Water must monitor UV reactors to determine if the reactors are operating within validated conditions, as identified in 310 CMR 22.20G(23)(b)4.
 - b. A Supplier of Water must submit monitoring results to the Department on a monthly basis on a form approved by the Department for review and evaluation in a format approved by the Department.
 - c. A Supplier of Water must monitor UV intensity as measured by a UV sensor(s), flow rate, lamp status, UV transmittance, or "UVT", and other appropriate parameters based on UV reactor operation.
 - d. A Supplier of Water must calibrate the UV reactor flow meters annually.
 - e. A Supplier of Water must verify the calibration of the UV sensors monthly and recalibrate the sensors annually, each in accordance with manufacturer's specifications.
 - f. A Supplier of Water must verify the calibration of UVT analyzers annually for UV reactors using the "Setpoint Approach". The Setpoint Approach, also called "Operational Setpoint", uses a specific value for a critical parameter, such as UV intensity, that is related to UV dose. Setpoints are established during validation testing. During operations, the PWS compares the measured parameter to the setpoint to confirm performance.
 - g. A Supplier of Water must verify the calibration of UV transmittance analyzers weekly for UV reactors using the "Calculated Dose Approach". The Calculated Dose Approach uses a dose-monitoring equation to estimate the UV dose based on operating conditions (typically flow rate, UV intensity, and UVT).
 - h. A Supplier of Water must verify the UVT reading of the reactor by comparing the UVT obtained from the on-line UVT transmitter against the UVT of a grab sample. The difference in reading between the on-line analyzer reading and the grab sample must be less than or equal to two percent of the UVT.

22.21: Groundwater Supply Protection

The following requirements shall apply to all persons to protect groundwater used as sources of public drinking water supply from contamination:

(1) Source Approval

(a) No public water supply well, wellfield, or spring shall be constructed, expanded or replaced, and no water supply well, wellfield, or spring shall be placed on-line in a public water system, without the prior written approval of the Department. Persons seeking such approval are directed to follow the procedures set forth in the Drinking Water Program's *Guidelines and Policies for Public Water Systems*.

All requests for source approval, or approval of Zone II and III delineations, shall be submitted to the Department's Regional Office serving the area where the proposed well, wellfield, or spring is located.

In determining whether to grant such approval, the Department shall apply the criteria set forth in 310 CMR 22.21 and the *Guidelines and Policies for Public Water Systems*. Copies of the *Guidelines and Policies for Public Water Systems* are available for a nominal fee from the State Bookstore, State House, Room 116, Boston, Massachusetts and 436 Dwight Street, Springfield, Massachusetts.

(b) No public water supply well or wellfield designed to withdraw, or spring which flows, less than 100,000 gallons per day shall be constructed, expanded or replaced, or placed on-line, unless the Department finds in writing:

1. that the proponent has satisfactorily complied with the Drinking Water Program's *Guidelines and Policies for Public Water Systems*;
2. that the source of water supply for the well, wellfield, or spring will achieve all applicable water quality standards set forth in the Massachusetts Drinking Water Regulations, 310 CMR 22.00;
3. that the proponent has properly determined the Zone I of the proposed well, wellfield, or spring;
4. that the Zone I of the proposed well, wellfield, or spring is owned or controlled by the supplier of water; and

22.21: continued

5. that current and/or future land uses within the Zone I are limited to those directly related to the provision of public drinking water or will have no significant adverse impact on water quality.

In addition, the Department may require the proponent to delineate Zones II and III, and submit a groundwater monitoring well program plan for approval if the Department finds that existing or proposed land uses within the Interim Wellhead Protection Area of the proposed well, wellfield, or spring, determined in accordance with 310 CMR 22.21(1)(i), may pose a threat to water quality.

(c) No public water supply well, wellfield or spring designed to withdraw, or spring which flows, 100,000 gallons per day or more shall be constructed, expanded or replaced unless the Department finds in writing:

1. that the proponent has met all the requirements set forth in 310 CMR 22.21(1)(b)1. through 5.;
2. that the proponent has properly delineated the Zones II and III of the proposed well, wellfield, or spring;
3. that the proponent has submitted a groundwater monitoring well program plan designed to evaluate the water quality impacts of land uses within the Zone II of the proposed well, wellfield, or spring; and
4. that the proponent has drafted wellhead protection zoning or nonzoning controls that prohibit siting within the Zone II the land uses set forth in 310 CMR 22.21(2)(a) and (b) unless designed in accordance with the performance standards specified in 310 CMR 22.00, and has complied with the nitrate management requirement of 310 CMR 22.21(2)(d).

(d) No public water supply well, wellfield or spring designed to withdraw, or spring which flows, 100,000 gallons per day or more shall be placed on-line unless:

1. a groundwater monitoring well program plan approved by the Department has been fully implemented (*i.e.* the monitoring wells are operational and the sampling frequency and parameters have been approved by the Department); and
2. the cities and towns in which any part of the Zone II of the proposed well, wellfield, or spring is located have wellhead protection zoning or nonzoning controls in effect that prohibit siting within the Zone II the land uses set forth in 310 CMR 22.21(2)(a) and (b) unless designed in accordance with the performance standards specified in 310 CMR 22.00. If the public water system is owned or controlled by an entity other than a municipality, the proponent must demonstrate to the Department's satisfaction that it has used its best efforts to have all cities and towns in which the Zone II is located establish such zoning or nonzoning controls.

(e) Notwithstanding 310 CMR 22.21(1)(d)2., no public water supply well, wellfield or spring designed to withdraw, or spring which flows, 100,000 gallons per day or more that will be used in a public water system owned or operated by a municipality, and is located within that municipality, shall be placed on-line unless the municipality has wellhead protection zoning or nonzoning controls in effect that prohibit siting within the Zone II the land uses set forth in 310 CMR 22.21(2)(a) and (b) unless designed in accordance with the performance standards specified therein. If the Zone II of a municipal public water system extends into another municipality, the water supplier must also demonstrate to the Department's satisfaction that it has used its best efforts to have all cities and towns into which the Zone II extends establish such zoning or nonzoning controls within the Zone II.

(f) Notwithstanding any other regulatory provision to the contrary, the Department may waive the requirement that the proponent of a public water supply well, wellfield, or spring delineate the Zone II, provided:

1. the proponent has properly delineated the Zone III;
2. each city and town in which the Zone III of the proposed well, wellfield, or spring is located has wellhead protection zoning or nonzoning controls in effect that prohibit within the Zone III the land uses set forth in 310 CMR 22.21(2)(a) and (b) unless designed in accordance with the performance standards specified in 310 CMR 22.00;
3. the proponent has submitted a groundwater monitoring well program plan designed to evaluate the water quality impacts of land uses within the Zone III of the proposed well, wellfield, or spring; and

22.21: continued

4. the desired relief can be granted without substantial detriment to the public good.

In the event the Department waives the requirement that the proponent delineate the Zone II of a proposed public water supply well, wellfield, or spring, the supplier of water shall fully implement the groundwater monitoring well program plan approved by the Department before placing the well, wellfield, or spring on-line (*i.e.* the monitoring wells shall be operational and the sampling frequencies and parameters shall have been approved by the Department).

(g) In determining whether a proponent has properly determined the Zone I or delineated the Zones II or III of a well, wellfield, or spring, or adequately designed a groundwater monitoring well program plan, the Department shall apply the criteria set forth in the Drinking Water Program's *Guidelines and Policies for Public Water Systems*.

(h) Any person who receives Department approval for a public water supply well, wellfield or spring designed to withdraw, or spring which flows, 100,000 gallons per day or more that is not a replacement withdrawal point shall obtain a permit for any withdrawal, in accordance with the Water Management Act, M.G.L. c. 21G, and 310 CMR 36.00: *Massachusetts Water Resources Management Program*.

(i) If the Department has not approved the Zone II for a public water supply well, wellfield, or spring, the Department will utilize the Interim Wellhead Protection Area as defined in 310 CMR 22.02.

(j) The proponent may meet the requirements set forth in 310 CMR 22.21(1)(d)2. by demonstrating that existing rights in perpetuity or for a specific period of years stated in the form of a restriction, easement, covenant or condition in a deed or other instrument prohibit the siting of the land uses set forth in 310 CMR 22.21(2)(a) and (b) within the Zone II.

(k) The proponent may meet the requirements set forth in 310 CMR 22.21(1)(f)2. by demonstrating that existing rights in perpetuity or for a specific period of years stated in the form of a restriction, easement, covenant or condition in a deed or other instrument prohibit the siting of the land uses set forth in 310 CMR 22.21(2)(a) and (b) within the Zone III.

(l) No public water supply well, wellfield or spring designed to withdraw, or spring which flows, 100,000 gallons per day or more approved after the effective date of 310 CMR 22.21 shall remain on-line following the amendment or repeal of a wellhead protection zoning or nonzoning control pertinent to that well, wellfield, or spring, or the expiration of any such period of years stated in a deed or other instrument approved pursuant to 310 CMR 22.21(1)(j) or (k), unless the Department finds in writing that the supplier of water meets the requirements set forth in 310 CMR 22.21(1)(d) or (e), whichever is applicable, or grants a variance in accordance with 310 CMR 22.21(5). Any source of supply removed from service shall be maintained by the supplier of water as an emergency source of water supply unless the Department finds in writing that the source is not needed by the supplier of water for present or future water supply.

(m) Notwithstanding any other regulatory provision to the contrary, the Department may exempt a supplier of water from any of the requirements set forth in 310 CMR 22.21(1)(d) while a state of water emergency declared pursuant to M.G.L. c. 21G, § 15, is in effect. In the event that the Department grants such an exemption, the well, wellfield, or spring shall remain on-line only for the duration of the state of water emergency, as determined by the Department.

(2) Wellhead Protection Zoning and Nonzoning Controls

(a) Wellhead protection zoning and nonzoning controls submitted to the Department in accordance with 310 CMR 22.21(1), shall collectively prohibit the siting of the following land uses within the Zone II, or Zone III if the criteria of 310 CMR 22.21(1)(f) have been met, of the proposed well, wellfield, or spring, whichever is applicable:

1. landfills and open dumps, as defined in 310 CMR 19.006: *Definitions*;
2. landfills receiving only wastewater residuals and/or septage (wastewater residuals "monofills") approved by the Department pursuant to M.G.L. c. 21, § 26 through 53; M.G.L. c. 111, § 17; M.G.L. c. 83, §§ 6 and 7, and any regulations promulgated thereunder.
3. automobile graveyards and junkyard, as defined in M.G.L. c. 140B, § 1;
4. stockpiling and disposal of snow or ice removed from highways and streets located outside of Zone II that contains sodium chloride, chemically treated abrasives or other chemicals used for snow and ice removal;

22.21: continued

5. petroleum, fuel oil and heating oil bulk stations and terminals, including, but not limited to, those listed under Standard Industrial Classification (SIC) Codes 5171 (not including liquified petroleum gas) and 5983. SIC Codes are established by the U.S. Office of Management and Budget and may be determined by referring to the publication, *Standard Industrial Classification Manual*;
 6. treatment or disposal works subject to 314 CMR 5.00: *Ground Water Discharge Permit Program* for wastewater other than sanitary sewage. This prohibition includes, but is not limited to, treatment or disposal works related to activities under the Standard Industrial Classification (SIC) Codes set forth in 310 CMR 15.004(6) (Title 5), except the following:
 - a. the replacement or repair of an existing system(s) that will not result in a design capacity greater than the design capacity of the existing system(s); and
 - b. treatment works approved by the Department designed for the treatment of contaminated ground or surface waters and operated in compliance with 314 CMR 5.05(3) or (13); and
 - c. publicly owned treatment works, or POTWs.
 7. facilities that generate, treat, store or dispose of hazardous waste that are subject to M.G.L. c. 21C and 310 CMR 30.000: *Hazardous Waste*, except for the following:
 - a. very small quantity generators, as defined by 310 CMR 30.00: *Hazardous Waste*;
 - b. household hazardous waste collection centers or events operated pursuant to 310 CMR 30.390: *Special Provisions for Accumulation of Household Hazardous Waste And/or Hazardous Waste Generated by Very Small Quantity Generators*;
 - c. waste oil retention facilities required by M.G.L. c. 21, § 52A; and
 - d. treatment works approved by the Department designed in accordance with 314 CMR 5.00: *Ground Water Discharge Permit Program* for the treatment of contaminated ground or surface waters.
 8. any floor drainage systems in existing facilities, in industrial or commercial hazardous material and/or hazardous waste process areas or storage areas, which discharge to the ground without a DEP permit or authorization. Any existing facility with such a drainage system shall be required to either seal the floor drain (in accordance with the state plumbing code, 248 CMR 10.00: *Uniform State Plumbing Code*), connect the drain to a municipal sewer system (with all appropriate permits and pre-treatment), or connect the drain to a holding tank meeting the requirements of all appropriate DEP regulations and policies.
- (b) Wellhead protection zoning and nonzoning controls submitted to the Department in accordance with 310 CMR 22.21(1), shall collectively prohibit the siting of the following and uses within the Zone II, or Zone III if the criteria of 310 CMR 22.21(1)(f) have been met, of the proposed well, wellfield, or spring, whichever is applicable, unless designed in accordance with the performance standards specified below in 310 CMR 22.21(2)(b)1. through 7.:
1. storage of sludge and septage, as defined in 310 CMR 32.05: *Definitions*, unless such storage is in compliance with 310 CMR 32.30: *Requirements for Any Storage of Sludge or Septage* and 32.31: *Additional Requirements for Long-term Storage of Sludge or Septage*;
 2. storage of sodium chloride, chemically treated abrasives or other chemicals used for the removal of ice and snow on roads, unless such storage is within a structure designed to prevent the generation and escape of contaminated runoff or leachate;
 3. storage of commercial fertilizers, as defined in M.G.L. c. 128, § 64, unless such storage is within a structure designed to prevent the generation and escape of contaminated runoff or leachate;
 4. storage of animal manures, unless such storage is within a structure designed to prevent the generation and escape of contaminated runoff and leachate;
 5. storage of liquid hazardous materials, as defined in M.G.L. c. 21E, and/or liquid petroleum products unless such storage is:
 - a. above ground level;
 - b. on an impervious surface; and

22.21: continued

c. either:

- (i) in container(s) or above-ground tank(s) within a building; or
- (ii) outdoors in covered container(s) or above-ground tank(s) in an area that has a containment system designed and operated to hold either 10% of the total possible storage capacity of all containers, or 110% of the largest container's storage capacity, whichever is greater;

however, these storage requirements shall not apply to the replacement of existing tanks or systems for the keeping, dispensing or storing of gasoline provided the replacement is performed in a manner consistent with state and local requirements.

6. the removal of soil, loam, sand, gravel or any other mineral substances within four feet of the historical high groundwater table elevation (as determined from monitoring wells and historical water table fluctuation data compiled by the United States Geological Survey), unless the substances removed are redeposited within 45 days of removal on site to achieve a final grading greater than four feet above the historical high water mark, and except for excavations for the construction of building foundations or the installation of utility works, or wetland restoration work conducted in accordance with a valid Order of Condition issued pursuant to M.G.L. c. 131, § 40;

7. and land uses that result in the rendering impervious of more than 15% or 2500 square feet of any lot or parcel, whichever is greater, unless a system for artificial recharge of precipitation is provided that will not result in the degradation of groundwater quality.

(c) The proponent shall give written notice to the Department of any and all local by-laws, ordinances, rules and regulations that allow for the grant of a variance, waiver or exemption from any of the wellhead protection zoning or nonzoning controls submitted to the Department for approval in accordance with 310 CMR 22.21 before placing the proposed well, wellfield, or spring on-line.

(d) The Department may require as part of the Source Approval process requirements of 310 CMR 22.21(1)(c), the completion of a nitrogen loading analysis for the new well, wellfield, or spring's Zone II. A nitrogen loading analysis shall be required when, in the Department's judgement, the type and level of land use within the Zone II or other information reasonably indicates that nitrate concentrations in the well, wellfield, or spring may or will exceed five mg/l nitrate.

Public water systems required by their Water Management Act M.G.L. c. 21G permits issued under 310 CMR 36.00: *Massachusetts Water Resources Management Program* to define Zone IIs and implement land use controls shall be required to conduct a nitrate loading analysis as part of the Zone II delineation for well, wellfield, or springs that have exceeded five mg/l nitrate.

Public water systems whose required nitrate loading analysis predicts >five mg/l nitrate or whose well, wellfield, or spring has exceeded five mg/l nitrate must prepare a nitrate management plan, subject to the Department's approval, which seeks to maintain nitrate levels below five mg/l for the subject well in the long-term.

(3) Requirements for all New and Existing Groundwater Sources

(a) Sources for Community Systems. Any person who obtains Department approval for a community public water system that relies entirely upon groundwater sources shall provide additional wells, wellfield, or springs and pumping equipment, or the equivalent, capable of producing the same volumes and quality of water as the system's primary well, wellfield, or spring at all times, or shall provide the storage capacity equivalent to the demand of at least two average days if approved by the Department, unless an interconnection with another public water system has been provided which can adequately provide the quantity and quality of water needed.

(b) Zone I. All suppliers of water shall acquire ownership or control of sufficient land around wells, infiltration galleries, springs and similar sources of ground water used as sources for drinking water to protect the water from contamination. This requirement shall generally be deemed to have been met if all land within Zone I is under the ownership or control of the supplier of water. Current and future land uses within the Zone I shall be limited to those land uses directly related to the provision of the public water system or to other land uses which the public water system has demonstrated have no significant impact on water quality. The Department may require greater distances or permit lesser distances than the Zone I distances set forth at 310 CMR 22.02, if the Department deems such action necessary or sufficient to protect public health. No new underground storage tanks for petroleum products shall be located within Zone I.

22.21: continued

(4) Inspection and Enforcement

(a) Each supplier of water shall annually survey the land uses within Zones I, II and III, or within the Interim Wellhead Protection Area, for each well and wellfield under its control.

(b) A supplier of water shall submit to the Department an annual report that identifies for each well and wellfield under its ownership and control the presence of new land uses within the Zones I, II and III, or within the Interim Wellhead Protection Area, that could adversely impact water quality. The annual reports shall be submitted on Department approved forms by January 31st for the preceding calendar year. The annual reports shall be submitted to the Department's Office of Water Supply at the Regional Office that serves the area where the well, wellfield, or spring is located.

(c) A supplier of water shall notify the local board of health or health department within 48 hours of detection of any violation of a statutory or regulatory requirement that may adversely effect its water supply or distribution system, and shall notify the inspector of buildings, building commissioners or local inspector, or the person charged with enforcement of local zoning and nonzoning controls, within 48 hours of detecting any violation of applicable land use restrictions that may adversely effect its water supply or distribution system. Such notices should include the following information:

1. the name of the person in violation;
2. the location where the violation is occurring;
3. the date when the violation was observed;
4. a description of the violation;
5. the legal citation of the requirement or restriction violated; and
6. a description of the actions necessary to remove or remedy the violation and the deadlines for taking such actions.

In addition, the supplier of water shall notify the Department's Office of Water Supply at the appropriate Regional Office upon giving any notice required by 310 CMR 22.21(4)(c).

(d) A supplier of water shall take appropriate action to determine whether the violation has been removed or remedied and shall notify the Department's Office of Water Supply at the appropriate Regional Office upon finding that the violation has been removed or remedied.

(5) Variances

(a) The Department may grant a variance from the requirements of 310 CMR 22.21(1)(e) to a proponent that, despite its best efforts, is unable to adopt one or more of the requirements set forth in 310 CMR 22.21(2)(a) and (b) if the Department finds that strict compliance with such requirements would result in an undue hardship and would not serve to further the intent of 310 CMR 22.21.

(b) The Department shall consider the following factors in making the finding necessary to grant a variance pursuant to 310 CMR 22.21(5):

1. the reasonableness of available alternatives to the proposed well, wellfield, or spring;
2. the overall effectiveness of existing land use controls and other protective measures on the proposed well, wellfield, or spring and any other water supply sources used by the supplier of water;
3. the nature and extent of the risk of contamination to the proposed well, wellfield, or spring that would result from the granting of the variance; and
4. whether the variance is necessary to accommodate an overriding community, regional, state or national public interest.

These factors need not be weighed equally, nor must all of these factors be present for the Department to grant a variance. The presence of any single factor may be sufficient for the granting of a variance.

(c) A variance granted pursuant to 310 CMR 22.21(5) shall be conditioned on such monitoring or other requirements as the Department may prescribe.

(d) Requests for variances shall be made in writing and clearly state the provision or requirement from which the variance is sought and the reasons and facts that support the granting of a variance, and shall include an evaluation of the reasonableness of alternatives to the proposed well, wellfield, or spring.

(e) Within 14 days of filing a request for variance under 310 CMR 22.21(5)(a), the person filing the request shall notify persons served by the supplier of water by direct mail and by publication on not less than three consecutive days in a newspaper of general circulation in the service area of the supplier of water. The notice shall include:

22.21: continued

1. the provision or requirements from which the variance is being sought;
 2. the identity of the proponent of the well, wellfield, or spring;
 3. the identity of the person requesting the variance, the address where a copy of the request for variance will be available for public inspection, and the times it will be available; and
 4. a statement that the Department will receive written comments concerning the request from the public for a 30 day period commencing on the last date of newspaper publication.
- (f) Each person submitting a request for variance shall submit to the Department a copy of the public notice required by 310 CMR 22.21(5)(e) and affidavits attesting to the fact that the notices have been given. The Department will receive written comments concerning the request from the public for a 30 day period commencing on the last date of newspaper publication.
- (g) Within 30 days of the close of the comment period, each person requesting a variance under 310 CMR 22.21(5)(a) shall respond in writing to all reasonable public comments received by the Department.
- (h) The Department may schedule a public hearing on any request for variance submitted in accordance with 310 CMR 22.21(5) if it determines on the basis of the public comments received that such a hearing is in the public interest. In the event that the Department schedules a hearing, the person filing the request shall notify persons served by the supplier of water of the hearing by publication on not less than three consecutive days in a newspaper of general circulation in the service area of the supplier of water. In addition, the person filing the request shall notify each person who submitted written comment concerning the request to the Department by direct mail. The person filing the request shall submit to the Department a copy of the public notices required by 310 CMR 22.21(5)(h), and an affidavit attesting to the fact that the notices have been given, prior to the hearing. Persons filing a request for a variance under 310 CMR 22.21(5) shall pay the full the cost of all notifications and public hearing scheduled.
- (i) Within 30 days of the grant of a variance under 310 CMR 22.21(5), any person that receives a variance shall notify persons served by the supplier of water of the granting of the variance, including any conditions imposed by the Department, by direct mail and by publication on not less than three consecutive days in a newspaper of general circulation in the service area of the supplier of water. The person that receives the variance shall submit to the Department a copy of the public notices and an affidavit attesting to the fact that the notices have been given upon completion of the public notification.

22.22: Cross Connections Distribution System Protection

(1) Purpose. The Department's purpose in establishing a comprehensive distribution protection program is to prevent the contamination of drinking water to the last free flowing outlets or consumer's tap. For this reason, the Department strongly advocates the elimination of all cross connections. The installation of backflow prevention devices does not eliminate a cross connection. The installation of backflow prevention devices is a protection solution when re-plumbing or re-piping is not feasible. All cross connection protection devices shall be approved and permitted in accordance with 310 CMR 22.22.

(2) Maintenance of a Cross Connection

- (a) No physical cross connection shall be maintained between the distribution system of a public water system, the water of which is being used for drinking, domestic, or culinary purposes, and the distribution system of any water source not approved by the Department, as being of safe sanitary quality, or any plumbing, fixture, or device whereby nonpotable water or other substances might flow into the potable water system, unless said connection has been protected by a backflow prevention device approved, in accordance with 310 CMR 22.22 or 248 CMR 10.00: *Uniform State Plumbing Code*; as applicable.
- (b) Backflow prevention devices shall be installed, based on the degree of hazard involved, at all fixtures and equipment where backflow and/or back siphonage may occur and whenever a minimum air gap cannot be provided between the public water system outlets to the fixture or equipment and its flood level rim. All fixtures that have a threaded hose type connection shall, at a minimum, have the required air gap separation and be equipped with a vacuum breaker in accordance with 248 CMR 10.14: *Water Supply and the Water Distribution System*;

22.22: continued

- (c) Where a water connection is not subject to back pressure, a non-pressure type vacuum breaker shall be installed on the discharge side of the last valve on the line serving the fixture or equipment,
 - (d) Cross connections maintained or created on fire protection system shall comply with 310 CMR 22.22(9)(d).
 - (e) All cross connection requiring the installation of a double check valve assembly or a reduced pressure backflow preventer shall be approved and registered by the public water system.
 - (f) Cross connections protected by a device other than a double check valve assembly or a reduced pressure backflow preventer, approved and permitted by the inspector of plumbing in accordance with 248 CMR 10.00: *Uniform State Plumbing Code* do not require the approval of the Department, its designee or the public water system.
 - (g) Except for the installation of backflow prevention devices on fire protection systems, no double check valve assembly or reduced pressure backflow preventors shall be installed on a cross connection until the application for a plumbing permit is accompanied by a letter of approval from the Department, its designee or public water system pursuant to 248 CMR 10.14: *Water Supply and the Water Distribution System*.
 - (h) Subject to applicable laws and regulations, public water systems shall have the authority to terminate any water service connection to any facility where cross connections are found to be in non-compliance with 310 CMR 22.22. The supplier shall deny water service to any premises where cross connections exist until corrective action is taken. If necessary, water service shall be disconnected for failure to test or maintain backflow prevention devices in a manner acceptable to the supplier. If it is found that the backflow prevention device has been removed or by-passed or otherwise rendered ineffective, water service shall be discontinued unless corrections are made immediately.
 - (i) The public water system shall establish a time for completion of necessary corrections or removal of actual or potential cross connections, taking into consideration the degree of hazard involved and the time required to obtain and to install the needed equipment. The public water system shall use every means at its disposal to obtain voluntary compliance. However, if proper protection has not been provided after a reasonable period of time (following legal notification and subject to applicable laws and regulations), the public water system shall physically separate the public water supply from the on-site piping system in such a manner that the two systems cannot again be connected by an unauthorized person.
 - (j) Cross connections between a public water system and a private well or individual water source serving residential dwellings used for potable or nonpotable purposes are prohibited.
 - (k) All backflow prevention devices shall be installed and repaired by a Massachusetts licensed plumber, except for backflow prevention devices installed on fire protection systems. A Massachusetts licensed fire sprinkler contractor is responsible for all work conducted on a fire protection system, including the installation, maintenance and repair of backflow prevention devices.
 - (l) An anti-siphon or back pressure device shall be installed on any apparatus that pumps any chemical into a potable water supply to prevent back siphonage.
- (3) Public Water System Responsibilities. Every public water system shall be responsible for:
- (a) Controlling cross connections to the last free flowing outlet of the consumer and for the safety of the public water system under its jurisdiction.
 - (b) Having a cross connection control distribution system protection program plan (the "cross connection program plan") approved by the Department as specified at 310 CMR 22.22(3)(b).
 1. Every public water system is required to have its cross connection program plan approved by the Department by June 1, 1994.
 2. Each plan must be prepared in accordance with departmental guidance and shall include, at a minimum, the following information: description of current program (*i.e.* staffing, tracking, surveying, testing, training and fee requirements) and evaluation of the current program, proposed changes and implementation plans. The plan shall also include an explanation of how the public water system will satisfy 310 CMR 22.22(3)(c) through (r).

22.22: continued

3. The plan shall be fully implemented and operational by January 1, 1999. A public water system may use a contractor, subcontractor, or consultant to assist in the program implementation except as specified at 310 CMR 22.22(3)(r). However, every public water system shall continue to be responsible for compliance with 310 CMR 22.22 and subject to enforcement by the Department.
 4. The public water system shall obtain the Department's written approval prior to modifying its approved cross connection plan.
- (c) Inspecting and surveying of all industrial, commercial, and institutional premises served by the public water system to determine if cross connections exist and that all cross connections are properly protected by an appropriate device or eliminated.
- (d) Maintaining on the public water system premises in a readily accessible form the following documentation:
1. a schedule of all facilities inspected and surveyed;
 2. records of all device locations;
 3. related correspondence, including notices of violation; and
 4. list of devices and inspections of approved backflow prevention devices.
- (e) Ensuring that all backflow prevention device inspections are conducted by a Massachusetts Certified Backflow Prevention Device Tester and surveys for cross connections are conducted by a person who is certified by the Department as a Massachusetts Certified Cross Connection Surveyor.
- (f) Establishing and maintaining a cross connection control program for residential users which shall include an educational component.
- (g) Not allowing any cross connection at any point within its system unless said cross connection is approved pursuant to 310 CMR 22.22 or 248 CMR 10.00: *Uniform State Plumbing Code*.
- (h) Ensuring that all double check valve assemblies and reduced pressure backflow preventer devices are inspected and tested in accordance with the public water system program plan as approved by the Department and as specified at 310 CMR 22.22(13). The public water system has the option of testing the devices itself, having the device tested by the device owner, or having the testing conducted by a contractor.
- (i) Establishing a program for auditing for devices not tested by public water system staff.
- (j) Submitting a report to the Department annually on a form or in a format specified by the Department that shall include the following minimum information:
1. a list of or information on all cross connections protected by an approved double check valve assembly or approved reduced pressure backflow preventer devices;
 2. the numbers and types of facilities surveyed yearly; and
 3. the number type and location of violations found.
- (k) Assisting Department personnel in any cross connection related inspections and backflow device installations;
- (l) Taking appropriate action to eliminate cross connections and hazardous conditions, strongly promote compliance, and take the appropriate enforcement action when necessary;
- (m) Notifying the cross connection owner of any violations of 310 CMR 22.22 by sending a Notice of Violation to owner;
- (n) Notifying all device owners of their responsibilities relative to cross connections control and 310 CMR 22.00.
- (o) Annually notify consumers of water and local public officials of the requirements of the distribution system cross connection control program, including Mayors, Town Managers, city and town councilors or selectmen, water commissioners, fire chiefs, local boards of health, plumbing inspectors, building inspectors, local state representatives, unless waived in writing by the Department.
- (p) Generating all necessary correspondence relative to the administration and operations of the cross connection control program. The public water system will be responsible for all correspondence to device owners. All correspondence relating to the cross connection control program must be signed by the public water system.

22.22: continued

(q) Reviewing and approving design data sheets and plans for proposed new installations of reduced pressure backflow preventers, and double check valve assemblies. All design data sheets and plans shall be reviewed by a Massachusetts Certified Cross Connection Surveyor, effective January 1, 1999 as specified at 310 CMR 22.22(7)(a)4. The public water system may not delegate, or subdelegate, contract, or subcontract this responsibility to any other entity, unless otherwise authorized in writing by the Department. The Department will require that all recommendations or findings made by the contracted certified surveyor, when reviewing and approving data sheets and plans, be submitted on the public water system letterhead and signed by an authorized person of the public water system.

(r) Ensuring, upon completion of installation that backflow prevention devices are installed according to the approved design data sheet and plans and tested for proper operation, effective January 1, 1999.

(4) Owners' Responsibilities. The owner of any cross connection protected by a double check valve assembly or reduced pressure backflow preventer shall:

(a) Notify the public water system of all cross connections protected by a double check valve assembly or reduced pressure backflow preventer and comply with all necessary approvals and permits from the public water system and/or the Department for the maintenance of cross connections, as specified at 310 CMR 22.22;

(b) Have suitable arrangements made so that inspections of backflow prevention devices and cross connection surveys can be made during regular business hours;

(c) Maintain a spare parts kit and any special tools required for the removal and reassembly of backflow prevention devices;

(d) Provide the necessary labor for inspection and testing by the Certified Backflow Prevention Device Testers or Certified Cross Connection Surveyor;

(e) Overhaul, repair, or replace within 14 days of the initial inspection date and retest pursuant to 310 CMR 22.22(13)(e), any device which fails a test or is found defective;

(f) Submit copies of the Inspection and Maintenance Report Form as required by the public water system.

(g) Maintain on the premises complete records on all devices for the life of said devices including as-built plans and design data sheets; maintain for seven years the Inspection and Maintenance Report Forms for tests conducted by the certified.

(h) Make certain that the cross connection protection device is tested as specified at 310 CMR 22.22(13) or as required by the public water system.

(5) Certified Backflow Prevention Device Tester's Responsibilities. Certified Backflow Prevention Device Testers have the following responsibilities relative to cross connections:

(a) Having a backflow preventer test kit that is maintained in proper working order and calibrated annually;

(b) Recording the test results for each inspection conducted;

(c) Submitting copies of inspection reports to the water supplier, and the owner within 30 days of the inspection; and

(d) Maintaining records of all test results for a minimum of seven years.

(6) Local Plumbing Inspector Responsibilities. Local Plumbing Inspectors, authorized by M.G.L. c. 142 to administer and to enforce 248 CMR 10.00: *Uniform State Plumbing Code*, have the following responsibilities relative to cross connections:

(a) As required by 248 CMR 10.14(6), the Inspector of Plumbing will ensure that potable water supply systems are designed, installed and maintained in a manner as to prevent contamination from non-potable liquids, solids or gases which may be introduced to a potable water supply system through cross connections;

(b) After reviewing the plans and specifications for plumbing work under 248 CMR 10.04(5), and before issuing a permit, the Plumbing Inspector, as required by 248 CMR 10.14, shall require the installation of appropriate devices in accordance with 310 CMR 22.00; and

(c) No plumbing permit shall be issued for cross connection installations requiring Reduced Pressure Zone Backflow Preventors or Double Check Valve Assemblies until the application for such permit is accompanied by a letter of approval from the Department, its Designee or public water system.

22.22: continued

(7) Installation Approval and Permit Requirements.(a) Installation Approval.

1. No person shall install or remove or contract with another person for the installation or removal of any reduced pressure backflow preventer or double check valve assembly required by 310 CMR 22.22 unless a design data sheet with plans showing the method of protection of the public water distribution system has been approved by the Department, its Designee or the public water system for the installation of such device.
2. All persons shall obtain approval from the local plumbing inspector or the head of the local fire department, to the extent required by the State Plumbing Code, 248 CMR 10.04(3), or M.G.L. c. 148, § 27A, for the initial installation or retrofit for any change in the installation of any air gap separation with tank and pump arrangement, reduced pressure backflow preventer, or double check valve assembly.
3. Prior to the installation of any pressure or atmospheric vacuum breaker, backflow preventer with intermediate atmospheric vent, or barometric loop, the plans and specifications for the plumbing work must receive a permit issued pursuant to 248 CMR 10.04(3) by the local Plumbing Inspector. For these devices, a plumbing permit issued under 248 CMR 10.04(3) shall constitute installation approval pursuant to 310 CMR 22.22.
4. All design data sheets and plans for the installation of backflow prevention devices shall be reviewed by a certified cross connection surveyor as of December 31, 1998.
5. Design data sheets and plans for the installation of a backflow prevention device on fire protection systems shall not be approved by the public water system until a building permit has been issued by the Building Official who has jurisdiction over such system in accordance with 780 CMR 1.00: *Scope and Administration* and 9.00: *Fire Protection Systems* and approval by the head of the local fire department.

(b) Permit Requirement.

1. Any person owning or maintaining a cross connection protected by a double check valve assembly or a reduced pressure backflow prevention device that was approved by the Department, its designee or public water system shall register such protected cross connection device(s) with the public water system in accordance with 310 CMR 22.22(2). The Department will issue, upon request, one annual permit to the public water system covering only those registered cross connection devices identified by the public water system in its annual statistical report to the Department.
2. The Department reserves the right to revoke or suspend any conditional approval and/or permit for cause.

(c) The Department may revoke any approval or permit for any installation or change in installation of any backflow prevention device which is found to be in noncompliance with 310 CMR 22.22.

(8) Location of Devices.

(a) The location of each approved backflow prevention device, with respect to the plumbing on the premises and the service connection to the premises, shall be based upon the degree of existing or potentially existing health hazard, and shall conform to the following specific requirements:

1. Approved backflow prevention devices shall be located so that protection of all cross connections is achieved with a minimum number of devices;
2. Approved backflow prevention devices shall be located so as to provide in-plant protection;
3. The following types of facilities have been determined to present high health hazard conditions and in-plant protection shall be supplemented by installation of a reduced pressure backflow preventer or an air gap separation at the meter or property line unless an approved device is installed on a dedicated or process line, or if protection of the in-plant cross connection(s) is achieved to the satisfaction of the Department, its Designee or the public water system at:
 - a. Nuclear reactors or other facilities where radioactive materials are used;
 - b. Sewage treatment plants and sewage pumping stations;
 - c. Piers, docks, marinas, shipyards;
 - d. Chemical plants;
 - e. Metal plating industries;
 - f. Hospitals, mortuaries, medical clinics, dental offices and clinics;

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.22: continued

- g. Laboratories, except when the Department or its Designee has made a specific determination that no health hazard exists on the premises;
- h. Other types of facilities as determined in writing by the Department or its Designee.

(b) If, upon request by the owner of the premises or upon its own initiative, the Department or its Designee or the public water system determines that it is unreasonable to locate all cross connections within the premises, or the Department or its Designee determines that protection of all cross connections is unreasonable for economic reasons, then:

1. the public water supply distribution system shall be protected by installation of a reduced pressure backflow preventer or an air gap separation at the meter or property line; and
2. the owner of the premises shall provide a safe, alternative supply of potable water, well marked and labeled, to all domestic water fixtures on the premises.

(9) Types of Backflow Prevention Devices Required.

(a) Subject to the provisions of 310 CMR 22.22(10): *Table 22-1* shall serve as the guide for the type of protection required.

Table 22-1

AG - Air Gap
 RPBP - Reduced Pressure Backflow Preventer
 DCVA - Double Check Valve Assembly
 AVB - Atmospheric Vacuum Breaker
 PVB - Pressure Vacuum Breaker
 BPIAV - Backflow Preventer with Intermediate Atmospheric Vent

Types of Hazard on Premises	Acceptable Types of Backflow Preventers						Comments*
	AG	RPBP	DCVA	AVB	PVB	BPIAV	
1. Sewage Treatment Plant	X	X					
2. Sewage Pumping Station	X	X					
3. Food Processing	X	X	X*				*If no health hazard exists
4. Laboratories	X	X	X*				*If no health hazard exists
5. Fixtures with hose threads on inlets	X	X	X	X			In addition to an air gap separation, all fixtures that have a threaded hose type connection shall at a minimum, be equipped with a AVB in accordance with 248 CMR 10.14
6. Hospitals, Mortuaries, Clinics	X	X					
7. Plating Facilities	X	X					
8. Irrigation Systems	X	X		X*	X**		Each case should be evaluated individually. *An AVB can be used if no back pressure is possible and no health hazard exists **Pressure Vacuum Breakers can be installed if back pressure is not possible
9. Systems or Equipment Using Radioactive Material	X	X					
10. Submerged Inlets	X	X		X*			*If no health hazard exists and no back pressure is possible
11. Dockside Facilities	X	X					
12. Valved outlets or fixtures with hose attachments	X	X		X*			Each case should be evaluated individually *If no health hazard exists and no back pressure is possible
13. Commercial Laundries and Dry Cleaners	X	X					
14. Commercial Dishwashing Machines	X	X		X*			*If no health hazard exists
15. High and Low Pressure Boilers	X	X*					*If chemicals are added
16. Low Pressure Heating Boilers						X	Residential and small commercial, having no chemicals added

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.22: continued

Types of Hazard on Premises	Acceptable Types of Backflow Preventers						Comments*
	AG	RPBP	DCVA	AVB	PVB	BPIAV	
17. Photo Processing Equipment	X	X					
18. Reservoirs -Cooling Tower Recirculating Systems	X	X					
19. Fire Protection Systems: For cross connection control, fire protection systems may be classified on the basis of water source and arrangement of supplies as follows: (a) Class 1: Direct connection from public water system mains only; no pumps, tanks, or reservoirs; no physical connection from other water supplies; no antifreeze or other additives of any kind; all sprinkler drains discharge to atmosphere, dry wells, or other safe outlets. These systems may or may not have fire department connections. Refer to 310 CMR 22.22(9)(d)1.	X	X	X				A backflow prevention assembly does not have to be installed on existing fire protection systems installed prior to March 21, 1997, provided that the fire protection system is registered with the public water system, equipped with a UL listed alarm check valve that is properly maintained in accordance with NFPA 25 and has not undergone substantial modification defined within 310 CMR 22.22(9)(d)3. Alarm check maintenance records must be available for inspection by the Department, its designee or the public water system
b. Class 2: Same as Class 1 except that booster pumps may be installed in the connections from the street mains .These systems may or may not have fire department connections. Refer to 310 CMR 22.22(9)(a).	X	X	X				A backflow prevention assembly does not have to be installed on existing fire protection system installed prior to March 21, 1997, provided that the fire protection system is registered with the public water system and equipped with a UL listed alarm check valve that is properly maintained in accordance with NFPA 25. Alarm check maintenance records must be available for inspection by the Department, its designee or the public water system
c. Class 3: Direct connection from public water system mains, plus one or more of the following: elevated storage tanks; fire pumps taking suction from aboveground covered reservoirs, or tanks; and pressure tanks.	X	X*	X*				*RPBP or DCVA contingent on evaluation of auxiliary supply and on-site system in accordance with 310 CMR 22.22(9)(d)1.
d. Class 4: Directly supplied from public water system mains, similar to Class 1 and Class 2 with an auxiliary water supply dedicated to fire department use and available to the premises, such as a nonpotable water source located within 1700 feet of the fire department connection, (FDC).	X	X*					*RPBP on evaluation of auxiliary supply and on-site system in accordance with 310 CMR 22.22(9)(d)1.
e. Class 5: Directly supplied from public water system mains, and interconnected with auxiliary supplies, such as pumps taking suction from reservoirs exposed to contamination, or rivers and ponds; driven wells; mills or other industrial water systems; or where antifreeze or other additives are used.	X*	X*					*RPBP or air gap contingent on evaluation of auxiliary supply and on-site system. Refer to 310 CMR 22.22(9)(d)1.
f. Class 6: Combined industrial and fire protection systems supplied from the public water mains only, with or without gravity storage or pump suction tanks.	X	X*			X	X	*RPBP contingent on evaluation of on-site water system. Refer to 310 CMR22.22 (9)(d)1.
g. Residential fire protection systems for one and two family detached dwellings and manufactured homes only. Fire protection systems in three family dwellings meeting NFPA 13D requirements as provided in 780 CMR, Chapter 9, are included in this section.	X	X	X				Non testable devices and flow through systems should be used whenever possible. Systems are typically designed and installed in accordance with NFPA 13D: "Installation of Sprinkler systems in One and Two Family Dwellings and manufactured homes". These systems are authorized to use food grade antifreeze with no additional requirements when potable piping (PB, CPVC, and copper tube) is employed. If non-grade antifreeze is utilized, the system may be classified as a class 5. If a fire department connection is used, the requirements for a class 1 or 2 apply.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

22.22: continued

Types of Hazard on Premises	Acceptable Types of Backflow Preventers						Comments*
	AG	RPBP	DCVA	AVB	PVB	BPIAV	
h. Residential fire protection systems for other than those described in Table 22-1-19.g.	X	X	X				Fire protection system in this category shall comply with the requirements set forth in class 1 through 4 as appropriate.
20. Solar Energy Systems	X	X				X*	Residential and small commercial having no chemicals or only USP Glycenne added to water
21. Single Jacketed Heat Exchangers	X	X					Each case should be evaluated individually

(b) Subject to the authority of the Department, its Designee, or public water system to issue the final determination of what type of device is required and the location of the device for each cross connection in individual cases, depending upon the degree of health hazard and type of backflow involved, the acceptable devices for backflow prevention include air gap separation, reduced pressure backflow preventers, double check valves assemblies, atmospheric or pressure vacuum breakers, backflow preventers with intermediate atmospheric vents, and barometric loops.

(c) There shall be no by-pass around any approved backflow prevention device unless the same type of approved backflow prevention device is installed on the by-pass.

(d) Fire Protection Systems.

1. Any new, existing or substantially modified fire protection system, including residential fire protection systems, shall be evaluated by the Department, its Designee or public water system to determine if a cross connection exists. If it is determined that a cross connection does exist, 310 CMR 22.22(9)(a): *Table 22-1* shall serve as a guide in determining the type of protection device required. In evaluating the type of protection device required, the degree of hazard associated with the fire protection system, and the potability of the water pumped into the fire department connection, shall be considered, and the head of the local fire department shall be consulted.

2. All existing cross connections between public water systems and fire protection systems, as described in 310 CMR 22.22: *Table 22-1*, (9)(a)19.a. and b., and installed prior to March 21, 1997, shall be equipped with a UL listed alarm check valve with the standard alarm pressure switch trim package. The device shall comply with the applicable requirements stated in 310 CMR 22.22(9)(d)6.: Fire protection systems installed on or after March 21, 1997, shall be equipped with a protection device specified in 310 CMR 22.22(9)(d)1. When backflow prevention devices are to be retroactively installed on exiting fire protection system, a thorough hydraulic analysis, including revised hydraulic calculations, new fire flow data, and all necessary system modification to accommodate the additional friction loss, shall be completed as part of the installation in accordance with NFPA-13. The installation of a backflow prevention device only does not constitute a substantial modification of an existing fire protection system.

3. The owner of a cross connection subject to 310 CMR 22.22(9)(d)2. shall register the connection(s) with the public water system, a copy of which shall be retained by the public water system as specified at 310 CMR 22.22.

22.22: continued

4. Any owner of existing cross connection(s) who decides to install a protection device specified at 310 CMR 22.22(9)(a): *Table 22-1*, when the Department has not determined that such a protection device is necessary, shall obtain the prior written approval of the Department or its Designee of the design data sheets for the proposed protection device as specified at 310 CMR 22.22(9)(d)6.

5. Notwithstanding the provisions of 310 CMR 22.22(9)(d)3. and 4., by providing written notification to the owner of a cross connection between a public water system and a fire protection system, the Department or its Designee may, whenever the Department or its designee determines that the cross connection constitutes a threat to the public health, at any time require the installation of a protection device, modify or revoke the approval of a cross connection, or require water quality monitoring.

6. In addition to the requirements set forth in 310 CMR 22.22, the installation and testing of a backflow protection device on a fire protection system may be subject to the requirements of the following:

- a. 780 CMR: *Massachusetts State Building Code - Fire Protection Systems, Design, Installation, Testing and Maintenance Requirements*;
- b. 527 CMR: *Massachusetts Fire Prevention Regulations, Installation Permits*;
- c. 250 CMR: *Board of Registration of Professional Engineers and Land Surveyors, Practice of Engineering and Preparation of Plans and Specifications*;
- d. 528 CMR: *Bureau of Pipe fitters, Refrigeration, and Sprinkler Fitters, Qualification and Licensing of Installers*;
- e. M.G.L. c. 148, § 27A, Shutting off Existing Fire Protection systems and Permitting;
- f. 248 CMR: *State Plumbing and Fuel Gas Code, Permits and Installation*.

(10) Approval of Devices for Use in Massachusetts.

(a) Types and models of atmospheric breakers, pressure vacuum breakers/anti-siphon vacuum breakers, backflow preventers with intermediate atmospheric vent, dual check valve preventers, and hose connection vacuum breakers may be used in Massachusetts for certain low hazard applications referred to in 248 CMR 10.00: *Uniform State Plumbing Code* shall be those meeting the requirements of, and approved by, the Board of State Examiners of Plumbers and Gas Fitters.

(b) All reduced pressure backflow preventers, double check valve assemblies, and double check detector assemblies used in Massachusetts for the protection of a cross connection in accordance with 310 CMR 22.00 shall meet the standards established by at least one of the following organizations: American Society of Sanitary Engineering (ASSE), American Water Works Association or University of Southern California (U.S.C.) Specifications;

(c) Devices and valves installed on fire protection systems including dual check backflow preventer for residential fire sprinkler systems shall be listed by Underwriters Laboratory (UL) or approved by Factory Mutual Research in accordance with 780 CMR *Massachusetts State Building Code* unless otherwise approved by the head of the local fire department.

(d) The Department reserves the right to prohibit the use of any cross connection protection devices in Massachusetts if the Department determines that such device is found, after subsequent review, to be defective or to have performed inadequately in the field.

(11) Installation Requirements.

(a) Reduced Pressure Backflow Preventers: Reduced pressure backflow preventers may be used to protect against backflow caused by back pressure or back siphonage and to protect a public water supply system from substances which are hazardous to health only when they are installed in the following manner:

1. For devices installed as in-plant protection, the reduced pressure backflow preventer shall be installed on the owner's side of the water meter on the potable water supply line.
2. Before installing a reduced pressure backflow preventer, all pipelines shall be thoroughly flushed to remove foreign material.
3. Drinking and domestic water lines, lines for safety showers, and lines for eye wash units must be taken off the upstream side of reduced pressure backflow preventers for devices installed as in-plant protection.
4. The reduced pressure backflow preventer shall be located so as to permit easy access and provide adequate and convenient space for maintenance, inspection, and testing.

22.22: continued

5. The owner of the device shall be able to shut down water lines after reasonable notice during normal business hours to permit necessary testing and maintenance of the device, provided that if it is not possible to meet this requirement a by-pass line equipped with an approved type reduced pressure backflow preventer shall be installed.
 6. The reduced pressure backflow preventer and shut-off valves must be installed in a horizontal alignment between three and four feet from the floor to the bottom of the device and a minimum of 12 inches from any wall. Vertical installation of devices shall be determined by the public water system.
 7. Tightly closing valves must be installed at each end of the device and be immediately accessible unless otherwise approved by the Department or its Designee or public water system.
 8. The device must be protected from freezing, flooding, and mechanical damage.
 9. If the device is to be installed on a hot water line, a device approved for use at the elevated temperature must be used.
 10. If a drain is to be provided for the relief valve port, there must be an approved air gap separation between the port and drain line. To be approved, the air gap must be at least twice the internal diameter of the discharge line.
 11. Pit installation shall be approved only as provided in 310 CMR 22.22(11)(f).
 12. All water lines shall be color coded according to 248 CMR 10.00: *Uniform State Plumbing Code*, except that water filtration plants, pumping stations, sewage treatment plants and sewage pumping stations shall label all water lines in lieu of color coding.
- (b) Double Check Valve Assemblies. Double check valve assemblies may be used to protect against backflow caused by back pressure or back siphonage and to protect a public water supply system from substances which may be objectionable, but not hazardous to health, only if they are installed in the following manner:
1. Drinking and domestic water lines, lines for safety showers, and lines for eye wash units must be taken off the upstream side of the double check valve assembly for devices installed as in-plant protection.
 2. The double check valve assembly shall be installed with adequate space to facilitate maintenance, inspection, and testing.
 3. The double check valve must be installed horizontally and the top of the double check valve assembly must be between 12 inches and 48 inches from the floor and a minimum of 12 inches from any wall. Vertical installation of devices shall be determined by the public water system.
 4. If a water meter is not provided on the upstream side of an approved swing-type double check valve assembly, a three to five foot spacer must be installed between the check valves.
 5. Tightly closing valves must be installed at each end of the device and be immediately accessible unless otherwise approved by the Department or its Designee.
 6. Double check valve assemblies must be readily accessible for testing and service and provided with suitable connections and appurtenances for testing.
 7. The device must be protected against flooding, freezing and mechanical damage.
 8. Pit installation will be approved only as provided in 310 CMR 22.22(11)(f).
- (c) Vacuum Breakers. Vacuum breakers shall not be used to protect against backflow due to back pressure and shall not be installed as protection for high hazard conditions as determined by the Department, its Designee or public water system. Vacuum breakers may be used for low health hazards only if they are installed in the following manner:
1. Vacuum breakers must be installed at least six inches above the flood level rim of the fixture they serve.
 2. Atmospheric vacuum breakers must be installed downstream of the last shut off servicing the fixture or equipment.
 3. Vacuum breakers must not be installed in locations where the device is subject to corrosive fumes, dust or grit.
 4. Vacuum breakers must be protected against flooding, freezing and mechanical damage.
 5. Atmospheric vacuum breakers shall not be used under conditions of static line pressure. Pressure vacuum breakers may be used under conditions of static line pressure.
 6. Vacuum breakers shall be installed on all fixtures that have a threaded hose type connection as required in 248 CMR 10.14: *Water Supply and the Water Distribution System*, in addition to an air gap separation.

22.22: continued

(d) Barometric Loops. Barometric Loops may be used only to protect against back siphonage, shall be approved for use only when no health hazard exists and when back pressure is not possible.

(e) Air Gap Separation. Air gap separation may be used to protect against backflow caused by back pressure or back siphonage and to protect a public water supply system from substances which are hazardous to health and shall be approved for use only when installed in accordance with 248 CMR 10.00: *Uniform State Plumbing Code*.

(f) Pit Installation. No devices shall be installed in pits except as specifically approved by the Department, its Designee or public water system in cases of unique circumstances, and must comply with 29 CFR 1910.196, OSHA regulations where applicable for work in confined spaces then only as follows:

1. the pit interior shall be a minimum of ten feet long, six feet wide, and must have a clear height 6½ feet high;
2. the pit must be watertight;
3. the pit opening and manhole cover must be at least 30 inches in diameter;
4. The foothold inserts must be of steel, aluminum, or other material approved by the Department, must be a maximum of 12 inches apart, and must be installed so that the top foothold is within 12 inches of the manhole cover and the bottom foothold is within 12 inches of the pit floor;
5. An adequate drain must be installed and the drain line shall not be connected to a sewer;
6. The pit floor shall be pitched to the drain;
7. If built in a roadway, the top of the pit must be adequately reinforced.

(12) Cross Connection Certification

(a) Cross Connection Backflow Prevention Device Tester. Any person seeking Department certifications as a Backflow Prevention Device Tester in the Commonwealth of Massachusetts shall meet all of the following requirements:

1. pass a written and practical certification examination which is approved by the Department for "Backflow Prevention Device Tester".
2. apply to the Department for certification on the form provided by the Department. This submittal must include payment of the certification fee established by the Department.
3. Application for certification must be submitted to the Department no later than 12 months after the date the applicant received notice of passing a Department approved examination.

(b) Cross Connection Control Surveyor. Any person seeking Department certification as a Cross Connection Surveyor in the Commonwealth of Massachusetts shall meet all of the following requirements:

1. Pass a written examination approved by the Department for Cross Connection Control Surveyor".
2. Apply to the Department for certification on the form provided by the Department. This submittal must include payment of the certification fee established by the Department.
3. Application for certification must be submitted to the Department no later than 12 months after the date the applicant received notice of passing a Department approved examination.

(c) Any person, upon satisfying the requirements of 310 CMR 22.22(13)(a), shall receive from the Department a certificate which indicates that he or she is a:

1. Certified Backflow Prevention Device Tester; or
2. Certified Cross Connection Surveyor; or
3. Combination Certified Backflow Prevention Device Tester/Certified Cross Connection Surveyor.

(d) All certificates will remain valid for three years from the date of issuance.

(e) Renewal of Certification. Any Certified Backflow Prevention Device Tester, Cross Connection Surveyor or person holding a valid Combination Certificate who desires to renew his or her certification must submit a renewal application including any renewal fee and prerequisites, no later than one month prior to the expiration date of his or her certificate.

22.22: continued

1. Backflow Prevention Device Testers. Persons applying for renewal shall complete at least 24 inspections/tests of backflow prevention devices and obtain a least three training contact hours (TCH) in the past three years. Proof of inspections and TCH shall accompany the application.
 2. Cross Connection Surveyor. Persons applying for renewal shall complete at least three cross connection surveys and obtain a least three training contact hours (TCH) in the past three years. Proof of surveys and TCH shall accompany the application.
- (f) Persons failing to meet the certification renewal requirements at 310 CMR 22.22(13)(e)1. and/or 2. within three years from the date that the certification expired must retake an examination approved by the Department for renewal.
- (g) Recertification Requirements. Persons failing to renew their certification within three years from the date that the certificate expired, must retake an examination approved by the Department for recertification.
- (h) Persons holding both a valid Backflow Prevention Device Testers certificate and a valid Cross Connection Surveyor certificate shall be issued a Combination Certificate.
- (i) Persons holding a combination certification shall satisfy all the renewal requirements stated at 310 CMR 22.22(12)(e), except for the TCH requirements. Only three TCH will be required for a combination certificate.
- (13) Inspection Surveying, Testing and Overhauling of Devices.
- (a) All cross connection surveys shall be conducted by a person who is a Massachusetts Certified Cross Connection Surveyor. All backflow prevention device tests shall be conducted by a certified Backflow Prevention Device Tester in accordance with 310 CMR 22.22. A person holding a Combination Certification may conduct a cross connection survey and/or backflow prevention test.
 - (b) Within 14 calendar days after the installation of devices in accordance with plans reviewed and approved by the reviewing authority, the owner or owner's agent shall notify the public water system to arrange for the inspection of the installation.
 - (c) Reduced pressure backflow preventers, double check valve assemblies, may be inspected and tested by the Department, its designee or the public water system at any time.
 - (d) The public water system is responsible to ensure that each reduced pressure backflow preventer will be inspected semiannually in accordance with the public water system's approved cross connection program plan, as provided for in 310 CMR 22.22(3)(b). If the supply is used less than six months of the year, these devices shall be inspected and tested once each year. Each double check valve assembly shall be tested annually. Pressure type vacuum breakers should be tested at least annually by the owner of the device. Each test shall be conducted by a Certified Backflow Prevention Device Tester.
 - (e) Devices which fail the test or are found to be defective shall be overhauled, repaired, or replaced and retested within 14 calendar days of the failure or from the discovery of the defect. The repair work must be done by a plumber licensed by the Commonwealth of Massachusetts to the extent required by 248 CMR 10.00: *Uniform State Plumbing Code*. No person shall overhaul, repair, replace a device on a fire system without approval from the head of the local fire department pursuant to M.G.L. c.148, § 27A.
 - (f) No two routine tests for reduced pressure backflow preventers required by 310 CMR 22.22 shall be conducted within five months of each other without the written approval of the Department, its designee or the public water system.
 - (g) The owner or owner's agent must maintain on the premises a spare parts kit and any special tools required for removal and reassembly of devices which are to be tested. The presence of these materials must be recorded on the Inspection and Maintenance Report Form.
 - (h) The owner or owner's agent must provide labor on the premises as necessary to allow inspection and testing of devices by the Department, the supplier of water, or Certified Backflow Prevention Device Testers.
 - (i) The owner or owner's agent shall notify the public water system in writing, no later than 30 days prior to the removal from service of any permitted device and such notification shall include the reason for removal and must indicate if the cross connection has been eliminated.
 - (j) The owner or owner's agent shall notify the public water system in writing no later than 30 days prior to a change in ownership. Notification must include, at a minimum, the name and address of the new owner as well as documentation with proof of change in ownership.

22.22: continued

- (k) If the public water system deems necessary, it may test a device more frequently to ensure proper cross connection control.
- (14) Right of Entry. All owners or operators of commercial, industrial or institutional premises served by a public water supply system shall authorize agents and employees of the Commonwealth, upon presentation of their credentials, to enter their premises without a warrant for the purpose of inspecting and surveying their water systems for cross connections and assuring compliance with 310 CMR 22.22, whether or not the Commonwealth has evidence that the system is in violation of an applicable legal requirement.
- (15) Fees.
- (a) The certification fees for Backflow Prevention Device Testers and Cross Connection Control Surveyors are established by the Department as stated in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.
- (b) A person holding either a Testers or Surveyors certificate will not be charged an additional fee for a combination certification provided that all the requirements of 310 CMR 22.22(12) have been met.
- (c) Permit fees as specified at 310 CMR 22.22(7)(b) are established by the Department in accordance with 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.
- (16) Enforcement.
- (a) Whoever maintains a cross connection in violation of M.G.L. c. 111, § 160A, shall be:
1. punished by a fine of not more than \$25,000 for each day such violation occurs or continues, or by imprisonment for not more than one year, or both such fine and imprisonment, or
 2. subject to a civil penalty not to exceed \$25,000 per day for each day that such violation occurs or continues.
- (b) Any violation of 310 CMR 22.22 shall be subject to the administrative penalty provisions of 310 CMR 5.00: *Administrative Penalty*.
- (c) Upon due notice to the person maintaining the connection the Department may revoke any permit whenever, in the opinion of the Department, the cross connection or the maintenance thereof no longer complies with 310 CMR 22.00.
- (d) After notice and opportunity for a hearing, the Department may suspend or revoke the certification of any Backflow Prevention Device Tester or Cross Connection Control Surveyor for cause. A certified backflow prevention device tester or certified cross connection control surveyor whose certification has been suspended or revoked by the Department may not test devices or conduct any surveys pending the outcome of the hearing, if any.
- (e) Audit: The Department may perform audits of a Public Water System's distribution system protection cross connection control program to ascertain whether the PWS is in compliance with 310 CMR 22.22, and to ascertain the fitness and purity of the water for domestic use and to secure the sanitary protection of such waters, pursuant to MGL c. 111, § 160. The Department may issue a written order, pursuant to M.G.L. c. 111, § 160A, requiring a supplier of public water to perform any action necessary to assure the delivery of fit and pure water through its distribution system, including the actions required under 310 CMR 22.22(13).
- (f) In order to ensure the delivery of a fit and pure water supply, the Department may issue a written order, pursuant to M.G.L. c. 111, § 160, requiring a supplier of public water to cease supplying water to any premises if one or more cross connections are maintained in violation of the requirements of 310 CMR 22.22, or requiring any person to take such actions as are reasonable and necessary to prevent or to eliminate cross connections.

22.23: Use of Non-centralized Treatment Devices and Bottled Water

- (1) Public Water Systems shall not use bottled water to achieve compliance with an MCL, MRDL, Action Level or Treatment Technique established in 310 CMR 22.00 or any standards specific to an individual Public Water System established pursuant to a health assessment as provided in 310 CMR 22.03(8). Bottled water may be approved by the Department for use on a temporary basis to avoid any unreasonable risk to health.

22.23: continued

- (2) Public Water Systems using bottled water as a condition of obtaining an exemption from the requirements of 310 CMR 22.06(16), 22.07A and 22.07B(1), and must meet the requirements in 310 CMR 22.14(25)
- (3) Public Water Systems that use point-of-use or point-of-entry devices as a condition of receiving an exemption must meet the requirements in 310 CMR 22.14(27).
- (4) A Supplier of Water meeting the following minimum requirements, subject to the Department's review and written approval in accordance with 310 CMR 22.04, may use Point of Use (POU) and/or Point of Entry (POE) devices to comply with an MCL set forth in 310 CMR 22.00 or to achieve a contaminant level identified in accordance with 310 CMR 22.03(8):
- (a) the POU or POE device must be owned, controlled, operated and maintained by the Supplier of Water in accordance with 310 CMR 22.00;
 - (b) the POU or POE device must be equipped with mechanical warnings device to ensure that customers are automatically notified of operational problems;
 - (c) the POU or POE device must be included in the Department's approved list of technologies for small systems and approved in accordance with 310 CMR 22.04(8);
 - (d) the POU or POE device must be installed in conformance with 248 CMR 10.00: *Uniform State Plumbing Code*;
 - (e) a monitoring plan that ensures that the devices provide health protection equivalent to that provided by central water treatment must be submitted;
 - (f) effective technology under a Department-approved plan must be applied. The microbiological safety of the water must be maintained at all times;
 - (g) the Supplier of Water must ensure that buildings connected to the system have sufficient POU or POE devices that are properly installed, maintained, and monitored such that all consumers will be protected;
 - (h) the POU or POE device must have an adequate certification of performance including field testing or the device has undergone a rigorous engineering design review;
 - (i) the design and application of the POU and/or POE devices must consider the potential for increasing concentrations of heterotrophic bacteria in water treated with activated carbon. It may be necessary to use frequent backwashing, post contactor Disinfection, and Heterotrophic Plate Count monitoring to ensure that the microbiological safety of the water is not compromised;
 - (j) each building connected to the system must have a POU or POE device that is properly installed, maintained, and monitored. Each building is subject to treatment and monitoring, and the rights and responsibilities of the Public Water System customer convey with title upon sale of property;
 - (k) the Supplier of Water must document that all customers are required to or have agreed to participate in the POU and or POE water treatment program. Documentation may include, without limitation, the following:
 - 1. an ordinance that requires the customers to participate in the program; or
 - 2. copies of signed agreements from all customers explicitly agreeing to provide the Supplier of Water with access to their homes or buildings for the purpose of conducting necessary maintenance and sampling activity;
 - (l) the Supplier of Water must notify and provide an opportunity for public comment to its customers of the proposed POU and POE treatment program at a public meeting, or an equivalent approved opportunity for public comment;
 - (m) the Supplier of Water must submit a continuing education and awareness plan, including all supporting educational materials;
 - (n) the Supplier of Water must provide educational materials pursuant to the approved continuing education and awareness plan described in 310 CMR 22.23(4)(m) to new and existing customers summarizing potential health effects of contaminants of concern and the benefits of POU/POE devices, subject to the following:
 - 1. if the water system is a Community Water System educational materials may be provided in their Consumer Confidence Report; and
 - 2. new residents shall be given educational materials within 15 days of beginning water service to such residents;
 - (o) the POU device must not be used for the following contaminants: microbiological contaminants, nitrate, volatile organic compounds and radon; and

22.23: continued

- (p) the POE device must not be used for the following contaminants: microbiological contaminants and nitrate.
- (5) With prior written approval of the Department in accordance with 310 CMR 22.04(1), a POE or POU device may be installed in a facility to meet an Action Level, Treatment Technique in *lieu* of an MCL, or other requirements of 310 CMR 22.00. The facility, upon the installation of the POE or POU device, shall constitute a consecutive Public Water System as defined in 310 CMR 22.02, provided the facility meets the definition of a Public Water System as defined in 310 CMR 22.02. A consecutive system that installed a POU or POE device in accordance with 310 CMR 22.23(5) is subject to all of the requirements of 310 CMR 22.00 unless said system complies with 310 CMR 22.23(6)(a) through (i) and demonstrates to the Department's satisfaction that it meets the criteria in 310 CMR 22.03(3)(b) through (e).
- (6) If a POE device is installed in a facility solely to enhance the aesthetic quality of the drinking water and, because of the installation of such a device the facility meets the definition of a Public Water System in 310 CMR 22.02, it shall constitute a consecutive Public Water System subject to all of the requirements of 310 CMR 22.00, unless the system complies with the following minimum requirements:
- (a) the facility shall advise the Department and the supplying Public Water System in writing of the intended installation of the device;
 - (b) the facility shall be responsible for the operation and maintenance of the device, subject to adequate oversight by the supplying Public Water System;
 - (c) the facility shall comply with the requirements of the supplying Public Water System;
 - (d) the facility shall provide a detailed written notification of the installation of the POE device to the local health authority having jurisdiction over the facility;
 - (e) the facility shall only use POE devices that have been certified by the National Sanitation Foundation (NSF), Underwriters Laboratory (UL) or equivalent third party certifying organization accredited by American National Standards Institute (ANSI);
 - (f) the facility shall install the POE device in accordance with 248 CMR 10.00: *Uniform State Plumbing Code*;
 - (g) the facility shall monitor the quality of water as specified by the supplying Public Water System, the Department or the local health authority;
 - (h) the facility shall ensure that any wastewater discharge complies with all applicable federal, state and local regulations; and
 - (i) the facility shall maintain the microbiological quality standards of the water at all times as specified at 310 CMR 22.05.
- (7) The Department may require any facility or other entity meeting the requirements of 310 CMR 22.23(5) and (6) to comply with any or all other requirement of 310 CMR 22.00, if the Department determines that such action is necessary to protect the health of the consumers of water.

22.24: Sale, Transfer of Property Interest, or Change in Use of Water Supply Land

- (1) No supplier of water may sell, lease, assign, or otherwise dispose of, or change the use of, any lands used for water supply purposes without the prior written approval of the Department. The Department will not approve any such disposition or change in use unless the supplier of water demonstrates to the Department's satisfaction that such action will have no significant adverse impact upon the supplier of water's present and future ability to provide continuous adequate service to consumers under routine and emergency operating conditions, including emergencies concerning the contamination of sources of supply, failure of the distribution system and shortage of supply.
- (2) Land Transfers Any sale, transfer of property interest or change in use of land acquired for water supply purposes may also require approval by a $\frac{2}{3}$ vote of the Legislature, in addition to Department approval. (Massachusetts Constitution Amend. Art. XCVII, Section 243)

22.23: continued

(3) Easements The Department will not approve any grant of easement for pipelines, or other conduit, carrying liquid petroleum products within the Zone I of a PWS. For other public utility easements within Zone I, the Department may require as a condition of any grant of such easement an express perpetual prohibition on the use of fertilizers, pesticides, herbicides, and other non-mechanical means of vegetation control within the area subject to the easement.

(4) The owner/operator of any public water system shall notify the Department in writing at least 30 days in advance of any:

- (a) proposed sale, change of system ownership, or transfer of the system; and/or
- (b) changes that impact the classification of the system. Changes in system classification are subject to Department review and approval. For non-community systems, changes that impact the classification include changes in the type of facilities, service connections, population served or operating hours that may result in a change of transient use to non-transient use, or non-community use to community use according to the definition of a public water system pursuant to 310 CMR 22.02 and the *Guidelines and Policies for Public Water Systems*.

22.25: Abandonment of Water Supply Sources

(1) No supplier of water may remove a public water system source from service or abandon a public water system source without the prior written approval of the Department. The Department will not approve any such action unless the supplier of water demonstrates to the Department's satisfaction that such action will have no significant adverse impact upon the supplier of water's present and future ability to provide continuous adequate service to consumers under routine and emergency operating conditions, including emergencies concerning the contamination of sources of supply, failure of the distribution system and shortage of supply.

(2) The supplier of water shall maintain each public water system source removed from service as an emergency source unless the Department approves its disposition in accordance with 310 CMR 22.24 or its abandonment in accordance with 310 CMR 22.25. All public water system groundwater sources approved for abandonment or permanent closure may continue to be used as non-public water system sources. The Department may require closure of certain groundwater sources in a manner that minimizes the potential for groundwater contamination and public health risk, by permanently preventing vertical movement of water within the borehole and annular space and eliminating all physical hazards at the ground surface associated with the well's construction or location. Proposals for permanent closure shall describe the closure method and materials to be used and shall be submitted to the Department for review and approval.

22.26 Ground Water Rule

(1) General Requirements and Applicability.

(a) Applicability. 310 CMR 22.26 applies to all Public Water Systems that use groundwater except that it does not apply to Public Water Systems that combine all of their groundwater with Surface Water or with Groundwater under the Direct Influence of Surface Water prior to treatment. For the purposes of 310 CMR 22.26, "groundwater system" is defined as any Public Water System meeting this applicability statement, including consecutive systems receiving finished groundwater.

(b) General Requirements. Systems subject to 310 CMR 22.26 must comply with the following requirements:

1. Sanitary survey information requirements for all groundwater systems as described in 310 CMR 22.26(2).
2. Microbial source water monitoring requirements for groundwater systems that do not treat all of their groundwater to at least 99.99% (4-log) treatment of Viruses (using inactivation, removal, or a Department-approved combination of 4-log Virus inactivation and removal) before or at the first customer as described in 310 CMR 22.26(3).

22.26: continued

3. Treatment Technique requirements, described in 310 CMR 22.26(4), that apply to groundwater systems that have fecally contaminated source waters, as determined by source water monitoring conducted under 310 CMR 22.26(3), or that have significant deficiencies that are identified by the Department. A groundwater system with fecally contaminated source water or with significant deficiencies subject to the Treatment Technique requirements of 310 CMR 22.26 must implement one or more of the following corrective action options:
 - a. correct all significant deficiencies;
 - b. provide an alternate source of water;
 - c. eliminate the source of contamination; or
 - d. provide treatment that reliably achieves at least 4-log treatment of Viruses (using inactivation, removal, or a Department-approved combination of 4-log Virus inactivation and removal) before or at the first customer.
 4. Groundwater systems that provide at least 4-log treatment of Viruses (using inactivation, removal, or a Department-approved combination of 4-log Virus inactivation and removal) before or at the first customer are required to conduct compliance monitoring to demonstrate treatment effectiveness, as described in 310 CMR 22.26(4)(b).
- (c) Compliance Date. Groundwater systems must comply, unless otherwise noted, with the requirements of 310 CMR 22.26 beginning December 1, 2009.
- (2) Sanitary Surveys for Groundwater Systems.
- (a) Groundwater systems must provide the Department or its agents, at the Department's request, any existing information that will enable the Department to conduct a Sanitary Survey.
 - (b) For the purposes of 310 CMR 22.26, a Sanitary Survey, as conducted by the Department or its agents, includes but is not limited to, an onsite review of the water source(s) (identifying sources of contamination by using results of source water assessments or other relevant information where available), facilities, equipment, operation, maintenance, and monitoring compliance of a Public Water System to evaluate the adequacy of the system, its sources and operations and the distribution of safe drinking water.
 - (c) The Sanitary Survey must include a written evaluation of the applicable components listed in 310 CMR 22.26(2)(c)1. through 8.:
 1. Source;
 2. Treatment;
 3. Distribution System;
 4. Finished water storage;
 5. Pumps, pump facilities, and controls;
 6. Monitoring, reporting, and data verification;
 7. System management and operation; and
 8. Operator compliance with Department requirements.
- (3) Groundwater Source Microbial Monitoring and Analytical Methods.
- (a) Triggered Source Water Monitoring.
 1. General Requirements. A groundwater system must conduct triggered source water monitoring if the conditions identified in 310 CMR 22.26(3)(a)1.a. and b. exist.
 - a. The system does not provide at least 4-log treatment of Viruses (using inactivation, removal, or a Department-approved combination of 4-log Virus inactivation and removal) before or at the first customer for each groundwater source; and
 - b. The system is notified that a sample collected under 310 CMR 22.05(1)(a) is total coliform-positive and the sample is not invalidated under 310 CMR 22.05(3).
 2. Sampling Requirements. A groundwater system must collect, within 24 hours of notification of the total coliform-positive sample, at least one groundwater source sample from each groundwater source in use at the time the total coliform-positive sample was collected, except as provided in 310 CMR 22.26(3)(a)2.b.
 - a. The Department may extend the 24-hour time limit on a case-by-case basis if the system cannot collect the groundwater source water sample within 24 hours due to circumstances beyond its control. The system must contact the Department for pre-approval of the delay of sampling. In the case of an extension, the Department will specify in writing how much time the system has to collect the sample.

22.26: continued

b. If approved by the Department, systems with more than one groundwater source may meet the requirements of 310 CMR 22.26(3)(a)2. by sampling a representative groundwater source or sources. Systems must submit for Department approval a triggered source water monitoring plan that identifies one or more groundwater sources that are representative of each monitoring site in the system's sample siting plan under 310 CMR 22.05(1) and that the system intends to use for representative sampling under 310 CMR 22.26(3). After December 1, 2009, a system that has not received written Department approval of their triggered source water monitoring plan, must collect triggered source water samples as required by 310 CMR 22.26(3)(a)2. until written approval is received.

c. A groundwater system serving 1,000 people or fewer may use a repeat sample collected from a groundwater source to meet both the requirements of 310 CMR 22.05(2) and to satisfy the monitoring requirements of 310 CMR 22.26(3)(a)2. for that groundwater source:

i. if *E. coli* is used as a fecal indicator for source water monitoring pursuant to 310 CMR 22.26(3)(a)3.; and

ii. if the Department, pursuant to 310 CMR 22.05(1)(a)3.d.ii., has approved the use of a single sample for meeting both the triggered source water monitoring requirements in 310 CMR 22.26(3)(a) and the repeat monitoring requirements in 310 CMR 22.05(2).

If the repeat sample collected for the groundwater source is *E. coli* positive, the system shall comply with 310 CMR 22.26(3)(a)4.

d. A groundwater system may use a Raw Water sample collected to meet the requirements of 310 CMR 22.05(1) to satisfy the monitoring requirements of 310 CMR 22.26(3)(a)2. for that groundwater source only if: the Raw Water sample was collected on the same day as the distribution sample that tested total coliform-positive under 310 CMR 22.05(1) and triggered the requirements of 310 CMR 22.26(3)(a)2.; and the Raw Water sample was analyzed in accordance with 310 CMR 22.05(3)(b)1. and the analytical methods in 310 CMR 22.26(3)(c). If the Raw Water sample is total coliform-negative, no additional testing is required under 310 CMR 22.26 unless otherwise determined by the Department.

3. Fecal Indicator Requirement.

a. All Non-transient Non-community Water Systems, all Transient Non-community Water Systems and each Community Water System serving 3,300 or fewer people shall use *E. coli* as the fecal indicator to comply with 310 CMR 22.26(3)(a).

b. For Community Water Systems serving greater than 3,300 people:

i. If *E. coli* is detected in samples collected under 310 CMR 22.05(1), the Community Water System shall use *E. coli* as the fecal indicator to comply with 310 CMR 22.26(3)(a).

ii. If total coliform is detected in samples collected under 310 CMR 22.05(1) without the confirmation of *E. coli*, the Community Water System shall use *enterococci* as the fecal indicator to comply with 310 CMR 22.26(3)(a).

c. Testing for additional fecal indicators may be required to further evaluate contamination at a groundwater source.

4. Additional Requirements. If the Department does not require corrective action under 310 CMR 22.26(4)(a)2. for a fecal indicator-positive source water sample collected under 310 CMR 22.26(3)(a)2. that is not invalidated under 310 CMR 22.26(3)(d), the system must collect five additional source water samples from the same source within 24 hours of being notified of the fecal indicator-positive sample.

5. Consecutive and Wholesale Systems.

a. In addition to the other requirements of 310 CMR 22.26(3)(a), a consecutive groundwater system that has a total coliform-positive sample collected under 310 CMR 22.05(1) must notify the Wholesale System(s) within 24 hours of being notified of the total coliform-positive sample.

b. In addition to the other requirements of 310 CMR 22.26(3)(a), a wholesale groundwater system must comply with 310 CMR 22.26(3)(a)5.b.i. and ii.

22.26: continued

- i. A wholesale groundwater system that receives notice from a consecutive system it serves that a sample collected under 310 CMR 22.05(1) is total coliform-positive must, within 24 hours of being notified, collect a sample from its groundwater source(s) under 310 CMR 22.26(3)(a)2. and analyze it for a fecal indicator under 310 CMR 22.26(3)(c).
 - ii. If the sample collected under 310 CMR 22.26(3)(a)5.b.i. is fecal indicator-positive, the wholesale groundwater system must notify all consecutive systems served by that groundwater source of the fecal indicator source water positive within 24 hours of being notified of the groundwater source water sample monitoring result and must meet the requirements of 310 CMR 22.26(3)(a)4.
- 6. Exceptions to the Triggered Source Water Monitoring Requirements. A groundwater system is not required to comply with the source water monitoring requirements of 310 CMR 22.26(3)(a) if either of the following conditions exists:
 - a. The Department determines, and documents in writing, that the total coliform-positive sample collected under 310 CMR 22.05(1) is caused by a Distribution System deficiency; or
 - b. The total coliform-positive sample collected under 310 CMR 22.05(1)(a) is collected at a location that meets Department criteria for Distribution System conditions that will cause total coliform- positive samples.
- (b) Other Source Water Monitoring.
 - 1. A groundwater system meeting the applicability requirements of 310 CMR 22.26(1)(a) that does not treat their groundwater to at least 99.99% (4-log) treatment of Viruses and conducts any type of source water monitoring under 310 CMR 22.00 or otherwise that includes analysis of total coliform, *E. coli*, enterococci, or coliphage is subject to the requirements of 310 CMR 22.26 if the source water sample analysis yields a positive result. The requirements of 310 CMR 22.26 apply only to the groundwater sources with positive source water sample results. A positive sample shall satisfy the monitoring requirements of 310 CMR 22.26(3)(a)2. If the source water sample is tested for total coliform, and the sample is total coliform-positive, the system must analyze that total coliform-positive culture medium for *E. coli*. *E. coli* shall serve as the fecal indicator under this condition.
 - 2. The Department reserves the right to require additional source water monitoring for fecal indicators using analytical methods as defined under 310 CMR 22.26(3)(c) if circumstances warrant additional testing to determine system vulnerability.
- (c) Analytical Methods.
 - 1. A groundwater system subject to the source water monitoring requirements of 310 CMR 22.26(3)(a) must collect a Standard Sample volume of at least 100 mL for fecal indicator analysis regardless of the fecal indicator or analytical methods used.
 - 2. A groundwater system must analyze all groundwater source samples collected under 310 CMR 22.26(3)(a) and (b) using methods listed in the following table in 310 CMR 22.26(3)(c)2. for the presence of *E. coli* or enterococci as specified in 310 CMR 22.26(3)(a)3. The Department reserves the right to require coliphage analysis.

22.26: continued

Analytical Methods for Source Water Monitoring

Fecal Indicator ¹	Methodology	Method Citation
<i>E.coli</i>	Colilert ^{®3} Colisure ^{®3} Colilert-18 [®] Membrane Filter Method with MI Agar E*Colite Test ⁵ NA-MUG	SM 9223 B ² SM 9223 B ² SM 9223 B EPA Method 1604 ⁴ SM 9222 G ²
<i>Enterococci</i>	Membrane Filter Technique Membrane Filter Technique Enterolert ^{™ 7}	SM 9230C ² EPA Method 1600 ⁶
Coliphage	Two-step Enrichment Presence-absence Procedure Single Agar Layer Procedure	EPA Method 1601 ⁸ EPA Method 1602 ⁹

Analyses must be conducted in accordance with the documents listed below. Copies may be inspected at EPA's Drinking Water Docket, EPA West, 1301 Constitution Avenue, NW, EPA West, Room B102, Washington DC 20460 (Telephone: 202-566-2426); or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

¹ The time from sample collection to initiation of analysis may not exceed 30 hours. The groundwater system is encouraged but is not required to hold samples below 10°C during transit.

² Methods are described in *Standard Methods for the Examination of Water and Wastewater* 20th edition (1998) and copies may be obtained from the American Public Health Association, 1015 Fifteenth Street, NW, Washington, DC 20005-2605.

³ Medium is available through IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092

⁴ EPA Method 1604: *Total Coliforms and Escherichia coli in Water by Membrane Filtration Using a Simultaneous Detection Technique (MI Medium)*; September 2002, EPA 821-R-02-024. Method is available at <http://www.epa.gov/nerlcwww/1604sp02.pdf> or from EPA's Water Resource Center (RC-4100T), 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460.

⁵ A description of the E*Colite Test, *Charm E*Colite Presence/Absence Test for Detection and Identification of Coliform Bacteria and Escherichia coli in Drinking Water*, January 9, 1998, is available from Charm Sciences, Inc, 659 Andover St., Lawrence, MA 01843-1032 or from EPA's Water Resource Center (RC-4100T), 1200 Pennsylvania Avenue, NW, Washington, DC 20460.

⁶ EPA Method 1600: *Enterococci in Water by Membrane Filtration Using membrane-Enterococcus Indoxyl-[beta]-D-Glucoside Agar (mEI)* EPA 821-R-02-022 (September 2002) is an approved variation of Standard Method 9230C. The method is available at <http://www.epa.gov/nerlcwww/1600sp02.pdf> or from EPA's Water Resource Center (RC-4100T), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. The holding time and temperature for groundwater samples are specified in footnote ¹, rather than as specified in Section 8 of EPA Method 1600.

⁷ IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092. Preparation and use of the medium is set forth in the article *Evaluation of Enterolert for Enumeration of Enterococci in Recreational Waters*, by Budnick, G.E., Howard, R.T., and Mayo, D.R., 1996, *Applied and Environmental Microbiology*, 62:3881- 3884.

⁸ EPA Method 1601: *Male-specific (F+) and Somatic Coliphage in Water by Two-step Enrichment Procedure*; April 2001, EPA 821-R-01-030. Method is available at <http://www.epa.gov/nerlcwww/1601ap01.pdf> or from EPA's Water Resource Center (RC-4100T), 1200 Pennsylvania Avenue, NW, Washington, DC 20460.

⁹ EPA Method 1602: *Male-specific (F+) and Somatic Coliphage in Water by Single Agar Layer (SAL) Procedure*; April 2001, EPA 821-R-01-029. Method is available at <http://www.epa.gov/nerlcwww/1602ap01.pdf> or from EPA's Water Resource Center (RC-4100T), 1200 Pennsylvania Avenue, NW, Washington, DC 20460.

(d) Invalidation of a Fecal Indicator-positive Groundwater Source Sample.

1. A groundwater system may obtain Department invalidation of a fecal indicator-positive groundwater source sample collected under 310 CMR 22.26(3)(a) only under the conditions specified in 310 CMR 22.26(3)(d)1.a. and b.

a. The system provides the Department with written notice from the laboratory that improper sample analysis occurred; or

22.26: continued

- b. The Department determines and documents in writing that there is substantial evidence that a fecal indicator-positive groundwater source sample is not related to source water quality.
 - 2. If the Department invalidates a fecal indicator-positive groundwater source sample, the groundwater system must collect another source water sample under 310 CMR 22.26(3)(a) within 24 hours of being notified by the Department of its invalidation decision and have it analyzed for the same fecal indicator using the analytical methods in 310 CMR 22.26(3)(c). The Department may extend the 24-hour time limit on a case-by-case basis if the system cannot collect the source water sample within 24 hours due to circumstances beyond its control. In the case of an extension, the Department will specify how much time the system has to collect the sample.
 - (e) Sampling Location.
 - 1. Any groundwater source sample required under 310 CMR 22.26(3)(a) must be collected at a location prior to any treatment of the groundwater source. All systems are required to maintain a Raw Water source water sample tap in accordance with 310 CMR 22.05(1)(a)1.
 - 2. If the system's configuration does not allow for sampling at the well itself, the system may collect a sample at a Department-approved location to meet the requirements of 310 CMR 22.26(3)(a) if the sample is representative of the water quality of that well. Approval must be received in writing.
 - (f) New Sources. A groundwater system that plans to place a new groundwater source into service after November 30, 2009, must conduct source water monitoring in accordance with Chapter 4 of the *Massachusetts Guidelines for Public Water Systems* and may have to meet the requirements of 310 CMR 22.26(3)(b) if the Department determines additional testing is required.
 - (g) Public Notification. A groundwater system with a groundwater source sample collected under 310 CMR 22.26(3)(a) or (b) that is fecal indicator-positive and that is not invalidated under 310 CMR 22.26(3)(d), including consecutive systems served by the groundwater source, must conduct public notification under 310 CMR 22.16.
 - (h) Monitoring Violations. Failure to meet the requirements of 310 CMR 22.26(3)(a) through (f) is a monitoring violation and requires the groundwater system to report each failure to the Department pursuant to 310 CMR 22.15(1), and provide public notification under 310 CMR 22.16.
 - (i) Department Notification. The Supplier of Water shall notify the Department by the end of the day that it is notified of a fecal indicator-positive source water test result. If the Supplier of Water receives such notification outside of the Department's regular business hours, then it shall provide notification to the Department by calling the Department's Emergency notification telephone number and using any other electronic reporting tool designated by the Department, or other Department designated telephone numbers.
- (4) Treatment Technique Requirements for Groundwater Systems.
- (a) Groundwater systems with significant deficiencies or source water fecal contamination.
 - 1. The Treatment Technique requirements of 310 CMR 22.26(4) must be met by groundwater systems when a Significant Deficiency is identified or when a groundwater source sample collected under 310 CMR 22.26(3)(a)4. is fecal indicator-positive.
 - 2. If directed by the Department, a groundwater system with a groundwater source sample collected under 310 CMR 22.26(3)(a)2., 5., or (b) that is fecal indicator positive must comply with the Treatment Technique requirements of 310 CMR 22.26(4).
 - 3. When a Significant Deficiency is identified at a surface or Groundwater Under the Direct Influence of Surface Water Public Water System that uses both Groundwater and Surface Water or Groundwater under the Direct Influence of Surface Water, the system must comply with provisions of 310 CMR 22.26(4) except in cases where the Department determines that the Significant Deficiency is in a portion of the Distribution System that is served solely by Surface Water or Groundwater under the Direct Influence of Surface Water.

22.26: continued

4. Unless the Department directs the groundwater system to implement a specific corrective action, the groundwater system must consult with the Department regarding the appropriate corrective action within 30 days of receiving written notice from the Department of a Significant Deficiency, written notice from a laboratory that a groundwater source sample collected under 310 CMR 22.26(3)(a)4. was found to be fecal-indicator-positive, or direction from the Department that a fecal indicator-positive sample collected under 310 CMR 22.26(3)(a)2., 5., or (b) requires corrective action. For the purposes of 310 CMR 22.26, significant deficiencies include, but are not limited to, defects in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or Distribution System that the Department determines to be causing, or have potential for causing, the introduction of contamination into the water delivered to consumers.
 5. Within 120 days (or earlier if directed by the Department) of receiving written notification from the Department of a Significant Deficiency, written notice from a laboratory that a groundwater source sample collected under 310 CMR 22.26(3)(a)4. was found to be fecal indicator-positive, or direction from the Department that a fecal indicator-positive sample collected under 310 CMR 22.26(3)(a)2., 5., or (b) requires corrective action, the groundwater system must either:
 - a. Have completed corrective action in accordance with applicable Department plan review processes or other Department guidance or direction, if any, including Department-specified interim measures; or
 - b. Be in compliance with a Department-approved corrective action plan and schedule subject to the conditions specified in 310 CMR 22.26(4)(a)5.b.i. and ii.
 - i. Any subsequent modifications to a Department-approved corrective action plan and schedule must also be approved by the Department.
 - ii. If the Department specifies interim measures for protection of the public health pending Department approval of the corrective action plan and schedule or pending completion of the corrective action plan, the system must comply with these interim measures as well as with any schedule specified by the Department.
 - iii. Corrective action plans submitted under 310 CMR 22.05(4) or 22.26(4) may be considered for purposes of 310 CMR 22.26(4)(a)5., as appropriate.
 6. Corrective Action Alternatives. Groundwater systems that meet the conditions of 310 CMR 22.26(4)(a)1. or 2. must implement one or more of the following corrective action alternatives:
 - a. Correct all significant deficiencies;
 - b. Provide an alternate source of water;
 - c. Eliminate the source of contamination; or
 - d. Provide treatment that reliably achieves at least 4-log treatment of Viruses (using inactivation, removal, or a Department-approved combination of 4-log Virus inactivation and removal) before or at the first customer for the groundwater source.
- (b) Compliance Monitoring.
1. Existing Groundwater Sources. A groundwater system that is not required to meet the source water monitoring requirements of 310 CMR 22.26 for any groundwater source because it provides at least 4-log treatment of Viruses (using inactivation, removal, or a Department-approved combination of 4-log Virus inactivation and removal) before or at the first customer for any groundwater source before December 1, 2009, must notify the Department in writing that it provides at least 4-log treatment of Viruses (using inactivation, removal, or a Department-approved combination of 4-log Virus inactivation and removal) before or at the first customer for the specified groundwater source and begin compliance monitoring in accordance with 310 CMR 22.26(4)(b)3. by December 1, 2009. Notification to the Department must include engineering, operational, or other information that the Department requests to evaluate the submission. If the system subsequently discontinues 4-log treatment of Viruses (using inactivation, removal, or a Department-approved combination of 4-log Virus inactivation and removal) before or at the first customer for a groundwater source, the system must conduct groundwater source monitoring as required 310 CMR 22.26(3).

22.26: continued

2. New Groundwater Sources. A groundwater system that places a groundwater source in service after November 30, 2009, that is not required to meet the source water monitoring requirements of 310 CMR 22.26 because the system provides at least 4-log treatment of Viruses (using inactivation, removal, or a Department-approved combination of 4-log Virus inactivation and removal) before or at the first customer for the groundwater source must comply with the requirements of 310 CMR 22.26(4)(b)2.a. through c.
 - a. The system must notify the Department in writing that it provides at least 4-log treatment of Viruses (using inactivation, removal, or a Department-approved combination of 4-log Virus inactivation and removal) before or at the first customer for the groundwater source. Notification to the Department must include engineering, operational, or other information that the Department requests to evaluate the submission.
 - b. The system must conduct compliance monitoring as required under 310 CMR 22.26(4)(b)3. within 30 days of placing the source in service.
 - c. The system must conduct groundwater source monitoring under 310 CMR 22.26(3) if the system subsequently discontinues 4-log treatment of Viruses (using inactivation, removal, or a Department-approved combination of 4-log Virus inactivation and removal) before or at the first customer for the groundwater source.
3. Monitoring Requirements. A groundwater system subject to the requirements of 310 CMR 22.26(4)(a) or (b)1. or 2. must monitor the effectiveness and reliability of treatment for that groundwater source before or at the first customer as follows:
 - a. Chemical Disinfection.
 - i. Groundwater Systems Serving Greater than 3,300 People. A groundwater system that serves greater than 3,300 people must continuously monitor the Residual Disinfectant Concentration using analytical methods specified in 310 CMR 22.20A(5)(a)2. at a location approved by the Department and must record the lowest Residual Disinfectant Concentration each day that water from the groundwater source is served to the public. The groundwater system must maintain the Department-determined Residual Disinfectant Concentration every day the groundwater system serves water from the groundwater source to the public. If there is a failure in the continuous monitoring equipment, the groundwater system must conduct grab sampling every four hours until the continuous monitoring equipment is returned to service. The system must resume continuous residual Disinfectant monitoring within 14 days.
 - ii. Groundwater Systems Serving 3,300 or Fewer People. A groundwater system that serves 3,300 or fewer people must monitor the Residual Disinfectant Concentration using analytical methods specified in 310 CMR 22.20A(5)(a)2. at a location approved by the Department and record the residual Disinfection concentration each day that water from the groundwater source is served to the public. The groundwater system must maintain the Department-determined Residual Disinfectant Concentration every day the groundwater system serves water from the groundwater source to the public. The groundwater system must take a daily grab sample during the hour of peak flow or at another time specified by the Department. If any daily grab sample measurement falls below the Department-determined Residual Disinfectant Concentration, the groundwater system must take follow-up samples every four hours until the Residual Disinfectant Concentration is restored to the Department-determined level. Alternatively, a groundwater system that serves 3,300 or fewer people may monitor continuously and meet the requirements of 310 CMR 22.26(4)(b)3.a.i.
 - b. Membrane Filtration. A groundwater system that uses Membrane Filtration to meet the requirements of 310 CMR 22.26 must monitor the Membrane Filtration process in accordance with all Department-specified monitoring requirements and must operate the Membrane Filtration in accordance with all Department-specified compliance requirements. A groundwater system that uses Membrane Filtration is in compliance with the requirement to achieve at least 4-log removal of Viruses when:
 - i. The membrane has an absolute molecular weight cut-off (MWCO), or an alternate parameter that describes the exclusion characteristics of the membrane, that can reliably achieve at least 4-log removal of Viruses;

22.26: continued

- ii. The membrane process is operated in accordance with Department-specified compliance requirements; and
 - iii. The integrity of the membrane is intact.
 - c. Alternative Treatment. A groundwater system that uses a Department-approved alternative treatment to meet the requirements of 310 CMR 22.26 by providing at least 4-log treatment of Viruses (using inactivation, removal, or a Department-approved combination of 4-log Virus inactivation and removal) before or at the first customer must:
 - i. Monitor the alternative treatment in accordance with all Department-specified monitoring requirements; and
 - ii. Operate the alternative treatment in accordance with all compliance requirements that the Department determines to be necessary to achieve at least 4-log treatment of Viruses.
 - (c) Discontinuing Treatment. A groundwater system may discontinue 4-log treatment of Viruses (using inactivation, removal, or a Department-approved combination of 4-log Virus inactivation and removal) before or at the first customer for a groundwater source if the Department determines and documents in writing that 4-log treatment of Viruses is no longer necessary for that groundwater source. A system that discontinues 4-log treatment of Viruses is subject to the source water monitoring and analytical methods requirements of 310 CMR 22.26(3).
 - (d) Failure to meet the monitoring requirements of 310 CMR 22.26(4)(b) is a monitoring violation and requires the groundwater system to provide public notification under 310 CMR 22.16(4).
- (5) Treatment Technique Violations for Groundwater Systems.
 - (a) A groundwater system with a Significant Deficiency is in violation of the Treatment Technique requirement if, within 120 days (or earlier if directed by the Department) of receiving written notice from the Department of the Significant Deficiency, the system:
 - 1. Does not complete corrective action in accordance with any applicable Department plan review processes or other Department guidance and direction, including Department specified interim actions and measures, or
 - 2. Is not in compliance with a Department-approved corrective action plan and schedule.
 - (b) Unless the Department invalidates a fecal indicator-positive groundwater source sample under 310 CMR 22.26(3)(d), a groundwater system is in violation of the Treatment Technique requirement if, within 120 days (or earlier if directed by the Department) of meeting the conditions of 310 CMR 22.26(4)(a)1. or 2., the system:
 - 1. Does not complete corrective action in accordance with any applicable Department plan review processes or other Department guidance and direction, including Department-specified interim measures, or
 - 2. Is not in compliance with a Department-approved corrective action plan and schedule.
 - (c) A groundwater system subject to the requirements of 310 CMR 22.26(4)(b)3. that fails to maintain at least 4-log treatment of Viruses (using inactivation, removal, or a Department-approved combination of 4-log Virus inactivation and removal) before or at the first customer for a groundwater source is in violation of the Treatment Technique requirement if the failure is not corrected within four hours of determining the system is not maintaining at least 4-log treatment of Viruses before or at the first customer.
 - (d) Groundwater system must give public notification under 310 CMR 22.16 for the Treatment Technique violations specified in 310 CMR 22.26(5)(a) through (c).
- (6) Reporting and Recordkeeping for Groundwater Systems.
 - (a) Reporting. In addition to the requirements of 310 CMR 22.15, a groundwater system regulated under 310 CMR 22.26 must provide the following information to the Department:

22.26: continued

1. A groundwater system conducting compliance monitoring under 310 CMR 22.26(4)(b) must notify the Department any time the system fails to meet any Department-specified requirements including, but not limited to, minimum Residual Disinfectant Concentration, membrane operating criteria or membrane integrity, and alternative treatment operating criteria, if operation in accordance with the criteria or requirements is not restored within four hours. The groundwater system must notify the Department as soon as possible, but in no case later than the end of the next business day.
 2. After completing any corrective action under 310 CMR 22.26(4)(a), a groundwater system must notify the Department within 30 days of completion of the corrective action.
 3. If a groundwater system subject to the requirements of 310 CMR 22.26(3)(a) does not conduct source water monitoring under 310 CMR 22.26(3)(a)6.b., the system must provide documentation to the Department within 30 days of the total coliform-positive sample that it met the Department criteria.
- (b) Recordkeeping. In addition to the requirements of 310 CMR 22.17, a groundwater system regulated under 310 CMR 22.26 must maintain the following information in its records:
1. Documentation of Corrective Actions. Documentation shall be kept for a period of not less than ten years.
 2. Documentation of notice to the public as required under 310 CMR 22.16A(8). Documentation shall be kept for a period of not less than three years.
 3. Records of decisions under 310 CMR 22.26(3)(a)6.b. and records of invalidation of fecal indicator-positive groundwater source samples under 310 CMR 22.26(3)(d). Documentation shall be kept for a period of not less than five years.
 4. For consecutive systems, documentation of notification to the Wholesale System(s) of total-coliform positive samples that are not invalidated under 310 CMR 22.05(3). Documentation shall be kept for a period of not less than five years.
 5. For systems, including Wholesale Systems, that are required to perform compliance monitoring under 310 CMR 22.26(4)(b):
 - a. Records of the Department-specified minimum Disinfectant residual. Documentation shall be kept for a period of not less than ten years.
 - b. Records of the lowest daily Residual Disinfectant Concentration and records of the date and duration of any failure to maintain the Department-prescribed minimum Residual Disinfectant Concentration for a period of more than four hours. Documentation shall be kept for a period of not less than five years.
 - c. Records of Department-specified compliance requirements for Membrane Filtration and of parameters specified by the Department for Department-approved alternative treatment and records of the date and duration of any failure to meet the membrane operating, membrane integrity, or alternative treatment operating requirements for more than four hours. Documentation shall be kept for a period of not less than five years.

22.27: Severability

If any provision of 310 CMR 22.00 or its application to any unit of government is held invalid, such invalidity shall not affect other provisions or applications of 310 CMR 22.00 which can be given effect without the invalid provision or application and to this end the provisions of 310 CMR 22.00 are declared to be severable.

REGULATORY AUTHORITY

310 CMR 22.00: M.G.L. c. 111, § 160A.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 23.00: RENOVATION OF ABANDONED CRANBERRY BOGS

Section

- 23.01: Authority, Jurisdiction, and Purpose
- 23.02: Definitions
- 23.03: Eligible Abandoned Cranberry Bogs
- 23.04: Procedures
- 23.05: Performance Standards
- 23.06: Permits
- 23.07: Appeals
- 23.08: Enforcement
- 23.09: Effective Date and Severability

23.01: Authority, Jurisdiction, and Purpose

- (1) Authority. 310 CMR 23.00 is adopted pursuant to St. 1996, c. 258 and establishes procedures and performance standards for the renovation of eligible abandoned cranberry bogs.
- (2) Jurisdiction. 310 CMR 23.00 applies to activities associated with the renovation of cranberry bogs abandoned since 1959 on property in agricultural use. Eligible activities which meet the performance standards and other requirements of 310 CMR 23.00 are not subject to any contrary provisions of other state laws or regulations. After completion of the renovation under 310 CMR 23.00, the operation and maintenance of renovated abandoned cranberry bogs is subject to other state laws and regulations as applicable. Local and federal laws apply.
- (3) Purpose. 310 CMR 23.00 is promulgated by the Department to carry out its statutory obligations to establish a permit process and performance standards for the renovation of eligible abandoned cranberry bogs.

23.02: Definitions

Abandoned Cranberry Bog. A cranberry bog that meets the criteria of 310 CMR 23.03.

Activity - Any proposed action associated with the renovation of an abandoned cranberry bog for the purpose of cultivating and harvesting cranberries. Activity does not include the construction of facilities or structures for the purpose of processing cranberries.

Aggrieved Person. Any person who, because of a determination by the Department, may suffer an injury in fact which is different either in kind or magnitude from that suffered by the general public and which is within the scope of interests identified in St. 1996, c. 258.

Agricultural Use. Any land presently and primarily used in production or raising one or more of the following agricultural commodities for commercial purposes:

- (a) animals, including but not limited to livestock, poultry, and bees;
- (b) fruits, vegetables, berries, nuts, maple sap, and other foods for human consumption;
- (c) feed, seed, forage, tobacco, flowers, sod, nursery or greenhouse products, and ornamental plants or shrubs; and
- (d) forest products on land maintained in forest use, including but not limited to biomass, sawlogs, and cordwood.

Additionally, land in agricultural use means land presently and primarily used in a manner related to, and customarily and necessarily used in, producing or raising such commodities, including but not limited to: existing access roads and livestock crossings, windbreaks, hedgerows, field edges, bee yards, sand pits, landings for forest products, fence lines, water management projects such as reservoirs, farm ponds, irrigation systems, field ditches, cross ditches, canals/ channels, grass waterways, dikes, subsurface drainage systems, watering facilities, water transport systems, and water storage systems; agricultural composting sites, agricultural storage and work areas; and land under farm structures. Land in agricultural use may lie inactive for up to five consecutive years unless it is under a U.S. Department of Agriculture (U.S.D.A.) contract for a longer term pursuant to the Conservation Reserves Program (the Food Security Act of 1985, as amended by the Food, Agriculture, Conservation and Trade Act of 1990; and 7 CFR 1410), or it is used for forestry purposes similar to those described in 310 CMR 10.04: Agriculture(b)14. through 17.

23.02: continued

Applicant. A person proposing any activity associated with the renovation of an eligible abandoned cranberry bog.

Area of Critical Environmental Concern. An area designated by the Secretary pursuant to M.G.L. c. 21A, § 2(7) and 301 CMR 12.00.

Cranberry Bog or Bog. An area actively cultivated for the production of any variety of cranberry (vaccinium).

Department. The Massachusetts Department of Environmental Protection.

Interests Identified in St. 1996, c. 258 - To protect the private or public water supply; to protect the ground water; to provide flood control; to prevent storm damage; to prevent pollution; to protect land containing shellfish; to protect wildlife habitat; and to protect the fisheries.

Navigable stream. Any nontidal river or stream on which public funds have been expended for stream clearance, channel improvement, or any form of flood control or prevention work, either upstream or down stream within the river basin, except for any portion of such river or stream which is not normally navigable during any season, by vessel including canoe, kayak, raft, or rowboat.

Person. Any agency or political subdivision of the Commonwealth or the federal government, public or private corporation or authority, individual, partnership or association, or other entity, including any officer of a public or private agency or organization.

Rare and Endangered Species Habitat - Areas within estimated habitat as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetlands Wildlife published by the Division of Fisheries and Wildlife's Natural Heritage and Endangered Species Program or rare animal or plant species as identified by the Department or the Natural Heritage and Endangered Species Program.

Rare species - Vertebrate and invertebrate animal and plant species officially listed as endangered, threatened, or of special concern by the Massachusetts Division of Fisheries and Wildlife under 321 CMR 8.00.

Renovation. The restoration for the active cultivation of any variety of cranberry of an area formerly cultivated as a cranberry bog.

Vernal Pool - A waterbody that has been certified by the Massachusetts Division of Fisheries and Wildlife as a vernal pool or identified by the Department and determined to be a vernal pool. Vernal pool habitat means confined basin depressions which, at least in most years, hold water for a minimum of two continuous months during the spring and/or summer, and which are free of adult fish populations.

Zone II. the area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at approved yield, with no recharge from precipitation). It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone II shall extend upgradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary). For public water supply wells that lack a Department-approved Zone II, the Department will apply an interim wellhead protection area (IWPA). This interim wellhead protection area shall be a ½ mile radius measured from the well or well field for sources whose approved pumping rate is 100,000 gpd or greater. For wells that pump less than 100,000 gpd, the IWPA radius is proportional to the well's approved daily volume which may be calculated according to the following equation: IWPA radius in feet = [32 x pumping rate in gallons per minute] + 400.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

23.03: Eligible Abandoned Cranberry Bogs

310 CMR 23.00 applies only to activities associated with the renovation of cranberry bogs which :

- (1) Are on property in agricultural use as of August 7, 1996 and until the time of application. The abandoned bog must be located on a lot where the land is in agricultural use or on certain adjacent land (either directly adjacent or across a right of way) owned by the applicant on August 7, 1996, or in which the applicant has an ownership interest. Such property adjacent to land in agricultural use shall be eligible only if such adjacent property consists of abandoned cranberry bogs and has not been developed for other purposes but would otherwise be ineligible solely because it is not in agricultural use.
- (2) Were abandoned on or after January 1, 1959;
- (3) Are not located within a Zone II or within the watershed of a surface public water supply designated in 314 CMR 4.00, to protect the public water supply interest of St. 1996, c. 258;
- (4) Are not located within an Area of Critical Environmental Concern;
- (5) Do not contain a navigable stream as defined by M.G.L. c. 91; and
- (6) Do not exceed five acres within any three year period on land in common ownership (*i.e.*, for the total acreage of land owned by the applicant or in which the applicant has an ownership interest). The acreage of renovation includes all areas of abandoned cranberry bogs altered by renovation and construction activities. An applicant may apply for renovation of up to five acres of additional eligible bogs in each subsequent three year period.

23.04: Procedures

- (1) Application Requirements - An applicant shall submit an application on the forms in the Abandoned Cranberry Bog Renovation application package available from the Department. The application shall be prepared in accordance with instructions contained in the Department's application package and submitted to the Southeast Regional Office. A copy of the application shall be sent to the Natural Heritage and Endangered Species Program of the Department of Fisheries, Wildlife and Environmental Law Enforcement concurrently with the submission of the application to the Department. A copy of the Conservation Farm Plan approved by U.S.D.A. Natural Resources Conservation Service shall be submitted with the application. A copy of the application shall be sent at the time of submission to the conservation commission in the city or town where the abandoned cranberry bog is located. Failure to complete an application where required, to provide additional information required when an application is deficient, or to notify other agencies with jurisdiction where required shall be grounds for denial of a permit. The applicant has the burden of demonstrating that the criteria of 310 CMR 23.00 have been met. The Department will conduct a site visit unless the Department determines it is not necessary.
- (2) Fee and Review Schedule - The fee and regulatory review schedule for actions by the Department in the review of an application are set forth in the Timely Action Schedule and Fee Provisions at 310 CMR 4.00.
- (3) Public Notice - Within ten days of submitting an application to renovate an abandoned cranberry bog, the applicant shall publish a public notice of the application in a newspaper of general circulation within the area of the proposed activity. The public comment period shall begin upon publication of the public notice and shall extend for 21 days unless a longer time is specified in the public notice. The public notice shall contain:
 - (a) the name and address of the applicant and the property owner, if different;
 - (b) the location of the proposed activity;
 - (c) a brief description of the activity, including the acreage of renovated bog;
 - (d) the name and address of a person from whom additional information may be obtained and a statement that the application is available for review at the office of the conservation commission;

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

(e) the 21 day time period within which the public may comment;

23.04: continued

(f) a statement that comments should be sent to the Southeast Regional Office, Department of Environmental Protection, 20 Riverside Drive, Lakeville; and

(g) a statement that any ten persons of the Commonwealth or any aggrieved person who have submitted written comments may also appeal the Department's permit decision and that failure to submit written comments before the end of the public comment period may result in the waiver of any right to an adjudicatory hearing.

(4) Abutter Notice. A copy of the public notice shall be sent by certified mail or hand delivered to owners of abutting land located within 1000 feet of the renovation activity.

(5) Public Hearing - The Department may conduct a public hearing upon request or upon its own initiative. The Department shall publish notice of the public hearing in the same manner as public notice of the application, at least 21 days but not more than 30 days in advance of the public hearing.

23.05: Performance Standards

(1) No renovation shall be permitted if it would adversely impact the habitat of rare animal or plant species as determined by the Natural Heritage and Endangered Species Program or the Department. No alteration of a vernal pool shall be allowed.

(2) All activities shall be conducted in accordance with U.S.D.A. Natural Resources Conservation Services (NRCS) Standards and best management practices, available from the Massachusetts Cranberry Experiment Station as approved by NRCS, as applicable. The cranberry operation shall have a Conservation Farm Plan approved by the NRCS prior to application for renovation activities.

(3) A tail water recovery system shall be established as necessary to protect water quality downstream. The system shall be able to retain on site a volume of water equal to the capacity of the bog for at least five days prior to discharging into a pond, river, or wetland. A by-pass canal shall be constructed and maintained as necessary to isolate naturally flowing water away from the bog area. The by-pass canal shall be constructed within the existing dike system or in an upland area. Bypass canals shall be provided with fish passage structures or adequate flows to protect anadromous fish runs.

(4) No cranberry bog renovation activities which will produce siltation or obstruct flows are allowed between March 1 and June 30 or between September 1 and October 31 in areas with anadromous fish runs as identified by the Division of Marine Fisheries. Water intake structures on anadromous fish runs shall have screens with a maximum of ¼ inch mesh and intake velocities cannot exceed ½ cubic foot per second. Adequate flows and water quality shall be maintained during spawning and down running periods of anadromous fish.

(5) No cranberry bog renovation activities shall cause an increase in flood elevations on adjacent or other downstream properties. To conserve water within the bog, the construction should be laser leveled or its equivalent to six inches.

(6) Renovation of abandoned cranberry bogs shall not result in any filling of wetlands or water bodies except that which necessarily occurs as a result of normal renovation practices or the repair or replacement of dikes and water control structures. Alteration of bordering vegetated wetlands that were not in agricultural use on or before January 1, 1959 is prohibited. Any fill shall be composed of suitable material and properly maintained to prevent erosion or other nonpoint sources of pollution. All permanent and temporary alterations shall be properly stabilized to prevent erosion.

(7) Renovation of an abandoned cranberry bog shall include mitigation to protect wildlife habitat by one or a combination of the following:

(a) 1:1 replication for wetlands altered. The replacement area must be substantially equivalent to the abandoned bog in terms of ground and surface water elevations, horizontal configuration, and general location. At least 75% of the surface area shall be reestablished with indigenous wetland plant species within two growing periods;

23.05: continued

(b) implementation of a wildlife habitat enhancement plan approved in writing by the Department and designed to promote wildlife habitat to compensate for the habitat lost to renovation activities; or

(c) for every acre of renovated bog, an equal or greater area of undisturbed land or land managed to enhance wildlife habitat values is protected from development through a conservation restriction for the duration of cranberry production at the cranberry bog.

(8) Any activities must be directly related to the cultivation and harvesting of cranberries. If a renovated bog is subsequently abandoned, the natural hydrology shall be restored.

(9) Activities shall not be permitted in the rare circumstances that the criteria of 310 CMR 23.05(1) through (8) are met but the renovation will result in substantial adverse effects on the interests identified in St. 1996, c. 258.

23.06: Permits from the Department

The Department will issue a permit to an applicant who meets the criteria of 310 CMR 23.00 and deny a permit if the criteria are not met. The permit shall contain:

(1) the name and address of the applicant, the address of the proposed activity, and the Transmittal Number and date of the Department's permit;

(2) any conditions deemed necessary by the Department to ensure that the performance standards of 310 CMR 23.05 are met and to protect the interests identified in St. 1996, c. 258;

(3) the date the work may begin. No activity may begin prior to the expiration of the appeal period or until a final decision is issued by the Department if an appeal is filed;

(4) a requirement that the applicant shall request in writing and obtain a certificate of compliance from the Department within five years of permit issuance, certifying that the activity was completed in compliance with the permit. The Department may grant an extension of no more than three years for just cause;

(5) a requirement that the permit and the certificate of compliance shall be recorded at the Registry of Deeds. The Department will provide a copy of the permit to the conservation commission; and

(6) notification of the right to request an adjudicatory hearing as described in 310 CMR 23.07.

23.07: Appeals

(1) Right to Appeal. Certain persons shall have a right to request an adjudicatory hearing concerning permit decisions by the Department:

(a) the applicant or property owner;

(b) any aggrieved person who has submitted comments during the public comment period; and

(c) any ten persons of the Commonwealth pursuant to M.G.L. c. 30A where a group member has submitted comments during the public comment period.

Any aggrieved person or any ten persons of the Commonwealth may appeal without having submitted written comments during the public comment period only when the claim is based on new substantive issues arising from material changes to the scope or impact of the activity and not apparent at the time of public notice.

(2) Notice of Claim. Any notice of claim for an adjudicatory hearing must be accompanied by a filing fee as specified in 310 CMR 4.06 and be sent by certified mail or hand delivered to the Office of Administrative Appeals of the Department of Environmental Protection, postmarked within 21 days of the date of the permit.

23.07: continued

(3) Contents of Claim. Any notice of claim for an adjudicatory hearing must include the following information:

- (a) the Transmittal Number and the name of the applicant and address of the project;
- (b) the complete name, address, and telephone number of the party filing the request; the name, address and telephone number of any authorized representative; and, if claiming to be a person aggrieved, the specific facts that demonstrate that the party satisfies the definition of "aggrieved person" found in 310 CMR 23.02;
- (c) a clear statement that an adjudicatory hearing is being requested;
- (d) a clear and concise statement of facts which are grounds for the proceeding, the specific objections to the Department's permit decision, and the relief sought through the adjudicatory hearing, including specifically the changes desired in the permit decision; and
- (e) a statement that a copy of the request has been sent by certified mail or hand delivered to
 1. the applicant;
 2. the owner, if different from the applicant;
 3. the Southeast Regional Office of the Department.

23.08: Enforcement

Failure to comply with 310 CMR 23.00 or a permit issued by the Department under 310 CMR 23.00 shall be enforceable pursuant to M.G.L. c. 21A, § 16 and 310 CMR 5.00.

23.09: Effective Date and Severability

- (1) Effective Date. 310 CMR 23.00 shall take effect May 2, 1997.
- (2) Severability. If any provision of any part of 310 CMR 23.00, or the application thereof, is held to be invalid, such invalidity shall not affect any other provision of 310 CMR 23.00.

REGULATORY AUTHORITY

310 CMR 23.00: St. 1996, c. 258.

(PAGES 857 THROUGH 860 ARE RESERVED FOR FUTURE USE.)

310 CMR 27.00: UNDERGROUND INJECTION CONTROL REGULATIONS

Section

- 27.01: Purpose
- 27.02: Definitions
- 27.03: Classes of Injection Wells
- 27.04: Prohibited Activities
- 27.05: Authorized Activities
- 27.06: Protection
- 27.07: Exemption
- 27.08: Registration
- 27.09: Requiring a Permit
- 27.10: Well Closure
- 27.11: Recordkeeping and Reporting
- 27.12: Corrective Action
- 27.13: Right of Entry
- 27.14: Orders, Violations and Penalties
- 27.15: Severability

27.01: Purpose

The purpose of 310 CMR 27.00 is to protect underground sources of drinking water by regulating the underground injection of hazardous wastes, fluids used for extraction of minerals, oil, and energy and any other fluids having potential to contaminate groundwater as required by the Federal Safe Drinking Water Act, 42 U.S.C. §§ 300h through 300h-8. 310 CMR 27.00 is not intended to apply to the drilling, development, and rehabilitation of drinking water supply wells, water production wells, or monitoring wells. Specific sections of 310 CMR 27.00 should be read together with 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*, 40.0000: *Massachusetts Contingency Plan*, 314 CMR 5.00: *Groundwater Discharge Permit Program*, and 20.00: *Reclaimed Water Permit Program and Standards*, which contain relevant information.

27.02: Definitions

As used in 310 CMR 27.00, the terms in 310 CMR 27.02 shall have the following meanings:

Aquifer means a geological formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Aquifer Remediation Well means any well used to inject fluids, nutrients, microbes, or gases into the subsurface for the purpose of discharging effluent from a groundwater treatment system, recovering contaminants (e.g., air sparging), or enhancing/effecting *in-situ* remediation (e.g., bioremediation).

Cesspool means a subsurface pit with open-jointed linings or holes in the bottom and/or sidewalls into which untreated sanitary waste is injected; the liquid portion of the sanitary waste is disposed of by seeping or leaching into the surrounding soils, and the solids or sludge are retained in the pit. Cesspools are nonconforming systems pursuant to 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*.

Closure means the act of securing an injection well to prevent it from contaminating an underground source of drinking water, or from otherwise endangering the health of persons or the environment. A well that has gone through the closure process is referred to as closed.

Commissioner means the Commissioner of the Department of Environmental Protection.

27.02: continued

Conversion means a change in the operation of an injection well that results in a change in the existing classification of the injection well or results in a change in the injection well's type of injection within a specific class of injection well.

Department means the Massachusetts Department of Environmental Protection.

Dry Well means a subsurface pit with open-jointed lining or holes constructed above the water table so that the bottom and sides are typically dry except when receiving fluids.

Exempt Aquifer means an aquifer or its portion that has been exempted from 310 CMR 27.00 in accordance with the procedures in 310 CMR 27.07.

Experimental Technology means a technology which has not been proven feasible under the conditions in which it is being tested.

Fluid means any material or substance that is capable of movement whether in a semisolid, liquid, sludge, gas, or any other physical state.

Formation means a body of rock characterized by a degree of lithologic homogeneity, which is prevailing, but not necessarily tabular and mappable on the earth's surface or traceable in the subsurface.

Formation Fluid means fluid present in a formation under natural conditions (as opposed to introduced fluids, such as drilling mud).

Groundwater means all water that exists beneath the land surface in soils or geologic formations, specifically that part of the subsurface water in the saturated zone.

Hazardous Waste means hazardous waste as defined in M.G.L. c. 21C, § 2.

Improved Sinkhole means a naturally occurring karst depression or other natural crevice found in volcanic terrain and other geologic settings which have been modified by man for the purpose of directing and emplacing fluids into the subsurface.

Inactive Well means a Class V injection well that is not currently being used for the purpose of underground injection but continues to be properly secured and maintained such that it is not receiving and does not have the potential to receive an underground injection.

Injection means the emplacement of fluids into a formation by gravity or greater pressure through a well.

Injection Well means a well into which fluids are being introduced.

Local Approving Authority means the board of health or its authorized agent or an agent of a health district constituted pursuant to M.G.L. c. 111, § 27, acting on behalf of the applicable board of health.

Motor Vehicle Waste Disposal Well means a well that receives or has received fluids from vehicular repair or maintenance activities, such as an auto body repair shop, automotive repair shop, new and used car dealerships, specialty repair shop (*e.g.*, transmission and muffler repair shops), or any facility that does vehicular repair work.

Nonpoint Source means a diffuse source that is not regulated as a point source and is normally associated with precipitation and runoff from the land or percolation.

On-site System or Disposal System or On-site Subsurface Sewage Disposal System or System means a system or series of systems for the treatment and disposal of sanitary sewage below the ground surface on a facility.

- (a) The standard components of a system are: a building sewer; a septic tank to retain solids and scum; a distribution box; a soil absorption system containing effluent distribution lines to distribute and treat septic tank effluent prior to injection into appropriate subsurface soils; and a reserve area.

27.02: continued

(b) These terms also include Tight Tanks, Shared Systems and Alternative Systems. Unless the text of 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage* indicates otherwise, these terms also include nonconforming systems as defined by 310 CMR 15.000.

Owner means the owner of any injection well subject to 310 CMR 27.00.

Operator means the operator of any injection well subject to 310 CMR 27.00.

Person means any individual, partnership, corporation, firm, association, authority, trust, or group, including, but not limited to a city, town, county, district, the Commonwealth and its agencies, and the federal government.

Plugging means the act or process of stopping the flow of water, oil, or gas into or out of a formation through a borehole or well penetrating that formation.

Pollutant means any element or property of sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent, or other matter, in whatever form and whether originating at a point or major nonpoint source, which is or may be discharged, drained, or otherwise introduced into any sewage system, treatment works, or waters of the Commonwealth.

Radioactive Waste means any waste which contains radioactive material in concentrations which exceed those listed in federal regulations at 10 CFR Part 20: *Appendix B, Table 2, column 2*.

Sanitary Waste means any liquid or solid wastes originating solely from humans and human activities, such as wastes collected from toilets, showers, wash basins, sinks used for cleaning domestic areas, sinks used for food preparation, clothes washing operations, and sinks or washing machines where food and beverage serving dishes, glasses, and utensils are cleaned. Sources of these wastes may include single or multiple residences, hotels and motels, restaurants, bunkhouses, schools, ranger stations, crew quarters, guard stations, campgrounds, picnic grounds, day-use recreation areas, other commercial facilities, and industrial facilities provided the waste is not mixed with industrial waste.

Soil Absorption System means a system of trenches, galleries, chambers, pits, field(s) or bed(s) together with effluent distribution lines and aggregate which is installed in appropriate soils to receive and distribute fluids below the surface of the ground.

Total Dissolved Solids means the total dissolved (filterable) solids as determined by the use of the method specified in 40 CFR Part 136 or other method approved by the Department.

Type of Injection refers to the nature of the wastewater injected into the well. Types of Injection for Class V wells include, but are not limited to the following: open-loop geothermal, stormwater, water purification backwash, groundwater infiltration, non-contact cooling water, aquaculture, aquifer storage, motor vehicle waste disposal, motor vehicle rinse water, large capacity cesspools; subsidence control; and radioactive waste.

UIC means the Underground Injection Control program under Part C of the Safe Drinking Water Act (P.L. 95-523), as amended by P.L. 95-502; 42 U.S.C. §§ 300h through 300h-8.

Underground Injection means the subsurface emplacement of fluids through a well.

Underground Source of Drinking Water (USDW) means an aquifer or its portion which supplies any public water supply system; or which contains a sufficient quantity of groundwater to supply a public water supply system; and either currently supplies drinking water for human consumption, or contains less than 10,000 mg/l total dissolved solids; and which is not an exempt aquifer.

27.02: continued

Well means any structure, including but not limited to a bored, drilled, or driven shaft, a dug hole, seepage pit, an improved sinkhole, or a soil absorption system that injects directly to the subsurface regardless of the depth below ground surface of the injection. A ground surface injection structure is considered a well for the purpose of these regulations if the depth is greater than its largest surface dimension. Ground surface injection to a trench or seepage pit that has been filled with greater than 18 inches of permeable fill material is considered a well, regardless of the depth and width dimensions.

27.03: Classes of Injection Wells(1) Class I.

- (a) wells used by generators of hazardous wastes or owners or operators of hazardous waste management facilities to inject fluids beneath the lowermost formation containing a USDW within ¼ mile of the well bore;
- (b) other industrial or municipal wells which inject fluids beneath the lowermost formation containing, within ¼ mile of the well bore, an underground source of drinking water; and
- (c) radioactive waste disposal wells which inject fluids below the lowermost formation containing an underground source of drinking water within ¼ mile of the well bore.

(2) Class II. Wells used to inject fluids:

- (a) which are brought to the surface in connection with conventional oil or natural gas production and that may be commingled with wastewater from gas plants as an integral part of production operations, unless those waters are classified as hazardous waste at the time of injection;
- (b) for enhanced recovery of oil or natural gas; and
- (c) for storage of hydrocarbons that are liquid at standard temperature and pressure.

(3) Class III. Wells used for extraction of minerals including:

- (a) mining of sulfur by the Frasch process;
- (b) solution mining of minerals;
- (c) *in situ* combustion of fossil fuel; and
- (d) *in situ* production of uranium or other metals.

This category includes only *in situ* production from ore bodies which have not been conventionally mined. Solution mining of conventional mines (such as stopes leaching) is regulated as Class V.

(4) Class IV. Wells used by generators of hazardous or radioactive wastes, by owners or operators of hazardous waste management facilities, by owners or operators of radioactive waste disposal sites, or by any other person to dispose of hazardous wastes or radioactive wastes into or above a formation containing a USDW within ¼ mile of the well bore.

(5) Class V. Injection wells not included in Classes I, II, III, or IV. Class V injection wells are further defined in 310 CMR 27.05.

27.04: Prohibited Activities

(1) No person shall inject fluids into or through any Class I, II, or III injection well and no person shall construct, install, operate or maintain any Class I, II, or III injection well.

(2) No person shall construct, install, operate or maintain a Class IV well that is not part of a response action conducted or performed in compliance with M.G.L. c. 21E and 310 CMR 40.0000: *Massachusetts Contingency Plan*, or in use for the purpose of remediation at a release site pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. §§ 9601 through 9675, or the requirements and provisions of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901 through 6992k.

(3) No person shall inject or cause to be injected any fluid into or through a registered Class V well:

27.04: continued

- (a) where that injection may cause or allow the movement of fluid containing any pollutant into underground sources of drinking water and the presence of that pollutant causes or is likely to cause a violation of 310 CMR 22.00: *Drinking Water*;
 - (b) where that injection may impair the use of ground water as an actual or potential source of potable water; or
 - (c) which in the opinion of the Department adversely affects or may adversely affect the health of persons.
- (4) No person shall construct or install a cesspool of any size.
- (5) An existing cesspool that has a design flow of 2,000 gallons per day (gpd) or greater is failing to protect public health and safety and the environment. Any owner of a cesspool with a design flow of 2,000 gpd or greater shall:
- (a) 30 days prior to upgrade of the cesspool notify the Department's Underground Injection Control program and the local approving authority on a *UIC Class V Well Registration and Pre-closure Notification Form* available from the Department of the owner's intent to upgrade the cesspool by April 5, 2005; and
 - (b) by April 5, 2005, upgrade each cesspool, that has a design flow of 2,000 gallons per day or greater, in accordance with 310 CMR 15.404: *Maximum Feasible Compliance - Approvals for Upgrades* and 15.405: *Contents of Local Upgrade Approval* unless either:
 - 1. an earlier date for an upgrade is required by the Department or the local approving authority pursuant to 310 CMR 15.303(2); or
 - 2. an earlier date for an upgrade is required by 310 CMR 15.305: *Deadlines for Completion of Upgrades*.
- (6) No person shall construct, install, operate or maintain a motor vehicle waste disposal well in the Commonwealth.
- (7) The existence of any of the following wells is prohibited and the owner of such well shall properly close it in accordance with 310 CMR 27.10 and 27.12:
- (a) a Class V injection well that is either receiving an underground injection for which it is not registered, or which has the potential to receive such an injection because it is not properly secured and maintained;
 - (b) an observation, monitoring, or production well that is either receiving an underground injection or has the potential to do so because it is not properly secured and maintained; and
 - (c) a borehole that was not properly sealed after the soil collection activities were completed or after the termination of well installation activities prior to well completion.
- (8) No person shall inject fluids into or through any Class V injection well that is not maintained in accordance with 310 CMR 27.00 and registered in accordance with 310 CMR 27.08, unless the well is exempt from registration under 310 CMR 27.07(2).

27.05: Authorized Activities

- (1) Any person may construct, install, operate or maintain a Class IV or Class V aquifer remediation well in the conduct or performance of a response action in accordance with the provisions of M.G.L. c. 21E, 310 CMR 40.0000: *Massachusetts Contingency Plan*, or for the purpose of remediation at a release site, pursuant to CERCLA, 42 U.S.C. §§ 9601 through 9675, or RCRA, 42 U.S.C. §§ 6901 through 6992k. Well authorization under 310 CMR 27.05 is also contingent upon remaining in compliance with 310 CMR 27.00 including, but not limited to, the registration requirements in 310 CMR 27.08.

27.05: continued

(2) Any person may construct, install, operate or maintain a Class V well in compliance with 310 CMR 27.00 and other applicable regulations and statutes including, but not limited to M.G.L. c. 21, § 43; 314 CMR 5.00: *Ground Water Discharge Permit Program*; 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*; and 248 CMR 10.00: *Uniform State Plumbing Code*. Class V wells shall include but not be limited to the following types of injections:

- (a) effluent from a heat exchanger;
- (b) non-contact cooling water;
- (c) stormwater runoff;
- (d) water purification backwash;
- (e) uncontaminated water used to replenish or recharge an aquifer;
- (f) uncontaminated fresh water used to create a salt water intrusion barrier to prevent the intrusion of salt water into the fresh water;
- (g) wastewater from on-site subsurface sewage disposal systems regulated under 314 CMR 5.00: *Ground Water Discharge Permit Program* or 310 CMR 15.00: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*;
- (h) uncontaminated water used for the purpose of subsidence control (*i.e.*, to reduce or eliminate subsidence associated with the overdraft of groundwater);
- (i) wastewater from the recovery of geothermal energy for heating, aquaculture and the production of electrical power;
- (j) aquaculture wastewater;
- (k) other types of aquifer remediation discharges not included in 310 CMR 27.05(1);
- (l) process water and wastewater disposal;
- (m) groundwater infiltration;
- (n) swimming pool drainage;
- (o) experimental technology wastewater; and
- (p) other types of groundwater discharges regulated under 314 CMR 5.00: *Ground Water Discharge Permit Program* that also meet the definition of 310 CMR 27.02: Well.

(3) Well authorization under 310 CMR 27.05, for discharges that have applied for and received MassDEP approval for UIC registration, expires on the effective date of any Department-issued permit for that discharge, or upon the proper closure of the well in compliance with 310 CMR 27.10.

27.06: Protection

(1) No person shall conduct an activity that is prohibited by 310 CMR 27.00 or that will endanger an aquifer or portion of an aquifer that meets the definition of an underground source of drinking water. The following guidance documents describe methods and procedures the Department deems likely to achieve this standard:

- (a) MassDEP *Standard Design Guidelines for Shallow UIC Class V Injection Wells*;
- (b) MassDEP *Guidelines for Ground Source Heat Pump Wells*;
- (c) MassDEP fact sheet: *Registration of Discharges to the Ground from Pump Houses and Other Public Water System Facilities Including Discharges from In-line Analyzers*; and
- (d) MassDEP *Massachusetts Stormwater Handbook*.

27.07: Exemption

(1) Aquifer. The Department may exempt an aquifer from being an underground source of drinking water if, after notice and an opportunity for a public hearing the Department determines, subject to the approval of the U. S. Environmental Protection Agency, that the aquifer:

- (a) currently does not serve as a source of public drinking water; and,
- (b) cannot now and will not in the future serve as a source of public drinking water because:
 1. it is used to produce mineral, hydrocarbon or geothermal energy;
 2. it is so contaminated that it would be economically or technologically impractical to render the water fit for human consumption; or

27.07: continued

3. it contains more than 3000 mg/l Total Dissolved Solids and it is not reasonably expected to be used as a source of public drinking water.

(2) Registration. The following Class V injection wells are exempt from the registration requirements of 310 CMR 27.08:

(a) on-site subsurface sewage disposal systems used solely for the disposal of sanitary sewage and regulated under 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*;

(b) Class V injection wells permitted under 314 CMR 5.00: *Ground Water Discharge Permit Program*; and

(c) Class V injection wells on properties that are only used for one single-family residential unit, and that are only used for one or more of the following types of discharges:

1. stormwater runoff;
2. water purification backwash;
3. wastewater from the recovery of geothermal energy for heating, or water used for cooling;
4. groundwater infiltration; and
5. swimming pool drainage.

27.08: Registration

(1) The owner and operator of an existing, proposed, or closed Class IV or Class V well that meets any of the following criteria shall jointly submit an electronic registration application to the Department using the Department's electronic filing system (unless the Department indicates that an alternative filing format is acceptable at the time of filing, or unless the Department grants a hardship exemption that allows for paper submission on a form available from the Department) in accordance with the following:

(a) Unless exempt pursuant to 310 CMR 27.07, the owner and operator of a Class V well in existence as of September 13, 2002, shall jointly submit a registration application to the Department for each such well by January 1, 2003;

(b) Unless exempt pursuant to 310 CMR 27.07, the owner and operator of a Class V injection well first put into use after September 13, 2002, shall jointly submit a registration application to the Department prior to commencing any injection;

(c) The owner and operator of a registered Class IV or Class V injection well shall jointly submit a registration application to the Department prior to any conversion of the injection well's class or type of injection;

(d) Unless exempt pursuant to 310 CMR 27.07, the owner or operator or Massachusetts Licensed Site Professional (LSP) of record of a property with an existing Class IV or Class V aquifer remediation well authorized by 310 CMR 27.05(1) shall submit the information required by 310 CMR 27.08(2) on a form provided by the Department by the following deadlines:

1. by April 1, 2017, for a well in existence as of October 1, 2016; or
2. within 30 days after commencing any injection for a well first put into use after October 1, 2016; and

(e) The owner and operator of a Class V injection well that has become an inactive well or has gone through a closure process for which a Department-issued UIC registration number has not been issued shall jointly submit a registration application to the Department unless that well was closed prior to September 13, 2002.

(2) A registration application submitted to the Department by the owner and operator of an existing, proposed, or closed Class IV or Class V well shall be signed by both the owner and operator of the well and shall include all information requested by the form including, but not limited to, the following:

- (a) facility name;
- (b) facility location;
- (c) name of facility owner;
- (d) legal contact for facility owner;

27.08: continued

- (e) name of facility operator;
- (f) legal contact for facility operator;
- (g) nature and type of well(s); and
- (h) operating status of well(s).

(3) Failure by the Department to approve, approve with conditions or deny a complete application within the timelines established in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*, shall be deemed to be an approval of the application.

(4) No person may commence or convert any injection into a well for which a registration application has been submitted pursuant to 310 CMR 27.08(1)(b) or (c), until the registration is approved by the Department.

(5) The Department may deny a registration application or impose conditions on its approval of a registration application if it determines that:

- (a) the injection well does not conform to the applicable standards for registration established by 310 CMR 27.00;
- (b) the injection is causing or allowing, or may cause or allow, the movement of fluid containing any pollutant into underground sources of drinking water and the presence of that pollutant is causing or is likely to cause a violation of 310 CMR 22.00: *Drinking Water*;
- (c) the injection is impairing or may impair the use of ground water as an actual or potential source of potable water;
- (d) the injection is adversely affecting or may adversely affect the health of persons;
- (e) the application was not timely submitted in accordance with 310 CMR 27.08(1);
- (f) the application is incomplete; or
- (g) the applicant has submitted information in the registration application which the applicant knew or reasonably should have known was false or misleading.

(6) No person may continue any injection into a well for which a registration application has been submitted pursuant to 310 CMR 27.08(1)(a) or (d) if the registration is denied by the Department.

Links to the UIC regulations and guidelines, UIC registration filing instructions, and a link to the Department's electronic filing system can be found at: <http://www.mass.gov/eea/agencies/massdep/water/drinking/underground-injection-control.html>.

27.09: Requiring a Permit

The Department may require the owner and/or operator of any Class V well to obtain a Massachusetts Groundwater Discharge Permit under 314 CMR 5.00: *Ground Water Discharge Permit Program* as the Department deems necessary for the protection of a USDW, the environment, or public health.

27.10: Well Closure

(1) Compliance with M.G.L. c. 21E, CERCLA or RCRA. Each person performing a remedial activity as part of an injection well closure shall perform such activity in accordance with the provisions of M.G.L. c. 21E, 310 CMR 40.0000: *Massachusetts Contingency Plan*, CERCLA, 42 U.S.C. §§ 9601 through 9675, and RCRA, 42 U.S.C. §§ 6901 through 6992k, as applicable.

(2) Minimum Closure Requirements. The owner and operator of a Class IV or Class V well shall properly close the well upon the termination of the use of the well for the type of Class IV or Class V injection for which it was permitted or registered. At a minimum, the owner and operator shall undertake the following activities:

- (a) eliminate well or injection:
 - 1. the well shall be physically removed or plugged to permanently prevent the vertical movement of water within the well; all physical hazards at the ground surface associated with the well's construction or location shall be eliminated; and all inlets into the drainage system leading to the well shall be permanently sealed; or

27.10: continued

2. the well is authorized by and permitted in accordance with 314 CMR 5.00: *Ground Water Discharge Permit Program*; or
3. all inlets to the well that are associated with the Class IV or Class V type of injection shall be permanently eliminated or sealed. This option may only be exercised if the well has been converted to, or was already in use for, another type of withdrawal or injection activity for which all necessary approvals have been obtained;
- (b) assess all soil, gravel, sludge, liquids or other materials adjacent to the injection well and all components of the drainage system leading to the injection well;
- (c) remove and dispose of any contaminated soil, gravel, sludge, liquids or other materials adjacent to the injection well and all contaminated components of the drainage system leading to the injection well in accordance with all federal, state, and local requirements;
- (d) except as provided in 310 CMR 27.10(2)(e):
 1. 30 days prior to closure, submit to the Department the applicable Class V Well *Pre-closure Notification Form* available from the Department; and
 2. within seven days following completion of closure of the injection well, submit to the Department documentation of closure on a *Post-closure Notification Form* available from the Department;
- (e) within 30 days of completion of the closure of a Class IV or Class V aquifer remediation well authorized by 310 CMR 27.05(1), submit to the Department documentation of closure on a form provided by the Department for such purpose; and
- (f) prior to sealing each floor drain, submit to the Department a completed *Form WSI, Notice of Plumbing Inspector Approval to Seal Floor Drain*.

(3) Additional Closure Activities. If the Department determines that it is likely that there has been movement of injection or formation fluids into any USDW or a release or threat of release of oil and/or hazardous material to the environment, the Department may require and the owner and operator of the well shall complete any additional closure measures the Department deems necessary for the preservation of the USDW.

(4) The Department's guidance document entitled, *Massachusetts Closure Guidance for Underground Injection Control (UIC) Wells (including shallow injection wells)*, Guidance # BRP/DWM/DW/G04-3, describes methods and procedures which the Department deems likely to satisfy the requirements of 310 CMR 27.10.

27.11: Recordkeeping and Reporting

- (1) The owner and operator of a registered Class IV or Class V well shall make all existing records and information concerning the construction and operation of the well available to the Department within ten days of receipt of a request by the Department, unless the Department agrees in writing to a later date.
- (2) Records shall be kept by the owner and operator of a registered Class IV or Class V well for a period of at least three years from the date of any sample, measurement, report, or application. This period may be extended by request of the Department.
- (3) Records associated with the nature and composition of all injected fluids shall be kept by the owner and operator for a period of at least three years from the date of closure of a registered Class IV or Class V well.
- (4) If requested by the Department, the owner and operator of a registered Class IV or Class V well shall deliver records kept pursuant to 310 CMR 27.11 to the Department, in an electronic format or another format acceptable to the Department, at the conclusion of their retention period.

27.12: Corrective Action

- (1) The Department may require closure of any injection well if it determines that closure is necessary for the protection of any USDW, the environment, or public health, or if the well or any injection into or through the well does not comply with 310 CMR 27.00.

27.12: continued

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

- (2) If the Department determines that closure of a well is necessary pursuant to 310 CMR 27.12(1), the owner and operator of the well shall close the well in accordance with 310 CMR 27.10 and 27.12(4).
- (3) The owner and operator of an injection well that is in violation of 310 CMR 27.04 shall close the well in accordance with 310 CMR 27.10 and 27.12(4).
- (4) The owner and operator of the well shall immediately prevent fluids from entering into or through the well until the well or injection has been eliminated in accordance with 310 CMR 27.10(2)(a) or until:
 - (a) the injection is connected to a municipal sanitary sewer line in accordance with 314 CMR 7.00: *Sewer System Extension and Connection Permit Program*;
 - (b) the injection is connected to a tight tank provided the connection complies with all applicable Department regulations; or
 - (c) the injection is addressed under a plan approved by the Department.

27.13: Right of Entry

- (1) The owner and operator of a Class IV or Class V well shall allow the Department and its authorized representatives to:
 - (a) Enter upon the premises where the well is located, or where records required to be maintained by 310 CMR 27.00 or the terms and conditions of the registration are kept;
 - (b) Have access to and copy, at reasonable times, any records that must be kept pursuant to 310 CMR 27.00 or the terms and conditions of the registration;
 - (c) Inspect at reasonable times any facilities, equipment, practices, or operations regulated or required by 310 CMR 27.00 or the terms and conditions of the registration; and
 - (d) Sample, monitor or test at reasonable times for the purpose of determining compliance with the terms and conditions of the registration and 310 CMR 27.00.

27.14: Orders, Violations and Penalties

- (1) Orders. The Department may issue such orders as necessary to aid in the implementation and enforcement of M.G.L. c. 21, § 27, c. 21A, § 2(28), c. 111, § 160, and 310 CMR 27.00. Such orders may include, but shall not be limited to, orders requiring persons to cease any activity that is in violation of 310 CMR 27.00 or to carry out such activities necessary to bring such person into compliance. The Department may also require any person to provide information, in a timeframe specified by the Department, that the Department deems necessary to determine whether such person is subject to, in violation of, or has violated M.G.L. c. 21, § 27, c. 21A, § 2(28), c. 111, § 160, or 310 CMR 27.00
- (2) Violations. It shall be a violation of M.G.L. c. 111, § 160, and 310 CMR 27.00 to:
 - (a) Fail to comply with any order of the Department;
 - (b) Inject fluids into or through any Class I, II, III, IV or V injection well contrary to the requirements of 310 CMR 27.00 or the terms and conditions of any registration issued pursuant to 310 CMR 27.00, or to construct, install, operate or maintain any Class I, II, III, IV or V injection well contrary to the requirements of 310 CMR 27.00 or the terms and conditions of any registration issued pursuant to 310 CMR 27.00;
 - (c) Fail to submit a timely registration application for an activity that requires registration pursuant to 310 CMR 27.08;
 - (d) Make any false, inaccurate, incomplete or misleading statement in any record, report, plan, log, register, registration, application or other document submitted to the Department or required to be kept or maintained by 310 CMR 27.00 or the terms and conditions of a registration issued pursuant to 310 CMR 27.00;
 - (e) Fail to provide any information requested by the Department pursuant to 310 CMR 27.00 or a registration or order issued pursuant to M.G.L. c. 111, § 160, or 310 CMR 27.00.
- (3) Penalties. Any person violating 310 CMR 27.00 shall be subject to the full range of legal actions authorized by M.G.L. c. 21A, § 16, c. 111, § 160, 310 CMR 27.00 and any other applicable law or regulations including, without limitation, criminal fines, imprisonment, and civil and administrative orders and penalties.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

27.15: Severability

If any provision of 310 CMR 27.00 or its application is held invalid, such invalidity shall not affect other provisions or applications of 310 CMR 27.00 which can be given effect without the invalid provision or application, and the provisions of 310 CMR 27.00 are declared to be severable.

REGULATORY AUTHORITY

310 CMR 27.00: M.G.L. c. 21, § 27, c. 21A, § 2(28) and c. 111, § 160.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 30.000: HAZARDOUS WASTE

Section

GENERAL PROVISIONS

- 30.001: Authority
- 30.002: Purpose
- 30.003: Rules of Construction
- 30.004: Effective Date
- 30.005: Computation of Time
- 30.006: Accurate and Timely Submittals to the Department
- 30.007: Accurate and Complete Record Keeping; Automatic Extension
- 30.008: Accurate Monitoring
- 30.009: Certification

30.010: DEFINITIONS

- 30.011: References to Code of Federal Regulations
- 30.012: Publications Incorporated by Reference

- 30.020: Imminent Threats

30.030: PRESUMPTION OF IRREPARABLE HARM

- 30.040: Recording Notice of License and of Past Disposal

30.060: NOTIFICATION PROCEDURES

- 30.061: Who Must Notify and Obtain an EPA Identification Number
- 30.062: Form of the Notification
- 30.063: Number of Forms
- 30.064: Change of Hazardous Waste Handled

- 30.099: Interim Status Facilities

30.100: IDENTIFICATION AND LISTING OF HAZARDOUS WASTES

- 30.101: Purpose and Scope
- 30.102: Methods of Identification of Hazardous Wastes
- 30.103: Hazardous Waste Numbers
- 30.104: Wastes Subject to Exemption from 310 CMR 30.000
- 30.105: Exemption for PCB Wastes Regulated Pursuant to Toxic Substances Control Act
- 30.106: Exemption for Residues of Hazardous Waste in Empty Containers and Tanks

30.110: CRITERIA AND PROCEDURES FOR DETERMINING WHICH WASTES ARE TO BE REGULATED AS HAZARDOUS OR NON-HAZARDOUS WASTES

- 30.111: Criteria for Identifying the Characteristics of Hazardous Waste
- 30.112: Criteria for Listing Hazardous Waste

30.120: CHARACTERISTICS OF HAZARDOUS WASTE

- 30.121: Determining Characteristics
- 30.122: Ignitability
- 30.123: Corrosivity
- 30.124: Reactivity
- 30.125: Toxicity Characteristic (TC)

30.130: LISTS OF HAZARDOUS WASTES

- 30.131: Hazardous Waste from Non-specific Sources
- 30.132: Hazardous Waste from Specific Sources
- 30.133: Hazardous Wastes Which Are Discarded Commercial Chemical Products or Off-specification Batches of Commercial Chemical Products or Spill Residues of Either

Section: continued

- 30.136: Acutely Hazardous Wastes
- 30.140: When a Waste Becomes a Hazardous Waste
- 30.141: When a Hazardous Waste Ceases to be a Hazardous Waste
- 30.142: Petition to Classify a Waste as Non-hazardous
- 30.143: Special Requirements for Regulated Recycled Materials and Universal Wastes
- 30.144: Authority to Further Identify Hazardous Waste
- 30.151: Representative Sampling Methods
- 30.152: Test for Ignitability of Waste
- 30.153: Test for Corrosivity of Waste
- 30.154: Test for Reactivity of Waste
- 30.155: Toxicity Characteristic Leaching Procedure (TCLP)
- 30.156: Paint Filter Liquids Test
- 30.157: Test Methods
- 30.160: Hazardous Constituents
- 30.161: Ground Water Monitoring List
- 30.162: Bases for Listing

- 30.200: PROVISIONS FOR RECYCLABLE MATERIAL AND FOR WASTE OIL
- 30.201: Applicability
- 30.202: Other Applicable Provisions
- 30.203: Signatories
- 30.204: Requirements for All Applications for Recycling Permits
- 30.205: General Conditions for All Recycling Permits
- 30.206: Additional General Permit Conditions for Recyclers Who Receive Regulated Recyclable Materials From Offsite

- 30.210: GENERAL PROVISIONS FOR CLASSIFYING AND HANDLING WASTE OIL AND REGULATED RECYCLABLE MATERIALS
- 30.211: Handling Regulated Recyclable Material
- 30.212: Class A Regulated Recyclable Materials
- 30.213: Class B Regulated Recyclable Materials
- 30.214: Class C Regulated Recyclable Materials
- 30.215: Distinguishing Waste Oil that is Used Oil Fuel from Waste Oil that is Not Used Oil Fuel
- 30.216: Distinguishing Specification Used Oil Fuel from Off-specification Used Oil Fuel

- 30.220: REQUIREMENTS GOVERNING CLASS A REGULATED RECYCLABLE MATERIALS
- 30.221: General Provisions
- 30.222: Generator Standards
- 30.223: Transport and Manifest Standards
- 30.224: Applications for Class A Permits
- 30.225: Conditions for Class A Recycling Permits

- 30.230: REQUIREMENTS GOVERNING CLASS B(1) REGULATED RECYCLABLE MATERIALS
- 30.231: General Provisions
- 30.232: Class B(1) Permits and Permit Applications

- 30.240: REQUIREMENTS GOVERNING CLASS B(2) REGULATED RECYCLABLE MATERIALS
- 30.241: General Provisions
- 30.242: Generator Standards
- 30.243: Transport and Manifest Standards
- 30.244: "Marketer" Standards
- 30.245: Permits and Permit Applications For Those Who Are "Marketers" of Hazardous Waste Fuel
- 30.246: Standards for Persons Who Burn Hazardous Waste Fuels

Section: continued

- 30.247: Permits and Permit Applications for Those Who Burn Hazardous Waste Fuel at the Site of Generation
- 30.248: Standards for Other Persons Who Handle Hazardous Waste Fuel

- 30.250: REQUIREMENTS GOVERNING WASTE OIL AND USED OIL FUEL
- 30.251: General Provisions Governing Class B(3) Regulated Recyclable Materials
- 30.252: General Provisions Governing Waste Oil That Is Not Used Oil Fuel
- 30.253: Generator Standards Governing Waste Oil and Used Oil Fuel
- 30.254: Transport and Manifest Standards Governing Waste Oil and Used Oil Fuel
- 30.255: "Marketer" Standards
- 30.256: Standards for Persons Who Burn Used Oil Fuels
- 30.260: Activities for Which Class B(3) Recycling Permits Are Required
- 30.261: Applications for Class B(3) Permits for Generators to Market Off-specification Used Oil Fuel
- 30.262: Class B(3) Permits for Generators to Market Off-specification Used Oil Fuel
- 30.263: Applications for Class B(3) Permits to Market Specification Used Oil Fuel
- 30.264: Class B(3) Permits to Market Specification Used Oil Fuel
- 30.265: Applications for Class B(3) Permits to Burn Off-specification Used Oil Fuel Generated at the Site of Burning
- 30.266: Class B(3) Permits to Burn Off-specification Used Oil Fuel Generated at the Site of Burning
- 30.267: Applications for Class B(3) Permits to Burn Off-specification Used Oil Fuel Generated Off the Site of Burning
- 30.268: Class B(3) Permits to Burn Off-specification Used Oil Fuel Generated Off the Site of Burning

- 30.270: REQUIREMENTS GOVERNING CLASS B(4) REGULATED RECYCLABLE MATERIALS
- 30.271: General Provisions
- 30.272: Generator Standards
- 30.273: Generator Permits and Permit Applications
- 30.274: Transport and Manifest Standards
- 30.275: Transporter Permits and Permit Applications
- 30.276: Recycling and Transfer Station Standards
- 30.277: Recycling and Transfer Station Permits and Permit Applications

- 30.280: REQUIREMENTS FOR RECYCLING CLASS B(5) REGULATED RECYCLABLE MATERIALS

- 30.290: REQUIREMENTS FOR RECYCLING CLASS C REGULATED RECYCLABLE MATERIALS
- 30.291: General Provisions
- 30.292: Generator Standards for Class C Regulated Recyclable Materials
- 30.293: Transporter Standards for Class C Regulated Recyclable Materials
- 30.294: Standards for Those Who Store Class C Regulated Recyclable Materials Before Those Materials Are Recycled
- 30.295: Standards for Those Who Recycle Class C Regulated Recyclable Materials Without Prior Storage
- 30.296: Recycling Permits and Permit Applications for Those Who Recycle Class C Regulated Recyclable Materials Without Prior Storage
- 30.297: Standards for Those Who Recycle Class C Regulated Recyclable Materials At the Site of Generation
- 30.298: Recycling Permits and Permit Applications for Those Who Recycle Class C Regulated Recyclable Materials At the Site of Generation

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Section: continued

- 30.300: Requirements for Generators of Hazardous Wastes
- 30.301: Purpose, Scope, and Applicability
- 30.302: Determination of Whether a Waste is Hazardous
- 30.303: Requirements Governing Notification, Identification Numbers, and Change of Status Requests
- 30.304: Offering Hazardous Wastes for Transportation
- 30.305: Destination of Hazardous Waste or Regulated Recyclable Material Sent Off-site

- 30.310: The Manifest
- 30.311: General Requirements
- 30.312: Form of the Manifest
- 30.313: Number and Distribution of Copies for Six-part Manifest (EPA form 8700-22)
- 30.314: Manifest Distribution Requirements for Waste Reclaimed Pursuant to a Contractual Agreement
- 30.315: Manifest Distribution Requirements for Intrastate Shipments of Waste Oil, Intrastate Shipments by Very Small Quantity Generators, Wastes Sent to Research Demonstration and Development Facilities, and Research Study Waste
- 30.316: Manifest Tracking Numbers, Manifest Printing and Obtaining Manifests
- 30.317: Waste Minimization Certification

- 30.320: Pre-transport Requirements
- 30.321: Packaging
- 30.322: Labelling
- 30.323: Marking
- 30.324: Placarding

- 30.330: Recordkeeping and Reporting
- 30.331: Recordkeeping
- 30.332: Biennial Reporting
- 30.333: Exception Reporting
- 30.334: Additional Reporting
- 30.340: Large Quantity Generators
- 30.341: General Accumulation Standards for Large Quantity Generators
- 30.342: On-site Accumulation by Large Quantity Generators in Containers
- 30.343: On-site Accumulation by Large Quantity Generators in Tanks

- 30.350: Special Generator Requirements
- 30.351: Small Quantity Generators
- 30.352: Inclusion of Acutely Hazardous Waste
- 30.353: Very Small Quantity Generators
- 30.354: Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities: Academic Laboratories Rule

- 30.360: Special Conditions
- 30.361: International Shipments

- 30.390: Special Provisions for Accumulation of Household Hazardous Waste and/or Hazardous Waste Generated by Very Small Quantity Generator
- 30.391: Definitions
- 30.392: Events for the Accumulation of Household Hazardous Waste and/or Hazardous Waste Generated by Very Small Quantity Generators
- 30.393: Centers for the Accumulation of Hazardous Waste Generated by Households and/or Very Small Quantity Generators
- 30.394: Management Standards for the Collection and Transport of Hazardous Waste to and from Events and/or Centers

Section: continued

- 30.400: REQUIREMENTS FOR TRANSPORTERS OF HAZARDOUS WASTE
- 30.401: Purpose and Applicability
- 30.402: Requirements for Transporting Hazardous Waste
- 30.403: Accepting Shipment of Hazardous Waste
- 30.404: Delivery of Shipment of Hazardous Waste
- 30.405: Manifest Requirements
- 30.406: Record Keeping
- 30.407: Reporting
- 30.408: Hazardous Wastes in Transit
- 30.409: Instruction and Training
- 30.410: Liability Insurance Requirements
- 30.411: Bonding Requirements
- 30.413: Discharges of Hazardous Wastes in Transit
- 30.414: Vehicle Identification Device
- 30.415: Emergency Procedures Guide
- 30.416: Vehicle Markings

- 30.500: MANAGEMENT STANDARDS FOR ALL HAZARDOUS WASTE FACILITIES
- 30.501: Applicability
- 30.502: Submission and Amendment of Plans

- 30.510: GENERAL MANAGEMENT STANDARDS FOR ALL FACILITIES
- 30.511: Identification Number
- 30.512: Required Notices
- 30.513: General Waste Analysis
- 30.514: Security
- 30.515: General Inspection
- 30.516: Personnel Training

- 30.520: CONTINGENCY PLAN, EMERGENCY PROCEDURES, PREPAREDNESS, AND PREVENTION
- 30.521: Purpose, Content, and Implementation of Contingency Plan
- 30.522: Copies of Contingency Plan
- 30.523: Amendment of Contingency Plan
- 30.524: Standards for Emergency Prevention and Response

- 30.530: MANIFEST SYSTEM
- 30.531: Applicability
- 30.532: Use of the Manifest System
- 30.533: Manifest Discrepancies
- 30.534: Unmanifested Waste Report
- 30.535: Waste Generated and Delivered by Very Small Quantity Generators
- 30.536: Manifest Requirements for Waste Recycled Pursuant to a Contractual Agreement

- 30.540: RECORD KEEPING AND REPORTING
- 30.541: Applicability
- 30.542: Operating Record
- 30.543: Availability, Retention, and Disposition of Records
- 30.544: Biennial Report

- 30.560: GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTES
- 30.561: Examples of Potentially Incompatible Wastes

Section: continued

30.580: CLOSURE

30.581: Applicability

30.582: Closure Performance Standard

30.583: Contents and Approval of Closure Plan; Notification of Closure

30.584: Time Allowed for Closure

30.585: Disposal or Decontamination of Equipment

30.586: Recording Survey Plat

30.587: Completion and Certification of Closure

30.590: POST-CLOSURE

30.591: Applicability

30.592: Post-closure Care and Use of Property

30.593: Post-closure Plan

30.594: Recording Notice of License and of Past Disposal

30.595: Subsequent Removal of Hazardous Waste and Hazardous Waste Containment Systems

30.596: Completion and Certification of Post-closure Care

30.600: TECHNICAL STANDARDS FOR ALL HAZARDOUS WASTE FACILITIES

30.601: Applicability

30.602: General Requirements for All Facilities

30.603: Preparation of Hazardous Waste for Disposal

30.604: Injection Wells, Leaching Fields, Seepage Pits

30.605: Special Requirements for Wastewater Treatment Units

30.606: Special Requirements for Miscellaneous Units

30.610: SURFACE IMPOUNDMENTS

30.611: Applicability

30.612: Design and Operating Requirements

30.613: Special Provisions for Existing Portions of Existing Surface Impoundments

30.614: Testing, Monitoring and Inspection

30.615: Emergency Repairs; Contingency Plans

30.616: Special Requirements for Ignitable, Reactive, Incompatible and Acutely Hazardous Wastes, and Hazardous Wastes That Are Polyhalogenated Aromatic Hydrocarbons

30.617: Closure and Post-Closure Care

30.618: Stand-by Surface Impoundments - Waiver From Groundwater Monitoring Requirements

30.620: LANDFILLS

30.621: Applicability

30.622: Design and Operating Requirements

30.623: Demonstration of Waste/Liner Compatibility

30.624: Monitoring and Inspection

30.625: Supervision of Operation

30.626: Surveying and Record-Keeping

30.627: Equipment

30.628: Special Requirements for Ignitable, Reactive or Incompatible Hazardous Wastes, and Hazardous Wastes that are Polyhalogenated Aromatic Hydrocarbons

30.629: Special Requirements for Liquid Waste

30.630: Special Requirements for Containers

30.631: Wastes Unacceptable for Landfilling

30.632: Stabilization/Solidification Plan

30.633: Closure and Post-Closure Care

30.640: WASTE PILES

30.641: Design and Operating Requirements

30.643: Inspection of Liners

30.644: Monitoring and Inspection

30.645: Demonstration of Waste/Liner Compatibility

30.646: Special Requirements for Ignitable, Reactive and Acutely Hazardous Wastes, and Hazardous Wastes That Are Polyhalogenated Aromatic Hydrocarbons, and Powders, Dusts, or Friable Materials

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Section: continued

- 30.647: Special Requirements for Incompatible Wastes
- 30.648: Limited Storage Duration
- 30.649: Closure and Post-Closure Care

- 30.650: LAND TREATMENT UNITS
- 30.651: Applicability
- 30.652: Treatment Program
- 30.653: Treatment Demonstration
- 30.654: Design and Operating Requirements
- 30.655: Unsaturated Zone Monitoring
- 30.656: Record Keeping
- 30.657: Special Requirements For Ignitable, Reactive, Incompatible, and Acutely Hazardous Wastes, and Hazardous Wastes that are Polyhalogenated Aromatic Hydrocarbons
- 30.658: Application Rates and Capacity
- 30.659: Closure and Post-Closure Care

- 30.660: GROUNDWATER PROTECTION
- 30.661: Applicability
- 30.662: Required Programs
- 30.663: General Groundwater Monitoring Requirements
- 30.664: Detection Monitoring Program
- 30.665: Groundwater Protection Standard
- 30.666: Hazardous Constituents
- 30.667: Concentration Limits
- 30.668: Maximum Concentration of Constituents for Groundwater Protection
- 30.669: Point of Compliance
- 30.670: Compliance Period
- 30.671: Compliance Monitoring Program
- 30.672: Corrective Action Program
- 30.673: Cochran's Approximation to the Behrens-Fisher Students' t-Test
- 30.675: Probable High Groundwater Levels

- 30.680: USE AND MANAGEMENT OF CONTAINERS
- 30.681: Applicability
- 30.682: Labelling and Marking
- 30.683: Condition of Containers
- 30.684: Compatibility of Waste with Containers
- 30.685: Management of Containers
- 30.686: Inspections
- 30.687: Containment
- 30.688: Special Requirements for Ignitable, Reactive or Incompatible Hazardous Wastes, and Hazardous Wastes that are Polyhalogenated Aromatic Hydrocarbons
- 30.689: Closure

- 30.690: STORAGE AND TREATMENT IN TANKS
- 30.691: Applicability
- 30.692: Assessment of Existing Tank System's Integrity
- 30.693: Design and Installation of New Tank Systems or Components
- 30.694: Containment and Detection of Releases
- 30.695: General Operating Requirements
- 30.696: Inspections
- 30.697: Response to Leaks or Spills and Disposition of Leaking Tank Systems
- 30.698: Special Requirements for Ignitable, Reactive or Incompatible Wastes, and Hazardous Wastes that are Polyhalogenated Aromatic Hydrocarbons
- 30.699: Closure and Post-closure Care

- 30.700: FACILITY LOCATION STANDARDS
- 30.701: Land Subject to Flooding
- 30.702: Surface Water Supplies
- 30.703: Actual, Planned and Potential Public Underground Drinking Water Supplies

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Section: continued

- 30.704: Private Water Supplies
- 30.705: Other Location Considerations
- 30.706: Disposal into Waterbodies
- 30.707: Disposal into Salt Domes, Salt Bed Formations, Underground Mines, and Caves
- 30.708: Areas of Critical Environmental Concern

- 30.750: Land Disposal Restrictions

- 30.800: LICENSING REQUIREMENTS AND PROCEDURES
- 30.801: Who Must Have a License
- 30.802: Application Form
- 30.803: Requirements for all License Applications
- 30.804: Additional Requirements for Facility License Applications
- 30.805: Additional Requirements for Transport License Applications
- 30.806: Recordkeeping
- 30.807: Signatories

- 30.810: REQUIREMENTS FOR OBTAINING AND KEEPING A LICENSE
- 30.811: Burden of Persuasion
- 30.812: Compliance with Standards
- 30.813: Competence
- 30.814: Additional Requirements for Prevention of Air Pollution

- 30.820: LICENSE CONDITIONS
- 30.821: License Expiration
- 30.822: General Conditions
- 30.823: Additional Conditions of Transport Licenses
- 30.824: Issuance of Transporter License
- 30.825: Additional Conditions of Facility Licenses
- 30.826: Additional Conditions for Corporations
- 30.827: License Duration
- 30.828: Transfer of Licenses
- 30.829: Requiring Additional Conditions

- 30.830: PROCESSING OF APPLICATIONS
- 30.831: Completeness of Application
- 30.832: Draft Facility License
- 30.833: Public Notice and Public Comment for Facility License Actions
- 30.834: Public Notice of Transport License Actions
- 30.835: Written Comments
- 30.836: Extending the Public Comment Period
- 30.837: Informal Public Hearing for Facility Licenses
- 30.838: Issuance Facility of License
- 30.839: Summary Response to Comments
- 30.840: Inspection of New or Modified Facilities
- 30.841: Compliance Schedules in Licenses

- 30.850: LICENSE MODIFICATION, SUSPENSION, AND REVOCATION
- 30.851: License Modifications
- 30.852: Facility License Modification at the Request of the Licensee
- 30.853: License Denial, Suspension or Revocation
- 30.854: Effect of License Denial, Suspension, or Revocation on Other Hazardous Waste Activities

- 30.860: SPECIAL FORMS OF LICENSES
- 30.861: Emergency License
- 30.862: License for Land Treatment Demonstration
- 30.863: Research, Development and Demonstration Facilities and Approvals
- 30.864: Research Facility License

- 30.870: LICENSE AND VEHICLE IDENTIFICATION FEES

- 30.880: COMPLIANCE WITH MEPA
- 30.890: ADJUDICATORY HEARING PROCESS

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Section: continued

30.900: FINANCIAL RESPONSIBILITY REQUIREMENTS FOR TREATMENT, STORAGE, AND DISPOSAL FACILITIES

30.901: Applicability and Compliance

30.902: Mailing of Notices

30.903: Cost Estimation for Closure

30.904: Financial Assurance for Closure

30.905: Cost Estimation for Post-closure Care

30.906: Financial Assurance for Post-closure Care

30.907: Use of a Mechanism for Financial Assurance of Both Closure and Post-closure Care

30.908: Liability Requirements (Effective July 1, 1987)

30.909: Wording of The Instruments

30.910: Special Options for Facilities Relying on the Hazardous Waste Licenses Insolvency Fund

30.1000: STANDARDS FOR UNIVERSAL WASTE MANAGEMENT

30.1001: Scope

30.1010: Definitions

30.1020: Applicability -- Wastes Covered

30.1030: STANDARDS FOR SMALL QUANTITY HANDLERS OF UNIVERSAL WASTE

30.1031: Applicability

30.1032: Prohibitions

30.1033: Notification, Change of Status, and Closure

30.1034: Waste Management

30.1035: Employee Training

30.1036: Response to Releases

30.1037: Off-site Shipments

30.1038: Tracking Universal Waste Shipments

30.1039: Exports

30.1040: STANDARDS FOR LARGE QUANTITY HANDLERS OF UNIVERSAL WASTE

30.1041: Applicability

30.1042: Prohibitions

30.1043: Notification

30.1044: Waste Management

30.1045: Employee Training

30.1046: Response to Releases

30.1047: Off-site Shipments

30.1048: Tracking Universal Waste Shipments

30.1049: Exports

30.1050: STANDARDS FOR UNIVERSAL WASTE TRANSPORTERS

30.1051: Applicability

30.1052: Prohibitions

30.1053: Waste Management

30.1054: Response to Releases

30.1055: Off-site Shipments

30.1056: Exports

30.1060: STANDARDS FOR DESTINATION FACILITIES

30.1061: Applicability

30.1062: Shipments

30.1063: Tracking Universal Waste Shipments

30.1070: IMPORT REQUIREMENTS

30.1071: Imports

30.1080: ADDITION OF OTHER WASTES UNDER 310 CMR 30.1000

30.1081: General

30.1082: Factors for Adding Other Wastes under 30.1000

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Section: continued

30.1100: Wastes and Activities Subject to Waiver

30.1101: General Requirements for Wastes and Activities Subject to Waiver

30.1102: Case-by-case Waiver Determinations for Specific Hazardous Wastes and Activities

30.1103: Treatment of Corrosive Hazardous Waste in an Elementary Neutralization Unit

GENERAL PROVISIONS

30.001: Authority

310 CMR 30.000 is promulgated by the Commissioner of the Department of Environmental Protection pursuant to the authority granted by M.G.L. c. 21A, § 2, M.G.L. c. 21C, §§ 4 and 6, M.G.L. c. 21E, § 6, and by St. 1987, c. 587, § 47.

30.002: Purpose

310 CMR 30.000 is intended to protect public health, safety, and welfare, and the environment, by comprehensively regulating the generation, storage, collection, transport, treatment, disposal, use, reuse, and recycling of hazardous waste in Massachusetts. 310 CMR 30.000 should be read together with M.G.L. c. 21C and c. 21E, § 6 and by St. 1987, c. 584, § 47, each of which has many important substantive requirements not repeated in 310 CMR 30.000.

30.003: Rules of Construction

- (1) 310 CMR 30.000 shall be construed to effectuate the purposes of M.G.L. c. 21C and the federal Resource Conservation and Recovery Act.
- (2) As used in 310 CMR 30.000, words in the singular also include the plural.
- (3) Words in the masculine gender also include the feminine and neuter genders.
- (4) No provision of 310 CMR 30.000 shall be construed to limit the Department's authority to take or arrange for, or to require any person to perform, any response action authorized by M.G.L. chs. 21C or 21E which the Department deems necessary to protect health, safety, public welfare or the environment.
- (5) The provisions of 310 CMR 30.000 are severable, and if any provision hereof or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions hereof or applications thereof which can be given effect without the invalid provision or application.
- (6) Federal statutes and regulations which are cited within 310 CMR 30.000 but which are not specifically adopted by reference shall be used as guidance in interpreting the state regulations in which they appear.
- (7) No provision of 310 CMR 30.000 shall be construed to relieve any person of the necessity of complying with all other applicable federal, state or local laws (*e.g.*, the more stringent requirements and effective dates established pursuant to the federal Hazardous and Solid Waste Amendments).
- (8) No provision of 310 CMR 30.000 (or 310 CMR 40.0000: *Massachusetts Contingency Plan*) shall be construed to limit the Department's authority to require additional response actions on a case-by-case basis in accordance with 310 CMR 30.829, when necessary to protect health, safety, public welfare or the environment.

30.004: Effective Date

Each provision in 310 CMR 30.000 and each subsequent revision shall be effective and have the force of law upon publication of the provision or revision in the *Massachusetts Register*. Every other state title shall be effective and have the force of law in accordance with the provisions of each. If a state title fails to state a date from when it is to be effective, it shall become effective upon publication in the *Massachusetts Register*.

30.005: Computation of Time

Unless otherwise specifically provided by law, 310 CMR 30.000, or any determination issued pursuant to 310 CMR 30.000, any time period prescribed or referred to in 310 CMR 30.000 or in any determination issued pursuant to 310 CMR 30.000 shall begin with the first day following the act which initiates the running of the time period, and shall include every calendar day,

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.005: continued

including the last day of the time period so computed. If the last day is a Saturday, Sunday, legal holiday, or any other day in which the offices of the Department are closed, the deadline shall run until the end of the next business day. If the time period prescribed or referred to is less than seven days, only days when the offices of the Department are open shall be included in the computation.

30.006: Accurate and Timely Submittals to the Department

(1) No person shall make any false, inaccurate, or misleading statement in any application, record, report, plan, or statement which that person submits, or is required to submit, to the Department pursuant to M.G.L. c. 21C, 310 CMR 30.000, or any order issued by the Department.

(2) Any application, record, report, plan, or statement which any person is required to submit to the Department shall be submitted within the time period presented in M.G.L. c. 21C, 310 CMR 30.000, or any order issued by the Department, unless otherwise specified by the Department.

30.007: Accurate and Complete Record Keeping; Automatic Extension

(1) No person shall make any false or misleading statement in any record, report, plan, file, log, or register which that person keeps, or is required to keep, pursuant to M.G.L. c. 21C, or 310 CMR 30.000. Any record, report, plan, file, log, or register which any person is required to keep shall be filled out completely and otherwise kept in compliance with M.G.L. c. 21C, 310 CMR 30.000, or any order issued by the Department.

(2) The periods prescribed in 310 CMR 30.000, including 310 CMR 30.331, for keeping records shall be extended automatically for the duration of any unresolved enforcement action regarding the activity in question or as ordered by the Department.

30.008: Accurate Monitoring

No person shall falsify, tamper with, or render inaccurate any monitoring device or method which any person maintains, or which is required to be maintained pursuant to M.G.L. c. 21C or 310 CMR 30.000. Any monitoring which any person is required to perform shall be promptly, fully and accurately performed and shall otherwise be in compliance with M.G.L. c. 21C, 310 CMR 30.000, or any order issued by the Department.

30.009: Certification

(1) Any person signing a document pursuant to 310 CMR 30.062, 30.142, 30.800, or when providing any other information ordered or requested by the Department pursuant to 310 CMR 30.000, shall make the following certification: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

(2) This certification need not appear on a manifest, but every person signing a manifest shall comply with 310 CMR 30.006 and 30.007.

30.010: Definitions

As used throughout 310 CMR 30.000, the following terms shall have the following meanings, unless the context clearly indicates otherwise.

Aboveground Tank means a device meeting the definition of a tank that is situated in such a way that the entire surface area of the tank is completely above the plane of the adjacent surrounding surface and the entire surface area of the tank (including the tank bottom) is able to be visually inspected. Where a double-walled tank is used, the entire surface area of the outer wall must be completely above the surrounding surface and be able to be visually inspected.

30.010: continued

Accidental Occurrence means an accident including, but not limited to, continuous or repeated exposure to conditions, which results in bodily injury or property damage neither expected nor intended by the insured. Every accidental occurrence shall be deemed either sudden or non-sudden.

Accumulation means the short term containment of hazardous waste on the premises of the person who generated such waste in a manner which does not constitute disposal, provided that if such containment is not as provided for in 310 CMR 30.340 or 30.351, such containment is storage and not accumulation of hazardous waste.

Active Life of a Facility means the period from the initial receipt of hazardous waste at the facility until the Department receives certification of final closure.

Active Portion means that portion of a facility where treatment, storage, or disposal operations are being or have been conducted after November 19, 1980 and which is not a closed or inactive portion. (See also closed portion and inactive portion.)

Actual Public Underground Drinking Water Source means a groundwater source of drinking water used by a Public Water System as defined in 310 CMR 22.02: *Definitions*.

Acutely Hazardous Regulated Recyclable Material means a recyclable material that, if discarded, would be a waste listed in 310 CMR 30.136 or a waste with EPA Hazardous Waste No. F020, F021, F022, F023, F026, or F027 listed in 310 CMR 30.131.

Acutely Hazardous Waste means a waste listed in 310 CMR 30.136 or a waste with EPA Hazardous Waste No. F020, F021, F022, F023, F026, or F027 listed in 310 CMR 30.131.

Administrator means the Administrator of the U.S. Environmental Protection Agency or his designee.

Amalgam means an alloy containing mercury and other metals used to restore the dentition.

Amalgam Waste means any waste containing mercury amalgam or otherwise associated with preparation or use of amalgam, including but not limited to amalgam collected by chair-side traps, screens, filters, vacuum system filters, amalgam separators or other devices; waste elemental mercury; and waste amalgam capsules.

Ancillary Equipment means any device including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps, that is used to distribute, meter, or control the flow of hazardous waste from its point of generation to a storage or treatment tank(s), between hazardous waste storage and treatment tanks to a point of disposal onsite, or to a point of shipment for disposal off-site.

Annual Rate Limiting Constituent means the compound, element, or waste fraction in a hazardous waste which sets the maximum amount of hazardous waste which can be loaded onto soil per year.

Aquifer means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs.

Area of Critical Environmental Concern (ACEC) means an area designated by the Secretary of the Executive Office of Energy and Environmental Affairs pursuant to 301 CMR 12.00: *Areas of Critical Environmental Concern*.

Authorized Representative means the person responsible for the overall operation of a facility or an operational unit (*i.e.*, part of a facility), *e.g.*, the plant manager, superintendent or person of equivalent responsibility. For purposes of complying with 310 CMR 30.800, the definition of an authorized individual at 310 CMR 30.822(8) shall control.

Battery means a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact unbroken battery from which the electrolyte has been removed.

30.010: continued

Boiler means an enclosed device that uses controlled flame combustion and meets all the requirements in 310 CMR 30.010: Boiler(a) through (d):

- (a) the device must have physical provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases; and
- (b) the device's combustion chamber and primary energy recovery section(s) must be of integral design. To be of integral design, the combustion chamber and the primary energy recovery section(s) (such as waterwalls and superheaters) must be physically formed into one manufactured or assembled unit. A unit in which the combustion chamber and the primary energy recovery section(s) are joined only by ducts or connections carrying flue gas is not integrally designed; however, secondary energy recovery equipment (such as economizers or air preheaters) need not be physically formed into the same unit as the combustion chamber and the primary energy recovery section. The following units are not precluded from being boilers solely because they are not of integral design: process heaters (units that transfer energy directly to a process stream), and fluidized bed combustion units; and
- (c) while in operation, the device must maintain a thermal efficiency of at least 60%, calculated in terms of the recovered energy compared with the thermal value of the fuel; and
- (d) the device must export and utilize at least 75% of the recovered energy calculated on an annual basis. In this calculation, no credit shall be given for recovered heat used internally in the same unit. (Examples of internal use are the preheating of fuel or combustion air, and the driving of induced or forced draft fans or feedwater pumps.)

Bulk Scrap Metal Item means a large item composed of worn out metal or a metal product that has outlived its original use, such as automobile hulks, railroad cars, steel beams from torn down buildings or bridges, and household appliances. (See also 310 CMR 30.010: Scrap Metal.)

By-product means a material that is not one of the primary products of a production process and is not solely or separately produced by the production process. Examples are process residues such as slags or distillation column bottoms. By-product does not include a co-product that is produced for the general public's use and is ordinarily used in the form it is produced by the process.

Cathode Ray Tube or CRT means a vacuum tube, composed primarily of glass, which is the visual or video display component of an electronic device. A used, intact CRT means a CRT whose vacuum has not been released. A used, broken CRT means glass removed from its housing or casing whose vacuum has been released.

Central Accumulation Area means an on-site hazardous waste accumulation area subject to 310 CMR 30.000 at a large quantity generator, small quantity generator or a very small quantity generator. A central accumulation area at an eligible academic entity that chooses to be subject to 310 CMR 30.354 is the area where the entity must also comply with the requirement for making the hazardous waste determination at 310 CMR 30.354(11) when accumulating unwanted material, unless the entity already has accumulated designated hazardous waste in the laboratory, in which case the waste determination must be made at the point of generation.

Certification means a statement by a person which is true to the best of that person's knowledge and belief.

Class A or Class SA Segment of a Surface Water Body means a segment of an inland or coastal surface water body so assigned said class pursuant to 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*.

Clean Water Act means the Federal Water Pollution Control Act, currently known as the Clean Water Act, 33 U.S.C. §§ 1251 *et seq.*

Closed Portion means that portion of a facility which an owner or operator has closed in compliance with the approved facility closure plan and all applicable closure requirements. (See also 310 CMR 30.010: Active Portion.)

Closure. (See 310 CMR 30.010: Final Closure and Partial Closure.)

30.010: continued

Closure Plan means the plan for closure prepared pursuant to 310 CMR 30.580 through 30.586.

Collect means gather at a place or places away from the premises of a licensee, *e.g.*, a transporter collecting hazardous waste from several sources.

College or University means a private or public, post-secondary, degree-granting, academic institution, that is accredited by an accrediting agency listed annually by the U.S. Department of Education.

Commercial Chemical Product or Manufacturing Chemical Intermediate Having the Generic Name Listed in 310 CMR 30.133 or 30.136 means a chemical substance which is manufactured or formulated for commercial or manufacturing use and which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not mean a waste, such as a manufacturing process waste, that contains any of the substances listed in 310 CMR 30.133 or 30.136. Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in 310 CMR 30.133 or 30.136, such waste will be listed in either 310 CMR 30.131 or 30.132 or will be identified as a hazardous waste by the characteristics set forth in 310 CMR 30.120 through 30.125.

Commissioner means the Commissioner of the Department of Environmental Protection or his or her designee.

Completely Enclosed Recycling System means a unit that is primarily for the recycling of a regulated recyclable material and that is totally enclosed and is managed so that the regulated recyclable material is accumulated in tanks or containers in compliance with 310 CMR 30.205(19). (*See* 310 CMR 30.010: Treatment Which is an Integral Part of the Manufacturing Process for a description of a totally enclosed unit.)

Component means any constituent part of a unit or group of constituent parts of a unit which are assembled to perform a specific function (*e.g.*, a pump seal, pump, kiln liner and kiln thermocouple.)

Compressed Gas means any material or mixture having in the container an absolute pressure exceeding 40 pounds per square inch at 70°F or, regardless of the pressure at 70°F, having an absolute pressure exceeding 104 pounds per square inch at 130°F.

Construction (with respect to any project of construction under M.G.L. c. 21C) means:

- (a) the erection or building of new structures and acquisition of lands or interests therein, or the acquisition, replacement, expansion, remodeling, alteration, modernization, or extension of existing structures, and
- (b) the acquisition and installation of initial equipment for, or required in connection with, new or newly acquired structures of the expanded, remodeled, altered, modernized or extended part of existing structures (including trucks and other motor vehicles, and tractors, cranes, and other machinery) necessary for the proper utilization and operation of the facility after completion of the project; and includes preliminary planning to determine the economic and engineering feasibility and health and safety aspects of the project, the engineering, architectural, legal, fiscal, and economic investigations and studies, and any surveys, designs, plans, working drawings, specifications, and other action necessary for the carrying out of the project, and
- (c) the inspection and supervision of the process of carrying out the project to completion.

Container means any portable device in which a hazardous waste is stored, transported, treated, disposed of, or otherwise handled.

Containment Building means a hazardous waste management unit that is eligible for interim status and used to store or treat hazardous waste in compliance with the provisions of 310 CMR 30.099(6)(q).

30.010: continued

Contingency Plan means a document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion or release of hazardous waste or hazardous waste constituents which could threaten public health, safety, or welfare, or the environment.

Corrosion Expert means a person who, by reason of his or her knowledge of the physical sciences and the principles of engineering and mathematics, acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person shall be certified by the National Association of Corrosion Engineers (NACE) or be a Massachusetts registered professional engineer who has certification or licensing that includes education and experience in corrosion control on buried or submerged metal piping systems and metal tanks.

Crime Involving Moral Turpitude means a crime involving fraud, misrepresentation or deceit including, but not limited to, fraud, misrepresentation or deceit in conducting business or obtaining a license or permit as well as any other crime that adversely reflects on the applicant or licensee's competence to transport, use, collect, store, treat or dispose of hazardous waste.

CRT Collector means a person who receives used, intact CRTs for recycling, repair, resale, or donation.

CRT Glass Manufacturer means an operation or part of an operation that uses a furnace to manufacture CRT glass.

CRT Processing means conducting all of the following activities:

- (1) Receiving broken or intact CRTs;
- (2) Intentionally breaking intact CRTs or further breaking or separating broken CRTs; and
- (3) Sorting or otherwise managing glass removed from CRT monitors.

Current Closure Cost Estimate means the most recent cost estimate prepared pursuant to 310 CMR 30.903.

Current Post-closure Cost Estimate means the most recent cost estimate prepared pursuant to 310 CMR 30.905.

Debris means solid material exceeding a 60 mm particle size that is intended for disposal and that is: A manufactured object; or plant or animal matter; or natural geologic material. However, the following materials are not debris: any material for which a specific treatment standard is provided in Subpart D, Part 268 as incorporated by reference at 310 CMR 30.750(1), namely lead acid batteries, cadmium batteries, and radioactive lead solids; process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by 40 CFR Part 268.45, and other material, is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

Demonstration means the initial exhibition of a new technology, process or practice or a significantly new combination or use of technologies, processes or practices, subsequent to the development stage, for the purpose of proving technological feasibility and cost effectiveness.

Department means the Massachusetts Department of Environmental Protection.

Designated Facility means a person or facility described in 310 CMR 30.305 that has been designated on the manifest by the generator pursuant to 310 CMR 30.310 (manifesting requirements).

30.010: continued

Destination Facility means a facility that is authorized to receive and recycle, treat or dispose of a particular category of universal waste, except those management activities described in 310 CMR 30.1034(1), (3) through (5) as well as 310 CMR 30.1044(1), (3) through (5). A facility at which a particular category of universal waste is only accumulated is not a destination facility for purposes of managing that category of universal waste. If located in Massachusetts, these facilities shall be properly licensed in compliance with 310 CMR 30.800, or be properly permitted in compliance with 310 CMR 30.290.

Dike means an embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

Directly to a Facility means a hazardous waste or regulated recyclable material shipment is collected by a transporter at the point of generation and remains in transportation at all times from the time of acceptance from the generator to delivery of the shipment at the destination facility designated on the manifest or shipping paper by the generator. Such shipments are in transportation as long as the hazardous waste or regulated recyclable material remains loaded on the transporter's vehicle after acceptance and until delivery to the designated destination facility. However, the transfer of containers of hazardous waste and regulated recyclable material between vehicles at transfer stations, as allowed under state, federal and local laws and regulations, and receipt and intermediate storage of Class A regulated recyclable material at Massachusetts licensed treatment, storage and disposal facilities, may be considered in transportation for the purpose of 310 CMR 30.010: Directly to a Facility.

Discharge or Hazardous Waste Discharge means the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying or dumping of hazardous waste into or on any land, surface water, ground water, or into the atmosphere.

Disposal means the discharge, deposit, injection, dumping, spilling, leaking, incineration or placing of any hazardous waste into or on any land or water so that such hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.

Disposal Facility. (See 310 CMR 30.010: Facility.)

Dredged Material means sediment and associated materials that are moved from below the mean high tide line for coastal waters and below the high water mark for inland waters during dredging activities.

Drinking Water Supplies means ground or surface water currently in use or which may reasonably be expected to be used in the future as sources of public or private drinking water supply.

Drip Pad means an engineered structure consisting of a curbed, free-draining base, constructed of non-earthen materials and designed to convey preservative kick-back or drippage from treated wood, precipitation, and surface water run-on to an associated collection system at wood preserving plants, and which is eligible for interim status and managed in compliance with the provisions of 310 CMR 30.099(6)(n).

Drum-top Crusher means a crushing unit, and the container it is mounted to, that is designed to crush mercury-containing lamps.

DOT means the United States Department of Transportation.

Elementary Neutralization means the reacting of an acid or base with an aqueous corrosive hazardous waste in an elementary neutralization unit for the intended and actual purpose of rendering the waste less hazardous or nonhazardous.

30.010: continued

Elementary Neutralization Unit means a device which:

- (a) is used for neutralizing aqueous wastes that are hazardous solely because they exhibit the corrosivity characteristic defined in 310 CMR 30.123(1)(a) or that are listed in 310 CMR 30.130 solely because they exhibit the corrosivity characteristic; and
- (b) meets the definition of a tank, tank system or container.

Eligible Academic Entity means a college or university, or a nonprofit research institute that is owned by or has a formal written affiliation agreement with a college or university, or a teaching hospital that is owned by or has a formal written affiliation agreement with a college or university.

Empty Container. (See 310 CMR 30.106.)

Environmental Monitor means the publication of that name issued by the MEPA Unit of the Massachusetts Executive Office of Environmental Affairs pursuant to 301 CMR 11.00: *MEPA Regulations*.

EPA means the United States Environmental Protection Agency.

EPA Hazardous Waste Number means the number assigned by EPA to each listed hazardous waste or to each hazardous waste characteristic in 40 CFR Part 261. (See also Massachusetts Hazardous Waste Number.)

EPA Identification Number means the number assigned by the Department to each generator, transporter, user, and treatment, storage, or disposal facility. (See also Massachusetts Identification Number.)

Equivalent Method means any testing or analytical method approved, in writing, by the Administrator based upon the standards and procedures prescribed by 40 CFR 260.20 and 260.21. The Department will consider any method so approved to be an acceptable method under the circumstances for which it was approved even if the method does not yet appear within "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication *SW-846*, as incorporated by reference at 310 CMR 30.012.

Existing Hazardous Waste Incinerator. (See 310 CMR 30.010: Existing Unit.)

Existing Hazardous Waste Management (HWM) Facility or Existing Facility means a facility which was in operation, or for which construction commenced, on or before November 19, 1980. A facility has commenced construction if:

- (a) The owner or operator has obtained the Federal, State and local approvals or permits necessary to begin physical construction; and
- (b) either:
 1. A continuous on-site, physical construction program has begun; or
 2. The owner or operator has entered into contractual obligations-which cannot be cancelled or modified without substantial loss-for physical construction of the facility to be completed within a reasonable time.

Existing Installation means a manufacturing plant or other industrial establishment which was in existence on October 15, 1983, or for which construction had commenced on or before October 15, 1983.

Existing Pile. (See 310 CMR 30.010: Existing Unit.)

Existing Portion means the existing unit's land surface area which was specifically included in the original Part A permit application and on or in which hazardous waste(s) was placed prior to the issuance of a license pursuant to 310 CMR 30.000.

30.010: continued

Existing Surface Impoundment or Existing Impoundment. (See 310 CMR 30.010: Existing Unit.)

Existing Tank System or Existing Component means a tank system or component that:

- (a) is used for the storage or treatment of hazardous waste and that is in operation, or for which installation commenced on or prior to:
 1. July 14, 1986 for those tank systems which are owned or operated by a Small Quantity Generator, are new underground tanks, or are tanks which cannot be entered for inspection (*i.e.*, tanks which are subject to the requirements of the federal Hazardous and Solid Waste Amendments); or
 2. December 1, 1988 for all other types of tank systems (*e.g.*, tank systems which are not owned or operated by a Small Quantity Generator and are either existing underground tanks or tanks that can be entered for inspection).
- (b) Installation will be considered to have commenced if the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system and if either:
 1. a continuous on-site physical construction or installation program has begun, or
 2. the owner or operator has entered into contractual obligations, which cannot be cancelled or modified without substantial loss, for physical construction of the site or installation of the tank system to be completed within a reasonable time.

Existing Unit means a storage, treatment or disposal unit (*e.g.*, existing surface impoundment, tank, pile, incinerator) which was specifically included in the original Part A permit application and in which hazardous waste(s) was placed prior to the issuance of a license pursuant to 310 CMR 30.000, or a unit which is otherwise lawfully in use at the time the license application is submitted to the Department.

Existing Well means a well that is in existence and being used to supply a person with drinking water on the date that an owner or operator of a proposed facility submits:

- (a) a license application to the Department pursuant to 310 CMR 30.000; or
- (b) a notice of intent pursuant to 990 CMR 4.00: *Notice of Intent*, whichever is submitted first.

Expanding Facility or Expansion means an increase in the design capacity or a process used at a facility to treat, store or dispose of hazardous waste beyond that design capacity specified in the facility's original Part A permit application.

Facility means:

- (a) All contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (*e.g.*, one or more landfills, surface impoundments, or combinations of them);
- (b) For the purpose of implementing corrective action under 310 CMR 30.602(9) and (10) or 40 CFR 264.101, all contiguous property under the control of the owner or operator required to seek a permit under subtitle C of RCRA. This definition also applies to facilities implementing corrective action under RCRA Section 3008(h) and M.G.L. c. 21E;
- (c) Notwithstanding 310 CMR 30.010: Facility(b), a remediation waste management site as defined in 40 CFR 260.10 is not a facility that is subject to corrective action requirements, but nevertheless will be subject to such requirements if the site is located within a facility as defined in 310 CMR 30.010: Facility(b).

Facility Having Interim Status Pursuant to RCRA or Interim Status Facility means a facility which satisfies the qualifications of 310 CMR 30.099(1).

Facility Mailing List means the mailing list for a facility maintained by the Department in accordance with 310 CMR 30.833(4)(a)8.

30.010: continued

Federal, State and Local Approvals or Permits Necessary to Begin Physical Construction means permits and approvals required under Federal, State or local hazardous waste control statutes, regulations or ordinances.

Final Closure means the act or process of deactivating all hazardous waste management units at a facility in compliance with all applicable closure requirements so that hazardous waste management activities are no longer conducted at the facility except as provided in 310 CMR 30.200 or 30.300.

Food-chain Crop means tobacco, any crop grown for human consumption, and any crop grown for feed for animals whose products are consumed by humans.

Formal Written Affiliation Agreement means:

(a) for a nonprofit research institute, a written document that establishes a relationship between institutions for the purposes of research and/or education and is signed by authorized representatives, as defined at 310 CMR 30.010, from each institution. A relationship on a project-by-project or grant-by-grant basis is not considered a formal written affiliation agreement.

(b) for a teaching hospital, a master affiliation agreement and program letter of agreement, as defined by the Accreditation Council for Graduate Medical Education, with an accredited medical program or medical school.

Fossil Fuel means coal, coke, distillate oil, residual oil, used oil fuel, or natural or manufactured gas.

Fossil Fuel Utilization Facility means any furnace(s), fuel burning equipment, boiler(s), space heater(s), or any appurtenance thereto used for the burning of fossil fuels, for the emission of products of combustion, or in connection with any process which generates heat and may emit products of combustion, but does not mean a motor vehicle.

Free Liquid means any liquid which readily separates from the solid portion of a waste under ambient temperature and pressure.

Freeboard means the vertical distance between the top of an open tank or surface impoundment dike, and the surface of the waste contained therein.

Fuel means any solid, liquid, or gaseous material used for the production of heat or power by burning.

Functionally Equivalent Component means a component which performs the same function or measurement and which meets or exceeds the performance specifications of another component.

Generator means any person, by site, whose act or process produces hazardous waste identified or listed in 310 CMR 30.100, or whose act first causes a hazardous waste to become subject to regulation.

Ground Water means water below the land surface in a zone of saturation.

Hazardous Debris means debris that contains one or more wastes listed in 310 CMR 30.130 through 30.136, or that exhibits any of the characteristics of hazardous waste identified in 310 CMR 30.120 through 30.125.

Hazardous Waste means a waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical or infectious characteristics may cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness or pose a substantial present or potential hazard to human health, safety, or welfare or to the environment when improperly treated, stored, transported, used or disposed of, or otherwise managed. See 310 CMR 30.104 for possible exemptions. Hazardous waste includes the hazardous waste component(s) of mixed waste. See 310 CMR 30.010: Mixed Waste.

30.010: continued

Hazardous Waste Constituent or Constituent means an element or compound that caused the Department to list the waste as a hazardous waste in 310 CMR 30.131 through 30.136 (*See* 310 CMR 30.160, which lists these constituents) or a contaminant listed in 310 CMR 30.125.

Hazardous Waste Fuel means a regulated recyclable material, other than a used oil fuel, that:

- (a) is burned for energy recovery in an industrial or utility boiler or in an industrial furnace; and
- (b) is:
 - 1. presumed to be hazardous waste fuel (*see* 310 CMR 30.215); or
 - 2. a mixture of any hazardous waste or any material presumed to be hazardous waste fuel when combined with any other material; and
- (c) is managed in compliance with 310 CMR 30.200.

Hazardous Waste Incinerator means any incinerator used for the reduction of hazardous waste, or in which any hazardous waste feed is caused, suffered, allowed, or permitted to be burned, except infectious waste regulated by the Department of Public Health pursuant to M.G.L. c. 111, §§ 3, and 51 through 56.

Hazardous Waste Management Unit means a contiguous area of land on or in which is placed hazardous waste or tanks or containers of hazardous waste, or the largest area in which there is a significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system, and a container storage area. A container alone does not constitute a hazardous waste management unit. A container or tank plus the land or pad upon which the container or tank is placed does constitute a hazardous waste management unit.

Hazardous Waste Number. (*See* EPA Hazardous Waste Number and Massachusetts Hazardous Waste Number.)

Identification Number. (*See* EPA Identification Number.)

Inactive Portion means that portion of a facility which is not operated after November 19, 1980. (*See* also 310 CMR 30.010: Active Portion and Closed Portion.)

Incineration means controlled combustion in an enclosed device, the primary purpose of which is to thermally break down hazardous waste.

Incinerator means any enclosed device using controlled flame combustion that neither meets the criteria for classification as a boiler nor is listed as an industrial furnace.

Incompatible Waste means a hazardous waste which is unsuitable for:

- (a) placement in a particular device or facility because it may cause corrosion or decay of containment materials (*e.g.*, container inner liners or tank walls); or
- (b) commingling with another waste or material under uncontrolled conditions because the commingling might produce heat or pressure, fire or explosion, violent reaction, toxic dusts, mists, fumes, or gases, or flammable fumes or gases. (*See* 310 CMR 30.561 for examples.)

Individual Generation Site means the contiguous site at or on which one or more hazardous wastes are generated. An individual generation site, such as a large manufacturing plant, may have one or more sources of hazardous waste but is considered a single or individual generation site if the site or property is contiguous.

Industrial Boiler means a boiler that is:

- (a) located on the site of a facility engaged in a manufacturing process in which substances are transformed into new products, including the component parts of products, by mechanical or chemical processes, or
- (b) used in conjunction with a greenhouse.

30.010: continued

Industrial Furnace means any of the following enclosed devices that are integral components of a manufacturing process and that use controlled flame devices to accomplish recovery of materials or energy:

- (a) cement kilns.
- (b) lime kilns.
- (c) aggregate kilns.
- (d) phosphate kilns.
- (e) coke ovens.
- (f) blast furnaces.
- (g) smelting, melting, or refining furnaces (including pyrometallurgical devices such as cupolas, reverberator furnaces, sintering machine, roasters, and foundry furnaces).
- (h) titanium dioxide chloride process oxidation reactors.
- (i) methane reforming furnaces.
- (j) pulping liquor recovery furnaces.
- (k) combustion devices used in the recovery of sulphur values from spent sulphuric acid.

Inject means to emplace fluid into a formation by gravity or greater pressure through a well.

Injection Well means a well into which fluids are injected. (See also 310 CMR 30.010: Underground Injection.)

Inner Liner means a continuous layer of material placed inside a tank or container which protects the structural materials of the tank or container from the contained waste or reagents used to treat the waste.

Interim Status. (See 310 CMR 30.010: Facility Having Interim Status Pursuant to RCRA or Interim Status Facility.)

Interim Zone II means the area within ½ mile radius of a public water supply wellhead. Interim Zone II is used when a hydrogeologically defined Zone II has not been established. (See 310 CMR 30.010: Zone II.)

International Shipment means the transportation of hazardous waste into or out of the jurisdiction of the United States.

Key Staff Individual means an individual who is directly responsible for the operation of a hazardous waste activity, or who supervises or oversees one or more individuals responsible for the operation of a hazardous waste activity.

Laboratory (for purposes of 310 CMR 30.354 only) means an area owned by an eligible academic entity where relatively small quantities of chemicals and other substances are used on a non-production basis for teaching or research (or diagnostic purposes at a teaching hospital) and are stored and used in containers that are easily manipulated by one person. Photo laboratories, art studios, and field laboratories are considered laboratories. Areas such as chemical stockrooms and preparatory laboratories that provide a support function to teaching or research laboratories (or diagnostic laboratories at teaching hospitals) are also considered laboratories.

Laboratory Clean-out means an evaluation of the inventory of chemicals and other materials in a laboratory that are no longer needed or that have expired and the subsequent removal of those chemicals or other unwanted materials from the laboratory. A clean-out may occur for several reasons. It may be on a routine basis (e.g., at the end of a semester or academic year) or as a result of a renovation, relocation, or change in laboratory supervisor or occupant. A regularly scheduled removal of unwanted material as required by 310 CMR 30.354(8) does not qualify as a laboratory clean-out.

Laboratory Worker means a person who handles chemicals and/or unwanted material in a laboratory and may include, but is not limited to, faculty, staff, post-doctoral fellows, interns, researchers, technicians, supervisors, managers, and principal investigators. A person does not need to be paid or otherwise compensated for his or her work in the laboratory to be considered a laboratory worker. Undergraduate and graduate students in a supervised classroom setting are not laboratory workers.

30.010: continued

Land Disposal means placement in or on the land and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave, or placement in a concrete vault, or bunker intended for disposal purposes.

Land Subject to Flooding means land area which is within the estimated maximum lateral extent of floodwater which will theoretically result from the statistical 100-year frequency storm or, as the case may be, from the statistical 500-year frequency storm.

Land Treatment Facility means a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface so as to render such waste less hazardous or non-hazardous by degradation, transformation, or immobilization processes occurring in or on the soil. Such facilities are disposal facilities if waste will remain after closure. The hazardous waste management unit in which the above described activities occur is also referred to as a land treatment unit.

Land Treatment Unit. (See 310 CMR 30.010: Land Treatment Facility.)

Landfill means a hazardous waste disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a pile, a land treatment facility, a surface impoundment, an injection well, a salt dome formation, a salt bed formation, an underground mine, a cave or a corrective action management unit.

Landfill Cell means a discrete volume of a hazardous waste landfill for which a liner is used to provide isolation of hazardous waste from adjacent cell(s) or waste(s). Examples of landfill cells are trenches and pits.

Large Quantity Generator of Class A Regulated Recyclable Material (See 310 CMR 30.010: Small Quantity Generator or Large Quantity Generator of Class A Regulated Recyclable Material).

Large Quantity Handler of Universal Waste means a universal waste handler that accumulates 5,000 kilograms or more total of universal waste at any time. This designation as a large quantity handler of universal waste is retained until such time as a change of status request is received by the Department in compliance with 310 CMR 30.1043, and through the end of the calendar year in which the change of status request was received.

Leachate means any liquid, including any suspended components in a liquid, that has percolated through or drained from hazardous waste.

Leak Detection System means a system capable of detecting the failure of either the primary or secondary containment structure or detecting the presence of hazardous waste or accumulated liquid in the secondary containment structure. Such a system must consist of an interstitial monitoring device designed to detect continuously and automatically, and to signify with a visual or audible alarm, the failure of the primary or secondary containment structure or the presence of hazardous waste into the secondary containment structure.

Legal Defense Costs means expenses that an insurer incurs in defending against claims of any person, other than the insured or the insurer, brought pursuant to an insurance policy.

License means the written approval, on a form prescribed by the Department, issued pursuant to M.G.L. c. 21C, to collect, transport, treat, store, use, or dispose of hazardous waste.

Licensee or Hazardous Waste Licensee means a person licensed, pursuant to M.G.L. c. 21C, to undertake the collection, transportation, storage, treatment, use, or disposal of hazardous wastes.

Liner means a continuous layer of natural or man-made material(s) which is beneath or on the sides of a surface impoundment, waste pile, landfill, or landfill cell, and which restricts the downward or lateral escape of hazardous waste, hazardous waste constituents or leachate.

30.010: continued

Loading Rate means the mass or volume of waste applied to a unit area of land per unit time.

Low-level Mixed Waste (LLMW) means a waste that contains both low-level radioactive waste and hazardous waste.

Low-level Radioactive Waste (LLW) means a radioactive waste which contains source, special nuclear, or byproduct material, and which is not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in the Atomic Energy Act of 1954, § 11e.(2). (See also 10 CFR 61.2 for the definition of “waste” promulgated by the Nuclear Regulatory Commission.)

Manifest means the shipping document EPA Form 8700-22 (including, if necessary, EPA Form 8700-22A), originated and signed by the generator or offeror in accordance with the instructions in 40 CFR part 262, Appendix and the applicable requirements of 40 CFR parts 262 through 265, as in effect on July 1, 2006.

Manifest Tracking Number means the alphanumeric identification number (*i.e.*, a unique three-letter suffix preceded by nine numerical digits), which is pre-printed in Item 4 of the Manifest by a registered source.

Massachusetts Hazardous Waste Number means the number assigned by the Department to each hazardous waste which is listed by the Department and which does not have an EPA hazardous waste number.

Massachusetts Identification Number means the number assigned by the Department to each Very Small Quantity Generator, as described in 310 CMR 30.353, or Small Quantity Generator of waste having only Massachusetts hazardous waste numbers, as described in 310 CMR 30.351.

Media means soils, groundwater and sediments but not debris or other wastes such as sludges.

Mercury-containing Device means any electrical product or component (excluding batteries, lamps and thermostats) which contains elemental mercury that is necessary for its operation and is housed within an outer metal, glass or plastic casing. Mercury-containing devices include, but are not limited to, thermocouples, thermometers, manometers, barometers, sphygmomanometers, electrical switches and relays, as well as certain gas flow regulators and water meters.

Mercury-containing Lamp means any bulb or tube portion of an electric lighting device specifically designed to produce radiant energy including, but not limited to, incandescent, fluorescent, high intensity discharge, and neon lamps in which mercury is purposefully introduced by the manufacturer for the operation of the lamp.

Mining Overburden Returned to the Mine Site means any material overlying an economic mineral deposit which is removed to gain access to that deposit and is then used for reclamation of a surface mine.

Miscellaneous Unit means a hazardous waste management unit where hazardous waste is treated, stored, or disposed of and that is not one of the following: a container, tank, surface impoundment, waste pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, or an interim status containment building managed in compliance with 310 CMR 30.099, corrective action management unit, or unit excluded from licensing requirements pursuant to 310 CMR 30.801, research facility, or staging pile.

Mixed Waste means, any waste that contains both hazardous waste and source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended, 43 U.S.C. §§ 2011 *et seq.* For purposes of 310 CMR 30.010: Mixed Waste, radioactive waste oil shall not be considered a mixed waste, and shall be exempt from all provisions of 310 CMR 30.000. Mixed wastes that are exempted by the Nuclear Regulatory Commission (NRC) Beneath Regulatory Concern shall be regulated as hazardous wastes subject to all applicable provisions of 310 CMR 30.000.

30.010: continued

Municipal or Industrial Wastewater Treatment Facility Permitted under M.G.L. c. 21, § 43 means:

- (a) a publicly owned treatment works having a permit issued pursuant to 314 CMR 2.00: *Permit Procedures*, and 314 CMR 3.00: *Surface Water Discharge Permit Program*, or 314 CMR 5.00: *Ground Water Discharge Permit Program*; or
- (b) a wastewater treatment unit permitted pursuant to 314 CMR 2.00: *Permit Procedures*, and 314 CMR 3.00: *Surface Water Discharge Permit Program*, or 314 CMR 5.00: *Ground Water Discharge Permit Program* which treats, or treats and accumulates incidental to such treatment, influent wastewater which is a hazardous waste; or
- (c) a surface impoundment permitted under 314 CMR 2.00: *Permit Procedures*, and 314 CMR 3.00: *Surface Water Discharge Permit Program*, or 314 CMR 5.00: *Ground Water Discharge Permit Program* which:
 - 1. treats an influent wastewater which is a hazardous waste; or
 - 2. treats and accumulates incidental to such treatment, a wastewater treatment sludge which is a hazardous waste.

If a treatment works receives hazardous waste from one or more off-site sources, all treatment, storage and disposal units, and all accumulation at the site of the treatment works, are regulated under M.G.L. c. 21C and are not part of a "municipal or industrial wastewater treatment facility permitted under M.G.L. c. 21, § 43". However, the discharge is still subject to regulation under M.G.L. c. 21, § 43.

Naturally Occurring and/or Accelerator-produced Radioactive Material (NARM) means radioactive materials that:

- (a) Are naturally occurring and are not source, special nuclear, or by-product materials defined by the Atomic Energy Act of 1954; or
- (b) Are produced by an accelerator.

New Facility means any facility which is not an existing facility.

New Hazardous Waste Incinerator. (See 310 CMR 30.010: New Unit.)

New Installation means a manufacturing plant or other industrial establishment which was not in existence on October 15, 1983 or for which construction had not begun on or before October 15, 1983.

New Pile. (See 310 CMR 30.010: New Unit.)

New Surface Impoundment or New Impoundment. (See 310 CMR 30.010: New Unit.)

New Tank (See 310 CMR 30.010: New Unit.)

New Tank System or New Tank Component means a tank system or component that is used for the storage or treatment of hazardous waste and for which installation commenced after:

- (a) July 14, 1986 for those tank systems which are owned or operated by a Small Quantity Generator, are new underground tanks, or are tanks which cannot be entered for inspection (*i.e.*, tanks which are subject to the requirements of the federal Hazardous and Solid Waste Amendments); or
- (b) December 1, 1988 for all other types of tank systems (*e.g.*, tank systems which are not owned or operated by a Small Quantity Generator and are either existing underground tanks or tanks that can be entered for inspection).

(See also 310 CMR 30.010: Existing Tank System regarding when installation will be considered to have commenced.)

New Unit means a treatment, storage or disposal unit (*e.g.*, new impoundment, tank, pile, incinerator) which is not an existing unit.

No Free Liquids (as used in 310 CMR 30.104(3)(i) and (j)) means that solvent-contaminated wipes may not contain free liquids as determined by Method 9095B (Paint Filter Liquids Test), included in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA Publication *SW-846*), which is incorporated by reference, and that there is no free liquid in the container holding the wipes.

30.010: continued

Noisome or Unwholesome Odor means an objectionable odor detectable off the site of a facility.

Non-profit Research Institute means an organization that conducts research as its primary function and files as a nonprofit organization under the tax code pursuant to 26 U.S.C. 501(c)(3).

Non-sudden Accidental Occurrence means an accidental occurrence which takes place over time and which involves continuous or repeated exposure to conditions.

Oil means petroleum in any form including crude oil, fuel oil, petroleum derived synthetic oil and refined oil products, including petroleum distillates such as mineral spirits and petroleum naphtha composed primarily of aliphatic hydrocarbons. It does not mean petrochemicals or animal or vegetable oils.

Open Burning means the combustion of any material without the following characteristics:

- (a) Control of combustion air to maintain adequate temperature for efficient combustion,
- (b) Containment of the combustion-reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, and
- (c) Control of emission of the gaseous combustion products.

Open Burning includes above or underground smoldering fires. (See also 310 CMR 30.010: Thermal Treatment.)

Operator means the person responsible for the over-all operation of a facility.

Owner means any person who has legal ownership of a facility or any part of a facility, or who has effective control over an activity subject to regulation under 310 CMR 30.000.

Partial Closure means the act or process of deactivating one or more hazardous waste management units at a facility in compliance with applicable closure requirements, while one or more other hazardous waste management units at the facility remain, or are intended to remain, active or in operation.

PCBs or Polychlorinated Biphenyls means any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substance.

Person means any agency or political subdivision of the federal government or Commonwealth, any state, public or private corporation or authority, individual, trust, firm, joint stock company, partnership, association, or other entity, and any officer, employee or agent of said person, and any group of said persons.

Personnel or Facility Personnel means all persons who work at or for, or oversee the operations of, a hazardous waste facility or a hazardous waste transporter, and whose actions or failure to act may result in non-compliance with the requirements of M.G.L. c. 21C or 310 CMR 30.000.

Pesticide means a substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant; provided that the term "Pesticide" shall not include any article that is a "new animal drug" within the meaning of § 201(w) of the Federal Food, Drug and Cosmetic Act, or that has been determined by the Secretary of the United States Department of Health, Education and Welfare not to be a new animal drug by a regulation establishing conditions of use for the article, or that is an animal feed within the meaning of § 201(x) of the Federal Food, Drug and Cosmetic Act.

30.010: continued

Petrochemical means an individual organic chemical compound for which petroleum or natural gas is the ultimate raw material, except that aliphatic hydrocarbon compounds, which maintain, after use, closed cup flashpoints equal to or greater than 140°F (and which are not otherwise a characteristic or listed hazardous waste) are oils. A mixture of a petrochemical and a petroleum distillate that has a closed cup flashpoint equal to or greater than 140°F (and which is not otherwise a characteristic or listed hazardous waste if discarded) is oil.

[NOTE: Oil refinery conversion processes change the size and/or structure of hydrocarbon molecules in petroleum distillates to produce petrochemicals (e.g., olefinic and aromatic organic compounds) and their derivatives (e.g., monomers used to produce plastics, synthetic fibers and rubbers).]

Pile means any non-containerized aggregation of solid, nonflowing hazardous waste that is being treated or stored.

Planned Public Underground Drinking Water Source means groundwater within land which has been acquired for drinking water purposes by a city, town, district, or other body politic which supplies drinking water to the public, regardless of the sustained yield of the groundwater source, provided that the land is acquired for that purpose before the date that the owner or operator of a proposed facility submits:

- (a) a license application to the Department pursuant to 310 CMR 30.000; or
- (b) a notice of intent pursuant to 990 CMR 4.00: *Notice of Intent*, whichever is submitted first.

Point-source means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. Point-source does not include return flows from irrigated agriculture.

Polyhalogenated Aromatic Hydrocarbons means hazardous waste listed in 310 CMR 30.131 and having any of the following Hazardous Waste Numbers: F020, F021, F022, F023, F026, or F027.

Post-closure means the period after the time closure has been completed and approved by the Department.

Post-closure Plan means the plan for post-closure care prepared pursuant to 310 CMR 30.590.

Potential Private Underground Drinking Water Source means a groundwater source capable of sustaining a yield of between two and 100 gallons per minute of drinking water and which has less than 10,000 mg./liter total dissolved solids. This definition does not include groundwater beneath an area which is served by a public water system on the date that the owner or operator of a proposed facility submits:

- (a) a license application to the Department pursuant to 310 CMR 30.000; or
- (b) A notice of intent pursuant to 990 CMR 4.00: *Notice of Intent*, whichever is submitted first.

Potential Public Underground Drinking Water Source means a groundwater source capable of sustaining a yield of 100 gallons or more per minute of drinking water and which has less than 10,000 mg./liter total dissolved solids. Potential Public Underground Drinking Water Source does not include an aquifer which has been exempted from being an underground source of drinking water pursuant to 310 CMR 27.00: *Underground Water Source Protection*.

Precious Metals means gold, silver, platinum, palladium, irridium, osmium, rhodium, or ruthenium, or any combination of these.

Private Underground Drinking Water Source. (See 310 CMR 30.010: Potential Private Underground Drinking Water Source and Existing Well.)

Public Underground Drinking Water Source. (See 310 CMR 30.010: Actual Public Underground Drinking Water Source, Planned Underground Drinking Water Source, and Potential Public Underground Drinking Water Source.)

30.010: continued

Public Water System means a system for the provision to the public of piped water for human consumption as defined in 310 CMR 22.02: *Definitions*.

Publicly Owned Treatment Works or POTW means any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a public entity. A POTW includes any sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

RCRA means the federal Solid Waste Disposal Act as revised by the Resource Conservation and Recovery Act of 1976, 42 U.S.C. §§ 6901 *et. seq.*

Reactive Acutely Hazardous Unwanted Material means an unwanted material that is one of the acutely hazardous commercial chemical products listed in 310 CMR 30.136 for reactivity.

Recyclable Material means any material other than an inherently waste-like material that is used, reused or reclaimed.

- (a) Used or reused material means any material that is either:
 - 1. employed as an ingredient (including use as an intermediate) in an industrial process to make a product (for example, distillation bottoms from one process used as feedstock in another process). However, a material will not satisfy this condition if distinct components of the material are recovered as separate end products (as when metals are recovered from metal-containing secondary materials); or
 - 2. employed in a particular function or application as an effective substitute for a commercial product (for example, spent pickle liquor used as phosphorous precipitant and sludge conditioner in wastewater treatment).
- (b) Reclaimed material means any material that is processed to recover a usable product or that is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents.

Refuse means all solid or liquid waste materials, including garbage and rubbish.

Regional Administrator means the Regional Administrator for the EPA Region in which the facility is located, or his or her designee.

Regulated Recyclable Material means any recyclable material which:

- (a) has a characteristic described in 310 CMR 30.120 through 310 CMR 30.125;
- (b) is listed or otherwise described in 310 CMR 30.131 through 310 CMR 30.136; or
- (c) has been determined by the Department to be a hazardous waste pursuant to 310 CMR 30.144.

Release means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment, but excludes:

- (a) emissions from the exhaust of an engine;
- (b) release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in 42 U.S.C. § 2014, if such a release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under 42 U.S.C. § 2210;
- (c) the normal application of fertilizer;
- (d) the application of pesticides in a manner consistent with their labeling; and
- (e) the application of residuals in accordance with 310 CMR 32.00: *Land Application of Sludge and Septage*.

Representative Sample means a sample of a universe or whole (*e.g.*, waste pile, lagoon, ground water) which can be expected to exhibit the average properties of the universe or whole.

30.010: continued

Research Facility means a site or works at which research studies are conducted or where hazardous waste is otherwise subjected to an innovative and experimental treatment, recycling, or disposal technology or other process for which permit or license standards have not been promulgated under 310 CMR 30.000. Without limiting the generality of the foregoing, such facility may consist of several operating units, and shall include all land, structures, and other appurtenances and improvements which are directly related to continuous research, development, and demonstration activity. 310 CMR 30.010: Research Facility does not include, and research facility is not, a site or works licensed or otherwise authorized pursuant to 310 CMR 30.099, 30.104(3)(b), 30.104(3)(c), 30.200, 30.801, 30.862 or 30.863 or any provision of 310 CMR 30.000 other than 310 CMR 30.864.

Research Study means the continuous research, development and demonstration activity conducted by a research facility, in which a hazardous waste is subjected to an innovative and experimental treatment, recycling or disposal technology or other process for which permit or license standards have not been promulgated under 310 CMR 30.000, and for the primary purpose of determining:

- (a) whether the waste is amenable to such process;
- (b) what pretreatment, if any, is required;
- (c) the optimal process conditions needed to achieve the desired treatment, recycling, disposal or other process result;
- (d) the efficiency of such process for a specific waste or wastes;
- (e) the characteristics and volumes of residuals from a particular process; and/or
- (f) cost effectiveness.

For the purpose of implementing 310 CMR 30.864, 310 CMR 010: Research Study also includes liner compatibility, corrosion, and other material compatibility studies and toxicological and health effects studies. Research Study does not include, and Research Study is not, an activity conducted pursuant to 310 CMR 30.099, 30.104(3)(b), 30.104(3)(c), 30.200, 30.801, 30.862, or 30.863, or a means to store, treat or dispose of hazardous waste or to employ the technology otherwise at the research facility site other than for the purpose of conducting research studies.

Response Action means any action such as assessment, containment, removal, disposal, treatment or storage undertaken as part of a corrective action performed pursuant to M.G.L. c. 21E, and 310 CMR 40.0000: *Massachusetts Contingency Plan*, Federal Superfund (CERCLA), RCRA Corrective Action or an analogous cleanup authority within another state.

Run-off means any rainwater, leachate, or other liquid that drains over land from any part of a facility.

Run-on means any rainwater, leachate, or other liquid that drains over land to any part of a facility.

Saturated Zone or Zone of Saturation means that part of the earth's crust in which all voids are filled with water.

Scrap Metal means metal particles, which would be hazardous waste if tested without additional particle size reduction including, but not limited to, finely shredded metal trimmings. Scrap metal does not include the following: metal containing process residues generated from smelting, refining, and other operations (*e.g.*, drosses, slags and sludges), liquid wastes containing metals (*e.g.*, spent acids, spent caustics, or other liquid wastes with metals in solution), liquid metal wastes (*e.g.*, liquid mercury), metal containing wastes with a significant liquid component, such as spent batteries, metal powders and intact used electronic components. (*See also* 310 CMR 30.010: Bulk Scrap Metal Item.)

Shipping Paper means an invoice, bill of lading, or other shipping document serving a similar purpose; other than a hazardous waste manifest used to document the conveyance of materials between different locations.

30.010: continued

Single Application Limiting Constituent means the compound, element or waste fraction in a hazardous waste which sets the maximum amount of hazardous waste which can be loaded onto soil per application.

Site or On-site means the same or geographically contiguous property in single ownership which may be divided by a public or private right-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along the right-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way which that person controls, and to which the public does not have access, are considered on-site property.

Sludge means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial waste water treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

Small Quantity Generator or Large Quantity Generator of Class A Regulated Recyclable Material means a person who generates 100 kilograms or more of RRM in a calendar month and/or any amount of acutely hazardous RRM, and/or accumulates 1000 kilograms or more of RRM at any one time.

Small Quantity Handler of Universal Waste means a universal waste handler who accumulates less than 5,000 kilograms total of universal waste at any time.

Soil Capacity Limiting Constituent means the compound, element or waste fraction in a hazardous waste which sets the total amount of hazardous waste which can be loaded onto soil.

Solid Waste Management Unit (SWMU) means any discernible unit at which solid wastes have been placed at any time, regardless of whether the unit was intended for the management of solid or hazardous waste. Such unit includes any area at a facility at which solid wastes have been routinely and systematically released.

Solvent-contaminated Wipe means:

- (1) A wipe that, after use or after cleaning up a spill, either:
 - (a) Contains one or more of the F001 through F005 solvents listed in 310 CMR 30.131 or the corresponding P- or U-listed solvents found in 310 CMR 30.133 and 310 CMR 30.136;
 - (b) Exhibits a hazardous characteristic found in 310 CMR 30.120 through 30.125 when that characteristic results from a solvent listed in 310 CMR 30.131; and/or
 - (c) Exhibits only the hazardous waste characteristic of ignitability found in 310 CMR 30.122 due to the presence of one or more solvents that are not listed in 310 CMR 30.131.
- (2) Solvent-contaminated wipes that contain listed hazardous waste other than solvents, or exhibit the characteristic of toxicity, corrosivity, or reactivity due to contaminants other than solvents, are not eligible for the exclusions at 310 CMR 30.104(3)(i) and (j).

Space Heater means a heating device that is used for direct heating of the area in, and adjacent to, the area in which the device is located.

Speculative Accumulation means:

- (a) accumulation or storage of material before that material is recycled; or
- (b) accumulation or storage of material in the hope or expectation, but without there being a written record indicating a commitment that the material will be recycled. Speculative accumulation shall be deemed not to be occurring if the person accumulating or storing the material persuades the Department that:
 1. the material can feasibly be recycled; and

30.010: continued

2. during the calendar year (commencing on January 1st), the amount of material that is recycled, and/or that is transferred to a different site for recycling, equals at least 75%, by weight or volume, of the sum of:

- a. the amount being accumulated on January 1st of the calendar year;
- b. the amount generated on-site during the calendar year; and
- c. the amount received from off-site during the calendar year.

To determine whether the foregoing percentage requirement has been met with respect to any particular material, the calculations shall include only material of the same type (*e.g.*, slags from a single smelting process) that is combusted as a fuel, used, reused, or recycled in the same way (*i.e.*, that is utilized in the same way or that is obtained from the same reuse or recycling process). The calculations shall not include hazardous waste that, pursuant to 310 CMR 30.140(1)(f), is not subject to regulation as hazardous waste.

Spent Material means any material that has been used and that as a result of contamination, depletion, or other factors (*e.g.*, extreme temperature) can no longer serve the purpose for which it was produced without processing.

Spill means the accidental spilling, leaking, pumping, emitting, discharging, emptying, or dumping of hazardous wastes or materials which become hazardous wastes when spilled into or on any land or water.

Storage means the containment of hazardous waste for a temporary period in a manner which does not constitute disposal, at the end of which period the hazardous waste will be used, treated, disposed of, transported or stored elsewhere.

Sudden Accidental Occurrence means an accidental occurrence which is not continuous or repeated in nature.

Sump means any pit or reservoir that meets the definition of 310 CMR 30.010: Tank and those troughs/trenches connected to it that serve to collect hazardous waste for transport to hazardous waste storage, treatment, or disposal facilities.

Surface Impoundment or Impoundment means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an aggregation of liquid hazardous waste or waste containing free liquid, and which is not an injection well. Examples of surface impoundments are: holding, storage, settling, and aeration pits, ponds, and lagoons.

Tank means a stationary device used to store or to contain hazardous waste which is constructed primarily of non-earthen materials (*e.g.*, wood, concrete, steel, plastic) which provide structural support.

Tank System means a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system.

Teaching Hospital means a hospital that trains students to become physicians, nurses or other health or laboratory personnel.

Thermal Treatment means the treatment of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. Examples of thermal treatment processes are incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. (*See also* 310 CMR 30.010: Incinerator and Open Burning.)

Thermostat means a temperature control device that contains metallic mercury in an ampoule attached to a bimetal sensing element.

30.010: continued

Threat of Release means a substantial likelihood of a release which requires action to prevent or mitigate damage to the environment which may result from such release. Circumstances which represent a threat of release include, but are not limited to, sites or vessels containing or conducting an amount of hazardous waste in excess of the reportable quantity for that hazardous waste where no release has occurred but where:

- (a) corrosion, damage, malfunction or other conditions are visible, known to exist or should be known to exist; and
- (b) where these conditions are likely to result in a release.

Trained Professional means a person who has completed the applicable training requirements of 310 CMR 30.341(1)(a) for large quantity generators, or is knowledgeable about normal operations and emergencies in accordance with 310 CMR 30.351(9)(g) for small quantity generators or is knowledgeable about normal operations and emergencies, based on training equivalent to that specified in 310 CMR 30.351(9)(g), for Very Small Quantity Generators. A trained professional may be an employee of the eligible academic entity or may be a contractor or vendor who meets the requisite training requirements.

Transfer Station means an intermediate point in the transport of hazardous wastes where such wastes are brought, stored and transferred to vehicles for movement to other intermediate points or to the point of ultimate storage, treatment, or disposal.

Transport means the movement, by vessel or carrier, of hazardous wastes from the point of generation to any intermediate point(s) or to the point(s) of ultimate storage, use, treatment, recovery or disposal.

Transportation Related Area means a parking area or other place where shipments of hazardous waste are held by a transporter during the normal course of transportation. A transportation related area shall not include a hazardous waste transfer station, school or hospital parking lot, or residentially zoned location.

Treatability Study means a study in which a hazardous waste is subjected to a treatment process to determine

- (a) whether the waste is amenable to the treatment process;
- (b) what pretreatment, if any, is required;
- (c) the optimal process conditions needed to achieve the desired treatment;
- (d) the efficiency of a treatment process for a specific waste or wastes; or
- (e) the characteristics and volumes of residuals from a particular treatment process. For the purpose of implementing 310 CMR 30.104(3)(b) and 30.104(3)(c) exemptions, 310 CMR 30.010: Treatability Study also includes liner compatibility, corrosion, and other material compatibility studies and toxicological and health effects studies. Treatability Study shall not include, and a Treatability Study is not, a means to commercially treat or dispose of hazardous waste.

Treatment means any method, technique or process, including neutralization, incineration, stabilization or solidification, designed to change the physical, chemical or biological character or composition of any hazardous waste so as to neutralize such waste or so as to render such waste less hazardous, nonhazardous, safer to transport, amenable to storage, or reduced in volume, except such method or technique as may be included as an integral part of a manufacturing process at the point of generation.

Treatment Which Is an Integral Part of the Manufacturing Process means any treatment method or technique which is at the site of generation of the waste, is not primarily for the purpose of recycling hazardous waste, and is:

- (a) Directly connected via pipes or the equivalent from an industrial production process [*i.e.*, a process which produces a product, produces an intermediate, produces a by-product, renders a service (*e.g.*, dry-cleaning), or produces a material which is used back in the production process]; and

30.010: continued

(b) Totally enclosed so that it is designed, constructed, and operated to prevent spills, leaks, or emissions of hazardous materials to the environment. A treatment unit may be deemed "totally enclosed" if it is completely contained on all sides (*i.e.*, an open-topped tank or treatment vessel shall not be deemed totally enclosed). If a treatment unit is vented, it may be deemed "totally enclosed" only if such vent(s) is/are designed to prevent overflow and emissions of gases, vapors, or aerosols where such events might occur through normal operation, equipment failure, or process upsets. This shall be accomplished through the use of suitable traps, recycle lines, sorption units, or the equivalent. If the effluent from the treatment unit discharges to surface water, ground water, or a sewer, the treatment unit may be deemed "totally enclosed" only if all discharges are in compliance with all applicable Federal, State, and local laws, regulations, and permits. If one unit operation in a series of unit operations is not "totally enclosed" or connected by pipe to the unit immediately upstream from that unit, then only unit operations upstream from that unit may be deemed "treatment which is an integral part of the manufacturing process".

Treatment Zone means a soil area of the unsaturated zone of a land treatment unit within which hazardous constituents are degraded, transformed, or immobilized.

Underground Drinking Water Source means any aquifer supplying drinking water for human consumption, an aquifer in which ground water contains less than ten thousand parts per million total dissolved solids, or an aquifer designated as such by the Department or a municipality.

Underground Injection means the subsurface emplacement of fluids through a bored, drilled or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension. (*See also 310 CMR 30.010: Injection Well.*)

Underground Tank means a device meeting the definition of 310 CMR 30.010: Tank which is resting on the adjacent surrounding surface or which has any portion of its total height below the adjacent surrounding surface.

United States means the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

Universal Waste means any of the following hazardous wastes, as further described in 310 CMR 30.1020, that are managed under the universal waste requirements of 310 CMR 30.1000:

- (a) Batteries;
- (b) Pesticides;
- (c) Thermostats;
- (d) Mercury-containing devices; and
- (e) Mercury-containing lamps.

[NOTE: Not all batteries, pesticides and lamps are hazardous waste, and therefore, they do not all qualify as universal wastes; such wastes may instead be managed as nonhazardous solid wastes.]

Universal Waste Handler:

- (a) Means:
 - 1. A generator of universal waste; or
 - 2. The owner or operator of a facility that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination.
- (b) Does not mean:
 - 1. A person who treats (except under the provisions of 310 CMR 30.1034(1), (3), (4) or (5), or 310 CMR 30.1044(1), (3), (4) or (5)), disposes of, or recycles universal waste; or
 - 2. A person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

30.010: continued

Universal Waste Transfer Facility means any transportation-related facility, including loading docks, parking areas, storage areas and other similar areas where shipments of universal waste batteries are held during the normal course of transportation for ten days or less.

Universal Waste Transporter means a person engaged in the off-site transportation of universal waste by air, rail, highway, or water.

Unsaturated Zone or Zone of Aeration means the zone between the land surface and the water table.

Unused Waste Oil means oil that is superfluous or abandoned fuel, storage tank bottoms, clean-out sludge, sludge from the separation of unused oil from a nonhazardous waste, contaminated oil resulting from the clean-up of a release of oil, and any other waste oil that is not used waste oil.

Unwanted Material means any chemical, mixtures of chemicals, products of experiments or other material from a laboratory that is no longer needed, wanted or usable in the laboratory and that is destined for hazardous waste determination by a trained professional. Unwanted materials include reactive acutely hazardous unwanted materials and materials that may eventually be determined not to be a waste or a hazardous waste, pursuant to 310 CMR 30.010 and 310 CMR 30.302. If an eligible academic entity elects to use another equally effective term in *lieu* of "unwanted material," as allowed by 310 CMR 30.354(6)(a)1.a., the equally effective term has the same meaning and is subject to the same requirements as "unwanted material" under 310 CMR 30.354.

Uppermost Aquifer means the aquifer nearest the natural ground surface and any lower aquifer that is hydraulically interconnected with this aquifer.

Use Constituting Disposal means the application or placement on the land of a recyclable material either without mixing with any other substance(s), or after mixing or combining with any other substances.

Used Oil Fuel means a regulated recyclable material:

- (a) that is recycled by being burned for energy recovery; and
- (b) that is:
 - 1. waste oil; or
 - 2. any fuel, other than hazardous waste fuel, produced from waste oil by processing, blending, or other treatment; and
- (c) that is managed in compliance with 310 CMR 30.200.

Used Oil Fuel Fired Space Heater means a space heater that burns used oil fuel for energy recovery.

Used Waste Oil means used and/or reprocessed, but not subsequently re-refined, oil that has served its original intended purpose. Such oil includes, but is not limited to, fuel oil, engine oil, gear oil, cutting oil, petroleum distillates such as mineral spirits and petroleum naphtha composed primarily of aliphatic hydrocarbons, transmission fluid, and dielectric fluid. It does not mean petrochemicals or animal or vegetable oils.

USPS means the United States Postal Service.

Utility Boiler means a boiler that is used to produce electric power, steam, or heated or cooled gases or fluids for sale.

Vehicle Identification Device means the document which identifies a specific vehicle used to transport hazardous waste, and which is issued by the Department pursuant to M.G.L. c. 21C, § 7.

30.010: continued

Very Small Quantity Generator of Class A Regulated Recyclable Material (RRM) means a person who generates less than 100 kilograms of RRM in a calendar month, no acutely hazardous RRM, and accumulates less than 1000 kilograms of RRM at any one time.

Vessel means every type of watercraft used or capable of being used as a means of transportation on the water.

Washout means the movement of hazardous waste from the active portion of a facility as a result of flooding.

Waste:

- (a) Waste means any discarded material. A waste may be a solid, liquid, semi-solid, or contained gaseous material, or any refuse or sludge, and may result from industrial, commercial, mining, or agricultural operations, or from municipal or other governmental activities, or from the activities of other persons.
- (b) Discarded material means any material that is:
 1. abandoned by being disposed of, burned, or incinerated;
 2. accumulated, stored, or treated before or in *lieu* of being disposed of, burned, or incinerated;
 3. inherently waste-like material;
 4. recycled in a manner that is not in compliance with 310 CMR 30.000.
- (c) Inherently waste-like material means material that is:
 1. hazardous waste numbered F020;
 2. hazardous waste numbered F021 (except when used as an ingredient to make a product at the site of generation);
 3. hazardous waste numbered F022;
 4. hazardous waste numbered F023;
 5. hazardous waste numbered F026;
 6. hazardous waste numbered F028; and
 7. designated as such by the Department using the following criteria:
 - a. the materials are ordinarily disposed of, burned, or incinerated; or
 - b. the materials contain one or more toxic constituents listed in 310 CMR 30.160 that are not ordinarily in raw materials or products for which the materials substitute (or are found in raw materials or products in smaller concentrations) and are not used or reused during the recycling process; and
 - c. the material may pose a substantial hazard to public health, safety, or welfare, or the environment when recycled.

Waste Oil means used or unused waste oil (or any mixture thereof) that is not otherwise hazardous pursuant to 310 CMR 30.120 through 30.136, except that used waste oil with a flash point greater than or equal to 100°F and less than 140°F (solely through use) remains subject to regulation as used waste oil.

Working Container means a small container (*i.e.*, two gallons or less) that is in use at a laboratory bench, hood, or other work station, to collect unwanted material from a laboratory experiment or procedure.

Waste Pile. (*See* 310 CMR 30.010: Pile.)

Wastewater Treatment Unit means a device which:

- (a) Is part of a wastewater treatment facility which is subject to regulation pursuant to § 307(b) (pretreatment provisions) or § 402 (NPDES program or equivalent state program) of the Federal Clean Waters Act; and
- (b) Either:
 1. treats or recycles an influent wastewater which is a hazardous waste; or
 2. treats or recycles a wastewater treatment sludge which is a hazardous waste; or
 3. is used for the accumulation or storage of a wastewater treatment sludge which is a hazardous waste, prior to the reintroduction of such sludge into the treatment process; and

30.010: continued

(c) meets the definition of a tank or tank system.

310 CMR 30.010: Wastewater Treatment Unit does not include a unit used solely for the accumulation or storage of a wastewater treatment sludge prior to disposal on-site or prior to transportation to an off-site facility. Each such unit is subject to the requirements of 310 CMR 30.340 or 310 CMR 30.690, as the case may be.

Water (Bulk Shipment) or Bulk Shipment Water means the bulk transportation of hazardous waste which is loaded or carried onboard a vessel without containers or labels.

Watershed means an area which is drained by or drains into a hydrologic feature such as a brook, creek, swamp, stream, river, spring, lake, pond, great pond, estuary, or ocean.

Well means a bored, drilled, or driven-shaft, or a dug-hole, whose depth is greater than its largest surface dimension.

Well Injection. (See 310 CMR 30.010: Underground Injection.)

Wetlands means any land or water area subject to M.G.L. c. 131, § 40, and as may be further defined in the regulations promulgated pursuant thereto, 310 CMR 10.00: *Wetlands Protection*.

White Oil means a petroleum based oil which contains no aromatic hydrocarbons and is transparent, colorless, odorless, and tasteless when cold. Synonyms for white oil include liquid paraffin, liquid petrolatum, USP mineral oil, white mineral oil, and vaseline oil.

Wipe means a woven or nonwoven shop towel, rag, pad, or swab made of wood pulp, fabric, cotton, polyester blends, or other material.

Working Container means a small container (*i.e.*, two gallons or less) that is in use at a laboratory bench, hood, or other work station, to collect unwanted material from a laboratory experiment or procedure.

Zone 2 means the hydrogeologically defined area of contribution to a public water supply wellhead.

30.011: References to Code of Federal Regulations

(1) References to federal regulations within 310 CMR 30.000 shall refer to those regulations in effect as follows:

(a) Any reference to Title 40 of the Code of Federal Regulations (40 CFR) refers to those regulations in effect on July 1, 2008, unless otherwise specified.

(b) Any reference to Title 49 of the Code of Federal Regulations (49 CFR) refers to those regulations in effect on October 1, 2007, unless otherwise specified.

30.012: Publications Incorporated by Reference

(1) When used in 310 CMR 30.000, the following publications are incorporated by reference:

(a) "ASTM Standard Test Methods for Flash Point of Liquids by Setaflash Closed Tester," ASTM Standard D-3278-78, available from American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

(b) "ASTM Standard Test Methods for Flash Point by Pensky-Martens Closed Tester," ASTM Standard D-93-79 or D-93-80. D-93-80 is available from American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

(c) "ASTM Standard Method for Analysis of Reformed Gas by Gas Chromatography," ASTM Standard D 1946-82, available from American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

(d) "ASTM Standard Test Method for Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method)," ASTM Standard D 2382-83, available from American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

30.012: continued

- (e) "ASTM Standard Practices for General Techniques of Ultraviolet-Visible Quantitative Analysis," ASTM Standard E 169-87, available from American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.
- (f) "ASTM Standard Practices for General Techniques of Infrared Quantitative Analysis," ASTM Standard E 168-88, available from American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.
- (g) "ASTM Standard Practice for Packed Column Gas Chromatography," ASTM Standard E 260-85, available from American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.
- (h) "ASTM Standard Test Method for Aromatics in Light Naphthas and Aviation Gasolines by Gas Chromatography," ASTM Standard D 2267-88, available from American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.
- (i) "APTI Course 415: Control of Gaseous Emissions," EPA Publication *EPA-450/2-81-005*, December 1981, available from National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.
- (j) "Flammable and Combustible Liquids Code" (1977 or 1981), available from the National Fire Protection Association, 470 Atlantic Avenue, Boston, MA 02210.
- (k) "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication *SW-846* [Third Edition (November, 1986), as amended by Updates I (July 1992), II (September 1994), IIA (August 1993), IIB (January 1995), III (December 1996), IIIA (April 1998)] and IIIB (November 2004)]. The Third Edition of *SW-846* and associated updates are available for purchase from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161; or for purchase from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 512-1800. For identification of the appropriate version of applicable methods, *see* 40 CFR 260.11(3), (3)(i) through (xxvii), inclusive, which is hereby incorporated by reference.
- (l) "ASTM Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteriscope", ASTM Standard D 2879-86, available from American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

(2) The references listed in 310 CMR 30.012(1) are also available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. These incorporations by reference were approved by the Office of the Secretary of the Commonwealth of Massachusetts. These materials are incorporated as they exist on the date of approval and a notice of any change in these materials will be published in the *Massachusetts Register*.

30.020: Imminent Threats

- (1) If, in making a determination which may be the subject of an adjudicatory hearing under M.G.L. c. 30A, the Department finds that an imminent threat to the public health, welfare, safety, or to the environment could result pending the conclusion of the adjudicatory hearing requested thereon, the Department may, pursuant to M.G.L. c. 21C, § 11, order that the determination become provisionally effective and enforceable immediately upon issuance, and shall remain so notwithstanding and until the conclusion of any adjudicatory hearing procedures.
- (2) Any person aggrieved by an imminent threat finding made pursuant to 310 CMR 30.020(1) may, by the close of the next business day after the receipt of the determination, request an adjudicatory hearing for the sole purpose of adjudicating whether the determination should become provisionally effective and enforceable immediately. This adjudicatory hearing shall not be for the purpose of adjudicating the merits of the determination. If a request for hearing is not made within this deadline, the Department's finding shall be deemed assented to. Such request for hearing may be made orally, in writing, or by telephone, and the Department shall proceed to schedule such hearing, as soon as is reasonably possible, for the following purposes:
 - (a) To allow the person requesting the hearing to show cause why such order should not take effect immediately;
 - (b) To allow the person requesting the hearing to show cause why such alleged violation or violations do not constitute an imminent danger to the public health, safety, or welfare or to the environment.

30.020: continued

(3) If the Department finds there is not an imminent threat, or if the Department's finding that there is an imminent threat is rendered unenforceable by order of any court of competent jurisdiction, the remainder of the Department's determination, of which the imminent threat finding was a part, shall remain in full force and effect unless the Department or the court orders otherwise.

30.030: Presumption of Irreparable Harm

Any violation of M.G.L. c. 21C, of 310 CMR 30.000, or of any order, license, or approval issued thereunder, shall be presumed to constitute irreparable harm to the public health, safety, and welfare, and to the environment. Such presumption may be rebutted by the introduction of competent evidence.

30.040: Recording Notice of License and of Past Disposal

(1) No storage, treatment, use, or disposal for which a license is required pursuant to 310 CMR 30.000, and no construction, maintenance, or operation of a facility for which such license is required, shall proceed until the owner of the land affected thereby has recorded notice of the issuance of such license in the appropriate Registry of Deeds or, if the land in question is registered land, in the registry section of the land court for the district wherein the land lies. The landowner shall submit to the Department a certified copy of each notice described in 310 CMR 30.040(1), including the date and book and page numbers of recording of such notice, within 30 days after the landowner receives the recorded notice from the registry.

(2) No land on or in which hazardous waste has been disposed, and no interest in such land, shall be conveyed or leased, and no such land shall be devoted to any use other than as a facility for such disposal, until notice of such disposal is recorded in the registry of deeds, or if the land affected thereby be registered land, in the registry section of the land court for the district wherein the land lies.

30.060: Notification Procedures

30.061: Who Must Notify and Obtain an EPA Identification Number

(1) Any person who generates hazardous waste, except a generator who is registered as a Very Small Quantity Generator pursuant to 310 CMR 30.353 or as a Small Quantity Generator of waste having only Massachusetts hazardous waste numbers, and any person who transports hazardous waste, or who owns or operates a facility for the treatment, storage, use, or disposal of hazardous waste, shall notify the Department of such activity and obtain an EPA Identification number.

(2) Any person who generates hazardous waste, or who owns or operates a facility for the use, treatment, storage, or disposal of hazardous waste, shall promptly notify the Department in writing whenever

(a) the person who submitted the original or most recent notification form is no longer the same person as the person who is the generator of the hazardous waste covered by said notification form, or the person who is the owner or operator of the facility covered by said notification form. If the facility is a facility having interim status pursuant to RCRA, the provisions of 310 CMR 30.099(8) shall apply. If the facility is licensed pursuant to 310 CMR 30.800, the provisions of 310 CMR 30.828 shall apply; or

(b) there is a change in the name or mailing address (the provisions of 310 CMR 30.063(1) shall apply to changes in the address of the site) of, or the contact individual for, the person who submitted the original or most recent notification form.

30.062: Form of the Notification

Except as provided in 310 CMR 30.061(2) notification shall be on a form prescribed by the Department and shall include the following information:

30.062: continued

- (1) The name and address of the generator, transporter, user, or facility for which notification is being given.
- (2) The address of the site for which notification is being given.
- (3) The EPA identification number of the generator, transporter, user, or facility if one has been assigned.
- (4) The name and telephone number of the individual who should be contacted regarding information contained in the notification.
- (5) The name of the legal owner of the generator, transporter, user, or facility.
- (6) The type of activity involving hazardous waste or regulated recyclable material for which notification is being given, *i.e.* generation, transportation, treatment, storage, use, or disposal.
- (7) For generators of hazardous waste or regulated recyclable material, information showing whether or not the generator is a Very Small Quantity Generator pursuant to 310 CMR 30.353, a Small Quantity Generator pursuant to 310 CMR 30.351, or a Large Quantity Generator subject to 310 CMR 30.340.
- (8) The name and EPA or Massachusetts hazardous waste number of each hazardous waste or regulated recyclable material handled by the generator, transporter, user, or facility. Transporters who do not generate, use, store, treat, or dispose of hazardous waste, and persons conducting activities regulated pursuant to 310 CMR 30.393(3), are not required to complete this section of the notification form with respect to such activities.
- (9) Certification, in compliance with 310 CMR 30.009.

30.063: Number of Forms

- (1) Any person who generates or uses hazardous waste, or owns or operates facilities, at more than one site or at a site or sites different from what was covered in a previously submitted notification form, shall submit a separate notification form for each such site.
 - (a) Each separate notification form shall cover only one site and shall cover all the hazardous waste activities at that site. An individual generation site, such as a large manufacturing plant, may have one or more sources of hazardous waste but is considered a single or individual generation site if the site or property is contiguous.
 - (b) For each separate notification form, the Department shall assign a separate EPA identification number. Each EPA identification number shall be valid only for the site covered by the notification form.
- (2) A person who transports, but does not generate, use, store, treat, or dispose of, hazardous waste may submit only one form which covers all the transportation activities which that person conducts within the Commonwealth of Massachusetts.

30.064: Change of Hazardous Waste Handled

Any person who has provided either to the EPA or to the Department proper notification of hazardous waste activity and has received an EPA identification number may handle additional hazardous wastes, not included in the original notification, only after complying with the following:

- (1) A generator shall notify the Department in writing of the additional hazardous waste to be generated; or
- (2) An owner or operator of a facility may store, treat, or dispose of a hazardous waste which was not previously identified in the facility's Part A application provided:

30.064: continued

- (a) the storage, treatment or disposal of the previously unidentified hazardous waste is eligible for interim status authorization and the owner or operator notifies the Department in writing at least 45 days before the treatment, storage or disposal of such hazardous waste commences; or
- (b) the owner or operator obtains from the Department, pursuant to 310 CMR 30.800, a license or license modification which authorizes the storage, treatment or disposal of the previously unidentified hazardous waste before the storage, treatment or disposal of such hazardous waste commences.

30.099: Interim Status Facilities

(1) Qualifying for Interim Status.

- (a) Any person who owns or operates an "existing hazardous waste management facility" or a facility in existence on the effective date of statutory or regulatory amendments under M.G.L. c. 21C that render the facility subject to the requirement to have a license pursuant to 310 CMR 30.800 shall have interim status to the extent the owner or operator has:
 - 1. complied with the requirements of 310 CMR 30.060 pertaining to notification of hazardous waste activity; and
 - 2. complied with the requirements of 310 CMR 30.099(2) governing submission of Part A applications.
- (b) If the EPA has granted interim status prior to September 15, 1989, then such status shall continue until terminated pursuant to 310 CMR 30.099(12) or a determination or order of the Department.
- (c) Failure to qualify for interim status. If the Department has reason to believe upon examination of a part A application that it fails to meet the requirements of 40 CFR § 270.13 as adopted and amended at 310 CMR 30.099(3), it shall notify the owner or operator in writing of the apparent deficiency. Such notice shall specify the grounds for the Department's belief that the application is deficient. The owner or operator shall have 30 days from receipt to respond to such a notification and to explain or cure the alleged deficiency in the part A application. If, after such notification and opportunity for response, the Department determines that the application is deficient it may take appropriate enforcement action.
- (d) 310 CMR 30.099 shall not apply to any facility which has been previously denied a RCRA permit or license or if authority to operate the facility under RCRA or M.G.L. c. 21C has been previously terminated.

(2) Submittal of Part A Applications.

- (a) Owners and operators of an existing hazardous waste management facility or of a facility in existence on the effective date of statutory or regulatory amendments under M.G.L. c. 21C that render the facility subject to the requirement to have a license pursuant to 310 CMR 30.800 shall submit Part A of their license application no later than:
 - 1. six months after the date of publication of regulations which first require them to comply with the standards set forth in 310 CMR 30.500 through 30.900, or
 - 2. 30 days after the date they first become subject to the standards set forth in 310 CMR 30.500 through 900, whichever first occurs.
- (b) Any person submitting a Part A application shall:
 - 1. provide the Department with the information set forth in 40 CFR 270.13, as adopted at 310 CMR 30.099(3);
 - 2. use the form prescribed by the Department; and
 - 3. complete, sign and submit the application to the Department in compliance with 310 CMR 30.807.

(3) Content of a Part A Application. 40 CFR 270.13 is hereby incorporated by reference subject to the following additions, modifications, and exceptions:

- (a) In 40 CFR 270.13(a), "permit," is substituted with "license";
- (b) In 40 CFR 270.13(j), the phrase "under 40 CFR part 261" is hereby replaced with "in 310 CMR 30.100"; and
- (c) In 40 CFR 270.13(k)(9), the references to "permits" are hereby modified to reference "permits or licenses".

30.099: continued

(4) Operation During Interim Status.

(a) Unless allowed under 310 CMR 30.099(5), during the interim status period the facility shall not:

1. treat, store, or dispose of hazardous waste not specified in the Part A license application;
2. employ processes not specified in Part A of the license application; or
3. exceed the design capacities specified in the Part A license application.

(b) During interim status, owners or operators shall comply with the interim status standards at 310 CMR 30.099, including the standards of 40 CFR part 265, as adopted and amended at 310 CMR 30.099(6).

(5) Changes During Interim Status.

(a) Except as provided in 310 CMR 30.099(5)(b), the owner or operator of an interim status facility may make the following changes at the facility:

1. Treatment, storage, or disposal of newly listed or identified hazardous wastes not previously identified in Part A of these license application (and addition of the units being used to treat, store, or dispose of these hazardous wastes on the effective date of the listing or identification) if the owner or operator submits a revised part A license application prior to such treatment, storage, or disposal;
2. Increases in the design capacity of processes used at the facility if the owner or operator submits a revised Part A license application prior to such a change (along with a justification explaining the need for the change) and the Department approves the changes because:
 - a. There is a lack of available treatment, storage, or disposal capacity at other hazardous waste management facilities, or
 - b. The change is necessary to comply with a Federal, State, or local requirement.
3. Changes in the processes for the treatment, storage, or disposal of hazardous waste or addition of processes if the owner or operator submits a revised Part A license application prior to such change (along with a justification explaining the need for the change) and the Department approves the change because:
 - a. The change is necessary to prevent a threat to public health, safety, welfare or the environment because of an emergency situation, or
 - b. The change is necessary to comply with a Federal, State, or local requirement.
4. Changes in the ownership or operational control of a facility if the new owner or operator submits a revised part A license application no later than 90 days prior to the scheduled change. When a transfer of operational control of a facility occurs, the old owner or operator shall comply with the requirements of 310 CMR 30.099(6)(c) (Financial Requirements for interim status facilities), until the new owner or operator has demonstrated to the Department that he is complying with the requirements of that subpart. The new owner or operator must demonstrate compliance with 310 CMR 30.099(6)(c) within six months of the date of the change in ownership or operational control of the facility. Upon demonstration to the Department by the new owner or operator of compliance with subpart H, the Department shall notify the old owner or operator in writing that he no longer needs to comply with subpart H as of the date of demonstration. All other interim status duties are transferred effective immediately upon the date of the change in ownership or operational control of the facility.
5. Changes made in accordance with an interim status corrective action order issued by EPA under section 3008(h) or other Federal authority, by an authorized State under comparable State authority, or by a court in a judicial action brought by EPA or by an authorized State. Changes pursuant to 310 CMR 30.099(5) are limited to the treatment, storage, or disposal of hazardous waste or constituents of hazardous waste from releases that originate within the boundary of the facility.
6. Addition of newly regulated units for the treatment, storage, or disposal of hazardous waste if the owner or operator submits a revised part A license application on or before the date on which the unit becomes subject to the new requirements.

(b) Except as specifically allowed pursuant to 310 CMR 30.099(5)(b), changes listed pursuant to 310 CMR 30.099(5)(a) may not be made if they amount to reconstruction of the hazardous waste management facility. Reconstruction occurs when the capital investment in the changes to the facility exceeds 50% of the capital cost of a comparable entirely new hazardous waste management facility. If all other requirements are met, the following changes may be made even if they amount to a reconstruction:

30.099: continued

1. Changes made solely for the purposes of complying with the requirements of 310 CMR 30.694 for tanks and ancillary equipment.
 2. If necessary to comply with Federal, State, or local requirements, changes to an existing unit, changes solely involving tanks or containers, or addition of replacement surface impoundments that satisfy the standards of RCRA § 3004(o).
 3. Changes that are necessary to allow owners or operators to continue handling newly listed or identified hazardous wastes that have been treated, stored, or disposed of at the facility prior to the effective date of the rule establishing the new listing or identification.
 4. Changes during closure of a facility or of a unit within a facility made in accordance with an approved closure plan.
 5. Changes necessary to comply with an interim status corrective action order issued by EPA under § 3008(h) or other Federal authority, by corrective action undertaken pursuant to M.G.L. c. 21C or M.G.L. c. 21E, or by a court in a judicial proceeding brought by EPA or an authorized State, provided that such changes are limited to the treatment, storage, or disposal of hazardous waste or constituents of hazardous waste from releases that originate within the boundary of the facility.
 6. Changes to treat or store, in tanks, containers or containment buildings, hazardous wastes subject to land disposal restrictions imposed by 310 CMR 30.750 or RCRA § 3004, provided that such changes are made solely for the purpose of complying with 310 CMR 30.750 or RCRA § 3004.
 7. Addition of newly regulated units described in 310 CMR 30.099(5)(a)6.
 8. Changes necessary to comply with standards under 40 CFR part 63, Subpart EEE—National Emission Standards for Hazardous Air Pollutants From Hazardous Waste Combustors.
- (6) Until a final license decision takes effect pursuant to 310 CMR 30.838, an interim status facility shall at all times comply with each of the following:
- (a) 310 CMR 30.502 through 310 CMR 30.579 subject to the following modifications:
 1. In *lieu* of the specific licensed facility documentation requirements of 310 CMR 30.513(2)(a)5., the owner or operator of an interim status facility shall comply with the applicable Waste Analysis Plan requirements established pursuant to 310 CMR 30.099(6)(f) through (p) and 310 CMR 30.750.
 2. In *lieu* of 310 CMR 30.542(2)(g), the following information shall be recorded, as it becomes available, and maintained in the operating record until closure of the facility, or for at least three years after the information is recorded in the operating record of the facility, whichever period is longer: Records and results of waste analysis, waste determinations, and trial tests performed as specified in 310 CMR 30.099(6)(f) through (p), and 310 CMR 30.750.
 - (b) 40 CFR Part 265 Subpart G [Closure and Post-closure] subject to the following provisions:
 1. The Department shall approve, modify, or disapprove a proposed closure plan within a reasonable time after its receipt by the Department. If the Department does not approve the plan, the Department shall provide the owner or operator with a detailed written statement of reasons for the Department's not approving the plan. Not later than 30 days after receiving said statement, the owner or operator shall submit a new or modified closure plan to the Department. Within a reasonable time after receiving said new or modified closure plan, the Department shall approve, modify, or disapprove it. If the Department modifies the plan, this modified plan (*i.e.* as modified by the Department) shall be the approved closure plan.
 2. Such facility's closure plan shall describe how and when each hazardous waste management unit at the facility shall be closed during the facility's intended operating life, and how the facility as a whole shall be closed at the end of its intended operating life. The plan shall identify how the requirements of 40 CFR Subpart G, as adopted and amended at 310 CMR 30.099(6)(b), shall be complied with. The facility's closure plan need not describe when the facility as a whole shall be closed, except that the facility's closure plan shall describe when the facility as a whole shall be closed if:
 - a. the facility's closure plan has not been approved by the Department, or
 - b. the facility's remaining operating life is less than 20 years, and the facility is using a trust fund to demonstrate financial assurance for closure pursuant to 310 CMR 30.904.

30.099: continued

3. An owner or operator who does not have an approved closure plan shall submit a closure plan to the Department and an owner or operator who is subject to post-closure requirements and who does not have an approved post-closure plan shall submit a post-closure plan to the Department, as follows:
 - a. at least 180 days prior to the date on which he or she expects to begin closure of the first surface impoundment, waste pile, land treatment unit, or landfill, or final closure of the facility if it involves such a unit, whichever is earlier; or
 - b. at least 45 days prior to the date on which he or she expects to begin final closure of a facility with only tanks, container storage, or incinerator units.
 4. The date on which the owner or operator "expects to begin . . . closure" shall be no later than 30 days after the date on which any hazardous waste management unit receives the known final volume of hazardous waste.
 5. An owner or operator with an approved closure plan shall notify the Department in writing:
 - a. at least 60 days prior to the date on which he or she expects to begin closure of a surface impoundment, waste pile, landfill, or land treatment unit, or final closure of a facility involving such a unit; or
 - b. at least 45 days prior to the date on which he or she expects to begin final closure of a facility with only tanks, container storage, or incinerator units.
 6. The Department shall approve, modify, or disapprove a proposed post-closure plan within a reasonable time after its receipt by the Department. If the Department does not approve the plan, the Department shall provide the owner operator with a detailed written statement of reasons for the Department's not approving the plan. Not later than 30 days after receiving said statement, the owner or operator shall submit a new or modified post-closure plan to the Department. Within a reasonable time after receiving said new or modified post-closure plan, the Department shall approve, modify, or disapprove it. If the Department modifies the plan, this modified plan (*i.e.* as modified by the Department) shall be the approved post-closure plan.
 7. For the purposes of groundwater monitoring during closure and post closure, the owner or operator of an interim status facility shall comply with all applicable provisions of 310 CMR 30.099(6)(d).
 8. In lieu of 40 CFR 265.111, 265.114, 265.115, and 265.120, the requirements of 310 CMR 30.582: *Closure Performance Standards*, 30.585: *Disposal or Decontamination of Equipment*, 30.587(2) and (3): *Completion and Certification of Closure*, and 30.596(2) and (3): *Completion and Certification of Post-closure Care* shall apply.
- (c) 310 CMR 30.900, provided that:
1. a surety bond guaranteeing performance of closure shall not be acceptable for the purpose of complying with 310 CMR 30.904, and
 2. a surety bond guaranteeing performance of post-closure care shall not be acceptable for the purpose of complying with 310 CMR 30.906.
- (d) 40 CFR Part 265, Subpart F: *Groundwater Monitoring*, as in effect on July 1, 2005, excluding 40 CFR §§ 265.90(c) and 265.90(e) unless written approval for a waiver pursuant to said provisions is granted by the Department. The owner or operator or a stand-by surface impoundment which is designed and operated solely for the containment of hazardous waste in the event of an emergency at the facility (*e.g.*, equipment failure or overflows) may apply to the Department, in writing, for a waiver from all or part of the groundwater monitoring requirements of 40 CFR Part 265, Subpart F. Notwithstanding any provision of 310 CMR 30.099(6) or 310 CMR 30.660: *Groundwater Protection*, the Department may require the owner or operator of any facility subject to the requirements of 310 CMR 30.099(6) to comply with, and such owner or operator shall comply with, all or part of 310 CMR 30.660: *Groundwater Protection* if the Department determines that such action is appropriate to protect public health, safety or welfare or the environment;
- (e) 40 CFR Part 265, Subpart I: *Use and Management of Containers*, as in effect on July 1, 2005, provided that the owner or operator shall also comply with 310 CMR 30.682: *Labeling and Marking of Containers*.

30.099: continued

(f) 310 CMR 30.690, provided that the owner or operator shall do the following, in addition to complying with 310 CMR 30.513, whenever a tank system is used to treat chemically or to store a hazardous waste that is substantially different from waste previously stored or treated in that tank system, or whenever a tank system is used to treat chemically a hazardous waste with a substantially different process than any previously used in that tank system:

1. Conduct waste analyses and trial treatment or storage tests (*e.g.* bench-scale or pilot-plant scale tests); or
2. Obtain written, documented information on similar waste under similar operating conditions to show that the proposed treatment or storage will meet the requirements of 310 CMR 30.695: *General Operating Requirements*.

(g) 40 CFR Part 265, Subpart K: *Surface Impoundments*, provided that the owner or operator shall remove all hazardous waste from each impoundment in compliance with 40 CFR § 265.228 unless the Department, in writing, directs otherwise;

(h) 40 CFR Part 265, Subpart L: *Waste Piles*;

(i) 40 CFR Part 265, Subpart M: *Land Treatment*;

(j) 40 CFR Part 265, Subpart N: *Landfills* however, in lieu of compliance with 40 CFR 265.120, as well as 40 CFR 265.312 through 265.316, an owner/operator shall comply with 310 CMR 30.596 as well as 310 CMR 30.628 through 30.632;

(k) 40 CFR Part 265, Subpart O: *Incinerators*;

(l) 40 CFR Part 265, Subpart P: *Thermal Treatment*;

(m) 40 CFR Part 265, Subpart Q: *Chemical, Physical and Biological Treatment*;

(n) 40 CFR Part 265, Subpart W: *Drip Pads*;

(o) 40 CFR Part 265, Subpart AA: *Air Emission Standards for Process Vents*;

(p) 40 CFR Part 265, Subpart BB: *Air Emission Standards for Equipment Leaks*;

(q) 40 CFR Part 265, Subpart DD: *Containment Buildings*;

(r) All provisions of 310 CMR 30.000 regulating mixed waste as hazardous waste;

(s) 310 CMR 30.602(12): *Corrective Action Management Units*, 30.602(13): *Temporary Units* and 30.602(14): *Staging Piles*;

(t) 310 CMR 30.750: *Land Disposal Restrictions*; and

(u) 40 CFR Part 265, Subpart CC: *Air Emission Standards for Tanks, Surface Impoundments, and Containers*.

(7) A facility having interim status pursuant to RCRA at which there is stored waste oil (MA01) generated at that facility shall be considered by the Department to have interim status for such storage of waste oil, and the owner or operator shall at all times comply with 310 CMR 30.510 through 30.579 and 30.900 and all applicable requirements set forth in 40 CFR Part 265 as adopted and amended at 310 CMR 30.099.

(8) Ownership or operational control of a facility having interim status pursuant to RCRA shall not be transferred from one person to another until at least 90 days after a revised Part A permit application is submitted to the EPA and the Department. If the facility is licensed pursuant to 310 CMR 30.800, the provisions of 310 CMR 30.828 shall apply.

(9) The owner or operator of a facility having interim status pursuant to RCRA shall notify the Department's hazardous waste program by certified mail of the commencement of a voluntary or involuntary proceeding pursuant to Title 11 (Bankruptcy) of the United States Code in which the owner or operator is named as a debtor within ten days after commencement of the proceeding.

(10) An owner or operator of a facility having interim status pursuant to RCRA is prohibited from placing any hazardous waste, or any container or tank holding hazardous waste, in any salt dome, salt bed formation, underground mine or cave. In addition, an owner or operator of a facility having interim status pursuant to RCRA is prohibited from injecting hazardous waste into or through any well, as provided in 310 CMR 30.604(1).

(11) The owner or operator of a facility having interim status pursuant to RCRA is prohibited from storing, treating, disposing of, or otherwise managing any hazardous waste containing any polyhalogenated aromatic hydrocarbons.

30.099: continued

(12) Notwithstanding any provision of 310 CMR 30.099(6) or any other provision of 310 CMR 30.000, a facility having interim status pursuant to RCRA shall cease to be a facility having interim status pursuant to RCRA in accordance with the following provisions:

(a) A land disposal facility which, on or any time before September 15, 1989, was a facility having interim status pursuant to RCRA shall not be a facility having interim status pursuant to RCRA on and after September 15, 1989 unless, by no later than November 8, 1985, the owner or operator of such facility had submitted to the Department:

1. a Part B hazardous waste facility license application for the facility, and
2. certification that, as of the date of the certification, the facility was in compliance with all applicable groundwater monitoring and financial responsibility requirements in effect on the date of the certification.

(b) A land disposal facility which is in existence on the effective date of statutory or regulatory amendments under M.G.L. c. 21C that render the facility subject to the requirement to have a license pursuant to 310 CMR 30.800, and which is granted interim status, shall not be a facility having interim status pursuant to RCRA on and after the date 12 months after the facility first becomes subject to such license requirement, unless by that date the owner or operator of such facility has submitted to the Department:

1. a Part B hazardous waste facility license application for the facility, and
2. certification that the facility is in compliance with all applicable ground water monitoring and financial responsibility requirements.

(c) A land disposal facility that is granted authority to operate in interim status pursuant to 310 CMR 30.099(5)(a)1., 2. or 3. shall not be a unit having interim status pursuant to RCRA on and after the date 12 months after the unit is granted authority to operate, unless by that date the owner or operator of the unit certifies that the unit is in compliance with all applicable ground water monitoring and financial responsibility requirements.

(d) A hazardous waste incinerator which, on or any time before November 8, 1989, was a facility having interim status pursuant to RCRA shall not be a facility having interim status pursuant to RCRA on and after November 8, 1989 unless, by no later than November 8, 1986, the owner or operator of such facility had submitted to the Department a Part B hazardous waste facility license application for the facility.

(e) A facility other than a landfill or a hazardous waste incinerator which on or any time before November 8, 1992, was a facility having interim status pursuant to RCRA shall not be a facility having interim status pursuant to RCRA on and after November 8, 1992 unless, by no later than November 8, 1988, the owner or operator of such facility had submitted to the Department a Part B hazardous waste facility license application for the facility.

(f) The Department may require an owner or operator of an existing hazardous waste management facility or of a facility in existence on the effective date of statutory or regulatory amendments under M.G.L. c. 21C that render the facility subject to the requirement to have a license to submit Part B of their license application. Any owner or operator shall be allowed at least six months from the date of request to submit Part B of the application. Any owner or operator of an existing hazardous waste management facility or of a facility in existence on the effective date of statutory or regulatory amendments under M.G.L. c. 21C that render the facility subject to the requirement to have a license may voluntarily submit Part B of the application at any time. Any owner or operator of such a hazardous waste management facility shall submit either a Part B license application in compliance with 310 CMR 30.800 or a closure plan in compliance with 40 CFR 265, Subpart G as adopted and amended at 310 CMR 30.099(6)(b), prior to the date on which interim status terminates pursuant to 310 CMR 30.099(12)(a) through (c).

(g) Failure to furnish a requested Part B application on time, or to furnish in full the information required by the Part B application, is grounds for termination of interim status pursuant to 310 CMR 30.850.

(13) Corrective Action at Interim Status Disposal Facilities.

(a) For purposes of 310 CMR 30.099(13) only, all terms shall be defined as defined in 310 CMR 30.010, except that the following terms shall be defined as follows:

30.099: continued

1. Hazardous Material means material, including, but not limited to, any material in whatever form which, because of its quantity, concentration, chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare, or to the environment, when improperly stored, treated, transported, disposed of, used, or otherwise managed. The term shall not include oil, but shall include waste oil and all those substances that are included under 42 U.S.C. § 9601(14), but it is not limited to those substances. The term shall also include, but is not limited to, material regulated as hazardous waste or recyclable material under 310 CMR 30.000 and 310 CMR 40.0000.
 2. Interim Status Disposal Facility Implementing Corrective Action means a facility that has not been issued a hazardous waste permit/license pursuant to 310 CMR 30.602(9) or a post closure order pursuant to 310 CMR 30.602(10), at which:
 - a. Hazardous waste was disposed of in a surface impoundment, waste pile, land treatment unit, or landfill, after July 26, 1982; or
 - b. An owner or operator either certified closure of or applied for a closure by removal determination regarding the closure of a surface impoundment, waste pile, land treatment unit, or landfill, after January 26, 1983.
 3. Licensed Site Professional and LSP each means a hazardous waste site professional, as defined in M.G.L. c. 21A, § 19, holding a valid license issued by the Board of Registration of Hazardous waste Site Professionals pursuant to M.G.L. c. 21A, §§ 19 through 19J.
 4. OHM means oil and/or hazardous material.
 5. Oil means insoluble or partially soluble oils of any kind or origin or in any form, including, without limitation, crude or fuel oils, lube oil or sludge, asphalt, insoluble or partially insoluble derivatives of mineral, animal or vegetable oils and white oil. The term shall not include waste oil, and shall not include those substances that are included in 42 U.S.C. § 9601(14).
- (b) The requirements of 310 CMR 30.099(13) shall apply to the owner and/or operator of an Interim Status Disposal Facility Implementing Corrective Action. The owner and/or operator of an Interim Status Disposal Facility Implementing Corrective Action shall investigate and remediate all releases and potential releases of OHM at or from the facility in accordance with the requirements of 310 CMR 30.099(13).
- (c) The owner and/or operator of an Interim Status Disposal Facility Implementing Corrective Action shall be regulated under M.G.L. c. 21E and 310 CMR 40.0000 (the Massachusetts Contingency Plan or MCP) and shall carry out all response actions in accordance with the requirements of those provisions. In order to be considered as adequately regulated pursuant to M.G.L. c. 21C, the owner and/or operator of an Interim Status Disposal Facility also shall comply with the additional requirements specified in 310 CMR 30.099(13).
1. An owner or operator of an Interim Status Disposal Facility Implementing Corrective Action who at the time of the effective date of 310 CMR 30.099(13) already is performing response actions addressing all releases and potential releases of OHM at or from the facility in accordance with M.G.L. c. 21E and 310 CMR 40.0000 shall continue to comply with those provisions, and shall also comply with the additional requirements specified in 310 CMR 30.099(13). 310 CMR 30.099 applies only to owners or operators who already have submitted to the Department an LSP Tier Classification Opinion and Release Notification Form(s), covering all solid waste management units at a facility, in full conformance with all applicable provisions of the MCP.
 2. On or before 90 days from the effective date of 310 CMR 30.099(13), an owner or operator of an Interim Status Disposal Facility Implementing Corrective Action who is not covered by 310 CMR 30.099(13)(c)(1), or anyone else notified by the Department to comply with this provision, shall submit to the Department an LSP Tier Classification Opinion and Release Notification Form(s), addressing all releases and potential releases of OHM at or from the facility, from all solid waste management units, in full conformance with all applicable provisions of the MCP. The owner or operator shall perform response actions at the facility in accordance with M.G.L. c. 21E and 310 CMR 40.0000, and also shall comply with the additional requirements specified in 310 CMR 30.099(13).

30.099: continued

(d) The response actions required under 310 CMR 30.099(13) shall, at a minimum, be equivalent to that specified for corrective action in 40 CFR 264.101 as adopted at 310 CMR 30.602. Utilizing the oversight and public participation procedures specified in 310 CMR 30.099(13)(e)1. through 6., the Department will ensure that any such response actions:

1. Protect health, safety, public welfare and the environment for all releases and potential releases of OHM at or from a facility, and
2. Meet all applicable requirements of the MCP, including the Response Action Performance Standards set forth at 310 CMR 40.0191 and the Performance Standards for Response Action Outcomes at 310 CMR 40.1004 and/or the Performance Standards for Remedy Operation Status at 310 CMR 40.0893(2), whichever are applicable.

(e) Department Oversight and Public Participation.

1. While a response action is being carried out, the Department and the owner or operator of an Interim Status Disposal Facility Implementing Corrective Action shall comply with all required Public Involvement activities in full conformance with the applicable provisions of 310 CMR 40.1400. In addition, at a minimum, prior to submitting a final Phase III report regarding remedy selection under the MCP to the Department in conformance with 310 CMR 40.0850, the owner or operator of an Interim Status Disposal Facility Implementing Corrective Action shall:

- a. Provide an opportunity for public comment on the Phase III by holding a minimum 30 day comment period, which may include the holding of a public meeting. The owner or operator shall give notice of the opportunity to submit comments, and of the public meeting if any, by causing the notice to be published (at its expense) in a newspaper having a substantial circulation in the affected area and by providing the notice to the Department and to all persons on the facility mailing list maintained pursuant to 310 CMR 40.1400.
- b. Provide the Department with a copy of all public comments received.
- c. Summarize and respond to the comments, and provide the Department and all persons who submit comments with a copy of the summary and response, noting which comments were incorporated, and explaining why other comments were not incorporated.

2. If at any time during the carrying out of a response action, for any reason including in response to public comments received pursuant to 40 CMR 40.1400 or 310 CMR 30.099(13), the Department determines that the response action is not being carried out in accordance with the MCP or 310 CMR 30.099(13), the Department may take any appropriate action, including issuing an order pursuant to M.G.L. c. 21E, §§ 9 and 10, and 310 CMR 40.0010. In particular, notwithstanding 310 CMR 40.0550(4)(a) and 40.0560(4)(a), the Department may at any time require the owner or operator of an Interim Status Facility Implementing Corrective Action to obtain prior Departmental approval of one or more of the submittals specified by 310 CMR 40.0550(2) or 40.0560(2), whichever is applicable, or the response actions or submittals required pursuant to 310 CMR 40.0800. The Department may require such prior approval for submittals or response actions as they relate to the entire facility or some portion thereof.

3. The Department shall audit in accordance with the MCP the response actions at all facilities at which corrective actions are undertaken pursuant to 310 CMR 30.099(13). If the Department determines that response action(s) at an Interim Status Disposal Facility Implementing Corrective Action has not been completed so as to meet all of the requirements of the MCP and 310 CMR 30.099(13), then the owner and/or operator of the facility shall perform any additional response actions required by the Department in accordance with the MCP and 310 CMR 30.099(13). The Department will notify the owner or operator in writing if it determines that further response action at a facility is required and shall include the basis for any such determination in any such notification.

4. Upon a tentative determination by the Department that response action(s) undertaken by the owner or operator of an Interim Status Disposal Facility Implementing Corrective Action were performed in compliance with M.G.L. c. 21E, the MCP, 310 CMR 30.099(13) and any other requirements applicable to such response actions, and that all other requirements for the termination of interim status have been met, the Department shall publish, or cause to be published, a public notice reflecting the Department's tentative determination to terminate the facility's interim status. Any such notice shall:

30.099: continued

- a. Be published, at the Department's expense, in a newspaper having a substantial circulation in the affected area;
 - b. Be provided to the owner or operator of the facility and to all persons on the facility mailing list maintained pursuant to 310 CMR 40.1400; and
 - c. Indicate the basis for the Department's tentative determination and that the Department will accept public comments on the tentative determination for at least 30 days from the date of publication.
5. After the public comment period, which may include holding a public meeting, the Department shall make a final determination. The Department will make a final determination to terminate a facility's interim status only if it finds that the facility has completed corrective action in full compliance with M.G.L. c. 21E, the MCP, 310 CMR 30.099(13) and any other requirements applicable to such response action(s), and that all other requirements for the termination of interim status have been met. Notice of the Department's final determination shall be provided to the owner or operator of the Interim Status Disposal Facility Implementing Corrective Action and to all persons who commented on the Department's tentative determination.
6. The Department may, when the Department deems it appropriate, make an earlier determination that all or a designated portion of the response actions undertaken by an owner or operator of an Interim Status Disposal Facility Implementing Corrective Action were performed in compliance with M.G.L. c. 21E, the MCP, 310 CMR 30.099(13) and any other requirements applicable to such response actions, even if the Interim Status Disposal Facility Implementing Corrective Action does not yet meet all requirements for the termination of interim status. The process for making any such determinations shall be the same as that set forth in 310 CMR 30.099(13)(e)4. Any such determination, however, shall not terminate interim status for the Interim Status Disposal Facility Implementing Corrective Action.
- (f) Nothing in 310 CMR 30.099(13) shall relieve an owner or operator of an Interim Status Disposal Facility Implementing Corrective Action from any other obligation imposed by law, including but not limited to any closure or post closure obligation of 310 CMR 30.580 and 310 CMR 30.590, respectively, or any financial responsibility requirement imposed under 310 CMR 30.900. With respect to closure and post closure requirements for regulated units, Interim Status Disposal Facilities Implementing Corrective Action will remain regulated under M.G.L. c. 21C, notwithstanding that they will carry out response actions for facility-wide corrective action under M.G.L. c. 21E.
- (g) Nothing in 310 CMR 30.099(13) shall limit the authority of the Department under any statute or other regulation, including but not limited to the authority to issue any order to prevent or abate the release of OHM or potential sources of OHM.
- (h) The owner or operator of an Interim Status Disposal Facility Implementing Corrective Action subject to 310 CMR 30.099(13) is responsible for payment of all Annual Compliance Fees for which it can be assessed pursuant to the provisions of 310 CMR 5.00, M.G.L. c. 21E and the MCP, and is responsible for payment of all applicable fee(s) required to accompany any submissions(s) pursuant to the provisions of 310 CMR 5.00, M.G.L. c. 21E and the MCP.

30.100: IDENTIFICATION AND LISTING OF HAZARDOUS WASTES30.101: Purpose and Scope

310 CMR 30.101 through 30.199, cited collectively as 310 CMR 30.100, identify or otherwise describe those wastes which are subject to 310 CMR 30.000, establish provisions for classifying waste as non-hazardous, and prescribe testing methods and procedures.

30.102: Methods of Identification of Hazardous Wastes

- (1) The Department uses two methods to identify or otherwise describe which wastes are regulated as hazardous wastes. Based upon the general criteria specified in 310 CMR 30.110 through 30.112, these methods are:
- (a) Identification of the characteristics of hazardous waste; and/or
 - (b) Listing of specific types or sources of hazardous waste and of acutely hazardous waste.

30.102: continued

(2) Accordingly, unless exempt pursuant to 310 CMR 30.104, a waste is a hazardous waste subject to 310 CMR 30.000 if:

- (a) The waste is listed in 310 CMR 30.130 through 30.136.
- (b) The waste, including a mixture of non-hazardous waste and one or more hazardous wastes, exhibits any of the characteristics of hazardous waste identified in 310 CMR 30.120 through 30.125.
- (c) The waste is a mixture of non-hazardous waste and one or more hazardous wastes listed in 310 CMR 30.130 through 30.136. However, the following mixtures are not hazardous wastes:

- 1. A mixture of non-hazardous waste and one or more hazardous wastes listed in 310 CMR 30.130 through 30.136 solely because the waste(s) exhibit(s) one or more characteristics of hazardous waste identified in 310 CMR 30.122 (ignitable), 30.123 (corrosive), or 30.124 (reactive) is not a hazardous waste when the resultant mixture no longer exhibits any such characteristic of hazardous waste. Any mixing process to render a waste non-hazardous is treatment of hazardous waste subject to the applicable requirements of 310 CMR 30.500 through 30.900.

- 2. A mixture of non-hazardous waste and one or more hazardous wastes listed in 310 CMR 30.130 through 30.136 which neither meets the description of a waste listed in 310 CMR 30.130 through 30.136 nor exhibits a characteristic identified in 310 CMR 30.120 through 30.125, provided the generator can persuade the Department that the mixture consists of:

- a. wastewater, the discharge of which is regulated under either § 402 or § 307(b) of the Clean Water Act or M.G.L. c. 21 § 43 (including wastewater at facilities which have eliminated the discharge of wastewater); and

- b. one of the wastestreams identified in and managed in compliance with 40 CFR 261.3(a)(2)(iv)(A) through (E), as in effect on July 1, 1999, and which is incorporated by reference in 310 CMR 30.102(2)(c)1.b. with the following additions, modifications and exceptions:

- (i) References to “§ 261.31” in 40 CFR 261.3(a)(2)(iv)(A) and (B) are hereby replaced with “310 CMR 30.131”.

- (ii) The reference to “§ 261.32” in 40 CFR 261.3(a)(2)(iv)(C) is hereby replaced with “310 CMR 30.132”.

- (iii) The reference to “§ 261.33” in 40 CFR 261.3(a)(2)(iv)(D) is hereby replaced with “310 CMR 30.133 or 310 CMR 30.136”.

- (iv) 40 CFR 261.3(a)(2)(iv)(D) is hereby modified to exclude the following phrase: “and rinstat[e] from empty containers or from containers that are rendered empty by that rinsing;” and to insert an “and” before “discharges from safety showers...”.

- (v) The reference to “Subpart D of this part” is hereby replaced with “310 CMR 30.130 through 30.133”.

- (d) The waste is generated from the treatment, storage, disposal, or use of a hazardous waste, including any sludge, spill residue, ash emission control dust, and leachate.

30.103: Hazardous Waste Numbers

(1) A hazardous waste which is identified by one or more characteristics in 310 CMR 30.120 through 30.125 is assigned every EPA Hazardous Waste Number that is applicable as established pursuant to 310 CMR 30.120 through 30.125. Except as indicated in 310 CMR 30.103(3), each applicable Hazardous Waste Number shall be used in complying with the notification requirements of 310 CMR 30.060 through 30.064 and all applicable recordkeeping and reporting requirements prescribed in 310 CMR 30.300 through 30.900.

(2) Each hazardous waste listed in 310 CMR 30.130 through 30.136 is assigned a Hazardous Waste Number which precedes the name of the waste. This number is either an EPA Hazardous Waste Number or a Massachusetts Hazardous Waste Number. This number, in addition to any Hazardous Waste Numbers applicable to the waste pursuant to 310 CMR 30.103(1), shall be used in complying with the notification requirements of 310 CMR 30.060 through 30.064 and all applicable recordkeeping and reporting requirements prescribed by 310 CMR 30.300 through 30.900.

30.103: continued

(3) As specified in 40 CFR 268.9(b) and as incorporated by reference at 310 CMR 30.750, for a waste subject to 310 CMR 30.750 that is both listed under 310 CMR 30.130 through 30.136 and exhibits a characteristic under 310 CMR 30.120, the treatment standard for the waste code listed under 310 CMR 30.130 through 30.136 will operate in lieu of the standard for the waste code under 310 CMR 30.120, provided that the treatment standard for the listed waste includes a treatment standard for the constituent that causes the waste to exhibit the characteristic. Otherwise, the waste must meet the treatment standards for all applicable listed and characteristic waste codes.

30.104: Wastes Subject to Exemption from 310 CMR 30.000

A waste identified in 310 CMR 30.104 is exempt from the requirements of 310 CMR 30.000 when handled in compliance with the requirements, if any, established by or referenced in 310 CMR 30.104 for that waste. A waste that is exempted from 310 CMR 30.000 may still be subject to other federal, state or local requirements. A waste identified in 310 CMR 30.104 that is not managed in compliance with the terms established by or referenced in 310 CMR 30.104 is a hazardous waste and is subject to all applicable requirements of 310 CMR 30.000.

(1) Wastes Based Upon Exclusions from the Definition of Hazardous Waste Pursuant to M.G.L. c. 21C.

(a) Domestic sewage and any mixture of domestic sewage and other waste that passes through a sewer system to a publicly owned treatment works, provided that the other waste is legally discharged to the sewer system. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

(b) Industrial wastewater discharges that are point source discharges permitted pursuant to M.G.L. c. 21, § 43 or subject to permits under section 402 of the Federal Water Pollution Control Act of 1967 as amended, or managed in compliance with 310 CMR 71.00. This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment.

(c) Irrigation return flows.

(d) Source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as amended, 43 U.S.C. § 2011 *et seq.*

(2) Wastes Otherwise Excluded from 310 CMR 30.000.

(a) Waste exempt pursuant to:

1. 310 CMR 30.102(2)(c)1. or 2.;

2. 310 CMR 30.105(1) addressing certain PCB wastes regulated pursuant to the Toxic Substances Control Act; or

3. 310 CMR 30.106: Residues of Hazardous Waste in Empty Containers.

(b) The material is a recyclable material reclaimed in compliance with 310 CMR 30.202(5) or 30.280(2).

(c) The waste ceases to be a hazardous waste pursuant to 310 CMR 30.141.

(d) The waste is listed in 310 CMR 30.130 through 30.136 but has been classified as non-hazardous pursuant to 310 CMR 30.142; or

(e) The following wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste, provided they do not exhibit any of the characteristics described pursuant to 310 CMR 30.120 through 30.125:

1. Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC Codes 331 and 332);

2. Nonwastewater residues, such as slag, resulting from high temperature metals recovery (HTMR) processing of K061, K062 or F006 waste, in units identified as rotary kilns, flame reactors, electric furnaces, plasma arc furnaces, slag reactors, rotary hearth furnace/electric furnace combinations or industrial furnaces (as defined in 310 CMR 30.010: Industrial Furnace (f) and (g)), that have been approved for disposal as special wastes pursuant to M.G.L. c. 111, § 150A at waste disposal facilities, provided that:

30.104: continued

- a. these residues meet the generic exclusion levels identified in the tables of 40 CFR 261.3(c)(2)(ii)(C), as incorporated by reference, for all constituents, and exhibit no characteristics of hazardous waste. Testing requirements must be incorporated in a facility's waste analysis plan or a generator's waste analysis plan; at a minimum, composite samples of residues must be collected and analyzed quarterly and/or when the process or operation generating the waste changes. Persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements including the notification and certification requirements of 310 CMR 30.104(2)(e)2.b.
 - b. A one-time notification and certification shall be provided to the solid waste facility and sent to the Department. The notification and certification must also be retained by the generator and treatment facility and must be updated if the process or operation generating the waste changes and/or if the solid waste facility receiving the waste changes. However, the generator or treatment facility need only notify the Department on an annual basis if such changes occur. Such notification and certification shall be submitted to the Department no later than December 31st. The contents of the notification and certification shall comply with 40 CFR 261.3(c)(2)(ii)(C)(2), as incorporated by reference.
3. Residue resulting from the treatment of hazardous debris, as defined in 40 CFR 268.2 and incorporated by reference at 310 CMR 30.750(1), provided such treatment was conducted by means of the required extraction or destruction technologies specified in 40 CFR 268.45: *Table 1* also as incorporated by reference at 310 CMR 30.750(1). Persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements.
- (f) Materials subject to in-situ mining techniques which are not removed from the ground as part of the extraction process.
 - (g) Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (*e.g.*, refuse derived fuel) or reused, except household hazardous waste accepted or accumulated at an event or center subject to 310 CMR 30.390. "Household waste" means any material (including garbage, trash, and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas). A resource recovery facility managing municipal waste shall not be deemed to be treating, storing, disposing of, or otherwise managing hazardous wastes for the purposes of 310 CMR 30.000, if such facility:
 1. Receives and burns only
 - a. Household waste (except household hazardous waste accepted or accumulated at an event or center subject to 310 CMR 30.390) and
 - b. Waste from commercial or industrial sources that does not contain hazardous waste; and
 2. Does not accept hazardous waste, and the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in such facility.
 - (h) Wastes generated by any of the following and which are returned to the soil as fertilizer:
 1. The growing and harvesting of agricultural crops; and
 2. The raising of animals, including animal manures.
 - (i) Mining overburden returned to the mine site.
 - (j) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels.
 - (k) Drilling fluids, produced waters and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy.
 - (l) Waste which is hazardous solely because it fails the test for toxicity due to the presence of chromium and waste which is hazardous because it is listed in 310 CMR 30.130 through 30.136 due only to the presence of chromium, provided the waste does not fail the test for any characteristic other than toxicity due only to the presence of chromium, shall not be subject to 310 CMR 30.000 if the criteria of 310 CMR 30.104(2)(l)1. through 3. are satisfied and documentation establishing compliance with these criteria is kept on-site by the generator in compliance with 310 CMR 30.331 and made available for inspection by the Department or the waste meets one or more of the descriptions in 310 CMR 30.104(2)(l)4.

30.104: continued

1. The chromium in the waste is exclusively, or nearly exclusively, trivalent chromium.
2. The waste is generated from an industrial process which uses trivalent chromium exclusively, or nearly exclusively, and the process does not generate hexavalent chromium.
3. The waste is typically and frequently managed in non-oxidizing environments.
4. Specific wastes which meet the standard in 310 CMR 30.104(2)(1)1. through 3., provided they do not fail the test for the toxicity characteristic for any other constituent and do not exhibit any other characteristic, are:
 - a. Chrome (blue) trimmings generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.
 - b. Chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.
 - c. Buffing dust generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue.
 - d. Sewer screenings generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.
 - e. Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.
 - f. Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.
 - g. Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries.
 - h. Wastewater treatment sludges from the production of TiO₂ pigment using chromium-bearing ores by the chloride process.
- (m) Waste from the extraction, beneficiation, and processing of ores and minerals (including coal, phosphate rock and overburden from the mining of uranium ore). For purposes of 310 CMR 30.104(2)(m), beneficiation of ores and minerals is restricted to the activities enumerated by 40 CFR 261.4(b)(7)(i) and waste from the processing of ores and minerals includes only those wastes specifically identified in 40 CFR 261.4(b)(7)(ii)(A) through (T) and incorporated by reference herein.
- (n) Cement kiln dust waste.
- (o) Waste which consists of discarded arsenical-treated wood or wood products which fails the test for the Toxicity Characteristic for Hazardous Waste Codes D004 through D017 and which is not a hazardous waste for any other reason if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials' intended end use.
- (p) Petroleum-contaminated media and debris that fail the test for the Toxicity Characteristic of 310 CMR 30.125 (Hazardous Waste Codes D018 through D043 only) when managed in compliance with the requirements of 310 CMR 40.000.
- (q) Explosives which are destroyed by, or whose destruction is supervised, by U.S. Army Explosive Ordnance personnel, if such explosives are generated by a Small Quantity Generator, as that term is defined in 310 CMR 30.351(1) and (2), such destruction does not involve land disposal, and such destruction occurs during an immediate response to an immediate threat to human health, safety or welfare or to the environment, by U.S. Army Explosive Ordnance personnel.
- (r) Explosives which are destroyed by, or whose destruction is supervised by the Department of Public Safety pursuant to M.G.L. c. 148, § 9 and codified at 527 CMR 13.00, if such explosives are generated by a Small Quantity Generator, as that term is defined in 310 CMR 30.351(1) and (2), such destruction does not involve land disposal, and such destruction occurs during an immediate response to an immediate threat to human health, safety or welfare or to the environment, by Department of Public Safety personnel.

30.104: continued

(s) Wastes with infectious characteristics, which are regulated by the Department of Public Health pursuant to M.G.L. c. 111, §§ 3, and 51 through 56.

(t) Amalgam waste that is hazardous solely because it fails the test for the Toxicity Characteristic of 310 CMR 30.125 for Hazardous Waste Code D009 when managed by dental facilities in compliance with the requirements of 310 CMR 73.00.

1. Massachusetts facilities that reclaim amalgam waste described in 310 CMR 30.104(2)(u) must comply with the requirements of 310 CMR 30.200 and 30.800, as applicable.

2. Massachusetts facilities that consolidate, but do not reclaim shipments of amalgam waste described in 310 CMR 30.104(2)(u) must, prior to shipping off-site for reclamation:

a. accumulate amalgam waste in containers that are sealed and structurally sound; and

b. accumulate amalgam waste for no more than one year.

(u) Medicinal nitroglycerin, in finished dosage form such as tablets or capsules, that would otherwise meet the description of a P081 listed waste, is not subject to hazardous waste regulation pursuant to 310 CMR 30.000 so long as, upon generation, the following conditions are met:

1. the waste does not meet the description of any other listing; and

2. the waste does not exhibit any hazardous waste characteristic, including the characteristic for which it was originally listed (*i.e.*, the reactivity characteristic, as described at 310 CMR 30.124).

(v) Hazardous debris, as defined in 310 CMR 30.010, that has been treated using one of the required extraction or destruction technologies specified in 310 CMR 30.750 (*see* 40 CFR 268.45: *Table 1*). Persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements.

(3) Wastes Subject to Conditional Exemptions.

(a) Samples of waste collected for the sole purpose of testing to determine their properties, characteristics or composition while being managed pursuant to 310 CMR 30.104(3)(a)1. and provided that the generator or sample collector complies with the requirements of 310 CMR 30.104(3)(a) 2. and 3.

1. The exemption established in 310 CMR 30.104(3)(a) is only applicable when:

a. The sample is being transported to a laboratory for the purpose of testing; or

b. The sample is being transported back to the sample collector after testing; or

c. The sample is being stored by the sample collector before transport to a laboratory for testing; or

d. The sample is being stored in a laboratory before testing; or

e. The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or

f. The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

2. In order to qualify for the exemption in 310 CMR 30.104(3)(a), a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector shall:

a. Comply with DOT, USPS, or any other applicable shipping requirements; or

b. Comply with the following requirements if the sample collector determines that DOT, USPS, or other shipping requirements do not apply to the shipment of the sample:

30.104: continued

- (i) Assure that the following information accompanies the sample:
 - (A) The sample collector's name mailing address and telephone number;
 - (B) The laboratory's name, mailing address, and telephone number;
 - (C) The quantity of the sample;
 - (D) The date of shipment; and
 - (E) A description of the sample.
 - (ii) Package the sample so that it does not leak, spill, or vaporize from its packaging.
3. This exemption shall not apply when the sample is discarded or if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in 310 CMR 30.104(3)(a)1.e. or f.
- (b) Treatability Study Samples. Except as provided in 310 CMR 30.104(3)(b) and (c), any person who generates or collects samples for the purpose of conducting treatability studies is exempt from the requirements of 310 CMR 30.000, and need not include treatability study samples in quantity determinations made pursuant to 310 CMR 30.340(1), 30.351(1) and 30.353(1), so long as such samples are managed pursuant to 310 CMR 30.104(3)(b).
 1. The exemption established in 310 CMR 30.104(3)(b) is only applicable when:
 - a. The generator or sample collector is collecting and preparing a sample for transportation; or
 - b. The generator or sample collector is accumulating or storing a sample prior to transportation to a laboratory or testing facility; or
 - c. The generator or sample collector is transporting a sample to a laboratory or testing facility for the purpose of conducting a treatability study; or
 - d. The sample is being transported back to the generator or sample collector after completion of the treatability study.
 2. Any person who generates or collects samples for the purpose of conducting a treatability study shall comply with the following requirements:
 - a. The generator or sample collector shall accumulate for treatability studies a total of no more than 10,000 kilograms of media contaminated with non-acutely hazardous waste, 1,000 kilograms of non-acutely hazardous waste other than contaminated media, 1 kilogram of acutely hazardous waste, or 2,500 kilograms of media contaminated with acutely hazardous waste for each treatment process being evaluated for each generated waste stream; and

30.104: continued

- b. The mass of each sample shipment shall not exceed 10,000 kilograms; the 10,000 kilogram quantity may be all media contaminated with non-acutely hazardous waste, 2,500 kilograms of media contaminated with acutely hazardous waste, 1,000 kilograms of hazardous waste, and 1 kilogram of acutely hazardous waste; and
- c. The generator or sample collector accumulates treatability study samples at the site of generation for 180 days or less; and
- d. The generator or sample collector shall package the sample to ensure that the sample will not leak, spill, or vaporize from its packaging during shipment, and shall ensure that:
 - (i) The transportation of each sample shipment shall comply with DOT, USPS, and all other applicable shipping requirements; or
 - (ii) If DOT, USPS, or other shipping requirements do not apply to the shipment of the sample, the following information shall accompany the sample:
 - (A) The name, mailing address, and telephone number of the originator of the sample;
 - (B) The name, address, and telephone number of the facility that will perform the treatability study;
 - (C) The quantity of the sample;
 - (D) The date of shipment; and
 - (E) A description of the sample including the EPA Hazardous Waste Number of the material in the sample; and
- e. The generator or sample collector shall cause the sample to be shipped only to a laboratory or testing facility which is exempt pursuant to 310 CMR 30.104(3)(c), or has a valid license issued by the Department pursuant to M.G.L. c. 21C or interim status; and
- f. The generator or sample collector may transport the sample off the site of generation without having to obtain a license to transport hazardous waste or a vehicle identification device for the vehicle in which the hazardous waste is transported, and without having to use a hazardous waste manifest, but only if all of the following requirements are met:
 - (i) The generator or sample collector may not collect or transport any treatability sample except such treatability samples generated by that generator.
 - (ii) the transport of the treatability sample is not prohibited by the DOT pursuant to 49 CFR 172.101(d).
 - (iii) The generator or sample collector may deliver the treatability sample only to a destination described in 310 CMR 30.104(3)(b)2.e.
 - (iv) The generator or sample collector may not transport more, in the aggregate, than 200 kilograms of treatability sample in any one vehicle at any one time. Such treatability samples may be transported only in containers.
 - (v) The generator or sample collector shall transport the treatability sample only in containers that are
 - (A) compatible with the sample; and
 - (B) tightly sealed; and
 - (C) tightly secured to the vehicle in which they are transported; and
 - (D) clearly marked and labelled in a manner which identifies, in words, the material(s) in the container (*e.g.*, acetone, toluene) and the hazard(s) associated with the sample (*e.g.*, ignitable, toxic, dangerous when wet); and
 - (E) clearly marked with the words "Treatability Sample"; and
 - (F) in compliance with applicable regulations and standards of the DOT and the Massachusetts Department of Public Works, and the Massachusetts Board of Fire Prevention Regulations, 527 CMR 1.00 through 24.00.
 - (vi) Treatability samples that are incompatible with each other shall not be transported in the same vehicle at the same time.
 - (vii) In the event that a fire, explosion, spill or other release or threat of release of oil, hazardous waste, or hazardous material occurs during transport, the generator shall take all appropriate action to protect public health, safety, and welfare and the environment, and shall

30.104: continued

(A) Immediately notify the local fire and police departments; and
 (B) Call the Bureau of Waste Site Clean-up at the Department's Regional Office serving the location where the release or threat of release occurred when required by and within the time frames established pursuant to 310 CMR 40.0311 through 40.0317. To report a release after normal business hours, dial (617) 556-1133, (888) 304-1133 (or such other telephone number as may be designated by the Department) or follow any instructions provided on the answering message for the Regional Office.

(C) In addition to the notification requirements of 310 CMR 30.104(3)(b)2.f.(vii)(A) and (B), when a fire, explosion, spill or other release could threaten human health or the environment, when a reportable quantity limit established pursuant to 310 CMR 40.0000 has been exceeded, or when the generator has knowledge that a spill has reached surface water or an adjoining shoreline, the generator shall immediately notify the National Response Center at its 24-hour toll-free number (1-800-424-8802) and provide the information required pursuant to 310 CMR 30.351(9)(i)2.a through g.

(viii) The vehicle in which the treatability sample is transported shall go directly to the intended destination, without any stops or detours in between except those reasonably and immediately necessary in response to road conditions, the driver's need for nourishment or rest, the vehicle's need for service or maintenance, or emergencies.

(ix) The generator shall placard the vehicle when so required by DOT pursuant to 49 CFR 172.504.

g. A generator or sample collector who ships or offers for shipment any sample in excess of 200 kilograms in weight shall:

(i) not itself transport the sample unless that generator or sample collector has at that time a valid license issued by the Department pursuant to M.G.L. c. 21C to transport hazardous waste; and

(ii) offer the sample for transportation only to a person who has at that time both an EPA identification number and a valid license issued by the Department pursuant to M.G.L. c. 21C for the transport of that hazardous waste sample; and

(iii) limit the mass of each sample shipment to 10,000 kilograms or less. The 10,000 kilogram quantity may be all media contaminated with non-acutely hazardous waste, or may include 2,500 kilograms of media contaminated with acutely hazardous waste, 1,000 kilograms of hazardous waste, and 1 kilogram of acutely hazardous waste; and

h. The generator or sample collector shall maintain the following records for a period of at least three years after completion of the treatability study, or for the duration of any unresolved enforcement action, whichever period is longer:

(i) Copies of the shipping documents;

(ii) A copy of the contract with the facility conducting the treatability study;

(iii) Documentation showing:

(A) the amount of waste shipped pursuant to 310 CMR 30.104(3)(b);

(B) the name, address, and EPA identification number of the laboratory or testing facility that received the waste;

(C) the date of the shipment to the laboratory or testing facility; and

(D) whether or not unused samples and residues were returned to the generator; and

i. A Large Quantity Generator shall report the information required in 310 CMR 30.104(3)(b)2.g.(iii) in its Biennial Report, as described in 310 CMR 30.332.

(c) Samples undergoing treatability studies at laboratories and testing facilities. While a sample undergoing a treatability study is at a laboratory or testing facility, such sample is not subject to any requirement of 310 CMR 30.000, provided that the requirements set forth in 310 CMR 30.104(3)(c) are met. The laboratory or test facility which only conducts treatability studies on treatability samples is not subject to any requirement of 310 CMR 30.000 provided that the requirements of 310 CMR 30.104(3)(c) are met. A mobile treatment unit may qualify as a testing facility subject to 310 CMR 30.104(3)(c). Where a group of mobile treatment units are located at the same site, the limitations specified in 310 CMR 30.104(3)(c) apply to the entire group of mobile treatment units collectively as if the group were one mobile treatment unit.

30.104: continued

1. A laboratory or testing facility which intends to conduct treatability studies shall notify the Department, in writing, and shall submit an application to the Department prior to commencing or conducting such treatability studies, and shall not commence such treatability studies without the prior, written, site-specific approval of the Department. The application shall include the following information:
 - a. The name and address of the owner of the property where the laboratory or testing facility is located;
 - b. The name and address of the owner and operator of the laboratory or testing facility;
 - c. The name and telephone number of the individual responsible for supervising all treatability studies at the laboratory or testing facility;
 - d. An operations plan which shall include a site plan and shall describe, at a minimum, all of the following:
 - (i) All hazardous waste storage areas;
 - (ii) All hazardous waste treatment and sample analysis areas;
 - (iii) All hazardous wastes to be stored and treated or analyzed, including chemical name and waste codes;
 - (iv) All hazardous waste treatment processes;
 - (v) Procedures for obtaining detailed chemical and physical analyses of representative samples of wastes prior to receipt by the laboratory or testing facility for treatability study; and
 - (vi) Chemical and physical screening methods used to verify that the information obtained pursuant to 310 CMR 30.104(3)(c)1.d.(v) accurately represents the hazardous waste received from off-site generators and sample collectors; and
 - e. Certification that the laboratory or testing facility is in compliance with 310 CMR 30.351(8) and (9), and that there are written emergency procedures to be used in the event of a fire, explosion, or spill within the storage, analysis, and treatment areas, including identification of the individual(s) responsible for implementing and carrying out all emergency actions; and
 - f. The signatures described in 310 CMR 30.807(1) and certification required by 310 CMR 30.009 both for sites where mobile treatment units are placed and for applicants located at a laboratory or testing facility; and
 - g. Listing and status of all required permits or construction approvals for treatability study activity conducted, or intended or proposed to be conducted, by the applicant; and
 - h. A description of introductory and continuing training programs for all personnel involved in the treatability studies, and documentation of all training given and intended or proposed to be given to each employee. Each applicant's training program shall emphasize hazardous waste management, treatment, and emergency procedures; and
 - i. Certification that there are written decontamination procedures in effect for mobile treatment units as required in 310 CMR 30.585;
 - j. The following certification, which shall be separately signed by the persons described in 310 CMR 30.807: I certify under penalty of law that the hazardous waste treatment process and equipment have been designed and installed and will be operated safely with a minimum risk to public health and safety and to the environment.
 - k. Documentation that the applicant has sent a copy of the notification to the Board of Health, Fire Department and Emergency Planning Committee of the city or town in which the laboratory, testing facility, or mobile treatment unit will be located.
2. The Department may obtain additional information or conduct inspections at the treatability site at any time to ensure that the operation constitutes an insignificant potential hazard to the public health, safety, or welfare or the environment.
3. The laboratory or testing facility conducting the treatability study shall have an EPA identification number as described in 310 CMR 30.511.
4. The laboratory or testing facility shall initiate, in any one day, treatment in all treatability studies on no more than 10,000 kilograms of "as received" media contaminated with non-acutely hazardous waste, 2,500 kilograms of media contaminated with acutely hazardous waste, or 250 kilograms of other "as received" hazardous waste. "As received" waste means the waste as received in the shipment from the generator or sample collector.

30.104: continued

5. For the purpose of evaluation in treatability studies, the total quantity of "as received" hazardous waste stored at a laboratory or testing facility shall not at any time exceed, in the aggregate, 10,000 kilograms. The 10,000 kilogram quantity may include not more than 10,000 kilograms of media contaminated with non-acutely hazardous waste, 2,500 kilograms of media contaminated with acutely hazardous waste, 1,000 kilograms of non-acutely hazardous wastes other than contaminated media, and 1 kilogram of acutely hazardous waste. The total quantity of as received hazardous waste does not include treatment materials (including non-hazardous waste) added to "as received" hazardous waste.
6. The laboratory or testing facility shall hold no sample longer than 90 days after the completion of the treatability study in which the sample was used, or one year after the generator or sample collector ships the sample to the laboratory or testing facility (two years for treatability studies involving bioremediation), whichever date first occurs. Up to 500 kilograms of treated material from a particular wastestream from treatability studies may be archived for future evaluation up to five years from the date of initial receipt. Quantities of materials archived shall be counted towards the total storage limit for the laboratory or testing facility.
7. The laboratory or testing facility shall accumulate treatability study samples, retained samples, treatability study residues and treatment materials (including nonhazardous waste) added to "as received" hazardous waste in storage at the laboratories or testing facilities in compliance with the requirements in 310 CMR 30.351(8) and (9).
8. In a treatability study, the placement of hazardous waste into or on land, and the open burning of hazardous waste, are prohibited.
9. For three years following completion of each study, or for the duration of any unresolved enforcement action, whichever period is longer, the laboratory or testing facility shall maintain all records that show the treatment rate, the quantity of material in storage, and the amount of time of storage, including, without limitation, records showing the following:
 - a. The name, address, and EPA identification number of the generator or sample collector of each waste sample;
 - b. The date the shipment was received by the laboratory or testing facility;
 - c. The quantity of waste accepted;
 - d. The quantity of "as received" waste in storage each day;
 - e. The date the treatment study was initiated and the amount of "as received" waste introduced to treatment each day;
 - f. The date the treatability study was concluded; and
 - g. The date on which the laboratory or testing facility returned any unused sample or residues generated from the treatability study to the generator or sample collector or, if sent to a designated facility, the name and EPA identification number of the facility.
10. The laboratory or testing facility shall keep on-site a copy of the treatability study contract and all shipping papers associated with the transport of treatability study samples to and from the facility for a period ending not less than three years from the completion date of each treatability study, or for the duration of any unresolved enforcement action, whichever period is longer. In the case of mobile treatment units, the laboratory or testing facility shall retain such information at the fixed facility where the mobile treatment unit is stored when not in use. If such location is situated outside the Commonwealth, such records shall be made available upon request of the Department.
11. The laboratory or testing facility shall prepare and submit a report to the Department by March 15 of each year that estimates the number of studies and the amount of waste expected to be used in treatability studies during the current year, and includes the following information for the previous calendar year:
 - a. The name, address, and EPA identification number of the laboratory or testing facility conducting the treatability studies;
 - b. The types (by process) of treatability studies conducted;
 - c. The names and addresses of persons for whom studies have been conducted (including the EPA identification number of each);
 - d. The total quantity of "as received" waste together with any materials archived pursuant to 310 CMR 30.104(3)(c)6. in storage each day;
 - e. The quantity and types of waste subjected to treatability studies;

30.104: continued

- f. When each treatability study was conducted;
 - g. The final disposition of residues and unused sample from each treatability study;
 - h. The names and addresses of all transporters or shippers (including the USPS) of wastes;
 - i. Types of wastes including waste codes shipped or transported; and
 - j. Dates of each shipment.
12. The laboratory or testing facility shall determine whether any unused sample or residues generated by the treatability study are hazardous waste pursuant to 310 CMR 30.100 and if so, are subject to 310 CMR 30.000, unless the residues and unused samples are returned to the sample originator pursuant to 310 CMR 30.104(3)(b).
13. The laboratory or testing facility shall comply with the following closure requirements:
- a. 310 CMR 30.585 (for equipment, structures, and soil);
 - b. 310 CMR 30.689 (for containers); and
 - c. 310 CMR 30.699 (for tank systems).
14. The laboratory or testing facility shall notify the Department by letter when the facility is no longer planning to conduct any treatability studies at the site and certifies compliance with the closure requirements referenced in 310 CMR 30.104(3)(c)13.
- (d) Research Study Samples. Except as provided in 310 CMR 30.104(3)(d) and 310 CMR 30.864, any person who generates or collects samples for the purpose of conducting a research study is exempt from the requirements of 310 CMR 30.000, and need not include research study samples in quantity determinations made pursuant to 310 CMR 30.340(1), 310 CMR 30.351(1) and 30.353(1), so long as such samples are managed pursuant to 310 CMR 30.104(3)(d).
- 1. The exemption established in 310 CMR 30.104(3)(d) is only applicable when:
 - a. The generator or sample collector is accumulating or storing a sample prior to transportation to a research facility; or
 - b. The generator or sample collector is collecting and preparing a sample for transportation; or
 - c. The generator or sample collector is transporting, or causing to have transported, a sample to a research facility for the purpose of conducting a research study.
 - d. The sample is being transported back to the generator or sample collector after completion of the research study and pursuant to a contractual agreement with the research facility.
 - 2. Any person who generates or collects samples, in excess of treatability study limits as set forth in 310 CMR 30.104(3)(b), for the purpose of conducting a research study shall comply with the following requirements:
 - a. For each treatment or disposal process evaluated for each generated waste stream, the generator or sample collector shall accumulate for a research study no more than the quantity of such waste stream that is necessary for the purpose of such study and specified in a contractual agreement with the destination research facility; and
 - b. The generator or sample collector shall accumulate at any one time for all research studies no more than the total quantities of various waste streams that are determined to be necessary for the purpose of such studies and specified in one or more contractual agreements with the destination research facility; and
 - c. The generator or sample collector shall package the sample to ensure that the sample will not leak, spill, or vaporize from its packaging during shipment; and
 - d. The generator or sample collector shall cause the sample to be shipped only to a research facility which has a valid license issued by the Department pursuant to 310 CMR 30.864; and
 - e. The generator or sample collector who transports or offers for transport to a research facility any sample shall:
 - (i) Comply with all applicable manifest requirements in 310 CMR 30.310 through 30.316;
 - (ii) Not itself transport the sample unless that generator or sample collector has at that time a valid license issued by the Department pursuant to M.G.L. c. 21C to transport hazardous waste; and
 - (iii) Offer the sample for transportation only to a person who has at that time both an EPA identification number and a valid license issued by the Department pursuant to M.G.L. c. 21C for the transport of that hazardous waste sample; and

30.104: continued

- f. The generator or sample collector shall maintain the following records for a period of at least three years after completion of a research study, or for the duration of any unresolved enforcement action, whichever period is longer:
- (i) Copies of all manifests;
 - (ii) A copy of the contractual agreement with the research facility conducting the research study;
 - (iii) Documentation showing:
 - (A) The amount of waste transported pursuant to 310 CMR 30.104(3)(d);
 - (B) The name, address, and EPA identification number of the research facility that received the waste; and
 - (C) The date of the shipment(s) to the research facility.
- g. A Large Quantity Generator shall report the information required in 310 CMR 30.104(3)(d)2.f. in its Biennial Report, as described in 310 CMR 30.332.
3. Any person who intends to or does generate or collect samples, below treatability study limits set forth in 310 CMR 30.104(3)(b), for the purpose of conducting a research study shall comply with all applicable requirements set forth in 310 CMR 30.104(3)(b).
- (e) Gasoline and water mixtures that are hazardous for the ignitability characteristic (D001) and/or the toxicity characteristic for benzene (D018) provided that the generator of the gasoline and water mixtures complies with the requirements of 310 CMR 30.104(3)(e). Such generators shall ensure that:
1. the material has never been used and is being reclaimed for gasoline content;
 2. the material, if accumulated on-site prior to shipping, is accumulated in containers that are sealed, structurally sound and labeled as a "Gasoline/Water Mixture For Reclamation – Ignitable – Toxic – Benzene";
 3. the material is transported by a hazardous waste transporter using either a manifest or bill of lading, or by a common carrier using a bill of lading in compliance with 310 CMR 30.223(4)(b), as applicable, and in such a manner so as to not cause a leak or spill during transit;
 4. records from the recycling facility demonstrating that each shipment of material to the recycling facility was received and recycled in compliance with applicable state and federal laws and regulations, are kept by the generator for three years from the date of recycling; and
 5. the recycling facility signs the bill of lading or manifest acknowledging receipt of the material and returns a copy after signature to the generator.
- (f) Dredged material when temporarily stored at an intermediate facility pursuant to 314 CMR 9.07(4), or when placed in confined disposal pursuant to 314 CMR 9.07(8), provided it is managed in accordance with the following:
1. the material is managed in accordance with requirements established in a Clean Water Act (33 U.S.C. 1344) § 401 certification, specifically covering the intermediate facility or the confined disposal; and
 2. the material is managed in accordance with requirements included in a permit issued under § 404 of the Clean Water Act, specifically covering the intermediate facility or the confined disposal;
 3. this exemption shall not apply:
 - a. to any facility or activity that is not subject to regulation under § 404 of the Clean Water Act;
 - b. to any facility or activity for which 401 certification requirements have been waived by the Department;
 - c. to any facility or activity regarding which all 401 certification requirements established by the Department have not been included in a 404 permit; or
 - d. if the Department determines that compliance with some or all of the provisions of 310 CMR 30.000 is required.
- (g) Low-level mixed waste and the transportation and disposal of Naturally Occurring and/or Accelerator-produced Radioactive Material (NARM) that contain hazardous waste managed in compliance with 40 CFR Part 266, Subpart N, hereby incorporated by reference, subject to the following exceptions, additions and modifications:

30.104: continued

1. When the low-level mixed waste referenced in 310 CMR 30.104(3)(g) has met the requirements for reaching background radiation levels in its Nuclear Regulatory Commission background license for decay-in-storage and can be disposed of as a non-radioactive waste, then the conditional exemption for storage no longer applies and such waste is subject to hazardous waste regulation pursuant to the applicable provisions of 310 CMR 30.000.
 2. Within three days of becoming subject to hazardous waste regulation, pursuant to 310 CMR 30.104(3)(g)1., such waste shall be transferred to the generator's hazardous waste accumulation area, and labeled with the date on which the waste was transferred to the accumulation area as the container accumulation start date.
- (h) Used, broken cathode ray tubes (CRTs) and processed CRT glass undergoing recycling that are managed in compliance with 310 CMR 30.104(3)(h). Such generators shall ensure that:
1. Prior to Processing. These materials are not hazardous wastes if they are destined for recycling and if they meet the following requirements:
 - a. Storage. The broken CRTs shall be placed in a container (*i.e.*, a package or a vehicle) that is constructed, filled, and closed to minimize releases to the environment of CRT glass (including fine solid materials).
 - b. Labeling. Each container in which the used, broken CRT is contained shall be labeled or marked clearly with one of the following phrases: "Used cathode ray tube(s)-contains leaded glass" or "Leaded glass from televisions or computers." It shall also be labeled: "Do not mix with other glass materials."
 - c. Transportation. The used, broken CRTs shall be transported in a container meeting the requirements of 310 CMR 30.104(3)(h)1.a. and 310 CMR 30.104(3)(h)1.b.
 - d. Speculative Accumulation and Use Constituting Disposal. The used, broken CRTs are subject to the speculative accumulation prohibition described at 310 CMR 30.205(14), including the same record-keeping requirements as are stated there for permittees. If they are used in a manner constituting disposal, or intended for disposal, and they or their components exhibit a hazardous waste characteristic described at 310 CMR 30.125, they shall comply with the applicable requirements of 310 CMR 30.000 instead of the requirements of 310 CMR 30.104(3)(h).
 - e. Exports. In addition to the applicable conditions specified in 310 CMR 30.104(3)(h)1. and 2., exporters of used, broken CRTs shall comply with the EPA administered requirements at 40 CFR 261.39(a)(5).
 2. Requirements for Used CRT Processing. Used, broken CRTs undergoing CRT processing as defined in 310 CMR 30.010 are not hazardous wastes if they meet the following requirements:
 - a. Storage. Used, broken CRTs undergoing processing are subject to 310 CMR 30.104(3)(h)1.d.
 - b. Processing.
 - i. All CRT processing activities described in the CRT processing definition at 310 CMR 30.010(1) through (3) shall be performed within a building with a roof, floor, and walls;
 - ii. No activities may be performed that use temperatures high enough to volatilize lead from CRTs; and
 - iii. A company that conducts CRT Processing shall submit a one-time notification to the Department on a form specified by the Department 30 days prior to commencing CRT Processing. This notification shall include, at a minimum, the name and address of the company conducting the CRT Processing, the name and phone number of a company contact person, a description of the CRT glass processing operation including, but not limited to, the procedures for acceptance, handling and processing, and the name and address of the facilities to which the CRT glass is sent for recycling.
 - c. Processed CRT Glass Sent to CRT Glass Making or Lead Smelting. Glass from used CRTs that is destined for recycling at a CRT glass manufacturer or a lead smelter after processing is not a hazardous waste if it meets the speculative accumulation prohibition described at 310 CMR 30.205(14), including the same record-keeping requirements as is stated there for permittees.

30.104: continued

- d. Use Constituting Disposal. Glass from used CRTs that exhibits a hazardous waste characteristic described at 310 CMR 30.125 and that is used in a manner constituting disposal, or intended for disposal, shall comply with the requirements of 310 CMR 30.000 instead of the requirements of 310 CMR 30.104(3)(h).
- (i) Solvent-contaminated wipes that are sent for cleaning and reuse are not hazardous wastes from the point of generation, provided that all of the following conditions are met:
1. The solvent-contaminated wipes, when accumulated, stored, and transported, are contained in non-leaking, closed containers that are labeled "Excluded Solvent-contaminated Wipes." The containers must be able to contain free liquids, should free liquids occur. During accumulation, a container is considered closed when there is complete contact between the fitted lid and the rim, except when it is necessary to add or remove solvent-contaminated wipes. When the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container must be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed sufficiently to prevent leaks and emissions;
 2. The solvent-contaminated wipes may be accumulated by the generator for up to 180 days from the start date of accumulation for each container prior to being sent for cleaning;
 3. At the point of being sent for cleaning on-site or at the point of being transported off-site for cleaning, the solvent-contaminated wipes must contain no free liquids as defined in 310 CMR 30.010;
 4. Free liquids removed from the solvent-contaminated wipes or from the container holding the wipes must be managed according to the applicable regulations found in 310 CMR 30.000;
 5. Generators must maintain at their site the following documentation:
 - a. Name and address of the laundry or dry cleaner that is receiving the solvent-contaminated wipes;
 - b. Documentation that the 180-day accumulation time limit in 310 CMR 30.104(3)(i)2. is being met; and
 - c. Description of the process the generator is using to ensure the solvent-contaminated wipes contain no free liquids at the point of being laundered or dry cleaned on-site or at the point of being transported off-site for laundering or dry cleaning.
 6. The solvent-contaminated wipes are sent to a laundry or dry cleaner in Massachusetts, or in another State where this exclusion has been adopted, whose discharge, if any, is regulated under §§ 301 and 402 or § 307 of the Clean Water Act.
- (j) Solvent-contaminated wipes, except for wipes that are hazardous waste due to the presence of trichloroethylene, that are sent for disposal are not hazardous wastes from the point of generation provided that all of the following conditions are met:
1. The solvent-contaminated wipes, when accumulated, stored, and transported, are contained in non-leaking, closed containers that are labeled "Excluded Solvent-contaminated Wipes." The containers must be able to contain free liquids, should free liquids occur. During accumulation, a container is considered closed when there is complete contact between the fitted lid and the rim, except when it is necessary to add or remove solvent-contaminated wipes. When the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container must be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed sufficiently to prevent leaks and emissions;
 2. The solvent-contaminated wipes may be accumulated by the generator for up to 180 days from the start date of accumulation for each container prior to being sent for disposal;
 3. At the point of being transported for disposal, the solvent-contaminated wipes must contain no free liquids as defined in 310 CMR 30.010;
 4. Free liquids removed from the solvent-contaminated wipes or from the container holding the wipes must be managed according to the applicable regulations found in 310 CMR 30.000;

30.104: continued

5. Generators must maintain at their site the following documentation:
 - a. Name and address of the landfill or combustor that is receiving the solvent-contaminated wipes;
 - b. Documentation that the 180-day accumulation time limit in 310 CMR 30.104(3)(i)2. is being met; and
 - c. Description of the process the generator is using to ensure solvent-contaminated wipes contain no free liquids at the point of being transported for disposal.
6. The solvent-contaminated wipes are sent for disposal
 - a. To a municipal solid waste landfill permitted pursuant to M.G.L. c. 111, § 150A (Solid Waste Management Act) and implementing regulations, or to a municipal solid waste landfill in another state where this exclusion has been adopted and which is regulated under 40 CFR Part 258, including 40 CFR 258.40, or to a hazardous waste landfill regulated under 40 CFR Parts 264 or 265 or equivalent State regulations; or
 - b. To a municipal waste combustor in Massachusetts or other combustion facility regulated under M.G.L. c. 111, § 142A through § 142E and implementing regulations, or to a municipal waste combustor or other combustion facility in another State where this exclusion has been adopted and which is regulated under Section 129 of the Clean Air Act, or to a hazardous waste combustor, boiler, or industrial furnace regulated under 40 CFR parts 264, 265, or 266 subpart H or equivalent State regulations.

30.105: Exemption for PCB Wastes Regulated Pursuant to Toxic Substances Control Act

- (1) PCB waste, as defined in 40 CFR 761.3, consisting of dielectric fluid or electrical equipment containing dielectric fluid that would be subject to hazardous waste regulation due to the presence of PCBs are exempt from 310 CMR 30.000 provided:
 - (a) the waste is regulated pursuant to 40 CFR 761, as in effect on July 1, 2002;
 - (b) the waste does not meet the description of any listing (*see, e.g.*, 310 CMR 30.131 describing MA01 and MA02); and
 - (c) the waste is hazardous solely because it exhibits the Toxicity Characteristic (D018 - D043 only).
- (2) PCB waste, as defined in 40 CFR 761.3, consisting of dielectric fluid or electrical equipment containing dielectric fluid that is subject to hazardous waste regulation due to the presence of PCBs need only be managed and identified using the appropriate Massachusetts hazardous waste number(s) provided:
 - (a) the waste is regulated pursuant to 40 CFR 761, as in effect on July 1, 2002;
 - (b) the waste does not meet the description of an F, K, U or P listed waste; and
 - (c) the only applicable EPA Hazardous waste codes are D018 - D043.

30.106: Exemption for Residues of Hazardous Waste in Empty Containers and Tanks

(1) Any residue of hazardous waste remaining in either an empty container or an inner liner removed from an empty container, as defined in 310 CMR 30.106(2), is not subject to regulation under 310 CMR 30.000. Any residue of hazardous waste in either a container that is not empty or an inner liner removed from a container that is not empty, as defined in 310 CMR 30.106(2), is subject to regulation under 310 CMR 30.000.

(2) Definition of Empty.

(a) A container or an inner liner removed from a lined container that has held any hazardous material or hazardous waste, except a waste that is a compressed gas or that is listed or otherwise described in 310 CMR 30.136, is empty if:

1. all wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, *e.g.*, pouring, pumping, and aspirating; and
2. no more than 2.5 centimeters (one inch) of residue remain on the bottom of the container or inner liner; or
3. no more than 3% by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 119 gallons in size, or
4. no more than 0.3% by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 119 gallons in size.

(b) A container that has held a hazardous material or hazardous waste that is a compressed gas is empty when the pressure in the container is substantially at atmospheric pressure.

(c) A container or inner liner removed from a lined container that has held a hazardous waste listed or otherwise described in 310 CMR 30.136 is empty if:

1. the container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing intermediate; or
2. the container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or,
3. in the case of a lined container, the inner liner that prevented contact of the commercial chemical product or manufacturing intermediate with the container has been removed.

(d) A paper bag which:

1. has contained a hazardous material or a hazardous waste, except for a waste listed in 310 CMR 30.136, is empty if all wastes have been removed that can be removed by shaking or using equivalent means to ensure that all wastes have been removed to the extent feasible.
2. has contained a hazardous material or a hazardous waste listed in 310 CMR 30.136 shall never be deemed an "empty container".

(3) A tank that contained non-acutely hazardous waste and that has been disconnected such that it is no longer stationary is considered a container and is empty if there is no evidence of free flowing liquid or hazardous waste residuals as determined by the generator based on testing or knowledge of the waste. For tanks that accumulated wastes listed in 310 CMR 30.136, the tank is considered an empty container if it has been disconnected and the requirements of 310 CMR 30.106(2)(c) are satisfied.

30.110: Criteria and Procedures for Determining which Wastes are to be Regulated as Hazardous or Non-hazardous Wastes

The Department shall not identify and define a waste as a hazardous waste in 310 CMR 30.100 unless it determines that the waste meets one or more of the criteria established in 310 CMR 30.111 and 30.112.

30.111: Criteria for Identifying the Characteristics of Hazardous Waste

(1) The Department shall identify and define a characteristic of hazardous waste within 310 CMR 30.100 only upon determining that a waste that exhibits the characteristic:

- (a) may cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

30.111: continued

(b) pose a substantial present or potential hazard to human health, safety, or welfare, or to the environment, when improperly stored, treated, transported, used, or disposed of, or otherwise managed; and

(2) The characteristic can be:

(a) Measured by an available standardized test method which is reasonably within the capability of the generators of waste or of private sector laboratories that are available to serve such generators; or

(b) Reasonably detected by generators through their knowledge of their waste.

30.112: Criteria for Listing Hazardous Waste

(1) The Department shall list a waste as a hazardous waste within 310 CMR 30.100 only upon determining that the waste meets one of the following criteria:

(a) It exhibits any of the characteristics of hazardous waste identified in 310 CMR 30.120 through 30.125;

(b) It satisfies the criteria of 40 CFR 261.11(a)(2) (criteria used to designate Acutely Hazardous Waste) which are hereby incorporated by reference; or

(c) It satisfies the criteria of 40 CFR 261.11(a)(3) (criteria used to designate Toxic Waste) which are hereby incorporated by reference subject to the following additions, modifications and exceptions:

1. References to “appendix VIII” are hereby replaced with “310 CMR 30.160”.

2. The reference to “Administrator” is hereby replaced with “Department”.

3. The reference to “human health or the environment” is hereby replaced with “public health, safety, welfare, or to the environment”.

4. The term “used” shall be inserted after “transported” in 40 CFR 261.11(a)(3).

5. The reference to “human health and environmental damage” is hereby replaced with “damage to public health, safety, welfare or the environment” in 40 CFR 261.11(a)(3)(ix).

6. The reference to “health or environmental hazard posed” is hereby replaced with “hazard posed to public health, safety, welfare or the environment” in 40 CFR 261.11(a)(3)(x).

(2) The Department may list classes or types of waste as hazardous waste if the Department has reason to believe that individual wastes, within the class or type of waste, typically or frequently are hazardous under the definition of hazardous waste found in M.G.L. c. 21C, § 2.

30.120: CHARACTERISTICS OF HAZARDOUS WASTE

310 CMR 30.120 through 30.125 identify and define the characteristics which distinguish hazardous waste from other waste. Any waste which exhibits one or more of such characteristics is subject to 310 CMR 30.000, unless exempted pursuant to 310 CMR 30.104.

30.121: Determining Characteristics

In determining whether a waste exhibits any of such characteristics, as is required of generators by 310 CMR 30.302, a representative sample of the waste shall be analyzed using the tests specified in 310 CMR 30.152 through 30.157. For purposes of 310 CMR 30.120 through 30.125, the Department will consider a sample obtained using any of the applicable sampling methods specified in 310 CMR 30.151 to be a representative sample.

30.122: Ignitability

(1) A waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

(a) It is a liquid, other than an aqueous solution containing less than 24% alcohol by volume, and has a flash point of less than 60°C, which is approximately 140°F, as determined by one of the methods prescribed in 310 CMR 30.152.

30.122: continued

- (b) It is not a liquid and is capable, under standard temperature and pressure of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.
- (c) It is an ignitable compressed gas as defined in 40 CFR 261.21(a)(3), as incorporated by reference, and as determined by the test methods described in that regulation or equivalent methods.
- (d) It is an oxidizer, as defined in 40 CFR 261.21(a)(4), and as incorporated by reference, and as determined by the test methods described in that regulation.

(2) A waste that exhibits the characteristic of ignitability has the EPA Hazardous Waste Number of D001.

30.123: Corrosivity

(1) A waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:

- (a) It is aqueous and has a pH less than or equal to 2, or greater than or equal to 12.5, as determined by a pH meter using the method prescribed by 310 CMR 30.153(1).
- (b) It is a liquid and corrodes steel (Type SAE 1020) at a rate greater than 6.35 mm (approximately 0.250 inch) per year at a test temperature of 55°C (approximately 130°F) as determined by the test method prescribed by 310 CMR 30.153(2).

(2) A waste that exhibits the characteristic of corrosivity has the EPA Hazardous Waste Number of D002.

30.124: Reactivity

(1) A waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:

- (a) It is normally unstable and readily undergoes violent changes without detonating.
- (b) It reacts violently with water.
- (c) It forms potentially explosive mixtures with water.
- (d) When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to public health, safety, or welfare, or to the environment.
- (e) It is a cyanide or sulfide bearing waste which, when exposed to a pH of between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to public health, safety, or welfare, or to the environment.
- (f) It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.
- (g) It is readily capable of detonation or explosive decomposition or reaction at a standard temperature and pressure.
- (h) It is a forbidden explosive as defined in 49 CFR 173.54 or a Division 1.1, 1.2 or 1.3 explosive as defined in 49 CFR 173.50(b)(1) through (3).

(2) A waste that exhibits the characteristic of reactivity has the EPA Hazardous Waste Number of D003.

30.125: Toxicity Characteristic (TC)

(1) A waste exhibits the characteristic of toxicity if, using the Toxicity Characteristic Leaching Procedure incorporated by reference in 310 CMR 30.155 or an equivalent method, the extract from a representative sample of the waste contains any of the contaminants listed in 310 CMR 30.125: Table 1 at a concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5% filterable solids, the waste itself, after filtering using the methodology incorporated by reference in 310 CMR 30.155, is considered to be the extract for the purposes of 310 CMR 30.125.

(2) A waste that exhibits the characteristic of toxicity has the EPA Hazardous Waste Number specified in 310 CMR 30.125: Table 1 which corresponds to the toxic contaminant causing it to be hazardous.

30.125: continued

Table 1.

MAXIMUM CONCENTRATION OF CONTAMINANTS
FOR TOXICITY CHARACTERISTIC

EPA HW No. 1	Contaminant	CAS No. 2	Regulatory Level (milligrams/liter)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene.....	106-90-7	100.0
D022	Chloroform.....	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol.....	95-48-7	200.0 4
D024	m-Cresol.....	108-39-4	200.0 4
D025	p-Cresol.....	106-44-5	200.0 4
D026	Cresol.....	-----	200.0 4
D016	2, 4-D.....	94-75-7	10.0
D027	1, 4 Dichlorobenzene...	106-46-7	7.5
D028	1, 2 Dichloroethane....	107-06-2	0.5
D029	1, 1 Dichloroethylene.	75-35-4	0.7
D030	2,4 Dinitrotoluene....	121-14-2	0.13 3
D012	Endrin.....	72-20-8	0.02
D031	Heptachlor (and its epoxide).....	76-44-8	0.008
D032	Hexachlorobenzene.....	118-74-1	0.13 3
D033	Hexachlorobutadiene....	87-68-3	0.5
D034	Hexachloroethane.....	67-72-1	3.0
D008	Lead.....	7439-92-1	5.0
D013	Lindane.....	58-89-9	0.4
D009	Mercury.....	7439-97-6	0.2
D014	Methoxychlor.....	72-43-5	10.0
D035	Methyl ethyl ketone...	78-93-3	200.0
D036	Nitrobenzene.....	98-95-3	2.0
D037	Pentachlorophenol.....	87-86-5	100.0
D038	Pyridine.....	110-86-1	5.0 3
D010	Selenium.....	7782-49-2	1.0
D011	Silver.....	7440-22-4	5.0
D039	Tetrachloroethylene....	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene.....	79-01-6	0.5
D041	2, 4, 5-Trichlorophenol	95-95-4	400.0
D042	2, 4, 6-Trichlorophenol	88-06-2	2.0
D017	2, 4, 5-TP (Silvex).....	93-72-1	1.0
D043	Vinyl chloride.....	75-01-4	0.2

¹ Hazardous Waste Number² Chemical abstracts service number³ Quantitation limit is greater than the calculated regulatory level. The quantitation limit becomes the regulatory level.⁴ If o-, m-, p-Cresol concentration cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

30.130: Lists of Hazardous Wastes

310 CMR 30.131 through 30.136 contain four lists of hazardous wastes. The first is a list of waste from non-specific sources. Such wastes may be generated as a part of a number of different industrial operations. Any residue or contaminated soil, water, or other debris resulting from the clean up of a spill, into or on any land or water, of any hazardous waste on this list shall carry the EPA Hazardous Waste Number of the released hazardous waste unless another hazardous waste number is designated within 310 CMR 30.131 (see, *e.g.*, F039).

The second is a list of hazardous wastes produced by specific industries. Any residue or contaminated soil, water, or other debris resulting from the clean up of a spill, into or on any land or water, of any hazardous waste on this list shall carry the EPA Hazardous Waste Number of the released hazardous waste.

The third is a list of commercial chemical products which, if discarded or intended to be discarded in pure or off-specification form, constitute hazardous waste.

The fourth is a list of acutely hazardous wastes.

The Department will indicate the basis for listing the classes or types of wastes listed in 310 CMR 30.131 through 30.136 which have EPA Hazardous Waste Numbers by employing one or more of the following Hazard Codes:

Ignitable Waste	(I)
Corrosive Waste	(C)
Reactive Waste	(R)
Toxicity Characteristic Waste	(E)
Acutely Hazardous Waste	(H)
Toxic Waste	(T)

The absence of a letter code in 310 CMR 30.133 indicates that the compound is listed for toxicity. The absence of a letter code in 310 CMR 30.136 indicates that the compound is listed for acute toxicity. Appendix VII of 40 CFR 261, which is adopted at 310 CMR 30.162, identifies the constituent which caused a waste to be listed for toxicity in 310 CMR 30.131 and 310 CMR 30.132.

A waste is a hazardous waste if it is listed in 310 CMR 30.131 through 30.136, unless it has been excluded pursuant to 310 CMR 30.142. A hazardous waste listed in 310 CMR 30.131 through 30.136 has the Hazardous Waste Number specified therein.

In addition, the following Hazardous Waste Numbers shall be used as set forth below:

Hazardous Waste No.	Substance
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MA00	Hazardous waste designated as such pursuant to 310 CMR 30.144. The manifest shall include (1) a description of the most hazardous constituent of the waste, and (2) a reference to the date when the Department designated the waste as hazardous, and, (3) reference to the office of the Department which designated the waste as hazardous. For example: "Alizarin mixture, 3/7/85 NE".
MA95	Universal waste shipped on a hazardous waste manifest by a licensed hazardous waste transporter.
MA97	Class A regulated recyclable material (including, but not limited to, specification used oil fuel) that is shipped using a hazardous waste manifest.
MA98	Off-specification used oil fuel that is shipped using a hazardous waste manifest.
MA99	Not hazardous waste. This designation is to be used only for material that is not hazardous waste and that is shipped using a hazardous waste manifest.

30.131: Hazardous Waste from Non-specific Sources

Hazardous Waste No.	Hazardous Waste
<u>Generic</u>	
F001	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. (T)
F002	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of 10% or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F001, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. (T)
F003	The following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol: all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and a total of 10% or more (by volume) of one or more of those solvents listed in F001, F002, F004 and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. (I)
F004	The following spent non-halogenated solvents: cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of 10% or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002 and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. (T)
F005	The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of 10% or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. (I,T)
F006	Wastewater treatment sludges from electroplating operations except from the following processes: <ol style="list-style-type: none"> (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum. (T)
F007	Spent cyanide plating bath solutions from electroplating operations. (R,T)
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process. (R, T)
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process. (R, T)
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process. (R, T)
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations. (R, T)
F012	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process. (T)
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process. (T)
F020	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or compound in a formulating process) of trichlorophenol or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol. (H)

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.131: continued

- F021 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives. (H)
- F022 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetrachlorobenzene, pentachlorobenzene, or hexachlorobenzene under alkaline conditions. (H)
- F023 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of trichlorophenols and tetrachlorophenols. This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-trichlorophenol. (H)
- F024 Wastes from the production, utilizing free radical catalyzed processes, of chlorinated aliphatic hydrocarbons having one, two, three, four, or five carbon atoms. These wastes include, but are not limited to, distillation residues, heavy ends, tars, and reactor cleanout wastes. These wastes do not include light ends, spent filters and filter aids, spent dessicants, wastewater, wastewater treatment sludges, spent catalysts, and wastes listed in 310 CMR 30.131 or 30.132. (T)
- F025 Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (T)
- F026 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetrachlorobenzene, pentachlorobenzene, or hexachlorobenzene under alkaline conditions. (H)
- F027 Discarded unused formulations containing trichlorophenol, tetrachlorophenol, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component. (H)
- F028 Residues resulting from the incineration or thermal treatment of soil contaminated with hazardous waste having EPA Hazardous Waste Nos. F020, F021, F022, F023, F026 or F027. (T)
- F037 Petroleum refinery primary oil/water/solids separation sludge. Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in 40 CFR 261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units), and K051 wastes are not included in this listing. This listing does include residuals generated from processing or recycling oil-bearing hazardous secondary materials excluded under 40 CFR 261.4(a)(12)(i), if those materials are to be disposed of. (T)
- F038 Petroleum refinery secondary (emulsified) oil/water/solids separation sludge. Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in dissolved air flotation (DAF) units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in 40 CFR 261.31(b)(2), (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing. (T)

30.131: continued

- F039 Leachate resulting from the treatment, storage, or disposal of wastes classified by more than one waste code under 310 CMR 30.131 through 30.136, or from a mixture of wastes classified under 310 CMR 30.120 through 30.125 and 30.131 through 30.136. (Leachate resulting from the management of one or more of the following EPA Hazardous Wastes and no other hazardous waste retains its hazardous waste code(s): F020, F021, F022, F026, F027, and/or F028.) (T)
- MA01 Waste oil¹ means used or unused waste oil (or any mixture thereof) that is not otherwise hazardous waste pursuant to 310 CMR 30.120 through 30.136, except that used waste oil that has a flash point greater than or equal to 100° F and less than 140° F (solely through use) remains subject to regulation as used waste oil.
- MA02 Wastes which contain polychlorinated biphenyls (PCBs) in concentrations equal to or greater than 50 parts per million.
- MA04 Waste generated in the manufacture of paint (*e.g.*, oils, shellac, varnish, stains, lacquer, latex, enamel, alkyds, urethanes, acrylics, casein) which is not otherwise regulated as hazardous waste pursuant to 310 CMR 30.120 through 30.125 (characteristics of hazardous waste) or 310 CMR 30.130 through 30.136 (lists of hazardous wastes) if:
- (1) The paint is formulated with one or more ingredients which are listed as hazardous constituents in 310 CMR 30.160; or
 - (2) The paint is formulated with any ingredient which contains 1% or more by weight of hazardous constituents listed in 310 CMR 30.160.

30.132: Hazardous Waste from Specific Sources

Industry and
EPA Hazardous
Waste No. Hazardous Waste

Wood Preservation:

- K001 Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.

Inorganic Pigments:

- K002 Wastewater treatment sludge from the production of chrome yellow and orange pigments.
- K003 Wastewater treatment sludge from the production of molybdate orange pigments.
- K004 Wastewater treatment sludge from the production of zinc yellow pigments.
- K005 Wastewater treatment sludge from the production of chrome green pigments.
- K006 Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).
- K007 Wastewater treatment sludge from the production of iron blue pigments.
- K008 Oven residue from the production of chrome oxide green pigments.

Organic Chemicals:

- K009 Distillation bottoms from the production of acetaldehyde from ethylene.
- K010 Distillation side cuts from the production of acetaldehyde from ethylene.
- K011 Bottom stream from the wastewater stripper in the production of acrylonitrile. (R, T)
- K013 Bottom stream from the acetonitrile column in the production of acrylonitrile. (R, T)
- K014 Bottoms from acetonitrile purification column in the production of acrylonitrile.
- K015 Still bottoms from the distillation of benzyl chloride.
- K016 Heavy ends or distillation residues from the production of carbon tetrachloride.
- K017 Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.
- K018 Heavy ends from the fractionation column in ethyl chloride production.
- K019 Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.
- K020 Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.
- K021 Aqueous spent antimony catalyst waste from fluoromethanes production.
- K022 Distillation bottom tars from the production of phenol/acetone from cumene.
- K023 Distillation light ends from the production of phthalic anhydride from naphthalene.

3 White oils and incidental waste oil appearing as a film on scrap metal are not subject to 310 CMR 30.000. However, waste transformer oil is subject to 310 CMR 30.000. See also 310 CMR 30.200.

30.132: continued

Industry and
EPA Hazardous
Waste No. Hazardous Waste

K024	Distillation bottoms from the production of phthalic anhydride from naphthalene.
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene.
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene.
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.
K026	Stripping still tails from the production of methy ethyl pyridines.
K027	Centrifuge and distillation residues from toluene diisocyanate production. (R. T)
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane.
K095	Distillation bottoms from the production of 1,1,1-trichloroethane.
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.
K083	Distillation bottoms from aniline production.
K103	Process residues from aniline extraction from the production of aniline.
K104	Combined wastewater streams generated from nitro-benzene/aniline production.
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes.
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.
K107	Column bottoms from product separation from the production of 1,1-dimethyl-hydrazine (UDMH) from carboxylic acid hydrazines.
K108	Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.
K109	Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.
K110	Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.
K111	Product washwaters from the production of dinitrotoluene via nitration of toluene.
K112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.
K113	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.
K114	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.
K115	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.
K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.
K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.
K118	Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.
K136	Still bottoms from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.
K149	Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. (This waste does not include still bottoms from the distillation of benzyl chloride.) (T)
K150	Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. (T)
K151	Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. (T)

30.132: continued

Industry and
EPA Hazardous
Waste No. Hazardous Waste

K181 Nonwastewaters from the production of dyes and/or pigments (including nonwastewaters commingled at the point of generation with nonwastewaters from other processes) that, at the point of generation, contain mass loadings of any of the constituents identified in paragraph (c) of 40 CFR 261.32 that are equal to or greater than the corresponding paragraph (c) levels, as determined on a calendar year basis. These wastes will not be hazardous if the nonwastewaters are: (i) disposed in a Subtitle D landfill unit subject to the design criteria in 40 CFR 258.40, (ii) disposed in a Subtitle C landfill unit subject to either 40 CFR 264.301 or 265.301, (iii) disposed in other Subtitle D landfill units that meet the design criteria in 40 CFR 258.40, 264.301, or 265.301, or (iv) treated in a combustion unit that is permitted under Subtitle C, or an onsite combustion unit that is permitted under the Clean Air Act. For the purposes of this listing, dyes and/or pigments production is defined in paragraph (b)(1) of 40 CFR 261.32. Paragraph (d) of 40 CFR 261.32 describes the process for demonstrating that a facility's nonwastewaters are not K181. This listing does not apply to wastes that are otherwise identified as hazardous under 40 CFR 261.21 through 261.24 and 261.31 through 261.33 at the point of generation. Also, the listing does not apply to wastes generated before any annual mass loading limit is met. (T)

Inorganic Chemicals:

K071 Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.

K073 Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.

K106 Wastewater treatment sludge from the mercury cell process in chlorine production.

Pesticides:

K031 By-product salts generated in the production of MSMA and cacodylic acid.

K032 Wastewater treatment sludge from the production of chlordane.

K033 Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.

K034 Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.

K097 Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.

K035 Wastewater treatment sludges generated in the production of creosote.

K036 Still bottoms from toluene reclamation distillation in the production of disulfoton.

K037 Wastewater treatment sludges from the production of disulfoton.

K038 Wastewater from the washing and stripping of phorate production.

K039 Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.

K040 Wastewater treatment sludge from the production of phorate.

K041 Wastewater treatment sludge from the production of toxaphene.

K098 Untreated process wastewater from the production of toxaphene.

K042 Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.

K043 2,6-Dichlorophenol waste from the production of 2,4-D.

K099 Untreated wastewater from the production of 2,4-D.

K123 Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts.

K124 Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts. (C,T)

K125 Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.

K126 Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.

K131 Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.

30.132: continued

Industry and
EPA Hazardous
Waste No. Hazardous Waste

K132 Spent absorbent and wastewater separator solids from the production of methyl bromide.

Explosives:

K044 Wastewater treatment sludges from the manufacturing and processing of explosives. (R)

K045 Spent carbon from the treatment of wastewater containing explosives. (R)

K046 Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.

K047 Pink/red water from TNT operations. (R)

Petroleum Refining:

K048 Dissolved air flotation (DAF) float from the petroleum refining industry.

K049 Slop oil emulsion solids from the petroleum refining industry.

K050 Heat exchanger bundle cleaning sludge from the petroleum refining industry.

K051 API separator sludge from the petroleum refining industry.

K052 Tank bottoms (leaded) from the petroleum refining industry.

Iron and Steel:

K061 Emission control dust/sludge from the primary production of steel in electric furnaces.

K062 Spent pickle liquor from steel finishing operations. (C,T)

Primary Copper:

K064 Acid plant blowdown slurry/sludge resulting from the thickening of blowdown slurry from primary copper production.

Primary Lead:

K065 Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities;

Primary Zinc:

K066 Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production;

Primary Aluminum:

K088 Spent potliners from primary aluminum reduction:

Ferroalloys:

K090 Emission control dust or sludge from ferrochromium silicon production.

K091 Emission control dust or sludge from ferrochromium production.

Secondary Lead:

K069 Emission control dust/sludge from secondary lead smelting.

K100 Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.

Veterinary Pharmaceuticals:

K084 Wastewater treatment sludges generated during the production of veterinary compounds from arsenic or organo-arsenic compounds.

K101 Distillation tar residues from the distillation of aniline based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.

K102 Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.

30.132: continued

Industry and
EPA Hazardous
Waste No. Hazardous Waste

Ink Formulation:

K086 Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.

Coking:

K060 Ammonia still lime sludge from coking operations.
K087 Decanter tank tar sludge from coking operations.

30.133: Hazardous Wastes Which are Discarded Commercial Chemical Products or Off-specification Batches of Commercial Chemical Products or Spill Residues of Either

(1) The following materials or items are hazardous wastes if and when they are, or are intended to be, discarded:

- (a) Any commercial chemical product or manufacturing chemical intermediate having the generic name listed in 310 CMR 30.133.
- (b) Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in 310 CMR 30.133.
- (c) Any residue remaining in a container or in an inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in 310 CMR 30.133, unless the container is empty as defined in 310 CMR 30.106.
- (d) Residues or hazardous waste constituents contained in media. Any residue or contaminated soil, water, or other debris resulting from the clean-up of a spill, into or on any land or water, of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in 310 CMR 30.133, or any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in 310 CMR 30.133.

(2) These hazardous wastes and their corresponding EPA Hazardous Waste Numbers are:

Haz. Waste Number	Chemical Abstracts Numbers	Substance
U001	75-07-0	Acetaldehyde (I)
U034	75-87-6	Acetaldehyde, trichloro-
U187	62-44-2	Acetamide, N-(4-ethoxyphenyl)-
U005	53-96-3	Acetamide, N-9H-fluoren-2-yl-
U240	94-75-7*	Acetic acid, (2,4-dichlorophenoxy)-, salts & esters
U112	141-78-6	Acetic acid ethyl ester (I)
U144	301-04-2	Acetic acid, lead(2+) salt
U214	563-68-8	Acetic acid, thallium(1+) salt
see F027	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-
U002	67-64-1	Acetone (I)
U003	75-05-8	Acetonitrile (I,T)
U004	98-86-2	Acetophenone
U005	53-96-3	2-Acetylaminofluorene
U006	75-36-5	Acetyl chloride (C,R,T)
U007	79-06-1	Acrylamide
U008	79-10-7	Acrylic acid (I)
U009	107-13-1	Acrylonitrile
U011	61-82-5	Amitrole

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.133: continued

Haz. Waste Number	Chemical Abstracts Numbers	Substance (continued)
U012	62-53-3	Aniline (I,T)
U136	75-60-5	Arsinic acid, dimethyl-
U014	492-80-8	Auramine
U015	115-02-6	Azaserine
U010	50-07-7	Anrino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, -amino-8-[[amino-carbonyl)oxy]methyl]-1,1a,2,8, 8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha, 8beta, 8aalpha, 8balph)]-
U157	56-49-5	Benz[j]accanthrylene, 1,2-dihydro-3-methyl-
U016	225-51-4	Benz[c]acridine
U017	98-87-3	Benzal chloride
U192	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-
U018	56-55-3	Benz[a]anthracene
U094	57-97-6	Benz[a]anthracene, 7,12-dimethyl-
U012	62-53-3	Benzenamine(I,T)
U014	492-80-8	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl-
U049	3165-93-3	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U093	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-
U328	95-53-4	Benzenamine, 2-methyl-
U353	106-49-0	Benzenamine, 4-methyl-
U158	101-14-4	Benzenamine, 4,4'-methylenebis[2-chloro-
U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride
U181	99-55-8	Benzenamine, 2-methyl-5-nitro-
U019	71-43-2	Benzene (I,T)
U038	510-15-6	Benzeneacetic acid, 4-chloro-alpha-(4-chloro-phenyl)-alpha-hydroxy-, ethyl ester
U030	101-55-3	Benzene, 1-bromo-4-phenoxy-
U035	305-03-3	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-
U037	108-90-7	Benzene, chloro-
U221	25376-45-8	Benzenediamine, ar-methyl-
U028	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester
U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester
U107	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester
U070	95-50-1	Benzene, 1,2-dichloro-
U071	541-73-1	Benzene, 1,3-dichloro-
U072	106-46-7	Benzene, 1,4-dichloro-
U060	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene)bis [4-chloro-
U017	98-87-3	Benzene, (dichloromethyl)-
U223	26471-62-5	Benzene, 1,3-diisocyanatomethyl- (R, T)
U239	1330-20-7	Benzene, dimethyl- (I,T)
U201	108-46-3	1,3-Benzenediol
U127	118-74-1	Benzene, hexachloro-
U056	110-82-7	Benzene, hexahydro- (I)
U220	108-88-3	Benzene, methyl-
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro-
U106	606-20-2	Benzene, 2-methyl-1,3-dinitro-
U055	98-82-8	Benzene, (1-methylethyl)- (I)
U169	98-95-3	Benzene, nitro-
U183	608-93-5	Benzene, pentachloro-
U185	82-68-8	Benzene, pentachloronitro-
U020	98-09-9	Benzenesulfonic acid chloride (C,R)
U020	98-09-9	Benzenesulfonyl chloride (C,R)

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.133: continued

Haz. Waste Number	Chemical Abstracts Numbers	Substance (continued)
U207	95-94-3	Benzene, 1,2,4,5-tetrachloro-
U061	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-chloro-
U247	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-methoxy-
U023	98-07-7	Benzene, (trichloromethyl)-
U234	99-35-4	Benzene, 1,3,5-trinitro-
U021	92-87-5	Benzidine
U202	81-07-2*	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, & salts
U203	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-
U141	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-
U090	94-58-6	1,3-Benzodioxole, 5-propyl-
U064	189-55-9	Benzo[rs]pentaphene
U248	81-81-2*	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations of 0.3% or less
U022	50-32-8	Benzo[a]pyrene
U197	106-51-4	p-Benzoquinone
U023	98-07-7	Benzotrichloride (C,R,T)
U085	1464-53-5	2,2'-Bioxirane
U021	92-87-5	[1,1'-Biphenyl]-4,4'-diamine
U073	91-94-1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-
U091	119-90-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-
U095	119-93-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-
U225	75-25-2	Bromoform
U030	101-55-3	4-Bromophenyl phenyl ether
U128	87-68-3	1.3-Butadiene, 1,1,2,3,4,4-hexachloro-
U172	924-16-3	1-Butanamine, N-butyl-N-nitroso-
U031	71-36-3	1-Butanol (I)
U159	78-93-3	2-Butanone (I,T)
U160	1338-23-4	2-Butanone, peroxide (R,T)
U053	4170-30-3	2-Butenal
U074	764-41-0	2-Butene, 1,4-dichloro- (I,T)
U143	303-34-4	2-Butenoic acid, 2-methyl-, 7-[[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy)methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]-
U031	D71-36-3	n-Butyl alcohol (I)
U136	75-60-5	Cacodylic acid
U032	13765-19-0	Calcium chromate
U238	51-79-6	Carbamic acid, ethyl ester
U178	615-53-2	Carbamic acid, methylnitroso-, ethyl ester
U097	79-44-7	Carbamic chloride, dimethyl-
U114	111-54-6*	Carbamodithioic acid, 1,2-ethanediylbis-, salts & esters
U062	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester
U215	6533-73-9	Carbonic acid, dithallium(1+) salt
U033	353-50-4	Carbonic difluoride
U156	79-22-1	Carbonochloridic acid, methyl ester (I,T)
U033	353-50-4	Carbon oxyfluoride (R,T)
U211	56-23-5	Carbon tetrachloride
U034	75-87-6	Chloral
U035	305-03-3	Chlorambucil

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.133: continued

Haz. Waste Number	Chemical Abstracts Numbers	Substance (continued)
U036	57-74-9	Chlordane, alpha & gamma isomers
U026	494-03-1	Chlornaphazin
U037	108-90-7	Chlorobenzene
U038	510-15-6	Chlorobenzilate
U039	59-50-7	p-Chloro-m-cresol
U042	110-75-8	2-Chloroethyl vinyl ether
U044	67-66-3	Chloroform
U046	107-30-2	Chloromethyl methyl ether
U047	91-58-7	beta-Chloronaphthalene
U048	95-57-8	o-Chlorophenol
U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride
U032	13765-19-0	Chromic acid H ₂ CrO ₄ , calcium salt
U050	218-01-9	Chrysene
U051	-----	Creosote
U052	1319-77-3	Cresol (Cresylic acid)
U053	4170-30-3	Crotonaldehyde
U055	98-82-8	Cumene (I)
U246	506-68-3	Cyanogen bromide CNBr
U197	106-51-4	2,5-Cyclohexadiene-1,4-dione
U056	110-82-7	Cyclohexane (I)
U129	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha, 2alpha, 3beta, 4alpha, 5alpha, 6beta)-
U057	108-94-1	Cyclohexanone (I)
U130	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
U058	50-18-0	Cyclophosphamide
U240	94-75-7*	2,4-D, salts & esters
U059	20830-81-3	Daunomycin
U060	72-54-8	DDD
U061	50-29-3	DDT
U062	2303-16-4	Diallate
U063	53-70-3	Dibenz[a,h]anthracene
U064	189-55-9	Dibenzo[a,i]pyrene
U066	96-12-8	1,2-Dibromo-3-chloropropane
U069	84-74-2	Dibutyl phthalate
U070	95-50-1	o-Dichlorobenzene
U071	541-73-1	m-Dichlorobenzene
U072	106-46-7	p-Dichlorobenzene
U073	91-94-1	3,3'-Dichlorobenzidine
U074	764-41-0	1,4-Dichloro-2-butene (I,T)
U075	75-71-8	Dichlorodifluoromethane
U078	75-35-4	1,1-Dichloroethylene
U079	156-60-5	1,2-Dichloroethylene
U025	111-44-4	Dichloroethyl ether
U027	108-60-1	Dichloroisopropyl ether
U024	111-91-1	Dichloromethoxy ethane
U081	120-83-2	2,4-Dichlorophenol
U082	87-65-0	2,6-Dichlorophenol
U084	542-75-6	1,3-Dichloropropene
U085	1464-53-5	1,2:3,4-Diepoxybutane (I,T)
U108	123-91-1	1,4-Diethyleneoxide
U028	117-81-7	Diethylhexyl phthalate
U086	1615-80-1	N,N'-Diethylhydrazine
U087	3288-58-2	O,O-Diethyl S-methyl dithiophosphate
U088	84-66-2	Diethyl phthalate
U089	56-53-1	Diethylstilbesterol
U090	94-58-6	Dihydrosafrole

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.133: continued

Haz. Waste Number	Chemical Abstracts Numbers	Substance (continued)
U091	119-90-4	3,3'-Dimethoxybenzidine
U092	124-40-3	Dimethylamine (I)
U093	60-11-7	p-Dimethylaminoazobenzene
U094	57-97-6	7,12-Dimethylbenz[a]anthracene
U095	119-93-7	3,3'-Dimethylbenzidine
U096	80-15-9	alpha,alpha-Dimethylbenzylhydroperoxide (R)
U097	79-44-7	Dimethycarbamoyl chloride
U098	57-14-7	1,1-Dimethylhydrazine
U099	540-73-8	1,2-Dimethylhydrazine
U101	105-67-9	2,4-Dimethylphenol
U102	131-11-3	Dimethyl phthalate
U103	77-78-1	Dimethyl sulfate
U105	121-14-2	2,4-Dinitrotoluene
U106	606-20-2	2,6-Dinitrotoluene
U107	117-84-0	Di-n-octyl phthalate
U108	123-91-1	1,4-Dioxane
U109	122-66-7	1,2-Diphenylhydrazine
U110	142-84-7	Dipropylamine (I)
U111	621-64-7	Di-n-propylnitrosamine
U041	106-89-8	Epichlorohydrin
U001	75-07-0	Ethanal (I)
U174	55-18-5	Ethanamine, N-ethyl-N-nitroso-
U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-1-pyridinyl-N'-(2-thienylmethyl)-
U067	106-93-4	Ethane, 1,2-dibromo-
U076	75-34-3	Ethane, 1,1-dichloro-
U077	107-06-2	Ethane, 1,2-dichloro-
U131	67-72-1	Ethane, hexachloro-
U024	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-
U117	60-29-7	Ethane, 1,1'-oxybis- (I)
U025	111-44-4	Ethane, 1,1,'-oxybis[2-chloro-
U184	76-01-7	Ethane, pentachloro-
U208	630-20-6	Ethane, 1,1,1,2-tetrachloro-
U209	79-34-5	Ethane, 1,1,2,2-tetrachloro-
U218	62-55-5	Ethanethioamide
U226	71-55-6	Ethane, 1,1,1-trichloro-
U227	79-00-5	Ethane, 1,1,2-trichloro-
U359	110-80-5	Ethanol, 2-ethoxy-
U173	1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-
U004	98-86-2	Ethanone, 1-phenyl-
U043	75-01-4	Ethene, chloro-
U042	110-75-8	Ethene, (2-chloroethoxy)-
U078	75-35-4	Ethene, 1,1-dichloro-
U079	156-60-5	Ethene, 1,2-dichloro-, (E)-
U210	127-18-4	Ethene, tetrachloro-
U228	79-01-6	Ethene, trichloro-
U112	141-78-6	Ethyl acetate (I)
U113	140-88-5	Ethyl acrylate (I)
U238	51-79-6	Ethyl carbamate (urethane)
U117	60-29-7	Ethyl ether (I)
U114	111-54-6*	Ethylenebisdithiocarbamic acid, salts & esters
U067	106-93-4	Ethylene dibromide
U077	107-06-2	Ethylene dichloride
U359	110-80-5	Ethylene glycol monoethyl ether
U115	75-21-8	Ethylene oxide (I,T)
U116	96-45-7	Ethylenethiourea

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.133: continued

Haz. Waste Number	Chemical Abstracts Numbers	Substance (continued)
U076	75-34-3	Ethylidene dichloride
U118	97-63-2	Ethyl methacrylate
U119	62-50-0	Ethyl methanesul fonate
U120	206-44-0	Fluoranthene
U122	50-00-0	Formaldehyde
U123	64-18-6	Formic acid (C,T)
U124	110-00-9	Furan (I)
U125	98-01-1	2-Furancarboxaldehyde (I)
U147	108-31-6	2.5-Furandione
U213	109-99-9	Furan, tetrahydro- (I)
U125	98-01-1	Furfural (I)
U124	110-00-9	Furfuran (I)
U206	18883-66-4	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitroso-ureido)-. D-
U206	18883-66-4	D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)-carbonyl]amino]-
U126	765-34-4	Glycidylaldehyde
U163	70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso-
U127	118-74-1	Hexachlorobenzene
U128	87-68-3	Hexachlorobutadiene
U130	77-47-4	Hexachlorocyclopentadiene
U131	67-72-1	Hexachloroethane
U132	70-30-4	Hexachlorophene
U243	1888-71-7	Hexachloropropene
U133	302-01-2	Hydrazine (R,T)
U086	1615-80-1	Hydrazine, 1,2-diethyl-
U098	57-14-7	Hydrazine, 1,1-dimethyl-
U099	540-73-8	Hydrazine, 1,2-dimethyl-
U109	122-66-7	Hydrazine, 1,2-diphenyl-
U134	7664-39-3	Hydrofluoric acid (C,T)
U134	7664-39-3	Hydrogen fluoride (C,T)
U135	7783-06-4	Hydrogen sulfide
U135	7783-06-4	Hydrogen sulfide H2S
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U116	96-45-7	2-Imidazolidinethione
U137	193-39-5	Indeno[1,2,3-cd]pyrene
U190	85-44-9	1,3-Isobenzofurandione
U140	78-83-1	Isobutyl alcohol (I,T)
U141	120-58-1	Isosafrole
U142	143-50-0	Kepone
U143	303-34-4	Lasiocarpine
U144	301-04-2	Lead acetate
U146	1335-32-6	Lead, bis(acetato-O)tetrahydroxytri-
U145	7446-27-7	Lead phosphate
U146	1335-32-6	Lead subacetate
U129	58-89-9	Lindane
U163	70-25-7	MNNG
U147	108-31-6	Maleic anhydride
U148	123-33-1	Maleic hydrazide
U149	109-77-3	Malononitrile
U150	148-82-3	Melphalan
U151	7439-97-6	Mercury
U152	126-98-7	Methacrylonitrile (I,T)
U092	124-40-3	Methanamine, N-methyl- (I)
U029	74-83-9	Methane, bromo-
U045	74-87-3	Methane, chloro- (I,T)

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.133: continued

Haz. Waste Number	Chemical Abstracts Numbers	Substance (continued)
U046	107-30-2	Methane, chloromethoxy-
U068	74-95-3	Methane, dibromo-
U080	75-09-2	Methane, dichloro-
U075	75-71-8	Methane, dichlorodifluoro-
U138	74-88-4	Methane, iodo-
U119	62-50-0	Methanesulfonic acid, ethyl ester
U211	56-23-5	Methane, tetrachloro-
U153	74-93-1	Methanethiol (I,T)
U225	75-25-2	Methane, tribromo-
U044	67-66-3	Methane, trichloro-
U121	75-69-4	Methane, trichlorofluoro-
U036	57-74-9	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-
U154	67-56-1	Methanol (I)
U155	91-80-5	Methapyrilene
U142	143-50-0	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-
U247	72-43-5	Methoxychlor
U154	67-56-1	Methyl alcohol (I)
U029	74-83-9	Methyl bromide
U186	504-60-9	1-Methylbutadiene (I)
U045	74-87-3	Methyl chloride (I,T)
U156	79-22-1	Methyl chlorocarbonate (I,T)
U226	71-55-6	Methyl chloroform
U157	56-49-5	3-Methylcholanthrene
U158	101-14-4	4,4'-Methylenebis(2-chloroaniline)
U068	74-95-3	Methylene bromide
U080	75-09-2	Methylene chloride
U159	78-93-3	Methyl ethyl ketone (MEK) (I,T)
U160	1338-23-4	Methyl ethyl ketone peroxide (R,T)
U138	74-88-4	Methyl iodide
U161	108-10-1	Methyl isobutyl ketone (I)
U162	80-62-6	Methyl methacrylate (I,T)
U161	108-10-1	4-Methyl-2-pentanone (I)
U164	56-04-2	Methylthiouracil
U010	50-07-7	Mitomycin C
U059	20830-81-3	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl]oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-. (8S-cis)-
U167	134-32-7	1-Naphthalenamine
U168	91-59-8	2-Naphthalenamine
U026	494-03-1	Naphthalenamine, N,N'-bis(2-chloroethyl)-
U165	91-20-3	Naphthalene
U047	91-58-7	Naphthalene, 2-chloro-
U166	130-15-4	1,4-Naphthalenedione
U236	72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis[5-amino-4-hydroxy]-, tetrasodium salt
U166	130-15-4	1,4-Naphthoquinone
U167	134-32-7	alpha-Naphthylamine
U168	91-59-8	beta-Naphthylamine
U217	10102-45-1	Nitric acid, thallium(1+) salt
U169	98-95-3	Nitrobenzene (I,T)

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.133: continued

Haz. Waste Number	Chemical Abstracts Numbers	Substance (continued)
U170	100-02-7	p-Nitrophenol
U171	79-46-9	2-Nitropropane (I,T)
U172	924-16-3	N-Nitrosodi-n-butylamine
U173	1116-54-7	N-Nitrosodiethanolamine
U174	55-18-5	N-Nitrosodiethylamine
U176	759-73-9	N-Nitroso-N-ethylurea
U177	684-93-5	N-Nitroso-N-methylurea
U178	615-53-2	N-Nitroso-N-methylurethane
U179	100-75-4	N-Nitrosopiperidine
U180	930-55-2	N-Nitrosopyrrolidine
U181	99-55-8	5-Nitro-o-toluidine
U193	1120-71-4	1,2-Oxathiolane, 2,2-dioxide
U058	50-18-0	2H-1,3,2-Oxazaphosphor in-2-amine, N,N-bis (2-chloroethyl)tetrahydro-, 2-oxide
U115	75-21-8	Oxirane (I,T)
U126	765-34-4	Oxiranecarboxyaldehyde
U041	106-89-8	Oxirane, (chloromethyl)-
U182	123-63-7	Paraldehyde
U183	608-93-5	Pentachlorobenzene
U184	76-01-7	Pentachloroethane
U185	82-68-8	Pentachloronitrobenzene (PCNB)
see F027	87-86-5	Pentachlorophenol
U161	108-10-1	Pentanol, 4-methyl-
U186	504-60-9	1,3-Pentadiene (I)
U187	62-44-2	Phenacetin
U188	108-95-2	Phenol
U048	95-57-8	Phenol, 2-chloro-
U039	59-50-7	Phenol, 4-chloro-3-methyl-
U081	120-83-2	Phenol, 2,4-dichloro-
U082	87-65-0	Phenol, 2,6-dichloro-
U089	56-53-1	Phenol, 4,4'-(1,2-diethyl-1,2- ethenediyl)bis-, (E)-
U101	105-67-9	Phenol, 2,4-dimethyl-
U052	1319-77-3	Phenol, methyl-
U132	70-30-4	Phenol, 2,2'-methylenebis[3,4,6-trichloro-
U170	100-02-7	Phenol, 4-nitro-
see F027	87-86-5	Phenol, pentachloro-,
see F027	58-90-2	Phenol, 2,3,4,6-tetrachloro-
see F027	95-95-4	Phenol, 2,4,6-trichloro-
see F027	88-06-2	Phenol, 2,4,6-trichloro-
U150	148-82-3	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-
U145	7446-27-7	Phosphoric acid, lead(2+) salt (2:3)
U087	3288-58-2	Phosphorodithioic acid, O,O-diethyl S-methyl ester
U189	1314-80-3	Phosphorus sulfide (R)
U190	85-44-9	Phthalic anhydride
U191	109-06-8	2-Picoline
U179	100-75-4	Piperidine, 1-nitroso-
U192	23950-58-5	Pronamide
U194	107-10-8	1-Propanamine (I,T)
U111	621-64-7	1-Propanamine, N-nitroso-N-propyl-
U110	142-84-7	1-Propanamine, N-propyl- (I)
U066	96-12-8	Propane, 1,2-dibromo-3-chloro-
U083	78-87-5	Propane, 1,2-dichloro-
U149	109-77-3	Propanedinitrile
U171	79-46-9	Propane, 2-nitro- (I,T)

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.133: continued

Haz. Waste Number	Chemical Abstracts Numbers	Substance (continued)
U027	108-60-1	Propane, 2,2'-oxybis[2-chloro-
U193	1120-71-4	1,3-Propane sultone
see F027	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-
U235	126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U140	78-83-1	1-Propanol, 2-methyl- (I,T)
U002	67-64-1	2-Propanone (I)
U007	79-06-1	2-Propenamide
U084	542-75-6	1-Propene, 1,3-dichloro-
U243	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-
U009	107-13-1	2-Propenenitrile
U152	126-98-7	2-Propenenitrile, 2-methyl- (I,T)
U008	79-10-7	2-Propenoic acid (I)
U113	140-88-5	2-Propenoic acid, ethyl ester (I)
U118	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester
U162	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
U194	107-10-8	n-Propylamine (I,T)
U083	78-87-5	Propylene dichloride
U148	123-33-1	3,6-Pyridazinedione, 1,2-dihydro-
U196	110-86-1	Pyridine
U191	109-06-8	Pyridine, 2-methyl-
U237	66-75-1	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-
U164	56-04-2	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-
U180	930-55-2	Pyrrolidine, 1-nitroso-
U200	50-55-5	Reserpine
U201	108-46-3	Resorcinol
U202	81-07-2*	Saccharin, & salts
U203	94-59-7	Safrole
U204	7783-00-8	Selenious acid
U204	7783-00-8	Selenium dioxide
U205	7488-56-4	Selenium sulfide
U205	7488-56-4	Selenium sulfide SeS ₂ (R,T)
U015	115-02-6	L-Serine, diazoacetate (ester)
see F027	93-72-1	Silvex (2,4,5-TP)
U206	18883-66-4	Streptozotocin
U103	77-78-1	Sulfuric acid, dimethyl ester
U189	1314-80-3	Sulfur phosphide (R)
see F027	93-76-5	2,4,5-T
U207	95-94-3	1,2,4,5-Tetrachlorobenzene
U208	630-20-6	1,1,1,2-Tetrachloroethane
U209	79-34-5	1,1,2,2-Tetrachloroethane
U210	127-18-4	Tetrachloroethylene
see F027	58-90-2	2,3,4,6-Tetrachlorophenol
U213	109-99-9	Tetrahydrofuran (I)
U214	563-68-8	Thallium(I) acetate
U215	6533-73-9	Thallium(I) carbonate
U216	7791-12-0	Thallium(I) chloride
U216	7791-12-0	Thallium chloride TlCl
U217	10102-45-1	Thallium(I) nitrate
U218	62-55-5	Thioacetamide
U153	74-93-1	Thiomethanol (I)
U244	137-26-8	Thioperoxydicarbonic diamide [(H ₂ N)C(S)] ₂ S ₂ , tetramethyl-
U219	62-56-6	Thiourea
U244	137-26-8	Thiram

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.133: continued

Haz. Waste Number	Chemical Abstracts Numbers	Substance (continued)
U220	108-88-3	Toluene
U221	25376-45-8	Toluenediamine
U223	26471-62-5	Toluene diisocyanate (R,T)
U328	95-53-4	o-Toluidine
U353	106-49-0	p-Toluidine
U222	636-21-5	o-Toluidine hydrochloride
U011	61-82-5	1H-1,2,4-Triazol-3-amine
U227	79-00-5	1,1,2-Trichloroethane
U228	79-01-6	Trichloroethylene
U121	75-69-4	Trichloromonofluoromethane
see F027	95-95-4	2,4,5-Trichlorophenol
see F027	88-06-2	2,4,6-Trichlorophenol
U234	99-35-4	1,3,5-Trinitrobenzene (R,T)
U182	123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl-
U235	126-72-7	Tris(2,3-dibromopropyl) phosphate
U236	72-57-1	Trypan blue
U237	66-75-1	Uracil mustard
U176	759-73-9	Urea, N-ethyl-N-nitroso-
U177	684-93-5	Urea, N-methyl-N-nitroso-
U043	75-01-4	Vinyl chloride
U248	81-81-2*	Warfarin, & salts, when present at concentrations of 0.3% or less
U239	1330-20-7	Xylene (l)
U200	50-55-5	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)-
U249	1314-84-7	Zinc phosphide, Zn ₃ P ₂ when present at concentrations of 10% or less

* CAS Number given for parent compound only.

30.136: Acutely Hazardous Wastes

A waste is an acutely hazardous waste if it is listed in 310 CMR 30.136, or if it listed in 310 CMR 30.131 with EPA Hazardous Waste No. F020, F021, F022, F023, F026, or F027.

(1) In addition to the wastes listed in 310 CMR 30.131 with EPA Hazardous Waste No. F020, F021, F022, F023, F026, or F027, the following materials or items are acutely hazardous waste if and when they are, or are intended to be, discarded:

- (a) Any commercial chemical product or manufacturing chemical intermediate having the generic name listed in 310 CMR 30.136.
- (b) Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in 310 CMR 30.136.
- (c) Any residue remaining in a container or an inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in 310 CMR 30.136, unless the container is an empty container as defined in 310 CMR 30.106.
- (d) Residues or hazardous waste constituents contained in media. Any residue or contaminated soil, water, or other debris resulting from the clean-up of a spill, into or on any land or water, of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in 310 CMR 30.136, or any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in 310 CMR 30.136.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.136: continued

(e) Any paper bag which has contained any material described in 310 CMR 30.136(1)(a) through (d).

(f) Any residue containing a chemical intermediate or chemical product having the generic name listed in 310 CMR 30.136 that is mixed with any other hazardous waste.

(2) The acutely hazardous wastes and their corresponding EPA Hazardous Waste Numbers are:

Haz. Waste Number	Chemical Abstracts Numbers	Substance
P023	107-20-0	Acetaldehyde, chloro-
P002	591-08-2	Acetamide, N-(aminothioxomethyl)-
P057	640-19-7	Acetamide, 2-fluoro-
P058	62-74-8	Acetic acid, fluoro-, sodium salt
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein
P070	116-06-3	Aldicarb
P004	309-00-2	Aldrin
P005	107-18-6	Allyl alcohol
P006	20859-73-8	Aluminum phosphide (R,T)
P007	763-96-4	5-(Aminomethyl)-3-isoxazolol
P008	504-24-5	4-Aminopyridine
P009	131-74-8	Ammonium picrate (R)
P119	7803-55-6	Ammonium vanadate
P099	506-61-6	Argentate(1-), bis(cyano-C)-, potassium
P010	7778-39-4	Arsenic acid H ₃ AsO ₄
P012	1327-53-3	Arsenic oxide As ₂ O ₃
P011	1303-28-2	Arsenic oxide As ₂ O ₅
P011	1303-28-2	Arsenic pentoxide
P012	1327-53-3	Arsenic trioxide
P038	692-42-2	Arsine, diethyl-
P036	696-28-6	Arsonous dichloride, phenyl-
P054	151-56-4	Aziridine
P067	75-55-8	Aziridine, 2-methyl-
P013	542-62-1	Barium cyanide
P024	106-47-8	Benzenamine, 4-chloro-
P077	100-01-6	Benzenamine, 4-nitro-
P028	100-44-7	Benzene, (chloromethyl)-
P042	51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)-ethyl]-, (R)-
P046	122-09-8	Benzeneethanamine, alpha,alpha-dimethyl-
P014	108-98-5	Benzenethiol
P001	81-81-2*	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3%
P028	100-44-7	Benzyl chloride
P015	7440-41-7	Beryllium
P017	598-31-2	Bromoacetone
P018	357-57-3	Brucine
P045	39196-18-4	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[(methylamino)carbonyl] oxime
P021	592-01-8	Calcium cyanide
P021	592-01-8	Calcium cyanide Ca(CN) ₂
P022	75-15-0	Carbon disulfide
P095	75-44-5	Carbonic dichloride
P023	107-20-0	Chloroacetaldehyde
P024	106-47-8	p-Chloroaniline
P026	5344-82-1	1-(o-Chlorophenyl)thiourea
P027	542-76-7	3-Chloropropionitrile

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.136: continued

Haz. Waste Number	Chemical Abstracts Numbers	Substance (continued)
P029	544-92-3	Copper cyanide
P029	544-92-3	Copper cyanide CuCN
P030	-----	Cyanides (soluble cyanide salts), not otherwise specified
P031	460-19-5	Cyanogen
P033	506-77-4	Cyanogen chloride
P033	506-77-4	Cyanogen chloride CNCl
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol
P016	542-88-1	Dichloromethyl ether
P036	696-28-6	Dichlorophenylarsine
P037	60-57-1	Dieldrin
P038	692-42-2	Diethylarsine
P041	311-45-5	Diethyl-p-nitrophenyl phosphate
P040	297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate
P043	55-91-4	Diisopropylfluorophosphate (DFP)
P004	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)-
P060	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,8abeta)-
P037	60-57-1	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)-
P051	72-20-8*	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-, & metabolites
P044	60-51-5	Dimethoate
P046	122-09-8	alpha,alpha-Dimethylphenethylamine
P047	534-52-1*	4,6-Dinitro-o-cresol, & salts
P048	51-28-5	2,4-Dinitrophenol
P020	88-85-7	Dinoseb
P085	152-16-9	Diphosphoramidate, octamethyl-
P111	107-49-3	Diphosphoric acid, tetraethyl ester
P039	298-04-4	Disulfoton
P049	541-53-7	Dithiobiuret
P050	115-29-7	Endosulfan
P088	145-73-3	Endothall
P051	72-20-8	Endrin
P051	72-20-8	Endrin, & metabolites
P042	51-43-4	Epinephrine
P031	460-19-5	Ethanedinitrile
P066	16752-77-5	Ethanimidothioic acid, N-[[[(methylamino)-carbonyl]oxy]-, methyl ester
P101	107-12-0	Ethyl cyanide
P054	151-56-4	Ethyleneimine
P097	52-85-7	Famphur
P056	7782-41-4	Fluorine
P057	640-19-7	Fluoroacetamide
P058	62-74-8	Fluoroacetic acid, sodium salt
P065	628-86-4	Fulminic acid, mercury(2+) salt (R,T)
P059	76-44-8	Heptachlor
P062	757-58-4	Hexaethyl tetraphosphate
P116	79-19-6	Hydrazinecarbothioamide

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.136: continued

Haz. Waste Number	Chemical Abstracts Numbers	Substance (continued)
P068	60-34-4	Hydrazine, methyl-
P063	74-90-8	Hydrocyanic acid
P063	74-90-8	Hydrogen cyanide
P096	7803-51-2	Hydrogen phosphide
P060	465-73-6	Isodrin
P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
P092	62-38-4	Mercury, (acetato-O)phenyl-
P065	628-86-4	Mercury fulminate (R,T)
P082	62-75-9	Methanamine, N-methyl-N-nitroso-
P064	624-83-9	Methane, isocyanato-
P016	542-88-1	Methane, oxybis[chloro-
P112	509-14-8	Methane, tetranitro- (R)
P118	75-70-7	Methanethiol, trichloro-
P050	115-29-7	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide
P059	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-
P066	16752-77-5	Methomyl
P068	60-34-4	Methyl hydrazine
P064	624-83-9	Methyl isocyanate
P069	75-86-5	2-Methylactonitrile
P071	298-00-0	Methyl parathion
P072	86-88-4	alpha-Naphthylthiourea
P073	13463-39-3	Nickel carbonyl
P073	13463-39-3	Nickel carbonyl Ni(CO) ₄ , (T-4)-
P074	557-19-7	Nickel cyanide
P074	557-19-7	Nickel cyanide Ni(CN) ₂
P075	54-11-5 *	Nicotine, & salts
P076	10102-43-9	Nitric oxide
P077	100-01-6	p-Nitroaniline
P078	10102-44-0	Nitrogen dioxide
P076	10102-43-9	Nitrogen oxide NO
P078	10102-44-0	Nitrogen oxide NO ₂
P081	55-63-0	Nitroglycerine (R)
P082	62-75-9	N-Nitrosodimethylamine
P084	4549-40-0	N-Nitrosomethylvinylamine
P085	152-16-9	Octamethylpyrophosphoramidate
P087	20816-12-0	Osmium oxide O(s)O(4), (1-4)-
P087	20816-12-0	Osmium tetroxide
P088	145-73-3	7-Oxabicyclo[2,2,1]heptane-2,3-dicarboxylic acid
P089	56-38-2	Parathion
P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-
P048	51-28-5	Phenol, 2,4-dinitro-
P047	534-52-1*	Phenol, 2-methyl-4,6-dinitro-, & salts
P020	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P092	62-38-4	Phenylmercury acetate
P093	103-85-5	Phenylthiourea
P094	298-02-2	Phorate
P095	75-44-5	Phosgene
P096	7803-51-2	Phosphine
P041	311-45-5	Phosphoric acid, diethyl 4-nitrophenyl ester

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.136: continued

Haz. Waste Number	Chemical Abstracts Numbers	Substance (continued)
P039	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester
P094	298-02-2	Phosphorodithioic acid, O,O-diethyl S-[(ethyl-thio)methyl] ester
P044	60-51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester
P043	55-91-4	Phosphorofluoridic acid, bis(1-methylethyl) ester
P089	56-38-2	Phosphorothioic acid, O,O-diethyl O-(4-nitro-phenyl) ester
P040	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P097	52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino)-sulfonyl]phenyl] O,O-dimethyl ester
P071	298-00-0	Phosphorothioic acid, O,O-dimethyl O-(4-nitro-phenyl) ester
P204	57-47-6	Physostigmine
P188	57-64-7	Physostigmine salicylate
P110	78-00-2	Plumbane, tetraethyl-
P098	151-50-8	Potassium cyanide
P098	151-50-8	Potassium cyanide K(CN)
P099	506-61-6	Potassium silver cyanide
P070	116-06-3	Propanal, 2-methyl-2-(methylthio)-, O-[(methyl-amino)carbonyl]oxime
P101	107-12-0	Propanenitrile
P027	542-76-7	Propanenitrile, 3-chloro-
P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl-
P081	55-63-0	1,2,3-Propanetriol, trinitrate (R)
P017	598-31-2	2-Propanone, 1-bromo-
P102	107-19-7	Propargyl alcohol
P003	107-02-8	2-Propenal
P005	107-18-6	2-Propen-1-ol
P067	75-55-8	1,2-Propylenimine
P102	107-19-7	2-Propyn-1-ol
P008	504-24-5	4-Pyridinamine
P075	54-11-5 *	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts
P114	12039-52-0	Selenious acid, dithallium(1+) salt
P103	630-10-4	Selenourea
P104	506-64-9	Silver cyanide
P104	506-64-9	Silver cyanide Ag(CN)
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide
P106	143-33-9	Sodium cyanide Na(CN)
P108	57-24-9 *	Strychnidin-10-one, & salts
P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-
P108	57-24-9 *	Strychnine, & salts
P115	7446-18-6	Sulfuric acid, dithallium(1+) salt
P109	3689-24-5	Tetraethyldithiopyrophosphate
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Tetraethyl pyrophosphate
P112	509-14-8	Tetranitromethane (R)
P062	757-58-4	Tetraphosphoric acid, hexaethyl ester
P113	1314-32-5	Thallic oxide
P113	1314-32-5	Thallium oxide Tl ₂ O ₃
P114	12039-52-0	Thallium(I) selenite

30.136: continued

Haz. Waste Number	Chemical Abstracts Numbers	Substance (continued)
P115	7446-18-6	Thallium(I) sulfate
P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
P045	39196-18-4	Thiofanox
P049	541-53-7	Thioimidodicarbonic diamide [(H ₂ N)C(S)] ₂ NH
P014	108-98-5	Thiophenol
P116	79-19-6	Thiosemicarbazide
P026	5344-82-1	Thiourea, (2-chlorophenyl)-
P072	86-88-4	Thiourea, 1-naphthalenyl-
P093	103-85-5	Thiourea, phenyl-
P123	8001-35-2	Toxaphene
P118	75-70-7	Trichloromethanethiol
P119	7803-55-6	Vanadic acid, ammonium salt
P120	1314-62-1	Vanadium oxide V ₂ O ₅
P120	1314-62-1	Vanadium pentoxide
P084	4549-40-0	Vinylamine, N-methyl-N-nitroso-
P001	81-81-2 *	Warfarin, & salts, when present at concentrations greater than 0.3%
P121	557-21-1	Zinc cyanide
P121	557-21-1	Zinc cyanide Zn(CN) ₂
P122	1314-84-7	Zinc phosphide Zn ₃ P ₂ (R,T), when present at concentrations greater than 10%

* CAS Number given for parent compound only.

30.140: When a Waste Becomes a Hazardous Waste

- (1) A waste which is not exempted from regulation pursuant to 310 CMR 30.104, becomes a hazardous waste when any of the following occurs:
- In the case of a waste listed in 310 CMR 30.131 or 30.132, when the waste first meets a listing description set forth in those sections.
 - In the case of a waste listed in 310 CMR 30.133 or 30.136 when the waste first meets a listing description set forth in those sections and either a decision is made to discard the material or it is discarded.
 - In the case of a mixture of non-hazardous waste and one or more listed hazardous wastes, when a hazardous waste listed in 310 CMR 30.130 through 30.136 is first added to the non-hazardous waste.
 - In the case of a waste not listed in 310 CMR 30.130 through 30.136, including mixtures of wastes not listed in 310 CMR 30.130 through 30.136, when the waste exhibits any of the characteristics identified in 310 CMR 30.120 through 30.125.
 - In the case of residue remaining in an empty container, as defined in 310 CMR 30.106, after the residue has first been removed if it exhibits any of the characteristics identified in 310 CMR 30.120 through 30.125 or contains a waste listed in 310 CMR 30.130 through 30.136.
 - When the hazardous waste is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit, it shall become subject to regulation as a hazardous waste when it exits the unit in which it was generated, except that:
 - if the unit is a surface impoundment, the hazardous waste shall become subject to regulation as a hazardous waste upon generation; and
 - if the hazardous waste remains in the unit, other than a surface impoundment, for more than 90 days after the unit ceases to be operated for manufacturing, storage or transportation of the product or raw material, the hazardous waste shall become subject to regulation as a hazardous waste upon the expiration of said 90 days.

30.141: When a Hazardous Waste Ceases to be a Hazardous Waste

Unless and until it meets the criteria in 310 CMR 30.141, a hazardous waste shall remain subject to regulation as a hazardous waste. Any hazardous waste described in 310 CMR 30.140 ceases to be a hazardous waste and need no longer be regulated as such when:

- (1) In the case of any waste or mixture which is regulated solely by virtue of the characteristics in 310 CMR 30.120 through 30.125, it no longer exhibits any of said characteristics. However, wastes that exhibit a characteristic at the point of generation may still be subject to the requirements of 310 CMR 30.750, even if they no longer exhibit a characteristic at the point of land disposal.
- (2) In the case of any waste which is a listed waste in 310 CMR 30.130 through 30.136, or waste which is derived from a waste listed in 310 CMR 30.130 through 30.136, it has been determined that the waste is not a hazardous waste pursuant to 310 CMR 30.142.
- (3) In the case of a mixture of non-hazardous waste and one or more hazardous wastes listed in 310 CMR 30.130 through 30.136 solely because the waste(s) exhibit(s) one or more characteristics of hazardous waste identified in 310 CMR 30.122 (ignitable), 30.123 (corrosive), or 310 CMR 30.124 (reactive), the resultant mixture no longer exhibits any such characteristic of hazardous waste. Any mixing process to render a waste non-hazardous is treatment of hazardous waste subject to the applicable requirements of 310 CMR 30.500 through 30.900.
- (4) In the case of a waste which can be recycled, the Department has approved that recycling pursuant to 310 CMR 30.200, provided that it is recycled in compliance with 310 CMR 30.200 and the terms and conditions of such approval.

30.142: Petition to Classify a Waste as Non-hazardous

(1) Any person seeking to exclude a waste, which is designated by an EPA Hazardous Waste Number at a particular generating facility from the lists in 310 CMR 30.131 through 30.136 may petition the EPA Administrator for a regulatory amendment. To be successful, the petitioner shall comply with 40 CFR §§ 260.20(b) through (e) and 260.22 which are hereby incorporated by reference, with respect to delisting petitions only, with the following additions, modifications and exceptions:

- (a) 40 CFR 260.20(b) is hereby modified to read as follows: "Each petition shall be submitted to the Administrator by certified mail, with a copy of the petition sent to the Department either by certified mail or hand delivery, and shall include:";
- (b) All references to federal citations within 40 CFR 260.22 are substituted with the analogous state regulation as follows:
 1. "§ 261.3(a)(2)(ii) or (c)" is hereby replaced with "310 CMR 30.102(2)(a) or (d)";
 2. "subpart D" is hereby replaced with "310 CMR 30.131 through 30.136"
 3. "paragraph (a) of this section" is hereby replaced with "310 CMR 30.142(1)";
 4. "subpart C of part 261" is hereby replaced with "310 CMR 30.120 through 30.125";
 5. "§ 261.21, § 261.22, § 261.23, or § 261.24" are hereby replaced with "310 CMR 30.122, 30.123, 30.124, or 30.125";
 6. "Appendix VII of part 261 of this chapter" is hereby replaced with "Appendix VII of part 261 as adopted at 310 CMR 30.162";
 7. "260.11" is hereby replaced with "310 CMR 30.012";
 8. "§ 261.11(a)(3)" is hereby replaced with "310 CMR 30.112(1)(c)";
 9. "§ 261.11(a)(3)(i) through (xi)" is hereby replaced with "310 CMR 30.112(1)(c)1. through 11."; and
 10. "261.11(a)(2)" is hereby replaced with "310 CMR 30.112(1)(b)".

(2) A waste which is excluded by the EPA pursuant to 310 CMR 30.142(1) is still a hazardous waste subject to 310 CMR 30.000 if:

- (a) the Department has accepted the EPA exclusion decision with a modification to impose additional, more stringent requirements; or
- (b) the Department has prohibited the EPA exclusion decision from taking effect within the Commonwealth of Massachusetts.

(3) Any person seeking to exclude a waste which is designated by a Massachusetts Hazardous Waste Number at a particular generating facility from the lists in 310 CMR 30.131 through 30.136 may petition the Department for a waiver. To be successful, the petitioner shall comply with 310 CMR 30.142(3)(a) through (c).

30.142: continued

- (a) Each petition shall be submitted to the Department by certified mail or by hand delivery and shall include the following:
1. The petitioner's name and address;
 2. A description of the waste or wastes for which the determination is requested pursuant to 310 CMR 30.142(3);
 3. Any relevant data, studies, or other information;
 4. The certification required by 310 CMR 30.009; and
 5. The petitioner's signature.
- (b) After receipt of any such petition, the Department may request any additional information which it may reasonably require to evaluate the petition.
- (c) The determination of the Department shall apply only to the particular waste generated at the individual plant covered by the petition.

30.143: Special Requirements for Regulated Recycled Materials and Universal Wastes

- (1) Materials that would be hazardous wastes if disposed of, but are recycled in compliance with 310 CMR 30.200 instead of being disposed of, are subject to the provisions of 310 CMR 30.200.
- (2) The materials listed in 310 CMR 30.143(2)(a) through (e), and further described in 310 CMR 30.1020, are exempt from regulation under 310 CMR 30.200 through 30.900, provided such wastes are managed in compliance with 310 CMR 30.1000:
- (a) Batteries;
 - (b) Pesticides;
 - (c) Thermostats;
 - (d) Mercury-containing devices; and
 - (e) Mercury-containing lamps.

30.144: Authority to Further Identify Hazardous Waste

A waste which is not identified or otherwise described in 310 CMR 30.120 through 30.125 or 30.130 through 30.136 becomes subject to 310 CMR 30.000 if:

- (1) The Department, in the course of inspecting any premises, has reason to believe that the waste being generated, transported, stored, treated, used, or disposed of meets the general criteria of a hazardous waste as set forth in 310 CMR 30.111; and
- (2) The Department believes that an imminent threat pursuant to M.G.L. c. 21C, §§ 9 and 11, may exist.

30.151: Representative Sampling Methods

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. For sampling waste with properties similar to the indicated material, the Department will consider samples collected using the sampling protocols listed in Appendix I of 40 CFR Part 261, which is hereby incorporated by reference, or equivalent methods to be representative of the waste.

Copies of ASTM Standards referred to in Appendix I of 40 CFR Part 261 are available from: ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

30.152: Test for Ignitability of Waste

- (1) The flash point of liquids shall be determined by any of the following methods:
 - (a) A Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D-93-79 or D-93-80, and/or "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", as incorporated by reference at 310 CMR 30.012;
 - (b) A Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D-3278-78; or
 - (c) An equivalent method.

30.153: Test for Corrosivity of Waste

(1) pH shall be determined by a pH meter using either method 9040C in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference at 310 CMR 30.012, or by an equivalent method.

(2) The rate of corrosion of steel shall be determined by Method 1110A in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference at 310 CMR 30.012, 3or by an equivalent method.

30.154: Test for Reactivity of Waste

No test is specified. Refer to criteria in 310 CMR 30.124.

30.155: Toxicity Characteristic Leaching Procedure (TCLP)

To determine whether a waste exhibits the characteristic of toxicity, the following procedure shall be used: Toxicity Characteristic Leaching Procedure, Method 1311, as specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in 310 CMR 30.012.

30.156: Paint Filter Liquids Test

To determine the presence or absence of free liquids in waste, the following procedure shall be used: Paint Filter Liquid Test, Method 9095B, as specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." EPA Publication SW-846, as incorporated by reference at 310 CMR 30.012.

30.157: Test Methods

Appropriate analytical procedures to determine whether a sample contains a given toxic constituent or a given physical characteristic are specified in Chapter Two, "Choosing the Correct Procedure" found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in 310 CMR 30.012. Prior to final sampling and analysis method selection, the individual should consult the specific section or method described in SW-846 for additional guidance on which of the approved methods should be employed for a specific sample analysis situation.

30.160: Hazardous Constituents

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No.
Acetonitrile	Same	75-05-8	U003
Acetophenone	Ethanone, 1-phenyl-	98-86-2	U004
2-Acetylamino-fluorene	Acetamide, N-9H-fluoren-2-yl	53-96-3	U005
Acetyl chloride	Same	75-36-5	U006
1-Acetyl-2-thio-urea	Acetamide, N-(aminothioxomethyl)-	591-08-2	P002
Acrolein	2-Propenal	107-02-8	P003
Acrylamide	2-Propenamamide	79-06-1	U007
Acrylonitrile	2-Propenenitrile	107-13-1	U009
Aflatoxins	Same	1402-68-2	----
Aldicarb	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime	116-06-3	P070

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.160: continued

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No. (continued)
Aldrin	1, 4, 5, 8-Dimethanonaphthalene, 1, 2, 3, 4, 10, 10-hexachloro-1, 4, 4a, 5, 8, 8a-hexahydro-, (1alpha, 4alpha, 4abeta, 5alpha, 8alpha, 8abeta)-	309-00-2	P004
Allyl alcohol	2-Propen-1-ol	107-18-6	P005
Allyl chloride	1-Propene, 3-chloro-	00107-05-1	see F024
Aluminum phosphide	Same	20859-73-8	P006
4-Aminobiphenyl	[1,1'-Biphenyl]-4-amine	92-67-1	----
5-(Aminomethyl)-3-isoxazolol	3(2H)-Isoxazolone, 5-(aminomethyl)-	2763-96-4	P007
4-Aminopyridine	4-Pyridinamine	504-24-5	P008
Amitrole	1H-1,2,4-Triazol-3-amine	61-82-5	U011
Ammonium vanadate	Vanadic acid, ammonium salt	7803-55-6	P119
Aniline	Benzenamine	62-53-3	U012
o-Anisidine (2-methoxyaniline)	Benzenamine, 2-Methoxy-	90-04-0	----
Antimony	Same	7440-36-0	----
Antimony compounds, N.O.S. *	-----	-----	----
Aramite	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	----
Arsenic	Same	7440-38-2	----
Arsenic compounds, N.O.S. *	-----	-----	----
Arsenic acid	Arsenic acid H3AsO4	7778-39-4	P010
Arsenic trioxide	Arsenic oxide As2O3	1327-53-3	P012
Arsenic pentoxide	Arsenic oxide As2O5	1303-28-2	P011
Auramine	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl	492-80-8	U014
Azaserine	L-Serine, diazoacetate (ester)	115-02-6	U015
Barium	Same	7440-39-3	----
Barium compounds, N.O.S. *	-----	-----	----
Barium cyanide	Same	542-62-1	P013
Benz[c]acridine	Same	225-51-4	U016
Benz[a]anthracene Same	56-55-3	U018	
Benzal chloride	Benzene, (dichloromethyl)-	98-87-3	U017
Benzene	Same	71-43-2	U019
Benzene arsonic acid	Arsonic acid, phenyl-	98-05-5	----
Benzidine [	1,1'-Biphenyl]-4,4'-diamine	92-87-5	U021
Benzo[b]fluoranthene	Benz[e]acephenanthrylene	205-99-2	----
Benzo[j]fluoranthene	Same	205-82-3	----
Benzo[a]pyrene	Same	50-32-8	U022
p-Benzoquinone	2,5-Cyclohexadiene-1,4-dione	106-51-4	U197
Benzotrichloride	Benzene, (trichloromethyl)-	98-07-7	U023
Benzyl chloride	Benzene, (chloromethyl)-	100-44-7	P028
Beryllium	Same	7440-41-7	P015
Beryllium compounds, N.O.S. *	-----	-----	----
Bromoacetone	2-Propanone, 1-bromo-	598-31-2	P017

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.160: continued

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No. (continued)
Bromoform	Methane, tribromo-	75-25-2	U225
4-Bromophenyl phenyl ether	Benzene, 1-bromo-4-phenoxy-	101-55-3	U030
Brucine	Strychnidin-10-one, 2,3-3 dimethoxy-	57-57-3	P018
Butyl benzyl phthalate	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester	85-68-7	----
Cacodylic acid	Arsinic acid, dimethyl-	75-60-5	U136
Cadmium	Same	7440-43-9	----
Cadmium compounds, N.O.S. *	-----	-----	----
Calcium chromate calcium salt	Chromic acid H ₂ CrO ₄ ,	13765-19-0	U032
Calcium cyanide	Calcium cyanide Ca(CN) ₂	592-01-8	P021
Carbon disulfide	Same	75-15-0	P022
Carbon oxyfluoride	Carbonic difluoride	353-50-4	U033
Carbon tetra	Methane, tetrachloro-chloride	56-23-5	U211
Chloral	Acetaldehyde, trichloro-	75-87-6	U034
Chlorambucil	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-	305-03-3	U035
Chlordane	4,7-Methano-1H-indene, 1,2,4.5,6,7,8,8-octachloro-2,3,3a,4,7,7a- hexahydro-	57-74-9	U036
Chlordane (alpha and gamma isomers)	-----	-----	U036
Chlorinated benzenes, N.O.S *	-----	-----	----
Chlorinated ethane, N.O.S. *	-----	-----	----
Chlorinated fluorocarbons, N.O.S. *	-----	-----	----
Chlorinated naphthalene, N.O.S. *	-----	-----	----
Chlorinated phenol, N.O.S. *	-----	-----	---
Chlornaphazin	Naphthalenamine, N,N'-bis(2-chloroethyl)-	494-03-1	U026
Chloroacetal	Acetaldehyde, chloro-dehyde	107-20-0	P023
Chloroalkyl ethers, N.O.S. *	-----	-----	----
p-Chloroaniline	Benzenamine, 4-chloro-	106-47-8	P024
Chlorobenzene	Benzene, chloro-	108-90-7	U037
Chlorobenzilate	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester	510-15-6	U038
p-Chloro-m-cresol	Phenol, 4-chloro-3-methyl-	59-50-7	U039
2-Chloroethyl vinyl ether	Ethene, (2-chloroethoxy)-	110-75-8	U042
Chloroform	Methane, trichloro-	67-66-3	U044

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.160: continued

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No. (continued)
Chloromethyl	Methane, chloromethoxy-methyl ether	107-30-2	U046
beta-Chloro	Naphthalene, 2-chloro-naphthalene	91-58-7	U047
o-Chlorophenol	Phenol, 2-chloro-	95-57-8	U048
1-(o-Chloro phenyl)thiourea	Thiourea, (2-chlorophenyl)-	5344-82-1	P026
Chloroprene	1,3-Butadiene, 2-chloro-	126-99-8	----
3-Chloropropio nitrile	Propanenitrile, 3-chloro-	542-76-7	P027
Chromium	Same	7440-47-3	----
Chromium compounds, N.O.S. *	-----	-----	----
Chrysene	Same	218-01-9	U050
Citrus red No. 2	2-Naphthalenol, 1-[(2,5-dimethoxyphenyl)azo]-	6358-53-8	----
Coal tar creosote	----	8007-45-2	----
Copper cyanide	Copper cyanide CuCN	544-92-3	P029
Creosote	Same	-----	U051
p-Cresidine	2-Methoxy-5-methylbenzenamine	120-71-8	----
Cresol (Cresylic acid)	Phenol, methyl-	1319-77-3	U052
Crotonaldehyde	2-Butenal	4170-30-3	U053
Cyanides (soluble salts and complexes) N.O.S. *	-----	-----	P030
Cyanogen	Ethanedinitrile	460-19-5	P031
Cyanogen bromide	Cyanogen bromide ⁵	06-68-3	U246
Cyanogen chloride	Cyanogen chloride CNCl	506-77-4	P033
Cycasin	beta-D-Glucopyranoside, (methyl-ONN-azoxy)methyl	14901-08-7	----
2-Cyclohexyl-4,6-dinitro phenol	Phenol, 2-cyclohexyl-4,6-dinitro-	131-89-5	P034
Cyclophosphamide	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl) tetrahydro-, 2-oxide	50-18-0	U058
2,4-D	Acetic acid, (2,4-dichlorophenoxy)-	94-75-7	U240
2,4-D salts & esters	-----	-----	U240
Daunomycin	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy-alpha-L-lyxohexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-	20830-81-3	U059
DDD	Benzene, 1,1'-(2,2-dichloro ethylidene)bis[4-chloro-	72-54-8	U060
DDE	Benzene, 1,1'-(dichloro ethenylidene)bis[4-chloro-	72-55-9	----
DDT	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-	50-29-3	U061
Diallate	Carbamothioic acid, bis(1-methylethyl)-, S- (2,3-dichloro-2-propenyl) ester	2303-16-4	U062

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.160: continued

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No. (continued)
Dibenz[a,h]acridine	Same	226-36-8	----
Dibenz[a,j]acridine	Same	224-42-0	----
Dibenz[a,h]anthracene	Same	53-70-3	U063
7H-Dibenzo[c,g]carbazole	Same	194-59-2	----
Dibenzo[a,e]pyrene	Naphtho[1,2,3,4-def]chrysene	192-65-4	----
Dibenzo[a,h]pyrene	Dibenzo[b,def]chrysene	189-64-0	----
Dibenzo[a,i]pyrene	Benzo[rst]pentaphene	189-55-9	U064
1,2-Dibromo-3-chloropropane	Propane, 1,2-dibromo-3-chloro-	96-12-8	U066
Dibutyl phthalate	1,2-Benzenedicarboxylic acid, dibutyl ester	84-74-2	U069
o-Dichlorobenzene	Benzene, 1,2-dichloro-	95-50-1	U070
m-Dichlorobenzene	Benzene, 1,3-dichloro-	541-73-1	U071
p-Dichlorobenzene	Benzene, 1,4-dichloro-	106-46-7	U072
Dichlorobenzene, N.O.S. *	Benzene, dichloro-	25321-22-6	----
3,3'-Dichlorobenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-	91-94-1	U073
1,4-Dichloro-2-butene	2-Butene, 1,4-dichloro-	764-41-0	U074
Dichlorodifluoromethane	Methane, dichlorodifluoro-	75-71-8	U075
Dichloroethylene, N.O.S. *	Dichloroethylene	25323-30-2	----
1,1-Dichloroethylene	Ethene, 1,1-dichloro-	75-35-4	U078
1,2-Dichloroethylene	Ethene, 1,2-dichloro-, (E)-	156-60-5	U079
Dichloroethyl ether	Ethane, 1,1'-oxybis[2-chloro-	111-44-4	U025
Dichloroisopropyl ether	Propane, 2,2'-oxybis[2-chloro-	108-60-1	U027
Dichloromethoxyethane	Ethane, 1,1'-[methylenebis (oxy)]bis[2-chloro-	111-91-1	U024
Dichloromethyl ether	Methane, oxybis[chloro-	542-88-1	P016
2,4-Dichlorophenol	Phenol, 2,4-dichloro-	120-83-2	U081
2,6-Dichlorophenol	Phenol, 2,6-dichloro-	87-65-0	U082
Dichlorophenylarsine	Arsonous dichloride, phenyl-	696-28-6	P036
Dichloropropane, N.O.S. *	Propane, dichloro-	26638-19-7	----
Dichloropropanol, N.O.S. *	Propanol, dichloro-	26545-73-3	----
Dichloropropene, N.O.S. *	1-Propene, dichloro-	26952-23-8	----

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.160: continued

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No. (continued)
1,3-Dichloro propene	1-Propene, 1,3-dichloro-	542-75-6	U084
Dieldrin	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1alpha,2beta,2alpha,3beta,6beta,6alpha,7beta,7alpha)-	60-57-1	P037
1,2:3,4-Di epoxybutane	2,2'-Bioxirane	1464-53-5	U085
Diethylarsine	Arsine, diethyl-	692-42-2	P038
1,4-Diethylene oxide	1,4-Dioxane	123-91-1	U108
Diethylhexyl phthalate	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	117-81-7	U028
N,N'-Diethyl hydrazine	Hydrazine, 1,2-diethyl-	1615-80-1	U086
O,O-Diethyl S-methyl dithio phosphate	Phosphorodithioic acid, O,O-diethyl S-methyl ester	3288-58-2	U087
Diethyl-p-nitro phenyl phosphate	Phosphoric acid, diethyl 4-nitrophenyl ester	311-45-5	P041
Diethyl phthalate	1,2-Benzenedicarboxylic acid, diethyl ester	84-66-2	U088
O,O-Diethyl O-pyrazinyl phosphorothioate	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	297-97-2	P040
Diethylstil besterol	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-(E)-	56-53-1	U089
Dihydrosafrole	1,3-Benzodioxole, 5-propyl-	94-58-6	U090
Diisopropyl fluorophosphate (DFP)	Phosphorofluoridic acid, bis(1-methylethyl) ester	55-91-4	P043
Dimethoate	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester	60-51-5	P044
3,3'-Dimethoxy	[1,1'-Biphenyl]-4,4'-diamine, benzidine 3,3'-dimethoxy-	119-90-4	U091
p-Dimethylamino	Benzenamine, N,N-dimethyl-4-azobenzene(phenylazo)-	60-11-7	U093
2,4-Dimethylaniline (2,4-xylidine)	Benzenamine, 2,4-dimethyl-	95-68-1	----
7,12-Dimethyl benz[a]anthracene	Benz[a]anthracene, 7,12-dimethyl-	57-97-6	U094
3,3'-Dimethyl	[1,1'-Biphenyl]-4,4'-diamine, benzidine 3,3'-dimethyl-	119-93-7	U095
Dimethylcarbamoyl chloride	Carbamic chloride, dimethyl-	79-44-7	U097
1,1-Dimethyl hydrazine	Hydrazine, 1,1-dimethyl-	57-14-7	U098
1,2-Dimethyl hydrazine	Hydrazine, 1,2-dimethyl-	540-73-8	U099
alpha,alpha-Dimethylphen ethylamine	Benzeneethanamine, alpha, alpha-dimethyl-	122-09-8	P046
2,4-Dimethyl phenol	Phenol, 2,4-dimethyl-	105-67-9	U101

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.160: continued

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No. (continued)
Dimethyl phthalate	1,2-Benzenedicarboxylic acid, dimethyl ester	131-11-3	U102
Dimethyl sulfate	Sulfuric acid, dimethyl ester	77-78-1	U103
Dinitrobenzene, N.O.S. *	Benzene, dinitro-	25154-54-5	----
4,6-Dinitro-o-cresol	Phenol, 2-methyl-4,6-dinitro-	534-52-1	P047
4,6-Dinitro-o-cresol salts	-----	-----	P047
2,4-Dinitrophenol	Phenol, 2,4-dinitro-	51-28-5	P048
2,4-Dinitro toluene	Benzene, 1-methyl-2,4-dinitro-	121-14-2	U105
2,6-Dinitro toluene	Benzene, 2-methyl-1,3-dinitro-	606-20-2	U106
Dinoseb	Phenol,2-(1-methylpropyl)-4,6-dinitro-	88-85-7	P020
Di-n-octyl phthalate	1,2-Benzenedicarboxylic acid, dioctyl ester	117-84-0	U107
Diphenylamine	Benzenamine, N-phenyl-	122-39-4	----
1,2-Diphenyl hydrazine	Hydrazine, 1,2-diphenyl-	122-66-7	U109
Di-n-propyl nitrosamine	1-Propanamine, N-nitroso-N-propyl-	621-64-7	U111
Disulfoton	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester	298-04-4	P039
DithiobiuretT	thioimidodicarbonic diamide [(H ₂ N)C(S)] ₂ NH	541-53-7	P049
Endosulfan	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide	115-29-7	P050
Endothall	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid	145-73-3	P088
Endrin	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-	72-20-8	P051
Endrin metabolites	-----	-----	P051
Epichlorohydrin	Oxirane, (chloromethyl)-	106-89-8	U041
Epinephrine	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-	51-43-4	P042
Ethyl carbamate	Carbamic acid, ethyl ester (urethane)	51-79-6	U238
Ethyl cyanide	Propanenitrile	107-12-0	P101
Ethylenebis dithiocarbamic acid	Carbamodithioic acid, 1,2-ethanediybis-acid	111-54-6	U114
Ethylenebis dithiocarbamic acid, salts & esters	-----	-----	U114

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.160: continued

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No. (continued)
Ethylene dibromide	Ethane, 1,2-dibromo-	106-93-4	U067
Ethylene dichloride	Ethane, 1,2-dichloro-	107-06-2	U077
Ethylene glycol monoethyl ether	Ethanol, 2-ethoxy-	110-80-5	U359
Ethyleneimine	Aziridine	151-56-4	P054
Ethylene oxide	Oxirane	75-21-8	U115
Ethylenethiourea	2-Imidazolidinethione	96-45-7	U116
Ethylidene dichloride	Ethane, 1,1-dichloro-	75-34-3	U076
Ethyl methacrylate	2-Propenoic acid, 2-methyl-, ethyl ester	97-63-2	U118
Ethyl methane sulfonate	Methanesulfonic acid, ethyl ester	62-50-0	U119
Famphur	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester	52-85-7	P097
Fluoranthene	Same	206-44-0	U120
Fluorine	Same	7782-41-4	P056
Fluoroacetamide	Acetamide, 2-fluoro-	640-19-7	P057
Fluoroacetic acid, sodium	Acetic acid, fluoro-, sodium salt	62-74-8	P058
Formaldehyde	Same	50-00-0	U122
Formic acid	Same	64-18-6	U123
Glycidylaldehyde	Oxiranecarboxyaldehyde	765-34-4	U126
Halomethanes, N.O.S. *	-----	-----	-----
Heptachlor	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	76-44-8	P059
Heptachlor epoxide	2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-,(1aalpha,1bbeta,2alpha,5alpha,5abeta,6beta,6aalpha)-	1024-57-3	----
Heptachlor epoxide (alpha, beta, & gamma isomers)	-----	-----	----
Hexachloro benzene	Benzene, hexachloro-	118-74-1	U127
Hexachloro butadiene	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87-68-3	U128
Hexachloro cyclopentadiene	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	77-47-4	U130
Hexachlorodi benzo-p-dioxins	-----	-----	----
Hexachlorodi benzofurans	-----	-----	-----
Hexachloro ethane	Ethane, hexachloro-	67-72-1	U131
Hexachloro phene	Phenol, 2,2'-methylenebis[3,4,6-trichloro-	70-30-4	U132

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.160: continued

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No. (continued)
Hexachloro propene	1-Propene, 1,1,2,3,3,3-hexachloro-	1888-71-7	U243
Hexaethyl tetra phosphate	Tetraphosphoric acid, hexaethyl ester	757-58-4	P062
Hydrazine	Same	302-01-2	U133
Hydrogen cyanide	Hydrocyanic acid	74-90-8	P063
Hydrogen fluoride	Hydrofluoric acid	7664-39-3	U134
Hydrogen sulfide	Hydrogen sulfide H2S	7783-06-4	U135
Indeno[1,2,3-cd] pyrene	Same	193-39-5	U137
Isobutyl alcohol	1-Propanol, 2-methyl-	78-83-1	U140
Isodrin	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha, 4alpha,4abeta,5beta,8beta, 8abeta)-	465-73-6	P060
Isosafrole	1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1	U141
Kepone	1,3,4-Metheno-2H-cyclobuta [cd]pentalen-2-one, 1,1a,3,3a, 4,5,5,5a,5b,6-decachloro octahydro-	143-50-0	U142
Lasiocarpine	2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxo butoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7 (2S * , 3R *),7aalpha]]-	303-34-1	U143
Lead	Same	7439-92-1	----
Lead compounds, N.O.S. *	-----	-----	----
Lead acetate	Acetic acid, lead(2+) salt	301-04-2	U144
Lead phosphate	Phosphoric acid, lead(2+) salt (2:3)	7446-27-7	U145
Lead subacetate	Lead, bis(acetato-O) tetrahydroxytri-	1335-32-6	U146
Lindane	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha, 3beta,4alpha,5alpha,6beta)-	58-89-9	U129
Maleic anhydride	2,5-Furandione	108-31-6	U147
Maleic hydrazide	3,6-Pyridazinedione, 1,2-dihydro-	123-33-1	U148
Malononitrile	Propanedinitrile	109-77-3	U149
Melphalan	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-	148-82-3	U150
Mercury	Same	7439-97-6	U151
Mercury compounds, N.O.S. *	-----	-----	----
Mercury fulminate	Fulminic acid, mercury(2+) salt	628-86-4	P065
Methacrylo nitrile	2-Propenenitrile, 2-methyl-	126-98-7	U152
Methapyrilene	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-	91-80-5	U155

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.160: continued

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No. (continued)
Methomyl	Ethanimidothioic acid, N-[[[(methylamino)carbonyl]oxy]-, methyl ester	16752-77-5	P066
Methoxychlor	Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-methoxy-	72-43-5	U247
Methyl bromide	Methane, bromo-	74-83-9	U029
Methyl chloride	Methane, chloro-	74-87-3	U045
Methyl chloro carbonate	Carbonochloridic acid, methyl ester	79-22-1	U156
Methyl chloroform	Ethane, 1,1,1-trichloro-	71-55-6	U226
3-Methylchol anthrene	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	56-49-5	U157
4,4'-Methylene bis(2-chloro aniline)	Benzenamine, 4,4'-methylene bis[2-chloro-	101-14-4	U158
Methylene bromide	Methane, dibromo-	74-95-3	U068
Methylene chloride	Methane, dichloro-	75-09-2	U080
Methyl ethyl ketone (MEK)	2-Butanone	78-93-3	U159
Methyl ethyl ketone peroxide	2-Butanone, peroxide	1338-23-4	U160
Methyl hydrazine	Hydrazine, methyl-	60-34-4	P068
Methyl iodide	Methane, iodo-	74-88-4	U138
Methyl iso cyanate	Methane, isocyanato-	624-83-9	P064
2-Methyl lacto nitrile	Propanenitrile, 2-hydroxy-2-methyl-	75-86-5	P069
Methyl meth acrylate	2-Propenoic acid, 2-methyl-, methyl ester	80-62-6	U162
Methyl methane sulfonate	Methanesulfonic acid, methyl ester	66-27-3	----
Methyl parathion	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester	298-00-0	P071
Methylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	56-04-2	U164
Mitomycin C	Azirino[2',3':3,4]pyrrolo[1, 2-a]indole-4,7- dione, 6-amino-8-[[[(aminocarbonyl)oxy] methyl]-1,1a,2,8,8a,8b hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha,8beta, 8aalpha,8balpha)]-	50-07-7	U010
MNNG	Guanidine, N-methyl-N'-nitro-N-nitroso-	70-25-7	U163
Mustard gas	Ethane, 1,1'-thiobis[2-chloro-	505-60-2	----
Naphthalene	Same	91-20-3	U165
1,4-Naphtho quinone	1,4-Naphthalenedione	130-15-4	U166
alpha-Naphthyl amine	1-Naphthalenamine	134-32-7	U167
beta-Naphthyl amine	2-Naphthalenamine	91-59-8	U168

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.160: continued

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No. (continued)
alpha-Naphthyl thiourea	Thiourea, 1-naphthalenyl-	86-88-4	P072
Nickel	Same	7440-02-0	----
Nickel compounds, N.O.S. *	-----	-----	----
Nickel carbonyl	Nickel carbonyl Ni(CO) ₄ , (T-4)-	13463-39-3	P073
Nickel cyanide	Nickel cyanide Ni(CN) ₂	557-19-7	P074
Nicotine	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-	54-11-5	P075
Nicotine salts	-----	-----	P075
Nitric oxide	Nitrogen oxide NO	10102-43-9	P076
p-Nitroaniline	Benzenamine, 4-nitro-	100-01-6	P077
Nitrobenzene	Benzene, nitro-	98-95-3	U169
Nitrogen dioxide	Nitrogen oxide NO ₂	10102-44-0	P078
Nitrogen mustard	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-N-oxide	51-75-2	----
Nitrogen mustard, hydrochloride salt	-----	-----	----
Nitrogen mustard	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-, N-oxide	126-85-2	----
Nitrogen mustard, hydrochloride salt	-----	-----	----
Nitroglycerin	1,2,3-Propanetriol, trinitrate	55-63-0	P081
p-Nitrophenol	Phenol, 4-nitro-	100-02-7	U170
2-Nitropropane	Propane, 2-nitro-	79-46-9	U171
Nitrosamines, N.O.S. *	-----	35576-91-10	----
N-Nitrosodi-n-butylamine	1-Butanamine, N-butyl-N-nitroso-	924-16-3	U172
N-Nitrosodiethanolamine	Ethanol, 2,2'-(nitrosoimino) bis-	1116-54-7	U173
N-Nitrosodiethylamine	Ethanamine, N-ethyl-N-nitroso-	55-18-5	U174
N-Nitrosodimethylamine	Methanamine, N-methyl-N-nitroso-	62-75-9	P082
N-Nitroso-N-ethylurea	Urea, N-ethyl-N-nitroso-	759-73-9	U176
N-Nitrosomethyl ethylamine	Ethanamine, N-methyl-N-nitroso-	10595-95-6	----
N-Nitroso-N-methylurea	Urea, N-methyl-N-nitroso-	684-93-5	U177
N-Nitroso-N-methylurethane	Carbamic acid, methylnitroso-, ethyl ester	615-53-2	U178
N-Nitrosomethyl vinylamine	Vinylamine, N-methyl-N-nitroso-	4549-40-0	P084
N-Nitrosomorpholine	Morpholine, 4-nitroso-	59-89-2	----
N-Nitrososonicotine	Pyridine, 3-(1-nitroso-2-pyrrolidinyl)-, (S)-	16543-55-8	----
N-Nitrosopiperidine	Piperidine, 1-nitroso-	100-75-4	U179
N-Nitrosopyrrolidine	Pyrrolidine, 1-nitroso-	930-55-2	U180

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.160: continued

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No. (continued)
N-Nitrososarcosine	Glycine, N-methyl-N-nitroso-	13256-22-9	----
5-Nitro-ortho-toluidine	Benzenamine, 2-methyl-5-nitro-	99-55-8	U181
Octamethylpyrophosphoramide	Diphosphoramidate, octamethyl-	152-16-9	P085
Osmium tetroxide	Osmium oxide OsO ₄ , (T-4)-	20816-12-0	P087
Paraldehyde	1,3,5-Trioxane, 2,4,6-trimethyl-	123-63-7	U182
Parathion	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester	56-38-2	P089
Pentachlorobenzene	Benzene, pentachloro-	608-93-5	U183
Pentachlorodibenzo-p-dioxins	-----	-----	----
Pentachlorodibenzofurans	-----	-----	----
Pentachloroethane	Ethane, pentachloro-	76-01-7	U184
Pentachloronitrobenzene (PCNB)	Benzene, pentachloronitro-	82-68-8	U185
Pentachlorophenol	Phenol, pentachloro-	87-86-5	see F027
Phenacetin	Acetamide, N-(4-ethoxyphenyl)-	62-44-2	U187
Phenol	Same	108-95-2	U188
1,2-Phenylenediamine	1,2-Benzenediamine	95-54-5	----
1,3-Phenylenediamine	1,3-Benzenediamine	108-45-2	----
Phenylenediamine	Benzenediamine	25265-76-3	----
Phenylmercury acetate	Mercury, (acetato-O)phenyl-	62-38-4	P092
Phenylthiourea	Thiourea, phenyl-	103-85-5	P093
Phosgene	Carbonic dichloride	75-44-5	P095
Phosphine	Same	7803-51-2	P096
Phorate	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester	298-02-2	P094
Phthalic acid esters, N.O.S. *	-----	-----	----
Phthalic anhydride	1,3-Isobenzofurandione	85-44-9	U190
Physostigmine	57-47-6	P204	
Physostigmine salicylate	57-64-7	P188	
2-Picoline	Pyridine, 2-methyl-	109-06-8	U191
Polychlorinated biphenyls N.O.S. *	-----	-----	----
Potassium cyanide	Potassium cyanide K(CN)	151-50-8	P098
Potassium silver cyanide	Argentate(1-), bis(cyano-C)-, potassium	506-61-6	P099
Pronamide	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	23950-58-5	U192
1,3-Propanesultone	1,2-Oxathiolane, 2,2-dioxide	1120-71-4	U193
n-Propylamine	1-Propanamine	107-10-8	U194
Propargyl alcohol	2-Propyn-1-ol	1107-19-7	P102
Propylene	Propane, 1,2-dichlorodichloride	78-87-5	U083
1,2-Propylenimine	Aziridine, 2-methyl-	75-55-8	P067

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.160: continued

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No. (continued)
Propylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-propyl-2-thioxo-	51-52-5	----
Pyridine	Same	110-86-1	U196
Reserpine	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)-	50-55-5	U200
Resorcinol	1,3-Benzenediol	108-46-3	U201
Saccharin	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide	81-07-2	U202
Saccharin salts	-----	-----	U202
Safrole	1,3-Benzodioxole, 5-(2-propenyl)-	94-59-7	U203
Selenium	Same	7782-49-2	----
Selenium compounds, N.O.S. *	-----	-----	----
Selenium dioxide	Selenious acid	7783-00-8	U204
Selenium sulfide	Selenium sulfide SeS2	7488-56-4	U205
Selenourea	Same	630-10-4	P103
Silver	Same	7440-22-4	----
Silver compounds, N.O.S. *	-----	-----	----
Silver cyanide	Silver cyanide Ag(CN)	506-64-9	P104
Silvex (2,4,5-TP)	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-	93-72-1	see F027
Sodium cyanide	Sodium cyanide Na(CN)	143-33-9	P106
Streptozotocin	D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)carbonyl]amino]-	18883-66-4	U206
Strychnine	Strychnidin-10-one	57-24-9	P108
Strychnine salts	-----	-----	P108
TCDD	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-	1746-01-6	----
1,2,4,5-Tetra chlorobenzene	Benzene, 1,2,4,5-tetrachloro-	95-94-3	U207
Tetrachlorodi benzo-p-dioxins	-----	-----	----
Tetrachlorodi benzofurans	-----	-----	----
Tetrachloro ethane, N.O.S. *	Ethane, tetrachloro-, N.O.S.	25322-20-7	----
1,1,1,2-Tetra chloroethane	Ethane, 1,1,1,2-tetrachloro-	630-20-6	U208
1,1,2,2-Tetra chloroethane	Ethane, 1,1,2,2-tetrachloro-	79-34-5	U209
Tetrachloro ethylene	Ethene, tetrachloro-	127-18-4	U210
2,3,4,6-Tetra chlorophenol	Phenol, 2,3,4,6-tetrachloro-	58-90-2	see F027
Tetraethyl di thiopyrophosphate	Thiodiphosphoric acid, tetraethyl ester	3689-24-5	P109
Tetraethyl lead	Plumbane, tetraethyl-	78-00-2	P110
Tetraethyl pyrophosphate	Diphosphoric acid, tetraethyl ester	107-49-3	P111

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.160: continued

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No. (continued)
Tetranitromethane	Methane, tetranitro-	509-14-8	P112
Thallium	Same	7440-28-0	----
Thallium compounds, N.O.S. *	-----	-----	----
Thallic oxide	Thallium oxide Tl ₂ O ₃	1314-32-5	P113
Thallium(I) acetate	Acetic acid, thallium(1+) salt	563-68-8	U214
Thallium(I) carbonate	Carbonic acid, dithallium(1+) salt	6533-73-9	U215
Thallium(I) chloride	Thallium chloride TlCl	7791-12-0	U216
Thallium(I) nitrate	Nitric acid, thallium(1+) salt	10102-45-1	U217
Thallium selenite	Selenious acid, dithallium(1+) salt	12039-52-0	P114
Thallium(I) sulfate	Sulfuric acid, dithallium(1+) salt	7446-18-6	P115
Thioacetamide	Ethanethioamide	62-55-5	U218
Thiofanox	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[(methylamino)carbonyl] oxime	39196-18-4	P045
Thiomethanol	Methanethiol	74-93-1	U153
Thiophenol	Benzenethiol	108-98-5	P014
Thiosemicarbazide	Hydrazinecarbothioamide	79-19-6	P116
Thiourea	Same	62-56-6	U219
Thiram	Thioperoxydicarbonic diamide [H ₂ N)C(S)] ₂ S ₂ , tetramethyl-	137-26-8	U244
Toluene	Benzene, methyl-	108-88-3	U220
Toluenediamine	Benzenediamine, ar-methyl-	25376-45-8	U221
Toluene-2,4-diamine	1,3-Benzenediamine, 4-methyl-	95-80-7	----
Toluene-2,6-diamine	1,3-Benzenediamine, 2-methyl-	823-40-5	----
Toluene-3,4-diamine	1,2-Benzenediamine, 4-methyl-	496-72-0	----
Toluene diisocyanate	Benzene, 1,3-diisocyanato methyl-	26471-62-5	U223
o-Toluidine	Benzenamine, 2-methyl-	95-53-4	U328
o-Toluidine hydrochloride	Benzenamine, 2-methyl-, hydrochloride	636-21-5	U222
p-Toluidine	Benzenamine, 4-methyl-	106-49-0	U353
Toxaphene	Same	8001-35-2	P123
1,2,4-Trichlorobenzene	Benzene, 1,2,4-trichloro-	120-82-1	----
1,1,2-Trichloroethane	Ethane, 1,1,2-trichloro-	79-00-5	U227
Trichloroethylene	Ethene, trichloro-	79-01-6	U228
Trichloromethanethiol	Methanethiol, trichloro-	75-70-7	P118
Trichloromono fluoromethane	Methane, trichlorofluoro-	75-69-4	U121
2,4,5-Trichlorophenol	Phenol, 2,4,5-trichloro-	95-95-4	see F027
2,4,6-Trichlorophenol	Phenol, 2,4,6-trichloro-	88-06-2	see F027

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.160: continued

Common Name	Chemical Abstracts Name	Chemical Abstracts Number	Haz. Waste No. (continued)
2,4,5-T	Acetic acid, (2,4,5-trichlorophenoxy)-	93-76-5	see F027
Trichloro propane, N.O.S. *	-----	25735-29-9	----
1,2,3-Trichloro propane	Propane, 1,2,3-trichloro-	96-18-4	----
O,O,O-Triethyl phosphorothioate	Phosphorothioic acid, O,O,O-triethyl ester	126-68-1	----
1,3,5-Trinitro benzene	Benzene, 1,3,5-trinitro-	99-35-4	U234
Tris(1-aziridinyl)phosphine sulfide	Aziridine, 1,1',1''-phosphinothioylidynetris-	52-24-4	----
Tris(2,3-dibromopropyl) phosphate	1-Propanol, 2,3-dibromo-, phosphate (3:1)	126-72-7	U235
Trypan blue	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl [1,1'-biphenyl]-4,4'-diyl) bis(azo)]bis[5-amino-4-hydroxy-, tetrasodium salt	72-57-1	U236
Uracil mustard	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-	66-75-1	U237
Vanadium pent oxide	Vanadium oxide V2O5	1314-62-1	P120
Vinyl chloride	Ethene, chloro-	75-01-4	U043
Warfarin	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations less than 0.3%	81-81-2	U248
Warfarin	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations greater than 0.3%		P001
Warfarin salts	when present at concentrations less than 0.3%	-----	U248
Warfarin salts	when present at concentrations greater than 0.3%	-----	P001
Zinc cyanide	Zinc cyanide Zn(CN)2	557-21-1	P121
Zinc phosphide	Zinc phosphide Zn3P2, when present at concentrations greater than 10%	1314-84-7	P122
Zinc phosphide	Zinc phosphide, Zn3P2, when present at concentrations of 10% less		U249

* The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

30.161: Ground Water Monitoring List

Appendix IX of 40 CFR Part 264 is hereby incorporated by reference.

30.162: Bases for Listing

Appendix VII of 40 CFR Part 261 is hereby adopted and incorporated by reference.

30.200: PROVISIONS FOR RECYCLABLE MATERIALS AND FOR WASTE OIL

30.201: Applicability

(1) 310 CMR 30.201 through 30.299, cited collectively as 310 CMR 30.200, are intended to protect public health, safety, and welfare, and the environment, by regulating the handling of waste oil, and of other materials which would be hazardous wastes if they were disposed of, or stored or treated prior to being disposed of. 310 CMR 30.200 applies to materials that would be hazardous wastes if disposed of, but are recycled in compliance with 310 CMR 30.200 instead of being disposed of. 310 CMR 30.200 does not apply to non-hazardous materials being recycled. Except as provided in 310 CMR 30.201, 30.211, and 30.250, 310 CMR 30.200 does not apply to the disposal of hazardous waste, or to the accumulation, storage, or treatment of hazardous waste prior to being disposed of (such activities are regulated elsewhere in 310 CMR 30.000). 310 CMR 30.200 does not apply to inherently waste-like materials even when such materials are recycled.

(2) 310 CMR 30.200 is promulgated pursuant to the authority set forth in 310 CMR 30.001. With respect to recyclable material, 310 CMR 30.200 is also promulgated pursuant to the authority given by M.G.L. c. 21C, § 4 to waive regulation where there is no significant potential hazard to the public health, safety, or welfare, or the environment. If an action is taken with respect to recyclable material which is consistent with 310 CMR 30.200 but creates a significant potential hazard to public health, safety, or welfare, or the environment, 310 CMR 30.200 shall cease to be applicable to that action, and that action shall be subject to all other provisions of 310 CMR 30.000.

30.202: Other Applicable Provisions

(1) Unless specifically exempted, all activities regulated by 310 CMR 30.200 shall also be subject to, and shall be done in compliance with, 310 CMR 30.001 through 30.064, 30.100 through 30.199, 30.303, 30.351(1) and (2), 30.353(1) and (2).

(2) Except as provided in 310 CMR 30.202(3) and 30.271(4), all materials that are subject to management in compliance with a recycling permit issued pursuant to 310 CMR 30.200 are subject to and shall be managed in compliance with, 310 CMR 30.001 through 30.064, 30.100 through 30.199, 30.200 [including, without limitation, 310 CMR 30.202(1)], 30.303, the conditions of the permit, and no other provisions of 310 CMR 30.000 not specifically stated as conditions. The Department may issue a permit pursuant to 310 CMR 30.200, and allow a permit issued pursuant to 310 CMR 30.200 to remain in effect, only to the extent, and only while, the Department is persuaded that such action would not lead to a significant potential hazard to public health, safety, or welfare, or the environment, or be in noncompliance with 310 CMR 30.200. In addition to any permit conditions required pursuant to 310 CMR 30.200, the Department may impose any other conditions that the Department determines may be appropriate to assure that the activity authorized by the Department does not and will not constitute a significant potential hazard to public health, safety, or welfare, or the environment.

(3) Notwithstanding the provisions of 310 CMR 30.202(2), if any material subject to management in compliance with a recycling permit issued pursuant to 310 CMR 30.200 is managed in a way that is not in compliance with 310 CMR 30.200 or any condition of the permit, the material is subject to all provisions of 310 CMR 30.000.

(4) Recyclable material managed in a Completely Enclosed Recycling System that is directly connected via pipes or the equivalent to an industrial production process is not subject to 310 CMR 30.200, or any other provision of 310 CMR 30.000, provided that:

30.202: continued

- (a) only accumulation in tanks is involved, and the entire process through completion of reclamation is closed by means of being entirely connected with pipes or other comparable closed means of conveyance;
 - (b) reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces, or incinerators);
 - (c) the secondary materials are never accumulated in such tanks for over 12 months without being reclaimed; and,
 - (d) the reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.
- (5) The following materials are not subject to 310 CMR 30.200, or any other provision of 310 CMR 30.000:
- (a) Pulping liquors (*i.e.*, black liquors) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless it is accumulated in a manner that constitutes speculative accumulation.
 - (b) Spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated in a manner that constitutes speculative accumulation.
 - (c) Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, provided the refrigerant is reclaimed for further use.
 - (d) Whole used circuit boards being recycled provided they are free of mercury switches, mercury relays, nickel-cadmium batteries, or lithium batteries.
 - (e) Shredded circuit boards being recycled provided that they are:
 - 1. managed in containers sufficient to prevent a release to the environment prior to recovery; and,
 - 2. free of mercury switches, mercury relays and nickel-cadmium batteries and lithium batteries.
 - (f) Bulk scrap metal items being recycled.

30.203: Signatories

All permit applications and all permits issued pursuant to 310 CMR 30.200 shall be signed as follows:

- (1) If the applicant is a corporation, by an individual who is a responsible corporate officer of the corporation and who is authorized by the corporation, in accordance with corporate procedures, to sign such documents on behalf of the corporation. As used in 310 CMR 30.203, "responsible corporate officer" shall mean a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other individual who performs for the corporation policy-making or decision-making functions similar to those performed by a president, secretary, treasurer, or vice-president.
- (2) If the applicant is a partnership, by a general partner.
- (3) If the applicant is a sole proprietorship, by the proprietor.
- (4) If the applicant is a municipality or public agency, by a principal executive officer or ranking elected official who is empowered to enter into contracts on behalf of the municipality or public agency.

30.204: Requirements for all Applications for Recycling Permits

All applications for recycling permits pursuant to 310 CMR 30.200 shall include at least the following:

- (1) The name, address, and EPA identification number, as required by 310 CMR 30.061, or state designated identification number, if applicable, of the applicant.

30.204: continued

- (2) The name and telephone number of an individual responsible for supervising the permitted activity.
- (3) A description of the material to be recycled, including waste code.
- (4) A description of the recycling activity, including the estimated quantity to be recycled annually.
- (5) A description of the management and other procedures to be used to prevent speculative accumulation.
- (6) If the material is to be stored prior to recycling, a complete description of the storage facility.
- (7) A signature pursuant to 310 CMR 30.203, certified pursuant to 310 CMR 30.009.
- (8) Such other information as the Department may require to determine that the proposed activity will be in compliance with 310 CMR 30.200 and will not constitute a significant potential hazard to the public health, safety, or welfare, or the environment.
- (9) If the applicant generates the material to be recycled, a statement that the applicant has evaluated whether there are opportunities to reduce or prevent the generation of the material to be recycled. In addition, a statement that the applicant has read and followed the guidance pertaining to toxics use reduction provided with the Department application.

30.205: General Conditions for all Recycling Permits

The following conditions shall apply to all permits issued pursuant to 310 CMR 30.200, regardless of whether or not such conditions are written into the permit. Failure to comply shall be grounds for an enforcement action, including, without limitation, permit suspension or revocation.

- (1) Duty to Comply. The permittee shall comply at all times with the terms and conditions of the permit, 310 CMR 30.000, M.G.L. c. 21C, and all other applicable State and Federal statutes and regulations.
- (2) Duty to Maintain. The permittee shall always properly operate and maintain all facilities, equipment, control systems, and vehicles which the permittee installs or uses.
- (3) Duty to Halt or Reduce Activity. The permittee shall halt or reduce activity whenever necessary to maintain compliance with 310 CMR 30.200 or the permit conditions, or to prevent an actual or potential threat to public health, safety, or welfare, or the environment.
- (4) Duty to Mitigate. The permittee shall remedy and shall act to prevent all potential and actual adverse impacts to persons and the environment resulting from noncompliance with the terms and conditions of the permit. The permittee shall repair at his own expense all damages caused by such noncompliance.
- (5) Duty to Provide Information. The permittee shall provide the Department, within a reasonable time, any information which the Department may request and which is deemed by the Department to be relevant in determining whether a cause exists to modify, revoke, or suspend a permit, or to determine whether the permittee is complying with the terms and conditions of the permit.
- (6) Entries and Inspections. The permittee shall allow personnel or other authorized agents of the Department or authorized EPA representatives, upon presentation of credentials or other documents as may be required by law, to:
 - (a) Enter at all reasonable times any premises, public or private, for the purposes of investigating, sampling or inspecting any records, condition, equipment, practice, or property relating to activities subject to M.G.L. c. 21C, or RCRA; and

30.205: continued

- (b) Enter at any time such premises for the purpose of protecting the public health, safety or welfare, or the environment; and
- (c) Have access to and copy at all reasonable times all records that are required to be kept pursuant to the conditions of the permit, and all other records relevant to the permittee's hazardous waste activity or to the permittee's activity involving regulated recyclable material.

(7) Records.

(a) All records and copies of all applications, reports, and other documents required by 310 CMR 30.200 shall be kept by the permittee for at least three years from the expiration of the permit or, for persons recycling Class A regulated recyclable materials in compliance with applicable performance standards, all records and documents shall be kept for at least three years from the date on which each batch of the material is completely recycled on-site or the date on which each batch of the material is sent offsite for recycling. This three-year period may be extended by order of the Department for the duration of any enforcement action. All record-keeping shall be in compliance with 310 CMR 30.007.

(b) All persons who claim that a material is subject to 310 CMR 30.200 shall retain documentation establishing that there is a known market for the recycled material and that the material is or will be recycled.

1. A person who recycles materials generated on-site shall retain documentation that the recycling of materials yields a material that is within a specification range acceptable for use as a product.

2. A person who sends materials destined for recycling to an off-site facility shall retain records regarding the capability of the off-site facility to conduct recycling, including that the recycling yields a material that is within a specification range acceptable for use as a product and that the materials sent to the facility have in fact been recycled.

3. A person who accepts materials for recycling from off-site sources shall retain records regarding its capability to conduct recycling, including that the recycling yields a material that is within a specification range acceptable for use as a product and that the materials have in fact been recycled.

(8) Continuing Duty to Inform. The permittee shall have a continuing duty to immediately:

- (a) correct any incorrect facts in an application; and
- (b) report or provide any omitted facts which should have been submitted; and
- (c) in advance, report to the Department each planned change in the permitted facility or activity which might result in noncompliance with 310 CMR 30.200 or with a term or condition of the permit; and
- (d) report to the Department any cessation of the permitted activity.

(9) Preventing and Reporting Releases Into the Environment. No materials that are to be recycled shall be intentionally released into the environment or otherwise disposed of within Massachusetts except in full compliance with all applicable provisions of 310 CMR 30.000. All accidental releases of recyclable material shall be immediately reported to the Department and to all other persons to whom such releases must be reported pursuant to State or Federal laws or regulations.

(10) Compliance with the Application and the Terms of the Permit. Except where 310 CMR 30.200 or other conditions of the permit provide otherwise, the materials that are to be recycled shall be recycled in the manner described in the application for the permit and in no other manner, and in compliance with all conditions of the permit. There shall be no change in the procedure of recycling without the prior express written approval of the Department for those permittees whose activities require a written permit. For those permittees whose activities do not require a written permit, a written notification to the Department is required.

(11) Transportation of Recyclable Material. Unless otherwise specified, all transportation of recyclable material, and preparation of all recyclable material for transportation, shall be in full compliance with all DOT and other Federal regulations, and all State regulations, governing the transportation of hazardous materials.

30.205: continued

(12) Annual Reporting. All permittees shall submit an annual report, on a form prescribed by the Department, covering all recyclable material they handle. Each annual report shall be submitted to the Department no later than March 1st for the preceding calendar year. The report shall include, at a minimum, the following information:

- (a) The EPA identification number, or state-only identification number, of the permittee; and
- (b) The name, address, and EPA identification number, or state-only identification number, of the facility to which recyclable material was sent; and
- (c) Identification of all recyclable material recycled by the permittee. Such identification shall include the EPA listed name or description, the EPA hazardous waste number, the DOT hazard class, the amount of material recycled; and
- (d) Identification of all recyclable material shipped to off-site facilities. Such identification shall include the EPA listed name or description, the EPA hazardous waste number, the DOT hazard class, the amount of recyclable material transported, and the facility to which it was transported; and
- (e) The name and EPA identification number of the transporters used.

(13) Dust Suppression and Road Treatment. The use of regulated recyclable material for dust suppression or road treatment is prohibited. The provisions set forth in 310 CMR 30.205(9) shall apply to such activity.

(14) Speculative Accumulation. Speculative accumulation is prohibited. The permittee shall make and keep records that will adequately demonstrate that no speculative accumulation, as defined in 310 CMR 30.010, has occurred. Such records shall include, but not be limited to, the following:

- (a) records showing the amount of material being accumulated or stored at the beginning of the calendar year;
- (b) records showing the amount of material received and generated during the calendar year;
- (c) records showing the amount of material being accumulated or stored at the end of the calendar year; and,
- (d) records showing the amount of material that is recycled on-site, and/or that is transferred to a different site for recycling.

(15) Personnel Training. The permittee shall instruct, or give on-the-job training to, personnel involved in any activity authorized by the permit, so that such instruction or on-the-job training teaches such personnel how to comply with the conditions of the permit and to carry out the authorized activity in a manner that is not hazardous to public health, safety, or welfare, or the environment.

(16) Emergency Prevention and Response. The permittee shall plan and prepare for fires, explosions, or other occurrences that might result in release of oil or hazardous materials to the environment or otherwise constitute a potential hazard to public health, safety, or welfare, or the environment. Without limiting the generality of the foregoing, if the permit authorizes the operation of a recycling facility, the design and operation of the recycling facility shall be in compliance with the requirements set forth in 310 CMR 30.341(1)(e)1.

(17) Transfer of Permits. Each permit issued pursuant to 310 CMR 30.200 shall be valid only for the person to whom it is issued and may not be transferred. Operation by an owner or operator other than those named in the permit shall be in violation of 310 CMR 30.000, and a basis for suspension or revocation of the permit, or for other enforcement action.

(18) Permit Expiration. Permits issued pursuant to 310 CMR 30.200 are in effect for a period of up to five years from the date of issuance. To continue the specified activity beyond this five year period, the permittee must reapply for a permit during the effective period of the existing permit. If the permittee wishes to engage in an activity different from the one specified in the permit, the permittee must receive a permit for the new activity prior to engaging in that activity.

30.205: continued

(19) Storage and Accumulation in Tanks and Containers. Regulated recyclable materials shall be stored or accumulated only in tanks or containers. Generators of regulated recyclable materials that are waste oil or used oil fuel shall comply with applicable container and tank requirements in 310 CMR 30.253. Generators of all other regulated recyclable materials shall comply with applicable container and tank requirements in 310 CMR 30.340 (for large quantity generators), 30.351 (small quantity generators), or 310 CMR 30.353 (very small quantity generators), respectively. Each tank or container in which regulated recyclable material is being accumulated or stored and each outside container into which small containers are packed shall be clearly marked and labeled throughout the period of accumulation or storage with the following:

- (a) The words "Regulated Recyclable Material";
- (b) regulated recyclable material(s) identified in words (*e.g.*, acetone, toluene);
- (c) type of hazard(s) associated with the material(s) indicated in words (*e.g.*, ignitable, toxic, dangerous when wet);
- (d) The date upon which each period of accumulation or storage begins, marked on each tank or container at the time accumulation or storage begins in that tank or container, except that tanks containing regulated recyclable materials to be lawfully recycled are exempt from dating requirements if hard-piped and integrally connected to a used oil fired space heater. Marks and labels shall be placed on the sides of each tank or container in such a manner that they are clearly visible for inspection.

30.206: Additional General Permit Conditions for Recyclers who Receive Regulated Recyclable Materials from Offsite

The following additional conditions shall apply to each permit issued pursuant to 310 CMR 30.200 for recyclers who receive regulated recyclable materials from offsite regardless of whether or not such conditions are written into the permit. Failure to comply shall be grounds for an enforcement action, including, without limitation, permit suspension or revocation.

- (1) Security. The design and operation of the recycling facility shall be in compliance with the requirements set forth in 310 CMR 30.514 or with general security standards of equivalent stringency.
- (2) Inspections. The permittee shall inspect the recycling facility and remedy malfunctions in compliance with requirements set forth in 310 CMR 30.515(1)(a) and (b).
- (3) Wastewater Treatment Units. If a wastewater treatment unit is part of the recycling activity for which the permit is issued, such wastewater treatment unit shall be in compliance with the requirements set forth or referred to in 310 CMR 30.605.

30.210: General Provisions for Classifying and Handling Waste Oil and Regulated Recyclable Materials

310 CMR 30.210 through 30.219, cited collectively as 310 CMR 30.210, set forth the various classifications of waste oil and of regulated recyclable materials, and set forth general requirements for the handling of regulated recyclable materials.

30.211: Handling Regulated Recyclable Material

Regulated recyclable materials that are recycled and otherwise handled in compliance with 310 CMR 30.200 and the conditions of the relevant recycling permit are subject to 310 CMR 30.200 and the conditions of the relevant recycling permit, and are not subject to any other requirements. Regulated recyclable materials that are not recycled or otherwise handled in compliance with 310 CMR 30.200 and the conditions of the relevant recycling permit

- (1) are hazardous wastes, and
- (2) shall not be subject to any provisions of 310 CMR 30.200 except for 310 CMR 30.201, 30.211, 30.221, 30.231, 30.241, 30.251, 30.261, 30.271 and 30.291, and
- (3) shall be accumulated, collected, transported, stored, treated, and disposed of in compliance with all the requirements of 310 CMR 30.000 other than 310 CMR 30.200.

30.212: Class A Regulated Recyclable Materials

Class A regulated recyclable materials are those regulated recyclable materials that, because of some inherent property of the materials, or because of some inherent property of the recycling process, or because the conditions of the recycling are such as to motivate the recycler to manage the recycling with minimum hazard to public health, safety, and welfare, and the environment, have been determined by the Department to require a degree of regulation sufficiently stringent to protect public health, safety, and welfare, and the environment, from any significant potential hazard, but not so stringent as to discourage the recycling of these materials as a socially and environmentally desirable alternative to disposal. The following are Class A recyclable materials:

- (1) Those regulated recyclable materials that are neither used in a manner constituting disposal nor burned for energy recovery nor accumulated speculatively and are either:
 - (a) used or reused as ingredients in an industrial process to make a product, provided that the materials are not being reclaimed; or
 - (b) used or reused as substitutes for commercial products; or
 - (c) generated onsite, removed from the original production process, and returned as substitutes for feedstock in the original production process without being reclaimed.

- (2) Industrial ethyl alcohol that is reused or reclaimed; however, persons initiating a shipment for reclamation in a foreign country, and any intermediary arranging for such a shipment shall also comply with the requirements of 40 CFR 261.6(a)(3)(i)(A) and transporters transporting such a shipment for export shall comply with 40 CFR 261.6(a)(3)(i)(B) and which are incorporated by reference with the following additions, modifications and exceptions:
 - (a) The following text is added after “262.57”: “as adopted at 310 CMR 30.361”.
 - (b) The following text is added after “subpart E of part 262”: “as adopted at 310 CMR 30.361”.

- (3) Scrap metal not otherwise excluded at 310 CMR 30.202(5).

- (4) Used oil fuel burned at the site of generation for energy recovery in a used oil fuel fired space heater and in compliance with the applicable provisions of 310 CMR 30.222 and 30.256.

- (5) A sludge having the characteristics of a hazardous waste when being reclaimed.

- (6) A by-product having the characteristics of a hazardous waste when being reclaimed.

- (7) A commercial chemical product listed in 310 CMR 30.133 or 30.136, or that exhibits a hazardous waste characteristic described at 310 CMR 30.120, which has never been used and which is being reclaimed.

- (8) Waste oil, including but not limited to waste oil that has the characteristics of a hazardous waste and is not hazardous waste fuel, if recycled in some other manner than being burned for energy recovery.

- (9) Specification used oil fuel burned for energy recovery in a fossil fuel utilization facility other than a used oil fuel fired space heater, and otherwise handled in compliance with 310 CMR 30.250.

- (10) A material recycled in a completely enclosed recycling system at the site of generation (*e.g.*, stills, silver recovery units), except such material recycled at a photo processor subject to 310 CMR 71.00, and except such material recycled at a printer subject to 310 CMR 71.00, provided:
 - (a) Reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces, or incinerators); and
 - (b) The reclaimed material is not used to produce:
 1. a fuel, including a hazardous waste fuel, or
 2. products that are used in a manner constituting disposal.

30.213: Class B Regulated Recyclable Materials

Class B regulated recyclable materials are those regulated recyclable materials which have been determined by the Department to require some specific management practices in order to be recycled or otherwise managed without constituting a significant potential hazard to the public health, safety, or welfare, or the environment. The following are Class B regulated recyclable materials:

- (1) Class B(1) - regulated recyclable materials that are not intended to be, and are not, used for the production of heat or power by burning, and that are intended to be, or that are, used in a manner constituting disposal. *See* 310 CMR 30.010, "Use constituting disposal".
- (2) Class B(2) - hazardous waste fuels that are intended to be, and that are, used for the production of heat or power by burning.
- (3) Class B(3) - used oil fuels that are intended to be, and that are, used for the production of heat or power by burning.
- (4) Class B(4) - Spent materials and hazardous wastes that are listed in 310 CMR 30.131 or 310 CMR 30.132 or that are characteristic for D011 pursuant to 310 CMR 30.125(B), and that have an economically recoverable quantity of precious metals. For purposes of implementing 310 CMR 30.000, quantities of precious metals are "economically recoverable" only if the person generating the material containing the precious metals can obtain greater economic benefit by recovering the precious metals than by causing the material to be handled in any other way.
- (5) Class B(5) - Spent lead-acid batteries that are intended to be, and that are, reclaimed for recovery of lead.

30.214: Class C Regulated Recyclable Materials

Class C regulated recyclable materials are those regulated recyclable materials which are neither Class A nor Class B. 310 CMR 30.214: *Table 1* sets forth some specific examples of Class C regulated recyclable materials.

Table 1 - Examples of Class Designations

Type of material being recycled	What happens to the material burned or used in a manner constituting disposal	Reclaimed
Spent material	B	C(1)(2)(3)
Sludge listed in 310 CMR 30.131 or 310 CMR 30.132	B	C(2)
Sludge which is hazardous pursuant to 310 CMR 30.120 through 30.125	B	A
By-product listed in 310 CMR 30.131 or 310 CMR 30.132	B	C(1)(2)
By-product which is hazardous pursuant to 310 CMR 30.120 through 30.125	B	A
Commercial chemical product listed in 310 CMR 30.133 or 310 CMR 30.136	B	A
Scrap metal	A	A(4)

Notes: (1) Except that industrial ethyl alcohol is Class A unless provided otherwise by 40 CFR 261.6(a)(3)(i) as adopted and amended at 310 CMR 30.212(2).

30.214: continued

- (2) Except that materials with precious metal are Class B.
- (3) Except that lead-acid batteries sent for reclamation are Class B
- (4) Except that certain scrap metal is excluded pursuant to 310 CMR 30.202(5).

30.215: Distinguishing Waste Oil that is Used Oil Fuel from Waste Oil that is not Used Oil Fuel

(1) Any batch or lot of waste oil that is not used oil fuel is either hazardous waste fuel, used waste oil, or unused waste oil. Unless and until the Department is persuaded otherwise pursuant to the application and permitting requirements set forth in 310 CMR 30.250, a batch or lot of waste oil shall be presumed to be mixed with hazardous waste, and therefore not used oil fuel, if:

- (a) The waste oil is "transformer oil", *i.e.* oil that has been used in a transformer, capacitor, switch, or other electrical device for insulation or heat transfer purposes. Transformer oil shall be presumed to be mixed with PCBs in concentrations equal to or exceeding 50 parts per million unless and until the Department is persuaded otherwise pursuant to the application and permitting requirements set forth in 310 CMR 30.250.
- (b) The waste oil contains 1,000 or more parts per million of total halogens, in which case the waste oil shall be presumed to be a mixture of oil and halogenated hazardous wastes unless and until the Department is persuaded, pursuant to the application and permitting requirements set forth in 310 CMR 30.250, that the waste oil contains no halogenated constituent listed in 310 CMR 30.160 in a significant amount.

(2) In any event, the Department may deem any particular batch or lot of used oil fuel to be hazardous waste, and make that material subject to all applicable provisions of 310 CMR 30.000 other than 310 CMR 30.200, if the Department determines that such action is necessary or appropriate to protect public health, safety, or welfare, or the environment.

30.216: Distinguishing Specification Used Oil Fuel from Off-specification Used Oil Fuel

Any waste oil, and any mixture of waste oil with any other material, that is used oil fuel is either specification used oil fuel or off-specification used oil fuel. If used oil fuel does not exceed the allowable level of any constituent or property as set forth in 310 CMR 30.216: *Table 1*, such used oil fuel is specification used oil fuel. If used oil fuel does exceed the allowable level of any constituent or property as set forth in 310 CMR 30.216: *Table 1*, such used oil fuel is off-specification used oil fuel.

Table 1.

<u>Constituent or Property</u>	<u>Allowable Level</u>
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Flash point	100°F minimum
Total Halogens	4,000 ppm maximum *

[* see also 310 CMR 30.215(1)(b)]

30.220: Requirements Governing Class A Regulated Recyclable Materials

310 CMR 30.220 through 30.229, cited collectively as 310 CMR 30.220, sets forth: standards for handling Class A regulated recyclable materials; the procedures for obtaining a permit to recycle Class A regulated recyclable materials and the conditions for such permits; as well as the performance standards for certain categories of Class A materials for which a permit is not required.

30.221: General Provisions

(1) No person shall recycle Class A regulated recyclable material except in compliance with 310 CMR 30.200.

30.221: continued

(2) 310 CMR 30.221: *Table 1* identifies the permit and approval categories for Class A Regulated Recyclable Materials.

(3) Recycling of Class A regulated recyclable material shall be done in compliance with the applicable permitting requirements of 310 CMR 30.220 or, for those activities specifically excluded from permitting in 310 CMR 30.221(3)(a), the performance standards described at 310 CMR 30.222.

(a) Class A recycling activities for which a recycling permit need not be obtained are as follows:

1. The recycling of Class A regulated recyclable materials at the site of generation;
2. The shipment off the site of generation for recycling within any calendar month of 200 kilograms or less of Class A regulated recyclable materials by a Very Small Quantity Generator of regulated recyclable material, excluding acutely hazardous regulated recyclable material, provided that material is managed in compliance with the requirements described at 310 CMR 30.222(4)(b);
3. The onsite recovery of silver from wastewater at the site of generation, provided such recycling is done in compliance with the Environmental Results Program regulations, 310 CMR 71.00; and
4. The shipment off the site of generation of specification used oil fuel (MA97) with a transporter/marketer authorized pursuant to 310 CMR 30.255.

(4) Class A regulated recyclable materials recycled in compliance with 310 CMR 30.200 are not included or counted in the determination of rate of hazardous waste generation and accumulation and corresponding hazardous waste generator status, however, such materials must be included and counted to determine a generators corresponding Class A RRM status.

Table 1.
Approval Categories for Class A Recyclers

Citation	Description	Generator recycles on-site	Large or small quantity generator sends regulated recyclable material off-site for recycling	Receiver of regulated recyclable materials
310 CMR 30.212				
(1) (a)	Used or reused as an ingredient in a product without reclamation	PS	N	N
(1) (b)	Substitute for commercial product being reclaimed	PS	N	N
(1) (c)	Substitute for feedstock in original process without reclamation	PS	N/A	N/A
(2)	Industrial Ethyl Alcohol being reclaimed	PS	N	N
(3)	Reserved			
(4)	Used oil fuel burned at the site of generation for energy recovery in a used oil fuel fired space heater in compliance with 310 CMR 30.222 and 310 CMR 30.256.	PS	N/A	N/A
(5)	Characteristic sludge being reclaimed	PS	N	P
(6)	Characteristic by-product being reclaimed	PS	N	P
(7)	Unused commercial chemical product being reclaimed	PS	N	P
(8)	Waste oil recycled by other than burning for energy recovery	PS	N	P

30.221: continued

Table 1.
Approval Categories for Class A Recyclers (continued)

Citation	Description	Generator recycles on-site	Large or small quantity generator sends regulated recyclable material off-site for recycling	Receiver of regulated recyclable materials
(9)	Specification used oil fuel burned for energy recovery in a fossil fuel utilization facility other than a used oil fuel fired space heater and otherwise handled in compliance with 310 CMR 30.250	PS	N	N
(10)	Material recycled in a completely enclosed recycling system at site of generation, except such material recycled at a photo processor or a printer subject to 310 CMR 71.00 (e.g., stand-alone solvent stills, stand-alone silver recovery units).	PS	N/A	N/A

N/A – Not Applicable

N – 21 Day Presumptive Approval

P – Written Permit

PS – Performance Standard

* Shipments of 200 kilograms or less of Class A regulated recyclable materials, sent off-site for recycling within any calendar month by a VSQG of regulated recyclable material, are specifically excluded from permitting. See 310 CMR 30.221(3)(a)2.

30.222: Generator Standards

(1) Except as otherwise specifically provided in 310 CMR 30.222 and 310 CMR 30.353 a generator of Class A regulated recyclable material may sell or otherwise transfer such material, or contract to sell or otherwise transfer such material, or cause or allow such material to be transported off the site of generation, directly to either

(a) a facility described in 310 CMR 30.305;

(b) a facility that has a Class A permit pursuant to 310 CMR 30.220; or

(c) a facility outside of Massachusetts that is properly authorized under that state's applicable authority and is identified in the generator's Class A recycling permit to receive Class A regulated recyclable material from that generator pursuant to 310 CMR 30.224(1)(c).

(2) Except as otherwise specifically provided in 310 CMR 30.222 and 310 CMR 30.255, a generator of Class A regulated recyclable material may sell or otherwise transfer custody or possession of such material only to a transporter in compliance with 310 CMR 30.223.

(3) A generator of material that the generator claims is specification used oil fuel shall not sell or otherwise transfer, or offer to sell or otherwise transfer, such material to any other person unless the generator:

(a) has ascertained, by appropriate analytical methods contained in EPA's Test Methods for Evaluating Solid Waste, *SW-846*, as incorporated by reference at 310 CMR 30.012, or by an equivalent method accepted by EPA, that it meets the conditions provided in 310 CMR 30.215 and the parameters provided in 310 CMR 30.216 for specification used oil fuel, and

30.222: continued

(b) has kept documentation showing compliance with the requirements in 310 CMR 30.222(3)(a), and makes and keeps records for each batch or quantity of such material that is sold or otherwise transferred, stating for each such batch or quantity the name and address of the facility to which the material is sold or otherwise transferred, the quantity of such material sold or otherwise transferred, the date when the material was collected, and a cross-reference to the documentation described in 310 CMR 30.222(3)(b).

(4) Very Small Quantity Generators of Class A regulated recyclable material excluded from Class A permit requirements at 310 CMR 30.221(3)(a)1. and 2. shall not accumulate at any one time 1000 kilograms or more of regulated recyclable material.

(a) Very Small Quantity Generators of Class A regulated recyclable material that recycle at the site of generation in accordance with 310 CMR 30.221(3)(a)1. shall also manage such regulated recyclable material in a manner which neither could nor does endanger public health, safety, or welfare or the environment, and in compliance with 310 CMR 30.222(5)(c), 30.222(5)(d)2., 30.222(5)(d)7., 30.222(5)(e), 30.222(5)(i) and the applicable performance standards at 310 CMR 30.222(6).

(b) For shipments off the site of generation of 200 kilograms or less of Class A regulated recyclable material by a Very Small Quantity Generator of regulated recyclable material, excluded at 310 CMR 30.221(3)(a)2., the generator shall:

1. keep, for a period of at least three years from the date of recycling:
 - a. a record from the recycling facility, certified pursuant to 310 CMR 30.009, that the materials were recycled in compliance with applicable State and Federal laws and regulations; and
 - b. a record of each shipment sent off-site that satisfies the requirements described at 310 CMR 30.223(4)(b).
2. accumulate the material prior to shipping in containers that are sealed, structurally sound, and labeled as a "Regulated Recyclable Material" and with the material identified with words and the type of hazard(s) associated with the material(s) indicated in words (e.g., ignitable, toxic, dangerous when wet).
3. comply with 310 CMR 30.222(1)a. and b., except that shipments of regulated recyclable material being sent off the site of generation to an out-of-state facility need not be managed in compliance with 310 CMR 30.305(2), but shall instead be sent directly to a facility that is authorized by that state to recycle that material.

(5) General Performance Standards. A Small Quantity Generator or Large Quantity Generator of Class A regulated recyclable material exempt from Class A permit requirements at 310 CMR 30.221(3)(a)1. shall:

- (a) Notify and obtain a generator identification number in compliance with 310 CMR 30.061, unless the generator has previously notified and obtained a generator identification number;
- (b) Submit a onetime notification to the Department on a form prescribed by the Department prior to or upon commencing a Class A recycling operation, unless the generator has a valid Class A recycling permit for that recycling operation as of February 27, 2004;
- (c) Manage regulated recyclable materials that are not recycled or otherwise handled in compliance with 310 CMR 30.220 as hazardous wastes which shall be accumulated, collected, transported, stored, treated, and disposed of in compliance with all the requirements of 310 CMR 30.000 other than 310 CMR 30.200;
- (d) Comply with the following conditions cited in 310 CMR 30.205:
 1. Duty to provide information - 310 CMR 30.205(5);
 2. Record-keeping - 310 CMR 30.205(7), except that 310 CMR 30.205(7)(b) does not apply to used oil fuel fired space heaters;
 3. Preventing and reporting releases to the environment - 310 CMR 30.205(9);
 4. Speculative accumulation requirements - 310 CMR 30.205(14);
 5. Personnel training - 310 CMR 30.205(15);
 6. Emergency prevention - 310 CMR 30.205(16); and
 7. Storage and accumulation only in tanks and containers - 310 CMR 30.205(19), except that generators recycling silver-bearing Class A regulated recyclable material in stand-alone silver recovery units at the site of generation are subject to the tank and container requirements at 310 CMR 71.00.
- (e) Use, operate and maintain recycling units that are appropriately designed for the material being recycled in accordance with manufacturer's recommended operating and maintenance procedures;

30.222: continued

- (f) Retain documentation that any recycling unit used to recycle Class A regulated recyclable materials has been tested and listed in accordance with the applicable UL Standard or has been otherwise approved by or designed in accordance with the standards of any nationally recognized engineering organization or testing laboratory, as applicable;
- (g) Manage as a hazardous waste any residual material produced by recycling Class A RRM's at the site of generation pursuant to 310 CMR 30.102(2)(d), if the residual is a listed waste or exhibits the characteristics of a hazardous waste;
- (h) Do not mix either regulated recyclable material or residual material produced by recycling Class A RRM's at the site of generation with hazardous waste;
- (i) Maintain documentation that the material is a Class A regulated recyclable material described in 310 CMR 30.212 and that it would be a hazardous waste if discarded (*see* 310 CMR 30.302); and
- (j) If reclaiming a Class A RRM at the site of generation, recover a useable product that meets commercial specifications for the product's intended use, and that requires no further reclamation prior to being used as a commercial ingredient in an on-site manufacturing process or being sold commercially.

[Note: 310 CMR 30.222(5)(j) applies to categories of Class A Regulated Recyclable Materials defined in 310 CMR 30.212 (2), (5) through (8) and (10) provided that, for solvents recycled at the site of generation in stand-alone solvent stills, the reclaimed solvent may not be sold commercially.]

- (k) Keep, for a period of at least three years from the date on which each batch of the material was sent off-site for recycling, the shipping paper provided by the transporter pursuant to 310 CMR 30.223(7).

(6) Specific Performance Standards. All generators of Class A regulated recyclable material exempt from Class A permit requirements pursuant to 310 CMR 30.221(3)(a)1. and 310 CMR 30.221(3)(a)2. shall comply with the following, as applicable:

(a) Used oil fuel fired space heaters. A generator of used oil fuel burned in a used oil fuel fired space heater for energy recovery at the site of generation shall ensure that:

1. only used oil fuel is burned in the space heater and such used oil fuel is generated at the site where the space heater is located, supplemental fuel sources may include used oil fuel generated by:
 - a. a person who is a very small quantity generator pursuant to 310 CMR 30.353 and transported by that person from the site of generation to the site where the heater is located; or
 - b. generated by a household as described in 310 CMR 30.104(6) and received from the person at whose household the oil became used oil;
2. the used oil fuel has a flash point of 100°F or greater;
3. the energy input capacity of the space heater is equal to or less than 500,000 BTU per hour;
4. the space heater is integrally connected to a tank that supplies the used oil fuel to the space heater and combustion gases from the space heater are vented vertically to the ambient air;
5. the space heater is not operated during the period from June 15th through September 15th; and
6. the space heater is operated in compliance with all other applicable regulations including those of the local fire department and the Massachusetts Office of the State Fire Marshall.

(b) Stand-alone solvent still. A generator of Class A regulated recyclable solvent recycled in a stand-alone solvent still at the site of generation, shall ensure that:

1. the process of reclamation is conducted in a "completely enclosed recycling system", as defined in 310 CMR 30.010;
2. reclaimed solvent is returned to an on-site process similar to the one in which it was generated;
3. reclaimed solvent is not used to produce a fuel or products that are used in a manner constituting disposal;
4. the solvent still is operated in compliance with all other applicable regulations, including those of the local fire department and the Massachusetts Office of the State Fire Marshall; and
5. the reclamation does not involve controlled flame combustion.

30.222: continued

(c) Silver Recovery Units. A generator of silver-bearing Class A regulated recyclable material recycled in stand-alone silver recovery units at the site of generation shall ensure that:

1. the process of reclamation is conducted in a “completely enclosed recycling system” as defined in 310 CMR 30.010;
2. if the generator is a photoprocessor or printer subject to the Environmental Results Program (ERP), 310 CMR 71.00: *Industrial Wastewater Regulations for Photo Processors and Printers*, it shall comply with 310 CMR 71.00;
3. if the generator is a photoprocessor or printer that is not subject to ERP, the generator shall comply with all applicable federal, state, and local waste water regulations, including those of the local POTW and shall not discharge or transport industrial wastewater to a POTW unless:
 - a. the wastewater contains less than or equal to 2 mg/l (*i.e.*, 2 ppm) silver, however this provision shall not excuse a generator from compliance with a lower, locally enforceable limit; or
 - b. the wastewater is in compliance with a local limit greater than 2 ppm and such limit is established pursuant to a locally enforceable permit.

(d) Specification Used Oil Fuel Burned for Energy Recovery in a Fossil Fuel Utilization Facility Other than a Used Oil Fuel Fired Space Heater. A generator of specification used oil fuel burned for energy recovery in a fossil fuel utilization facility other than a used oil fuel fired space heater shall:

1. manage the material in compliance with 310 CMR 30.250;
2. retain at the site of generation documentation of compliance with 310 CMR 30.250 and include the following:
 - a. information that shows that the material burned at the facility is specification used oil fuel and meets the parameters of specification used oil fuel as defined in 310 CMR 30.216 and that the generator uses sampling and analytical methods in compliance with 310 CMR 30.151 for representative sample methods and 30.152 for flash point determination. For determining approved analytical procedures, *see* EPA’s “Test Methods for Evaluating Solid Waste, *SW-846*”;
 - b. a copy of the Department’s air quality approval to burn the used oil fuel pursuant to 310 CMR 7.00: *Air Pollution Control*; and
3. not mix specification used oil fuel with any off-specification used oil fuel, with any waste oil, or with any hazardous waste fuel, unless such mixing is incidental to the filling or emptying of a tank or container.

(e) Recyclable Material Described at 310 CMR 30.212(1)(a), (b) and (c). A generator of Class A regulated recyclable material described at 310 CMR 30.212(1)(a) through (c) and used/reused as an ingredient to make a product, substitutes for a commercial product, or substitutes for feedstock in the original production process, shall ensure that such material is present in the resulting product or process within a specification range typical for the product or process. The Department may consider use of excess regulated recyclable material as a form of treatment and/or disposal subject to the licensing requirements of 310 CMR 30.800.

30.223: Transport and Manifest Standards

[Note: A transporter of Class A Regulated Recyclable Material (RRM), including specification used oil fuel, is required to comply with all US DOT regulations applicable to the shipment of hazardous materials.]

(1) A transporter of specification used oil fuel shall be licensed to transport hazardous waste pursuant to 310 CMR 30.000

(2) A transporter of any Class A regulated recyclable material other than specification used oil fuel shall be either:

- (a) licensed to transport hazardous waste pursuant to 310 CMR 30.000, or
- (b) a person who
 1. transports Class A regulated recyclable material in full compliance with all applicable State and Federal regulations including, but not limited to, M.G.L. c. 159B, and
 2. transports, from or to any point in Massachusetts, no hazardous waste, and no regulated recyclable material other than Class A regulated recyclable material.

30.223: continued

- (3) A transporter of Class A regulated recyclable material may cause or allow such material to be transported off the site of generation directly to either
- (a) a facility described in 310 CMR 30.222(1), or
 - (b) a transporter described in 310 CMR 30.223(1).
- (4) Class A regulated recyclable material transported by a transporter described in 310 CMR 30.223(1) or 310 CMR 30.223(2)(a) shall be accompanied by either:
- (a) a manifest filled out, signed, and distributed in compliance with all provisions of 310 CMR 30.000 governing the filling out, signing, and distribution of copies of manifests; or
 - (b) a shipping paper which shall describe the transportation of the material, shall accompany the material at all times while it is being transported, shall be made available to the Department by the generator, transporters or recycling facility on request, and shall contain at least the following:
 1. the transporter's name, address, EPA identification number, and hazardous waste transporter license number;
 2. the date of collection of the Class A regulated, recyclable material from the generator;
 3. the name and address of the generator from whom Class A regulated, recyclable material was collected on that date;
 4. the amount of Class A regulated, recyclable material collected from the generator;
 5. the location of the recycling facility taking delivery and custody of the Class A regulated, recyclable material from the last transporter, including the facility's name, address, EPA identification number, and license or permit identification;
 6. the dated signature of the generator from whom Class A regulated, recyclable material was collected;
 7. the dated signature of the transporter's employee making the collection, and of all subsequent transporters;
 8. the dated signature of the recycling facility's owner or operator, or his or her designee; and
 9. for any specification used oil fuel being transported, the shipping paper shall identify the material as "specification used oil fuel".
- (5) Class A regulated recyclable material transported by a transporter described in 310 CMR 30.223(2)(b) shall be accompanied by a shipping paper filled out and signed pursuant to 310 CMR 30.223(4)(b).
- (6) A transporter of Class A regulated recyclable material described in 310 CMR 30.223(1) or 30.223(2) shall retain for at least three years from the date it accepts Class A regulated recyclable material from a generator, a copy of the shipping paper or manifest used to comply with 310 CMR 30.223(4). All record-keeping shall be in compliance with 310 CMR 30.007.
- (7) A transporter of Class A regulated recyclable material using the shipping paper required by 310 CMR 30.223(4)(b) shall provide the generator of the regulated recyclable material with a copy of the shipping paper after it is signed by the recycling facility pursuant to 30.223(4)(b)8.

30.224: Applications for Class A Permits

- (1) Generators and recyclers of Class A regulated recyclable material, other than those exempt from permit requirements pursuant to 310 CMR 30.221(3)(a), shall determine their appropriate permit category according to 310 CMR 30.221: *Table 1* and submit a permit application for that category on a form prescribed by the Department. In addition to what is set forth 310 CMR 30.204, the application shall include:
- (a) for a generator intending to send materials off the site of generation, the names, addresses, and EPA identification numbers of the recycler(s) to whom the materials are to be sent.
 - (b) for a recycler intending to receive materials from off the site of recycling, the names, addresses, and EPA identification numbers of the generator(s) located outside of Massachusetts from whom the materials are to be received.
 - (c) for a generator intending to send materials outside of Massachusetts, a statement from those persons outside of Massachusetts who are referred to in the application, certified pursuant to 310 CMR 30.009, that:

30.224: continued

1. the information contained in the application is correct and accurate, and
2. the activity they intend to engage in is in compliance with applicable State and Federal laws and regulations.

(2) For a generator intending to recycle specification used oil fuel by burning it in a fossil fuel utilization facility other than a used oil fuel fired space heater, documentation that the burning of specification used oil fuel in that facility has been approved as applicable by the Department pursuant to 310 CMR 7.00: *Air Pollution Control*.

30.225: Conditions for Class A Recycling Permits

In addition to conditions imposed pursuant to 310 CMR 30.202(2), the conditions set forth in 310 CMR 30.205 and 30.206, and the provisions set forth in 310 CMR 30.221 and 310 CMR 30.222 and 30.250, the following conditions shall apply to each Class A recycling permit, regardless of whether or not such conditions are written into the permit.

(1) The permittee shall immediately notify the Department of any change in the characteristics, composition, or source of any Class A regulated recyclable material that would require that said material be managed differently, that the conditions of the permit be changed, or that the permit be suspended or revoked.

(2) If the permittee is a generator who is a "marketer" [that term is defined in 310 CMR 30.255(1)] of specification used oil fuel by selling or otherwise transferring such fuel, or offering to sell or otherwise transfer such fuel, to other persons who burn that fuel, or who intend or plan to burn that fuel, for energy recovery, the permittee shall determine that the used oil fuel is specification used oil fuel by causing samples of such fuel to be analyzed only by laboratories meeting standards of quality control and quality assurance acceptable to the Department.

(3) If the permittee is authorized to burn specification used oil fuel, the permittee shall not mix such used oil fuel with any off-specification used oil fuel, with any waste oil, with any hazardous waste fuel, or with unused fuel oil unless such mixing is incidental to the filling or emptying of a tank or container.

(4) If the permittee is authorized to burn specification used oil fuel, the permittee shall not receive from off the site of generation, and shall not contract to receive from off the site of generation, any off-specification used oil fuel, any waste oil, or any hazardous waste fuel. If the permittee receives or otherwise comes to possess any off-specification used oil fuel not generated at the site of burning, any waste oil not generated at the site of burning, or any hazardous waste fuel not generated at the site of burning, the permittee shall immediately so notify the Department and shall manage such material as hazardous waste in compliance with all applicable provisions of 310 CMR 30.000.

30.230: Requirements Governing Class B(1) Regulated Recyclable Materials

310 CMR 30.230 through 30.239, cited collectively as 310 CMR 30.230, set forth standards for the handling of Class B(1) regulated recyclable materials, describe procedures for obtaining a permit to recycle Class B(1) regulated recyclable materials, and set forth the basic and optional conditions that may be imposed in such permits.

30.231: General Provisions

(1) Except for those regulated recyclable materials described in 310 CMR 30.231(2), all regulated recyclable materials used in a manner constituting disposal

- (a) shall not be subject to any provisions of 310 CMR 30.200 other than 30.201, 30.211, and 30.231(1), and
- (b) shall be recycled and otherwise handled in full compliance with all applicable provisions of 310 CMR 30.000 other than 310 CMR 30.200.

(2) When used in a manner constituting disposal, regulated recyclable materials shall be subject to 310 CMR 30.230 if they:

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.231: continued

- (a) are listed or otherwise described in 310 CMR 30.133 or 310 CMR 30.136, and
- (b) have never been used, and
- (c) are ordinarily used on the land.

(3) No person shall recycle any Class B(1) regulated recyclable material described in 310 CMR 30.231(2), or engage in any other activity involving Class B(1) regulated recyclable material described in 310 CMR 30.231(2) if a Class B(1) permit is required for that activity, unless either

- (a) that person has applied for and obtained a Class B(1) permit, said permit is in effect when the recycling or other activity is being done, and said permit authorizes the recycling or other activity being done; or

30.231: continued

- (b) the Class B(1) regulated recyclable material is recycled or otherwise handled in compliance with all provisions of 310 CMR 30.000 other than 310 CMR 30.200.
- (4) If a person described in 310 CMR 30.231(3) has a Class B(1) permit issued pursuant to 310 CMR 30.230, and does not have a license issued pursuant to 310 CMR 30.500, 30.600, 30.700, and 30.800, that person shall
- (a) not recycle any Class A, Class B(2), Class B(3), Class B(4), Class B(5), or Class C regulated recyclable material, or any other material that is regulated pursuant to 310 CMR 30.000, unless that person also has whatever license or permit is required by 310 CMR 30.000 for such activity; and
 - (b) not receive from off the site of generation, or contract to receive from off the site of generation, any Class A, Class B(1), Class B(2), Class B(3), Class B(4), Class B(5), or Class C regulated recyclable material, or any other material that is regulated pursuant to 310 CMR 30.000, unless that person also has whatever license or permit is required by 310 CMR 30.000 for such activity, and
 - (c) notify the EPA and the Department pursuant to 310 CMR 30.060 through 30.064.
- (5) Generators and transporters of Class B(1) regulated recyclable material described in 310 CMR 30.231(2) shall handle such material in compliance with all provisions set forth in 310 CMR 30.000 for the generation and transportation of hazardous waste. Without limiting the generality of the foregoing,
- (a) such material shall be accompanied by a manifest filled out, signed, and distributed in compliance with all provisions of 310 CMR 30.000 governing the filling out, signing, and distribution of copies of manifests; and
 - (b) a generator of such material may sell or otherwise transfer custody or possession of such material only to a transporter in compliance with 310 CMR 30.304; and
 - (c) a generator of such material may sell or otherwise transfer such material, or contract to sell or otherwise transfer such material, or cause or allow such material to be transported off the site of generation, only to either
 - 1. a facility described in 310 CMR 30.305 or
 - 2. a facility that has a Class B(1) permit pursuant to 310 CMR 30.232(2) or
 - 3. a facility outside of Massachusetts that has been designated by the Department pursuant to 310 CMR 30.232(3); and
 - (d) a transporter of Class B(1) regulated recyclable material may cause or allow such material to be transported off the site of generation only to either
 - 1. a person described in 310 CMR 30.404 or
 - 2. a facility that has a Class B(1) permit pursuant to 310 CMR 30.232(2) or
 - 3. a facility outside of Massachusetts that has been designated by the Department pursuant to 310 CMR 30.232(3).
- (6) Products produced for the general public's use that are used in a manner that constitutes disposal and that contain recyclable materials are not presently subject to the land disposal restrictions of 310 CMR 30.750 (*see* 40 CFR 268.7(b)(6)) if the regulated recyclable materials have undergone a chemical reaction in the course of producing the products so as to become inseparable by physical means and if such products meet the applicable treatment standards in subpart D of 40 CFR 268, as incorporated by reference at 310 CMR 30.750, or meet the requirements of 40 CFR § 268.32, as incorporated by reference at 310 CMR 30.750, or RCRA section 3004(d) where no treatment standards have been established for the constituents that they contain.

30.232: Class B(1) Permits and Permit Applications

- (1) Any person wishing to recycle Class B(1) regulated recyclable material in compliance with a Class B(1) permit shall apply to the Department for a Class B(1) permit to do so. The application shall be on a form acceptable to the Department. In addition to what is set forth in 310 CMR 30.204, the application shall include:

30.232: continued

- (a) The names, addresses, and EPA identification numbers of all generators generating the material to be recycled, and
- (b) The location of the recycling, if it is not the given address of the recycler, and
- (c) A complete description of the material to be recycled, including any hazardous constituent listed in 310 CMR 30.160 present in a concentration greater than 1.0 mg/kg (dry weight) and not ordinarily present in the material when in commercial distribution, and
- (d) A complete description of the proposed method of use, specifically including, without limitation, any departures from the ordinary method of use or the method approved by the manufacturer, and
- (e) A complete description of all sensitive receptors and environmentally sensitive activities at or near the site of use, including, without limitation residences, schools, and drinking water supplies.

(2) Conditions imposed pursuant to 310 CMR 30.202(2), the general conditions set forth in 310 CMR 30.205 and 310 CMR 30.206, and the provisions set forth in 310 CMR 30.231 shall apply to each Class B(1) permit, regardless of whether or not such conditions are written into the permit. Permittees shall comply with such conditions whether or not they are written into the permit. Failure to comply shall be grounds for an enforcement action, including, without limitation, permit suspension or revocation.

(3) Any person who wishes to recycle, at a facility outside of Massachusetts, Class B(1) regulated recyclable material generated in Massachusetts shall apply to the Department to be considered a designated facility for the purpose of receiving Class B(1) regulated recyclable material. The application shall be on a form acceptable to the Department. In addition to what is set forth in 310 CMR 30.204, the application shall include:

- (a) The names, addresses and EPA identification numbers of the generators located in Massachusetts from whom the recycler intends to obtain regulated recyclable material, and
- (b) A statement that
 1. the State in which the recycling would be done, if applicable, or the EPA, has approved such recycling, or
 2. approval of the recycling is not required by State or Federal law in effect where the recycling would be done.

30.240: Requirements Governing Class B(2) Regulated Recyclable Materials

310 CMR 30.240 through 30.249, cited collectively as 310 CMR 30.240, set forth standards for the handling of Class B(2) regulated recyclable materials, describe procedures for obtaining a permit to recycle Class B(2) regulated recyclable materials, and set forth the basic and optional conditions that may be imposed in such permits.

30.241: General Provisions

- (1) No person shall recycle any Class B(2) regulated recyclable material, or engage in any other activity involving Class B(2) regulated recyclable material if a Class B(2) permit is required for that activity, unless either
 - (a) that person has applied for and obtained a Class B(2) permit, said permit is in effect when the recycling or other activity is being done, and said permit authorizes the recycling or other activity being done, or
 - (b) the Class B(2) regulated recyclable material is recycled or otherwise handled in compliance with all provisions of 310 CMR 30.000 other than 310 CMR 30.200.
- (2) If a person described in 310 CMR 30.241(1) has a Class B(2) permit issued pursuant to 310 CMR 30.240, and does not have a license issued pursuant to 310 CMR 30.500, 30.600, 30.700, and 30.800, that person shall
 - (a) not recycle any Class A, Class B(1), Class B(3), Class B(4), Class B(5), or Class C regulated recyclable material, or any other material that is regulated pursuant to 310 CMR 30.000, unless that person also has whatever license or permit is required by 310 CMR 30.000 for such activity; and

30.241: continued

- (b) not receive from off the site of generation, or contract to receive from off the site of generation, any Class A, Class B(1), Class B(2), Class B(3), Class B(4), Class B(5), or Class C regulated recyclable material, or any other material that is regulated pursuant to 310 CMR 30.000, unless that person also has whatever license or permit is required by 310 CMR 30.000 for such activity; and
- (c) notify the EPA and the Department pursuant to 310 CMR 30.060 through 30.064.

30.242: Generator Standards

- (1) Each person who generates hazardous waste fuel, regardless of what else he does or wishes to do with that material, shall handle such material in compliance with all applicable provisions set forth in 310 CMR 30.000 for the generation of hazardous waste. Without limiting the generality of the foregoing,
 - (a) such material shall be accompanied by a manifest filled out, signed, and distributed in compliance with all provisions of 310 CMR 30.000 governing the filling out, signing, and distribution of copies of manifests; and
 - (b) a generator of such material may sell or otherwise transfer custody or possession of such material only to a transporter in compliance with 310 CMR 30.304; and
 - (c) a generator of such material may sell or otherwise transfer such material, or contract to sell or otherwise transfer such material, or cause or allow such material to be transported off the site of generation, only to a facility described in 310 CMR 30.305.
- (2) Each generator of hazardous waste fuel who is a "marketer" of hazardous waste fuel shall be subject to, and shall comply with, 310 CMR 30.244 and 310 CMR 30.245.
- (3) All generators of hazardous waste fuel who burn the hazardous waste fuel they generate shall be subject to, and shall comply with, 310 CMR 30.246 and 310 CMR 30.247.

30.243: Transport and Manifest Standards

Each transporter of hazardous waste fuel shall handle such material in compliance with all applicable provisions set forth in 310 CMR 30.000 for the transport of hazardous waste. Without limiting the generality of the foregoing,

- (1) such material shall be accompanied by a manifest filled out, signed, and distributed in compliance with all provisions of 310 CMR 30.000 governing the filling out, signing, and distribution of copies of manifests; and
- (2) a transporter of such material may cause or allow such material to be transported off the site of generation only to a person described in 310 CMR 30.404.

30.244: "Marketer" Standards

- (1) As used in 310 CMR 30.240, the term "marketer" means a person who intends to or does sell or otherwise transfer, or offer to sell or otherwise transfer, a hazardous waste fuel to another person who wishes to or does burn it. The term "marketer" does not include a person who transfers hazardous waste to another person for conversion by that other person to a hazardous waste fuel by blending or other treatment if the person doing the blending or other treatment does not wish to, and does not, burn the hazardous waste fuel.
- (2) In addition to complying with all other applicable requirements, each "marketer" of hazardous waste fuel shall:
 - (a) comply with 310 CMR 30.001 through 30.059 and all applicable provisions of 310 CMR 30.100 through 30.199, and
 - (b) notify the EPA and the Department of his hazardous waste fuel activity pursuant to 310 CMR 30.060 through 30.064 before engaging in such activity, or constructing or operating any site or works for engaging in such activity, and
 - (c) before sending the first shipment of hazardous waste fuel to a person who wishes to or does burn it, receive from said person a certification that said person

30.244: continued

1. has notified the EPA and the Department of his hazardous waste fuel activity pursuant to 310 CMR 30.060 through 30.064 and
 2. has a currently valid license or permit for that activity, and
- (d) in addition to complying with all other applicable record-keeping requirements, keep a copy of each certification of hazardous waste fuel activity that he sends or receives.
- (3) Except for generators described in 310 CMR 30.244(4), each "marketer" who blends or otherwise treats hazardous waste or hazardous waste fuel, or who receives hazardous waste or hazardous waste fuel from off the site of generation thereof for the purpose of transferring it to another "marketer" of hazardous waste fuel, or who stores, and not just accumulates, hazardous waste fuels at the site of generation thereof, shall do so at a facility that is either
- (a) licensed pursuant to 310 CMR 30.800 and in compliance with all applicable provisions of 310 CMR 30.500 through 30.900, or
 - (b) a facility having interim status pursuant to RCRA.
- (4) The provisions of 310 CMR 30.244(3) shall not apply to a "marketer" of hazardous waste fuel who is a generator who
- (a) does not receive hazardous waste or hazardous waste fuel from off the site of generation thereof, and
 - (b) does not burn or store hazardous waste or hazardous waste fuel, and
 - (c) does not blend or otherwise treat hazardous waste or hazardous waste fuel.
- (5) Each "marketer" described in 310 CMR 30.244(4) shall manage the hazardous waste fuel he generates in compliance with either
- (a) 310 CMR 30.200 and a Class B(2) permit issued pursuant to 310 CMR 30.245, or
 - (b) all provisions of 310 CMR 30.000 other than 310 CMR 30.200.

30.245: Permits and Permit Applications for Those Who are "Marketers" of Hazardous Waste Fuel

- (1) Any generator described in 310 CMR 30.244(4) who wishes to be a "marketer" of hazardous waste fuel in compliance with a Class B(2) permit shall apply to the Department for a Class B(2) permit to do so. The application shall be on a form acceptable to the Department. In addition to what is set forth in 310 CMR 30.204, the application shall include:
- (a) The names, addresses, and EPA identification numbers of the persons to whom the hazardous waste fuel is to be sold or otherwise transferred, or offered for sale or other transfer.
 - (b) Copies of the certifications required pursuant to 310 CMR 30.246(2)(c).
- (2) Conditions imposed pursuant to 310 CMR 30.202(2), the general conditions set forth in 310 CMR 30.205 and 30.206, and the provisions set forth in 310 CMR 30.241, 30.242, 30.243, and 30.244 shall apply to each Class B(2) permit issued pursuant to 310 CMR 30.245, regardless of whether or not such conditions are written into the permit. Permittees shall comply with such conditions whether or not they are written into the permit. Failure to comply shall be grounds for an enforcement action, including, without limitation, permit suspension or revocation.

30.246: Standards for Persons Who Burn Hazardous Waste Fuels

- (1) The burning of hazardous waste fuel is prohibited except in
- (a) an industrial and utility boiler or an industrial furnace permitted or licensed by the Department for that burning, or
 - (b) a hazardous waste incinerator licensed pursuant to 310 CMR 7.00 and 30.000, or
 - (c) a cement kiln located within the boundaries of a municipality with a population less than 500,000 (based on the most recent census statistics) if such cement kiln is in full compliance with all requirements of 310 CMR 30.000 and 7.00 applicable to hazardous waste incinerators.
- (2) In addition to complying with all other applicable requirements, each person who burns hazardous waste fuel shall:

30.246: continued

- (a) comply with 310 CMR 30.001 through 30.059 and all applicable provisions of 310 CMR 30.100 through 30.199, and
- (b) notify the EPA and the Department of his hazardous waste fuel activity pursuant to 310 CMR 30.060 through 30.064 before engaging in such activity, or constructing or operating any site or works for engaging in such activity, and
- (c) before accepting the first shipment of hazardous waste fuel, provide to the "marketer" a certification that the marketer:
 - 1. has notified the EPA and the Department of his hazardous waste fuel activity pursuant to 310 CMR 30.060 through 30.064, and
 - 2. has a currently valid license or permit for that activity, and
 - 3. is in compliance with the requirements of 310 CMR 30.240.
- (d) In addition to complying with all other applicable record-keeping requirements, keep a copy of each certification of hazardous waste fuel activity that he sends or receives.

(3) All persons who intend to or do burn hazardous waste fuel and who receive hazardous waste fuel not generated at the site where they intend to burn it, or who store hazardous waste fuel at the site of generation prior to burning it at the site of generation, shall do so at a facility that is either:

- (a) licensed pursuant to 310 CMR 30.800 and in compliance with all applicable provisions of 310 CMR 30.500 through 30.900, or
- (b) a facility having interim status pursuant to RCRA, provided that the owner or operator shall have filed a Part A permit application for the hazardous waste fuel activity, or have applied to amend an existing Part A permit application to include the hazardous waste fuel activity, by no later than May 29, 1986.

(4) Generators who burn hazardous waste fuel that is generated only at the site of burning, and that is only accumulated, and not stored, prior to being burned, shall manage that material in compliance with either

- (a) 310 CMR 30.200 and a Class B(2) permit issued pursuant to 310 CMR 30.247, or
- (b) all provisions of 310 CMR 30.000 other than 310 CMR 30.200.

30.247: Permits and Permit Applications for Those Who Burn Hazardous Waste Fuel at the Site of Generation

(1) Any generator described in 310 CMR 30.246(4) who wishes to burn hazardous waste fuel at the site of generation in compliance with a Class B(2) permit shall apply to the Department for a Class B(2) permit to do so. The application shall be on a form acceptable to the Department. In addition to what is set forth in 310 CMR 30.204, the application shall include:

- (a) a complete description of:
 - 1. the hazardous waste fuel to be burned, and
 - 2. how the fuel will be blended or otherwise treated, and
 - 3. with what the fuel will be blended. (Note that after hazardous waste fuel is blended, the mixture is hazardous waste fuel.)
- (b) a complete description of each facility for accumulating and blending or otherwise treating hazardous waste fuels, showing that the construction and operation of each such facility shall be in compliance with applicable requirements set forth or referred to in 310 CMR 30.300.
- (c) a complete description of how the hazardous waste fuel shall be managed so that it will be accumulated and not stored.
- (d) a complete description of the facility in which the hazardous waste fuel is to be burned, and of the management of sludges and other residues from the burning.
- (e) a copy of the Department's approval of the burning pursuant to 310 CMR 7.00.

(2) In addition to conditions imposed pursuant to 310 CMR 30.202(2), the general conditions set forth in 310 CMR 30.205 and 30.206, and the provisions set forth in 310 CMR 30.241, 30.242, 30.243, and 30.246, the following conditions shall apply to each Class B(2) permit issued pursuant to 310 CMR 30.247, regardless of whether or not such conditions are written into the permit. Permittees shall comply with such conditions whether or not they are written into the permit. Failure to comply shall be grounds for an enforcement action, including, without limitation, permit suspension or revocation.

30.247: continued

- (a) the hazardous waste fuel shall at all times be managed as hazardous waste in compliance with all applicable requirements of 310 CMR 30.300 through 30.399.
- (b) all sludges and residues of the burning shall be presumed to be hazardous waste unless and until the Department is persuaded otherwise, and the Department has so determined in writing.
- (c) the facility shall be operated at all times in compliance with the terms and conditions of the approval given by the Department pursuant to 310 CMR 7.00.

30.248: Standards for Other Persons Who Handle Hazardous Waste Fuel

Each person who is not a "marketer" of hazardous waste fuel and who handles hazardous waste fuel he does not generate by doing something with it other than transporting it or burning it shall handle such material only at a facility that is either

- (1) licensed pursuant to 310 CMR 30.800 and in compliance with all applicable provisions of 310 CMR 30.500 through 30.900, or
- (2) a facility having interim status pursuant to RCRA.

30.250: Requirements Governing Waste Oil and Used Oil Fuel

310 CMR 30.250 through 30.269, cited collectively as 310 CMR 30.250, set forth standards for the handling of used waste oil, of unused waste oil, and of Class B(3) regulated recyclable materials, describe procedures for obtaining a permit to recycle Class B(3) regulated recyclable materials, and set forth the basic and optional conditions that may be imposed in such permits.

30.251: General Provisions Governing Class B(3) Regulated Recyclable Materials

- (1) No person shall engage in any activity involving Class B(3) regulated recyclable material if a Class B(3) permit is required for that activity unless either
 - (a) that person has applied for and obtained a Class B(3) permit, said permit is in effect when the activity is being done, and said permit authorizes the activity being done, or
 - (b) the Class B(3) regulated recyclable material is recycled or otherwise handled in compliance with all provisions of 310 CMR 30.000 other than 310 CMR 30.200.
- (2) If a person described in 310 CMR 30.251(1) has a Class B(3) permit issued pursuant to 310 CMR 30.250, and does not have a license issued pursuant to 310 CMR 30.500, 30.600, 30.700, and 30.800, that person shall
 - (a) not recycle any Class A, Class B(1), Class B(2), Class B(4), Class B(5), or Class C regulated recyclable material, or any other material that is regulated pursuant to 310 CMR 30.000, unless that person also has whatever license or permit is required by 310 CMR 30.000 for such activity; and
 - (b) not receive from off the site of generation, or contract to receive from off the site of generation, any Class A, Class B(1), Class B(2), Class B(3), Class B(4), Class B(5), or Class C regulated recyclable material, or any other material that is regulated pursuant to 310 CMR 30.000, unless that person also has whatever license or permit is required by 310 CMR 30.000 for such activity; and
 - (c) notify the EPA and the Department pursuant to 310 CMR 30.060 through 30.064.
- (3) Except as otherwise provided in 310 CMR 30.251(3), off-specification used oil fuel may be blended with specification used oil fuel or unused fuel oil for the purpose of producing used oil fuel only at a facility licensed pursuant to 310 CMR 30.800. Mixing that is incidental to the filling or emptying of a tank or container is not blending. Off-specification used oil fuel may be blended with specification used oil fuel or unused fuel oil for the purpose of producing used oil fuel at a facility that has a Class B(3) permit issued pursuant to 310 CMR 30.266 or 310 CMR 30.268 if the blending is done for the purpose of making fuel which, at the time the blending occurs, may be lawfully burned at the site of blending pursuant to 310 CMR 7.00 and 30.000.

30.251: continued

- (4) Waste oil and used oil fuel shall not be blended, mixed, commingled, or otherwise treated with any other hazardous waste identified or otherwise described in 310 CMR 30.100 unless such blending, mixing, commingling, or other treatment is done in compliance with either
- (a) 310 CMR 30.240 and a Class B(2) recycling permit issued pursuant to 310 CMR 30.240, or
 - (b) 310 CMR 30.290 and a Class C recycling permit issued pursuant to 310 CMR 30.290, or
 - (c) all provisions of 310 CMR 30.000 other than 310 CMR 30.200

30.252: General Provisions Governing Waste Oil That Is Not Used Oil Fuel

(1) Except as provided in 310 CMR 30.252(2) and (3), waste oil that is not used oil fuel shall be managed either:

- (a) as hazardous waste fuel (if it is hazardous waste fuel) in compliance with 310 CMR 30.240; or as
- (b) regulated recyclable material if recycled in some manner other than being burned for energy recovery, in compliance with 310 CMR 30.220 and 310 CMR 30.212(8); or as
- (c) waste oil or hazardous waste in compliance with 310 CMR 30.201, 30.250, and all provisions 310 CMR 30.000 other than 310 CMR 30.200.

(2) Except as otherwise provided in 310 CMR 30.252, Remediation Waste, Remedial Waste Water, Soil, and Sediment, as defined in 310 CMR 40.0000: *Massachusetts Contingency Plan*, that contain used or unused waste oil, and that are not otherwise a hazardous waste pursuant to 310 CMR 30.120 through 30.136, generated as the result of a response action pursuant to 310 CMR 40.0000, as defined in 310 CMR 40.0000, shall be managed pursuant to 310 CMR 30.000 as a hazardous waste with a waste code of MA01.

- (a) Such Remediation Waste, Remedial Waste Water, Soil, and Sediment that are subject to the requirements of M.G.L. c. 21E, and 310 CMR 40.0000: *Massachusetts Contingency Plan* may be managed by the generator in compliance with the requirements of 310 CMR 40.0030: *Management Procedures for Remediation Waste*, and the receiving facility's permit issued pursuant to 310 CMR 30.000 or 310 CMR 19.000: *Solid Waste Management* rather than as MA01 hazardous waste.
- (b) Such Remediation Waste, Remedial Waste Water, Soil, and Sediment that are subject to the requirements of M.G.L. c. 21E, and 310 CMR 40.0000: *Massachusetts Contingency Plan* may be managed by the generator in compliance with the requirements of 310 CMR 40.0030: *Management Procedures for Remediation Waste* and transported to an out-of-state facility permitted for the receipt of such wastes rather than as MA01 hazardous waste.
- (c) Such Remediation Waste, Remedial Waste Water, Soil, and Sediment generated at an out-of-state response action may be shipped to a Massachusetts receiving facility as a non-hazardous waste provided such management is in compliance with the facility's permit issued pursuant to 310 CMR 30.000 or 310 CMR 19.00: *Solid Waste Management*, and the requirements of the state of generation.
- (d) Notwithstanding any provision of 310 CMR 30.252, the Department may require, in order to protect the public health, safety, and welfare, or the environment, any Remediation Waste, Remedial Waste Water, Soil, or Sediment subject to the provisions of 310 CMR 30.252 to be managed, stored, transported, treated or disposed of as a hazardous waste.
- (e) For any Uncontainerized Hazardous Waste, as defined in 310 CMR 40.0000: *Massachusetts Contingency Plan*, no provision of 310 CMR 30.252(2) shall limit the ability of the Department to require compliance, pursuant to 310 CMR 40.0031(3), with all or portions of the requirements of 310 CMR 30.000 including, but not limited to, those of 310 CMR 30.200 or 310 CMR 30.800.

(3) Notwithstanding the provisions of 310 CMR 30.252(1), unused waste oil that is to be used for the original purpose for which it was produced with no other processing than separation from a nonhazardous material at the site of generation or at a facility licensed pursuant to 310 CMR 30.800 is not a waste if it is sold or otherwise transferred as a commercial product.

(4) The separation of waste oil from a nonhazardous waste or nonhazardous material at the site of generation is not treatment and does not require a license pursuant to 310 CMR 30.800. The sludge from such a process is either a hazardous waste or wastewater or both and shall be subject to regulation as such.

30.252: continued

(5) Waste oil that is subject to the provisions of 310 CMR 30.104(2)(g) shall be deemed to be generated when it is accumulated or stored by a generator who is subject to 310 CMR 30.060 through 30.064, including, without limitation, a generator described in 310 CMR 30.353(8).

30.253: Generator Standards Governing Waste Oil and Used Oil Fuel

- (1) All generators of waste oil and all generators of used oil fuel:
 - (a) shall be subject to 310 CMR 30.301(1) and (2).
 - (b) shall comply with 310 CMR 30.302.
 - (c) may sell or otherwise transfer custody or possession of such waste oil only to a transporter in compliance with 310 CMR 30.304.
 - (d) may sell or otherwise transfer custody or possession of off-specification used oil fuel (specification used oil fuel is subject to 310 CMR 30.222) only to a transporter in compliance with 310 CMR 30.304.
 - (e) may sell or otherwise transfer such waste oil, or contract to sell or otherwise transfer such waste oil, or cause or allow such waste oil to be transported off the site of generation, only to a facility described in 310 CMR 30.305.
 - (f) may sell or otherwise transfer off-specification used oil fuel (specification used oil fuel is subject to 310 CMR 30.222), or contract to sell or otherwise transfer off-specification used oil fuel, or cause or allow off-specification used oil fuel to be transported off the site of generation, only to either:
 1. a facility described in 310 CMR 30.305, or
 2. a facility that has a Class B(3) permit pursuant to 310 CMR 30.268, or
 3. a marketer authorized pursuant to 310 CMR 30.255.
 - (g) may accumulate or store waste oil or used oil fuel in an underground tank only if the tank is installed, designed, constructed, operated, and monitored in compliance with the applicable requirements of 310 CMR 80.00: *Underground Storage Tank Systems*.
- (2) Any process at the site of generation which separates waste oil from a non-hazardous waste does not constitute treatment. Such activity shall be conducted in such a way as to prevent the release of waste oil into the environment.
- (3) A generator of waste oil or of used oil fuel who is a "marketer" is also subject to, and shall comply with, 310 CMR 30.255.
- (4) A generator of waste oil or of used oil fuel who burns waste oil or used oil fuel is also subject to, and shall comply with, 310 CMR 30.256.
- (5) A generator subject to 310 CMR 30.253 may obtain dual status if hazardous waste as well as waste oil and/or used oil fuel are generated or accumulated on-site. A generator of hazardous waste that is also subject to 310 CMR 30.253 shall determine its status with respect to such hazardous waste pursuant to the generator requirements of 310 CMR 30.300. (See 310 CMR 30.340(1); 30.351(1) and (2); and 30.353(1) and (2).) A generator of hazardous waste may exclude waste oil and/or used oil fuels from the hazardous waste status calculations in 310 CMR 30.300 provided these regulated recyclable materials are counted towards a generator's status with respect to waste oil and/or used oil fuels as follows:
 - (a) A generator is a Very Small Quantity Generator of waste oil and/or used oil fuels if that generator:
 1. does not generate in a calendar month 100 kg or more of such regulated recyclable materials; and
 2. does not accumulate a total quantity of 1,000 kg or more of any regulated recyclable material, hazardous waste, or combination of hazardous waste and regulated recyclable material, including waste oil and/or used oil fuels.
 - (b) A generator is a Small Quantity Generator of waste oil and/or used oil fuels if that generator:
 1. does not generate in a calendar month 1,000 kg or more of such regulated recyclable materials; and
 2. does not accumulate a total quantity of 6,000 kg or more of any hazardous waste, regulated recyclable material, or combination including waste oil and/or used oil fuels.

30.253: continued

(c) A generator is a large quantity generator of waste oil and/or used oil fuels if that generator is not a Small Quantity Generator of waste oil and/or used oil fuels pursuant to 310 CMR 30.253(5)(b) or a Very Small Quantity Generator of waste oil and/or used oil fuels pursuant to 310 CMR 30.253(5)(a).

(6) Generators of waste oil and/or used oil fuel shall comply with the following regulations, except that in implementing and enforcing said regulations with respect to used oil fuel, the term "used oil fuel" shall be used instead of the terms "waste" or "hazardous waste" wherever the latter two terms are used in said regulations, or in any other regulations referred to therein:

(a) All large quantity generators of waste oil and/or used oil fuel shall comply with 310 CMR 30.322, 30.323, 30.340(6), 30.341(2), (3), (5), (6), (7) and (8) as well as 310 CMR 30.342, and 310 CMR 30.343(1)(d), (e), (g) and (i). All areas where waste oil and/or used oil fuel is accumulated or stored, except for satellite accumulation areas, shall have posted at all times a sign with the words "WASTE OIL" in capital letters at least one inch high.

(b) All Small Quantity Generators of waste oil and/or used oil fuel shall comply with 310 CMR 30.351, including all regulations referred to therein, except that a Small Quantity Generator of waste oil and/or used oil fuel:

1. need not comply with the signage requirement of 310 CMR 30.341(4) referenced in 310 CMR 30.351(8)(a). Instead, all areas where waste oil and/or used oil fuel is accumulated or stored, except for satellite accumulation areas, shall have posted at all times a sign with the words "WASTE OIL" in capital letters at least one inch high.

2. need only comply with the following requirements of 310 CMR 30.343 referenced in 310 CMR 30.351(8)(c) regarding accumulation in tanks:

a. 310 CMR 30.343(1)(d) regarding Containment;

b. 310 CMR 30.343(1)(e) regarding General Operating Requirements;

c. 310 CMR 30.343(1)(g) relating to Response to Leaks or Spills and Disposition of Leaking Tank Systems; and

d. 310 CMR 30.343(1)(i) relating to Closure and Post-Closure Care.

(c) All Very Small Quantity Generators of waste oil and/or used oil fuel shall comply with 310 CMR 30.353, including all other regulations referred to therein, except that a Very Small Quantity Generator of waste oil and/or used oil fuel need not comply with the signage requirement of 310 CMR 30.341(4) referenced in 310 CMR 30.353(6)(h). Instead, all areas where waste oil and/or used oil fuel is accumulated or stored, except for satellite accumulation areas, shall have posted at all times a sign with the words "WASTE OIL" in capital letters at least one inch high.

(7) Generators of waste oil and/or used oil fuel shall be subject to the following preparedness and emergency procedure requirements:

(a) Large Quantity Generators of waste oil and/or used oil fuel only, as defined in 310 CMR 30.253(5), Large Quantity Generators of waste oil and/or used oil fuel who generate and accumulate all other regulated recyclable materials and all other hazardous wastes in quantities entitling them to the status of either a Small Quantity Generator pursuant to 310 CMR 30.351 or a Very Small Quantity Generator pursuant to 310 CMR 30.353, shall comply with the requirements set forth or referred to in 310 CMR 30.351(9).

(b) All Small Quantity Generators of waste oil and/or used oil fuel, as defined in 310 CMR 30.253(5), shall comply with requirements set forth or referred to in 310 CMR 30.351(9).

(c) All Very Small Quantity Generators of waste oil and/or used oil fuel, as defined in 310 CMR 30.253(5), shall comply with requirements set forth or referred to in 310 CMR 30.353(4).

(8) Persons who generate or accumulate waste oil and/or used oil fuel, and who generate or accumulate any other hazardous waste, shall comply with all applicable provisions of 310 CMR 30.200 with respect to the waste oil and/or used oil fuel, and shall comply with all applicable provisions of 310 CMR 30.000 with respect to all the other hazardous waste they generate.

30.253: continued

(9) Except for the generators described in 310 CMR 30.253(10), all generators of waste oil and/or off-specification used oil fuel (specification used oil fuel is subject to 310 CMR 30.222) shall cause such waste oil or used oil fuel, when it is collected and transported, to be accompanied by a hazardous waste manifest which shall be filled out, signed, and distributed, and copies of which shall be kept, in compliance with all provisions of 310 CMR 30.000 governing the filling out, signing, distribution, and keeping of copies of manifests. Generators subject to 310 CMR 30.253(9) shall notify the Department and obtain an identification number pursuant to 310 CMR 30.060 through 30.064.

(10) Persons who generate and accumulate waste oil or off-specification used oil fuel (specification used oil fuel is subject to 310 CMR 30.222) in quantities entitling them to the status of either a Small Quantity Generator pursuant to 310 CMR 30.351 or a Very Small Quantity Generator pursuant to 310 CMR 30.353, and who generate and accumulate all other regulated recyclable materials and all other hazardous wastes in quantities entitling them to the status of a Very Small Quantity Generator pursuant to 310 CMR 30.353 need not handle such waste oil or off-specification used oil in compliance with 310 CMR 30.253(9), and instead shall cause such waste oil or off-specification used oil fuel to be handled in compliance with the following requirements:

- (a) Generators subject to 310 CMR 30.253(10) shall register with the Department by notifying the Department in writing of their activity involving waste oil, off-specification used oil fuel, other regulated recyclable material, and other hazardous waste. Except as specifically provided elsewhere in 310 CMR 30.253(10), such registration shall be in compliance with requirements set forth or referred to in 310 CMR 30.353(5) (requirements governing Very Small Quantity Generators of hazardous waste).
- (b) Generators subject to 310 CMR 30.253(10) shall cause waste oil or off-specification used oil fuel, when it is collected and transported, to be accompanied by a hazardous waste manifest filled out, signed, and distributed in compliance with all provisions of 310 CMR 30.000 governing the filling out, signing, and distribution of copies of manifests.

30.254: Transport and Manifest Standards Governing Waste Oil and Used Oil Fuel

(1) A transporter of waste oil or of off-specification used oil fuel (specification used oil fuel is subject to 310 CMR 30.223) shall be licensed to transport hazardous waste pursuant to 310 CMR 30.000.

(2) A transporter of waste oil may cause or allow such material to be transported off the site of generation only to a person described in 310 CMR 30.404.

(3) A transporter of off-specification used oil fuel (specification used oil fuel is subject to 310 CMR 30.223) may cause or allow such material to be transported off the site of generation only to either

- (a) a person described in 310 CMR 30.404, or
- (b) a facility that has a Class B(3) permit pursuant to 310 CMR 30.268.

(4) When waste oil or off-specification used oil fuel (specification used oil fuel is subject to 310 CMR 30.223) generated by a generator described in 310 CMR 30.253(6) is collected and transported, such waste oil or used oil fuel shall be accompanied by a manifest filled out, signed, and distributed in compliance with all provisions of 310 CMR 30.000 governing the filling out, signing, and distribution of manifests.

(5) A transporter of waste oil or off-specification used oil fuel shall report monthly to the Department the source, amount, and destination of all waste oil and off-specification used oil fuel transported during the month. Each such monthly report shall be submitted to the Department no later than the last day of the following month. Such reports shall be on a machine readable file in a format prescribed by the Department. Such reports shall be subject to 310 CMR 30.006 and 30.007, certified pursuant to 310 CMR 30.009, and in compliance with 310 CMR 30.407.

30.254: continued

- (6) A person who contracts to perform an activity which results in the generation of waste oil may transport such waste oil without a license pursuant to 310 CMR 30.402 only if such person:
- (a) has generated, as a result of his activity at the site at which such person performed contracted work, the waste oil that he intends to transport from the site at which he performed the activity;
 - (b) transports no more than 100 kilograms per month of waste oil from any single site;
 - (c) transports waste oil in containers whose capacity does not exceed, in the aggregate, 200 kilograms in any one vehicle at any one time;
 - (d) registers such activity with the Department in compliance with 310 CMR 30.353(5);
 - (e) is in compliance with 310 CMR 30.353(7)(g), and (h); and
 - (f) delivers the waste oil either to a facility described in 310 CMR 30.305(1) or accumulates and manages the waste oil in compliance with 310 CMR 30.340 through 30.343, 30.351, or 30.353, as applicable.

30.255: "Marketer" Standards

- (1) The following criteria shall be used to determine whether or not a person is a "marketer" of used oil fuel. A person is a "marketer" of used oil fuel if that person is any of the following:
- (a) A generator of used oil fuel who sells or otherwise transfers, or offers to sell or otherwise transfer, used oil fuel to persons authorized to market used oil fuel or to other persons authorized to burn that fuel for energy recovery.
 - (b) Said person is the owner or operator of a facility at which used oil fuel is blended for the purpose of preparing either specification or off-specification used oil fuel.
 - (c) Said person is a transporter licensed pursuant to 310 CMR 30.800 and who transports used oil fuel to other authorized marketers, or to persons who are authorized to burn that used oil fuel for energy recovery.
- (2) A person who is a "marketer" of off-specification used oil fuel may sell or otherwise transfer such material, or contract to sell or otherwise transfer such material, or cause or allow such material to be transported off the site of generation, only to owners or operators of facilities that meet all the following requirements:
- (a) For each facility located in Massachusetts, the requirements are:
 1. the owner or operator must have notified the EPA and the Department of the facility's used oil fuel activity pursuant to 310 CMR 30.060 through 30.064.
 2. the facility must have an EPA identification number.
 3. the facility must be either:
 - a. licensed pursuant to 310 CMR 30.800 and in addition possess a B(3) permit or a specific license condition authorizing it to be a marketer, or
 - b. a marketer authorized to receive off-specification used oil fuel, or
 - c. a facility for which the Department has issued a Class B(3) recycling permit for burning pursuant to 310 CMR 30.268.
 - (b) For each facility located outside of Massachusetts, the requirements are:
 1. the facility must have the legal authority to accept the used oil pursuant to applicable statutes and regulations in effect where the facility is located.
 2. the transport of the used oil fuel must be in compliance with applicable statutes and regulations in effect in all places where such transport is to occur.
- (3) A "marketer" who burns used oil fuel shall be subject to, and shall comply with, 310 CMR 30.256.
- (4) A "marketer" shall, pursuant to 310 CMR 30.060 through 30.064, notify the Department of his activities as a "marketer" prior to engaging in those activities, regardless of whether or not said "marketer" has previously given notice of other activity pursuant to 310 CMR 30.060 through 30.064.
- (5) Whenever a "marketer" causes off-specification used oil fuel to be transferred to a person who intends to, or does market or burn it for energy recovery, said off-specification used oil fuel shall be accompanied by a hazardous waste manifest filled out, signed, and distributed in compliance with all provisions of 310 CMR 30.000 governing the filling out, signing, and distribution of copies of manifests. On the manifest, the off-specification used oil fuel shall be identified as "off-specification used oil fuel", and the waste code "MA98" shall be used.

30.255: continued

(6) Whenever a "marketer" causes specification used oil fuel to be transferred to a person who is authorized to burn specification used oil fuel, or to another marketer, said specification used oil fuel shall be accompanied either by:

- (a) a shipping paper on which the specification used oil fuel shall be identified as "specification used oil fuel", or by
- (b) a hazardous waste manifest on which the specification used oil fuel shall be identified as "specification used oil fuel", and the waste code "MA97" shall be used.

(7) No person shall be a "marketer" of any used oil fuel he claims is specification used oil fuel unless said person:

- (a) has ascertained, by appropriate analytical methods contained in EPA's Test Methods for Evaluating Solid Waste, SW-846, as incorporated by reference at 310 CMR 30.012, or by an equivalent method, that it meets the conditions provided in 310 CMR 30.215 and the parameters provided in 310 CMR 30.216 for specification used oil fuel,
- (b) has obtained and kept documentation showing compliance with the requirements in 310 CMR 30.255(7)(a), and
- (c) makes and keeps records for each batch or quantity of specification used oil fuel sold or otherwise transferred to a facility or to a person who is authorized to burn it for energy recovery, or to market, specification used oil fuel, stating for each such batch or quantity the name and address of the facility to which the specification used oil fuel is sold or otherwise transferred, the quantity of specification used oil fuel sold or otherwise transferred, the date when the used oil fuel was collected, and a cross-reference to the documentation described in 310 CMR 30.255(7)(b).

(8) Every "marketer" shall maintain copies of all notices, shipping papers, and manifests, and all other records he is required to make, send, or receive pursuant to 310 CMR 30.200, for at least three years after the date of his last used oil fuel activity. This period shall be automatically extended for the duration of any enforcement action. This period may be extended by order of the Department. All record keeping shall be in compliance with 310 CMR 30.007.

(9) A generator of specification used oil fuel who is a "marketer" of used oil fuel shall either:

- (a) be licensed pursuant to 310 CMR 30.800, and possess a special license condition authorizing it to be a marketer, or
- (b) have a Class A recycling permit issued pursuant to 310 CMR 30.220.

(10) A generator of off-specification used oil fuel who is a "marketer" of off-specification used oil fuel shall either:

- (a) be licensed pursuant to 310 CMR 30.800, or
- (b) have a Class B(3) recycling permit issued pursuant to 310 CMR 30.262.

(11) No person shall be a "marketer" of any used oil fuel he claims is off-specification used oil fuel unless said person:

- (a) has ascertained, by appropriate analytical methods contained in EPA's Test Methods for Evaluating Solid Waste, SW-846, as incorporated by reference at 310 CMR 30.012, such as the field screening tests described in method 9077, or by an alternate method accepted by EPA, that it meets the conditions for used oil fuel provided in 310 CMR 30.215.
- (b) has obtained and kept documentation showing compliance with the requirements in 310 CMR 30.255(11)(a), and
- (c) makes and keeps records for each batch or quantity of off-specification used oil fuel sold or otherwise transferred to a facility or to a person who burns off-specification used oil fuel, stating for each such batch or quantity the name and address of the facility to which the off-specification used oil fuel is sold or otherwise transferred, the quantity of off-specification used oil fuel sold or otherwise transferred, the date when the used oil fuel was collected, and a cross-reference to the documentation described in 310 CMR 30.255(11)(b).

(12) A person who is a "marketer" of specification used oil fuel may sell or otherwise transfer such material, or contract to sell or otherwise transfer such material, or cause or allow such material to be transported off the site of generation, only to owners or operators of facilities that meet all the following requirements:

- (a) For each facility located in Massachusetts, the requirements are:

30.255: continued

1. the facility must have an EPA identification number or a state-only Massachusetts identification number.
2. the facility must be
 - a. licensed pursuant to 310 CMR 30.800, and possess a special license condition authorizing it to be a marketer, or
 - b. a facility for which the Department has issued a Class B(3) recycling permit pursuant to 310 CMR 30.264, or
 - c. a person with a Class A regulated recyclable materials permit issued pursuant to 310 CMR 30.220 who is authorized to burn used oil fuel.
 - d. or an authorized marketer.
- (b) For each facility located outside of Massachusetts, the requirements are:
 1. the facility must have the legal authority to accept the used oil fuel pursuant to applicable statutes and regulations in effect where the facility is located.
 2. the transport of the used oil fuel must be in compliance with applicable statutes and regulations in effect in all places where such transport is to occur.

30.256: Standards for Persons Who Burn Used Oil Fuels

- (1) Persons who receive used oil fuel and burn it for energy recovery are subject to 310 CMR 30.256, other requirements referred to in 310 CMR 30.256, and the conditions of any required license or permit.
- (2) Persons who burn specification used oil fuel shall either:
 - (a) be licensed pursuant to 310 CMR 30.800 and in compliance with 310 CMR 30.500, 30.600, 30.700, and 30.900, or
 - (b) have a Class A recycling permit issued pursuant to and in compliance with 310 CMR 30.220, or,
 - (c) comply with performance standards established at 310 CMR 30.222.
- (3) Specification used oil fuel may be burned only in:
 - (a) an industrial or utility boiler or industrial furnace which is specifically approved by the Department for such burning pursuant to 310 CMR 7.00; or
 - (b) a used oil fuel fired space heater, provided that the space heater is operated in compliance with 310 CMR 30.222.
- (4) Off-specification used oil fuel may be burned only in:
 - (a) an industrial or utility boiler or industrial furnace which is specifically approved by the Department for such burning pursuant to 310 CMR 7.00; or
 - (b) a used oil fuel fired space heater, provided that the space heater is operated in compliance with 310 CMR 30.222.
- (5) Generators who intend to or do burn off-specification used oil fuel that is generated at the site of burning, and that is burned or intended to be burned in a fossil fuel utilization facility, shall burn such used oil fuel only at a facility that either
 - (a) is licensed pursuant to 310 CMR 30.800 and in compliance with 310 CMR 30.500, 30.600, 30.700, and 30.900, or
 - (b) has a Class B(3) recycling permit issued pursuant to 310 CMR 30.265 and 30.266, and is in compliance with 310 CMR 30.250.
- (6) Persons who burn, or who receive and intend to burn, off-specification used oil fuel not generated at the site of burning, shall do so only at a facility that either
 - (a) is licensed pursuant to 310 CMR 30.800 and in compliance with 310 CMR 30.500, 30.600, 30.700, and 30.900, or
 - (b) has a Class B(3) recycling permit issued pursuant to 310 CMR 30.267 and 30.268, and is in compliance with 310 CMR 30.250.
- (7) Before a person burns, or receives with intent to burn, off-specification used oil fuel received from a "marketer", said person shall receive from said "marketer" a written notice saying that the "marketer" has notified the EPA and the Department of his used oil fuel activity.

30.256: continued

- (8) No person who intends to or does burn off-specification used oil fuel shall accept any such fuel from a "marketer" unless said person has previously given to said "marketer" a written certification that said person:
- (a) has notified the EPA and the Department of his used oil fuel activity, and
 - (b) will burn off-specification used oil fuel only in an industrial or utility boiler or industrial furnace, and
 - (c) has a valid license or recycling permit appropriate to the activity for which certification is being given. The certification shall specify the type of license or recycling permit the person has.
- (9) No person shall burn any batch or lot of specification used oil fuel unless said person
- (a) has ascertained, by some means acceptable to the Department, *e.g.* by obtaining either an analysis of the oil done by a procedure acceptable to the Department or a certification from a "marketer", that the oil in that batch or lot meets the specifications set forth in Table 310 CMR 30.216, and
 - (b) has obtained and kept documentation showing compliance with the requirements in 310 CMR 30.256(9)(a).
- (10) No person who burns used oil fuel shall mix used oil fuel with any other material unless such mixing is done for the purpose of making fuel which the permittee is lawfully burning pursuant to 310 CMR 7.00 and 310 CMR 30.000.

30.260: Activities for Which Class B(3) Recycling Permits are Required

Before engaging in the following activities, the following persons shall apply for, obtain, and have in effect either a hazardous waste license issued pursuant to 310 CMR 30.800 or a Class B(3) recycling permit:

- (1) A generator who intends to be, or who is, a "marketer" of off-specification used oil fuel by selling or otherwise transferring such fuel, or offering to sell or otherwise transfer such fuel, to other persons who burn that fuel, or who intend or plan to burn that fuel, for energy recovery. Such a generator shall comply with 310 CMR 30.261 and 310 CMR 30.262 in applying for a Class B(3) recycling permit for this activity.
- (2) A "marketer", other than a transporter/marketer, who receives only specification used oil fuel from off the site of generation thereof, and who receives no other used oil fuel or waste oil or other hazardous wastes, and who intends to or does sell or otherwise transfer such fuel, or offer to sell or otherwise transfer such fuel, to any person authorized to market used oil fuel, or to other persons who burn that fuel, or who intend or plan to burn that fuel, for energy recovery in a fossil fuel utilization facility and have all required legal authority to burn such fuel in said fossil fuel utilization facility. Such a "marketer" shall comply with 310 CMR 30.263 and 310 CMR 30.264 in applying for and obtaining a Class B(3) recycling permit for this activity.
- (3) A generator who intends to or does burn off-specification used oil fuel that is generated at the site of burning, and that is burned or intended to be burned in a fossil fuel utilization facility. Such a generator shall comply with 310 CMR 30.265 and 310 CMR 30.266 in applying for and obtaining a Class B(3) recycling permit for this activity.
- (4) A person who burns, or who receives and intends to burn, off-specification used oil fuel not generated at the site of burning, and blended at the site of burning only in compliance with 310 CMR 30.251(3). Such a person shall comply with 310 CMR 30.267 and 310 CMR 30.268 in applying for and obtaining a Class B(3) recycling permit for this activity.

30.261: Applications for Class B(3) Permits for Generators to Market Off-specification Used Oil Fuel

Any generator wishing to be a "marketer" of off-specification used oil fuel by selling or otherwise transferring such fuel, or offering to sell or otherwise transfer such fuel, in compliance with a Class B(3) permit, to other persons who burn that fuel, or who intend or plan to burn that fuel, for energy recovery shall apply to the Department for a Class B(3) permit to do so. The application shall be on a form acceptable to the Department. In addition to what is set forth in 310 CMR 30.204, the application shall include:

30.261: continued

(1) The name, address, and EPA identification number of each person to whom the used oil fuel is to be sold or otherwise transferred, or offered for sale or other transfer. For each such person, the application shall include a reference to the approval that person has to burn the used oil fuel, or to be a "marketer" of the used oil fuel.

(2) A copy of each certification provided to the generator pursuant to 310 CMR 30.255(8) by each person described in 310 CMR 30.261(1).

30.262: Class B(3) Permits for Generators to Market Off-specification Used Oil Fuel

Conditions imposed pursuant to 310 CMR 30.202(2), the general conditions set forth in 310 CMR 30.205 and 310 CMR 30.206, and the standards set forth or referred to in 310 CMR 30.253, 30.254, and 30.255 shall apply to each Class B(3) permit for generators to market off-specification used oil fuel, regardless of whether or not such conditions are written into the permit. Permittees shall comply with such conditions whether or not they are written into the permit. Failure to comply shall be grounds for an enforcement action, including, without limitation, permit suspension or revocation.

30.263: Applications for Class B(3) Permits to Market Specification Used Oil Fuel

Any "marketer" wishing to receive specification used oil fuel from off the site of generation thereof, and then sell or otherwise transfer such fuel, or offer to sell or otherwise transfer such fuel, in compliance with a Class B(3) permit, to any person authorized to market used oil fuel, or to other persons who burn that fuel, or who intend or plan to burn that fuel, for energy recovery in a fossil fuel utilization facility and who have all required legal authority to burn such fuel in said fossil fuel utilization facility, shall apply to the Department for a Class B(3) permit to do so. The application shall be on a form acceptable to the Department. In addition to what is set forth in 310 CMR 30.204, the application shall include:

(1) The name, address, and EPA identification number of each generator and each "marketer" from whom the specification used oil fuel is to be obtained. For each "marketer", the application shall include a reference to the recycling permit issued to that "marketer". If a generator is also a "marketer", the application shall so state and shall include a reference to the recycling permit issued to that "marketer".

(2) The name, address, and EPA identification number of each person to whom the specification used oil fuel is to be sold or otherwise transferred, or offered for sale or other transfer. For each such person, the application shall include a reference to the approval that person has to market or burn the specification used oil fuel.

(3) A statement of how the used oil fuel will be determined to be specification used oil fuel. If the applicant intends to use laboratory analysis to determine that used oil fuel is specification used oil fuel, the application shall include a statement naming each laboratory at which samples of the used oil fuel will be analyzed, whether and if so by whom each such laboratory is certified, and the quality assurance procedures to be used. If the applicant intends to rely on the representation of the generator that the material in question is specification used oil fuel, the application shall include a copy of the documentation obtained and kept by the generator pursuant to 310 CMR 30.222(3)(b).

30.264: Class B(3) Permits to Market Specification Used Oil Fuel

In addition to conditions imposed pursuant to 310 CMR 30.202(2), the general conditions set forth in 310 CMR 30.205 and 310 CMR 30.206, and the standards set forth or referred to in 310 CMR 30.253, 30.254, and 30.255, the following conditions shall apply to each Class B(3) permit to market specification used oil fuel, regardless of whether or not such conditions are written into the permit. Permittees shall comply with such conditions whether or not they are written into the permit. Failure to comply shall be grounds for an enforcement action, including, without limitation, permit suspension or revocation.

(1) The permittee shall not receive, and shall not contract to receive, any off-specification used oil fuel, any waste oil, or any hazardous waste fuel.

30.264: continued

(2) If the permittee receives or otherwise comes to possess any off-specification used oil fuel, any waste oil, or any hazardous waste fuel, the permittee shall immediately so notify the Department and shall manage such material as hazardous waste in compliance with all applicable provisions of 310 CMR 30.000.

(3) The permittee shall not sell or otherwise transfer, and shall not contract to sell or otherwise transfer, any specification used oil fuel to any person other than a person authorized to market used oil fuel, or to other persons who intend to burn such fuel for energy recovery in a fossil fuel utilization facility, and who has all required legal authority to burn such fuel in said fossil fuel utilization facility. If the fossil fuel utilization facility is located in Massachusetts, the approval of the Department is required pursuant to 310 CMR 7.00.

(4) If the permittee is required to use laboratory analysis to determine that used oil fuel is specification used oil fuel, the permittee shall determine that the used oil fuel is specification used oil fuel by causing samples of such fuel to be analyzed only by laboratories certified by the Department or by laboratories meeting standards of quality control and quality assurance acceptable to the Department.

30.265: Applications for Class B(3) Permits to Burn Off-specification Used Oil Fuel Generated at the Site of Burning

Any person who generates off-specification used oil fuel, and who wishes to burn such material at the site of generation for energy recovery in any device other than a used oil fired space heater, all in compliance with a Class B(3) permit, shall apply to the Department for a Class B(3) permit to do so. The application shall be on a form acceptable to the Department. In addition to what is set forth in 310 CMR 30.204, the application shall include:

(1) Proof that the burning of the fuel in question in that facility has been approved by the Department pursuant to 310 CMR 7.00, and

(2) A complete description of the characteristics of the fuel, and the variation in those characteristics, if appropriate, and

(3) A complete description of the analysis procedure used to obtain the information described in 310 CMR 30.265(2), including, but not limited to, a statement naming each laboratory at which samples of the fuel were analyzed, whether and if so by whom each such laboratory is certified, and the quality assurance procedures to be used.

(4) A complete description of how the fuel will be managed so that it will not be speculatively accumulated.

(5) If the fuel is to be mixed with other fuels, a complete description of how such mixing will occur in compliance with 310 CMR 30.000.

30.266: Class B(3) Permits to Burn Off-specification Used Oil Fuel Generated at the Site of Burning

In addition to conditions imposed pursuant to 310 CMR 30.202(2), the general conditions set forth in 310 CMR 30.205 and 310 CMR 30.206, and the standards set forth or referred to in 310 CMR 30.253, 30.254, and 30.256, the following conditions shall apply to each Class B(3) permit to burn used oil fuel at the site of generation, regardless of whether or not such conditions are written into the permit. Permittees shall comply with such conditions whether or not they are written into the permit. Failure to comply shall be grounds for an enforcement action, including, without limitation, permit suspension or revocation.

(1) The permittee shall not burn any waste oil or other hazardous waste, regardless of where it is generated. Except for used oil fuel approved in the permit by the Department, the permittee shall not burn any used oil fuel or hazardous waste fuel, regardless of where it is generated.

30.266: continued

- (2) The permittee shall not receive from off the site of generation, and shall not contract to receive from off the site of generation, any material described in 310 CMR 30.266(1) as material the permittee is not authorized to burn. If the permittee receives or otherwise comes to possess any such material not generated at the site of burning, the permittee shall immediately so notify the Department and shall manage such material as hazardous waste in compliance with all applicable provisions of 310 CMR 30.000.
- (3) The permittee shall not mix used oil fuel with any other material unless such mixing is done for the purpose of making fuel which, at the time the mixing occurs, the permittee may lawfully burn pursuant to 310 CMR 7.00 and 310 CMR 30.000.
- (4) The permittee shall immediately notify the Department of any change in the characteristics, composition, or source of any used oil fuel that would require that the used oil fuel be managed differently, that the conditions of the permit be changed, or that the permit be suspended or revoked.
- (5) If the permittee is required to use laboratory analysis to determine that used oil fuel is specification used oil fuel, the permittee shall determine that the used oil fuel is specification used oil fuel by causing samples of such fuel to be analyzed only by laboratories certified by the Department or by laboratories meeting standards of quality control and quality assurance acceptable to the Department.
- (6) The permittee shall at all times be in compliance with 310 CMR 7.00.

30.267: Applications for Class B(3) Permits to Burn Off-specification Used Oil Fuel Generated Off The Site of Burning

Any person who wishes to burn, in compliance with a Class B(3) permit, off-specification used oil fuel generated off the site of burning shall apply to the Department for a Class B(3) permit to do so. The application shall be on a form acceptable to the Department. In addition to what is set forth in 310 CMR 30.204, the application shall include:

- (1) A copy of the approval given by the Department to the applicant to burn off-specification used oil fuel pursuant to 310 CMR 7.00.
- (2) The name, address, and EPA identification number of each “marketer” from whom used oil fuel is to be obtained. For each “marketer” the application shall include a reference to the recycling permit issued to that “marketer”.
- (3) A copy of each certification provided to the applicant pursuant to 310 CMR 30.256(6) by each person described in 310 CMR 30.267(2).
- (4) If the fuel is to be mixed with other fuels, a complete description of how such mixing will occur in compliance with 310 CMR 30.000.

30.268: Class B(3) Permits to Burn Off-specification Used Oil Fuel Generated Off the Site of Burning

In addition to conditions imposed pursuant to 310 CMR 30.202(2), the general conditions set forth in 310 CMR 30.205 and 30.206, and the standards set forth or referred to in 310 CMR 30.254 and 30.256, the following conditions shall apply to each Class B(3) permit to burn off-specification used oil fuel generated off the site of burning, regardless of whether or not such conditions are written into the permit. Permittees shall comply with such conditions whether or not they are written into the permit. Failure to comply shall be grounds for an enforcement action, including, without limitation, permit suspension or revocation.

- (1) The permittee shall at all times be in compliance with 310 CMR 7.00.

30.268: continued

(2) The permittee shall not receive from off the site of generation, and shall not contract to receive from off the site of generation, any waste oil or other hazardous waste, any hazardous waste fuel, or any used oil fuel which the permittee is not authorized to receive. If the permittee receives or otherwise comes to possess any such material not generated at the site of burning, the permittee shall immediately so notify the Department and shall manage such material as hazardous waste in compliance with all applicable provisions of 310 CMR 30.000.

(3) The permittee shall not mix used oil fuel with any other material unless such mixing is done for the purpose of making fuel which, at the time the mixing occurs, the permittee may lawfully burn pursuant to 310 CMR 7.00 and 310 CMR 30.000.

(4) The permittee shall immediately notify the Department of any change in the characteristics, composition, or source of any used oil fuel that would require that the used oil fuel be managed differently, that the conditions of the permit be changed, or that the permit be suspended or revoked.

(5) The permittee shall at all times comply with 310 CMR 30.530 through 30.534 (use of manifests by facilities).

30.270: Requirements Governing Class B(4) Regulated Recyclable Materials

310 CMR 30.270 through 30.279, cited collectively as 310 CMR 30.270, set forth standards for the handling of Class B(4) regulated recyclable materials, describe procedures for obtaining a permit to recycle Class B(4) regulated recyclable materials, and set forth the basic and optional conditions that may be imposed in such permits.

30.271: General Provisions

(1) No person shall recycle any Class B(4) regulated recyclable material, or engage in any other activity involving Class B(4) regulated recyclable material if a Class B(4) permit is required for that activity, unless either

(a) that person has applied for and obtained a Class B(4) permit, said permit is in effect when the recycling or other activity is being done, and said permit authorizes the recycling or other activity being done, or

(b) the Class B(4) regulated recyclable material is recycled or otherwise handled in compliance with all provisions of 310 CMR 30.000 other than 310 CMR 30.200; or

(c) the Class B(4) regulated recyclable material is D011 silver fixer solution, the generator is a Very Small Quantity Generator and operates in compliance with 310 CMR 30.353, the generator need not apply for or obtain a Class B(4) permit.

(2) If a person described in 310 CMR 30.271(1) has a Class B(4) permit issued pursuant to 310 CMR 30.270, and does not have a license issued pursuant to 310 CMR 30.500, 30.600, 30.700, and 30.800, that person shall

(a) not recycle any Class A, Class B(1), Class B(2), Class B(3), Class B(5), or Class C regulated recyclable material, or any other material that is regulated pursuant to 310 CMR 30.000, unless that person also has whatever license or permit is required by 310 CMR 30.000 for such activity; and

(b) not receive from off the site of generation, or contract to receive from off the site of generation, any Class A, Class B(1), Class B(2), Class B(3), Class B(5), or Class C regulated recyclable material, or any other material that is regulated pursuant to 310 CMR 30.000, unless that person also has whatever license or permit is required by 310 CMR 30.000 for such activity; and

(c) notify the EPA and the Department pursuant to 310 CMR 30.060 through 30.064.

(3) A permit may be granted pursuant to 310 CMR 30.270 for the handling of Class B(4) regulated recyclable material only if the precious metals are actually recovered in the form of either a metal or an economically valuable chemical combination or compound. If precious metals are not intended to be, or are not, recovered from Class B(4) regulated recyclable material, such material shall be handled in compliance with 310 CMR 30.213 and 310 CMR 30.271, shall not be subject to any other provisions of 310 CMR 30.200, and shall be handled in compliance with all other applicable provisions of 310 CMR 30.000.

30.271: continued

(4) Notwithstanding the provisions of 310 CMR 30.202(2) and 310 CMR 30.271(1), the Department may decide on a case-by-case basis that any person who intends to or does engage in any activity described in 310 CMR 30.271(1) shall comply with all provisions of 310 CMR 30.000 in lieu of the provisions of a Class B(4) permit.

(a) In every proceeding, the burden shall be on the applicant for, or the holder of, a Class B(4) permit to persuade the Department that the applicant or permittee intends to or does engage in any activity described in 310 CMR 30.271(1) in a manner that protects public health, safety, and welfare, and the environment.

(b) A Class B(4) permit shall be granted, and shall be allowed to remain in effect, only to the extent, and only while, the Department is persuaded that the applicant or permittee engages in, and will continue to engage in, the activity described in 310 CMR 30.271(1) in a manner that protects public health, safety, and welfare, and the environment.

(c) In making this decision, the Department may consider, among other things:

1. The types and amounts of materials that are, or are intended to be, accumulated or stored;
2. The method by which materials are, or are intended to be, accumulated or stored;
3. The length of time the materials have been, or are intended to be, accumulated or stored;
4. Whether any contaminants are being released into the environment, or are likely to be so released; and
5. Other relevant factors.

(d) If the Department decides that an applicant or permittee shall be regulated pursuant to all provisions of 310 CMR 30.000, the Department shall send to the applicant or permittee a brief written response giving a reason for the Department's decision. Except as provided in 310 CMR 30.890, the Department's decision shall not be subject to public notice, public comment, or public hearings.

(e) The applicant or permittee shall comply with the Department's decision and with all applicable provisions of 310 CMR 30.000 pursuant to a compliance schedule set forth in the decision, provided that transporters and owners or operators of facilities shall submit applicable permit applications within no less than 60 days and no more than six months after the date of the Department's final decision.

30.272: Generator Standards

(1) A generator of Class B(4) regulated recyclable material may sell or otherwise transfer such material, or contract to sell or otherwise transfer such material, or cause or allow such material to be transported off the site of generation, only to either

(a) a facility described in 310 CMR 30.305, or

(b) a facility that has a Class B(4) permit pursuant to 310 CMR 30.270, or

(c) a facility outside of Massachusetts that:

1. either is designated a facility by the EPA pursuant to 40 CFR Part 266 Subpart F, or that has an equivalent State designation or authorization; and
2. has in writing notified the generator and the Department, in compliance with 310 CMR 30.009, that it is in compliance with the requirements set forth in 310 CMR 30.272(1)(c)1.

(2) A generator of Class B(4) regulated recyclable material may sell or otherwise transfer custody or possession of such material only to a transporter in compliance with 310 CMR 30.274.

(3) A generator of Class B(4) regulated recyclable material who intends to or does sell or otherwise transfer, or contract to sell or otherwise transfer, such material to any other person, or who intends to or does cause or allow such material to be transported off the site of generation, shall at all times manage such material

(a) as hazardous waste in full compliance with 310 CMR 30.300 and all other applicable provisions of 310 CMR 30.000, or

(b) in full compliance with a Class B(4) recycling permit issued by the Department.

30.273: Generator Permits and Permit Applications

(1) Any generator wishing to manage Class B(4) regulated recyclable material in compliance with a Class B(4) permit shall apply to the Department for a Class B(4) permit to do so. The application shall be on a form acceptable to the Department. In addition to what is set forth in 310 CMR 30.204, the application shall include a complete description of how the material will be managed in compliance with the requirements set forth or referred to in 310 CMR 30.270.

(2) In addition to conditions imposed pursuant to 310 CMR 30.202(2), the general conditions set forth in 310 CMR 30.205 and 30.206, and the standards set forth in 310 CMR 30.271, 30.272, and 30.274, the following conditions shall apply to each Class B(4) permit issued to generators, regardless of whether or not such conditions are written into the permit. Permittees shall comply with such conditions whether or not they are written into the permit. Failure to comply shall be grounds for an enforcement action, including, without limitation, permit suspension or revocation.

(a) Except as specifically provided in 310 CMR 30.273(2)(b), the permittee shall accumulate and otherwise manage the material in compliance with 310 CMR 30.300.

(b) The material may be accumulated at the site of generation for up to one calendar year without such accumulation being deemed storage, but only if such accumulation is not speculative accumulation.

30.274: Transport and Manifest Standards

(1) A transporter of Class B(4) regulated recyclable material shall either

- (a) be licensed to transport hazardous waste pursuant to 310 CMR 30.000, or
- (b) have a Class B(4) permit issued pursuant to 310 CMR 30.275.

(2) Any person who intends to or does transport Class B(4) regulated recyclable material shall at all times manage such material

(a) as hazardous waste in full compliance with 310 CMR 30.400 and all other applicable provisions of 310 CMR 30.000, or

(b) in full compliance with 310 CMR 30.274 and a Class B(4) recycling permit issued pursuant to 310 CMR 30.275.

(3) Unless otherwise specifically provided in 310 CMR 30.274(3), all Class B(4) regulated recyclable material shall at all times be accompanied by a hazardous waste manifest filled out, signed, and distributed in compliance with all provisions of 310 CMR 30.000 governing the filling out, signing, and distribution of copies of manifests. The following material need not be accompanied by a manifest:

(a) Useable end products (*e.g.* metal ingots) of the recycling of Class B(4) regulated recyclable material when such end products are returned to trade use.

(b) Intermediate products of the recycling of Class B(4) regulated recyclable material if such products neither appear in the lists set forth in 310 CMR 30.131 through 30.136 nor have the characteristics of a hazardous waste set forth in 310 CMR 30.120 through 30.125.

(4) A transporter of Class B(4) regulated recyclable material may transport such material, or cause or allow such material to be transported, only to a facility or transporter that is

(a) a Massachusetts facility that has a facility license pursuant to 310 CMR 30.800, or

(b) a Massachusetts facility that has a Class B(4) permit pursuant to 310 CMR 30.277, or

(c) a facility outside of Massachusetts that either is designated a facility by the EPA pursuant to 40 CFR Part 266 Subpart F, or that has an equivalent State designation or authorization, or

(d) another transporter who is either described in 310 CMR 30.403(2), (3), or (4), or who has a Class B(4) permit issued pursuant to 310 CMR 30.275.

(5) If Class B(4) regulated recyclable material is accompanied by a manifest, a transporter of such material may transport such material, or cause or allow such material to be transported, only to a facility or transporter that is described in 310 CMR 30.274(4) and that is specified on the manifest accompanying the material.

(6) If the transporter has a Class B(4) permit issued pursuant to 310 CMR 30.275 and does not have a license issued pursuant to 310 CMR 30.400 and 310 CMR 30.800, the transporter shall:

30.274: continued

- (a) not collect or transport any Class A, Class B(1), Class B(2), Class B(3), Class B(5), or Class C regulated recyclable material, or any other material that is regulated pursuant to 310 CMR 30.000, unless the transporter also has whatever license or permit is required by 310 CMR 30.000 for such activity, and
- (b) collect such material, or cause or allow such material to be collected, only from
 - 1. any generator in compliance with 310 CMR 30.300 or who has a Class B(4) permit pursuant to 310 CMR 30.273 or a person who generates only D011 silver fixer solution as described in 310 CMR 30.271(1)(c), or
 - 2. a Massachusetts facility that has a facility license pursuant to 310 CMR 30.800, or
 - 3. a Massachusetts facility that has a Class B(4) permit pursuant to 310 CMR 30.277, or
 - 4. a facility outside of Massachusetts that either is designated a facility by the EPA pursuant to 40 CFR Part 266 Subpart F, or that has an equivalent State designation or authorization, or
 - 5. a transporter who is either described in 310 CMR 30.403(2), (3), or (4), or who has a Class B(4) permit issued pursuant to 310 CMR 30.275, and
- (c) notify the EPA and the Department pursuant to 310 CMR 30.060 through 30.064, and
- (d) obtain and maintain in effect a certification or other written statement by and from the Massachusetts Department of Public Utilities that the transporter is in compliance with M.G.L. c. 159B, and
- (e) comply with the requirements set forth in 310 CMR 30.404 through 30.406, 30.408 through 30.409, 30.413, and 30.415, and
- (f) have at all times on all vehicles used for the transport of Class B(4) regulated recyclable materials, while such materials are in the vehicles, all markings, including placards, required by statute or regulation applicable to such materials, and
- (g) obtain and maintain in effect at all times evidence of financial responsibility acceptable to the Department, and
- (h) have at all times in the cab of all vehicles used for transport of Class B(4) regulated recyclable materials, while such materials are in the vehicles information, in a form satisfactory to the Department, identifying the owner and operator of each vehicle.

30.275: Transporter Permits and Permit Applications

- (1) Any person wishing to transport Class B(4) regulated recyclable material in compliance with a Class B(4) permit shall apply to the Department for a Class B(4) permit to do so. The application shall be on a form acceptable to the Department. In addition to what is set forth in 310 CMR 30.204, the application shall include a complete description of how the applicant intends to comply with the requirements set forth or referred to in 310 CMR 30.270, including, without limitation, a complete description showing how the applicant proposes to meet the requirements set forth in 310 CMR 30.274(6)(f), (g), and (h).
- (2) Conditions imposed pursuant to 310 CMR 30.202(2), the general conditions set forth in 310 CMR 30.205 and 30.206, and the standards set forth in 310 CMR 30.271 and 30.274 shall apply to each Class B(4) permit issued to transporters, regardless of whether or not such conditions are written into the permit. Permittees shall comply with such conditions whether or not they are written into the permit. Failure to comply shall be grounds for an enforcement action, including, without limitation, permit suspension or revocation.

30.276: Recycling and Transfer Station Standards

- (1) The provisions of 310 CMR 30.276 and 30.277 shall apply to any person who intends to or does:
 - (a) recycle Class B(4) regulated recyclable material, including but not limited to any generator who intends to or does recycle Class B(4) regulated recyclable material at the site of generation, or
 - (b) receive and store Class B(4) regulated recyclable material not generated at the site of storage.
- (2) Any person who intends to or does engage in any activity described in 310 CMR 30.276(1) shall at all times manage Class B(4) regulated recyclable material.

30.276: continued

- (a) as hazardous waste in full compliance with 310 CMR 30.500, 30.600, 30.700, 30.800, and 30.900, and all other applicable provisions of 310 CMR 30.000, or
 - (b) in full compliance with a Class B(4) recycling permit issued by the Department.
- (3) If a person described in 310 CMR 30.276(1) has a Class B(4) permit issued pursuant to 310 CMR 30.277, and does not have a license issued pursuant to 310 CMR 30.500, 30.600, 30.700, and 30.800, that person shall:
- (a) comply with the requirements set forth in 310 CMR 30.512(1), and
 - (b) have the capability of quickly obtaining the results of a timely analysis of incoming materials to assess their hazardous characteristics and the quantity of recoverable precious metals they contain, and
 - (c) comply with the requirements set forth in 310 CMR 30.514(1) and
 - (d) comply with the requirements set forth in 310 CMR 30.515(1)(a) and (b), and
 - (e) have and properly carry out a program of instruction or on-the-job training for employees who deal with hazardous regulated recyclable materials and wastes that teaches those employees to perform their duties in a way that ensures compliance with 310 CMR 30.000 and the conditions of the permit, and in a way that does not constitute or result in a significant potential or actual hazard to public health, safety, or welfare, or the environment, and
 - (f) have, and properly carry out if and when necessary, a plan for emergencies and contingencies that prevents and minimizes hazards to public health, safety, and welfare, and the environment, from fires explosions, spills, or any other unplanned sudden or non-sudden release of hazardous constituents into air, soil, or surface or ground water, and
 - (g) comply with the requirements set forth in 310 CMR 30.530 through 30.534, and
 - (h) comply with the requirements set forth in 310 CMR 30.560.
- (4) If the person recycling or receiving the Class B(4) regulated recyclable material receives from off the site of generation, or otherwise comes to possess, any Class A, Class B(1), Class B(2), Class B(3), Class B(5), or Class C regulated recyclable material, or any other material that is regulated pursuant to 310 CMR 30.000, which that person is not authorized to receive or otherwise possess, that person shall immediately so notify the Department and shall manage such material as hazardous waste in compliance with all applicable provisions of 310 CMR 30.000.

30.277: Recycling and Transfer Station Permits and Permit Applications

- (1) Any person wishing to engage in any activity described in 310 CMR 30.276(1) in compliance with a Class B(4) permit, including but not limited to any generator wishing to recycle Class B(4) regulated recyclable material at the site of generation, shall apply to the Department for a Class B(4) permit to do so. The application shall be on a form acceptable to the Department. In addition to what is set forth in 310 CMR 30.204, the application shall include a complete description of how the applicant intends to comply with the requirements set forth or referred to in 310 CMR 30.270, including, without limitation, a complete description showing how the applicant proposes to meet the requirements set forth in 310 CMR 30.276.
- (2) Conditions imposed pursuant to 310 CMR 30.202(2), the general conditions set forth in 310 CMR 30.205 and 30.206, and the standards set forth in 310 CMR 30.270 shall apply to each Class B(4) permit issued to persons who engage in any activity described in 310 CMR 30.276(1), regardless of whether or not such conditions are written into the permit. Permittees shall comply with such conditions whether or not they are written into the permit. Failure to comply shall be grounds for an enforcement action, including, without limitation, permit suspension or revocation.

30.280: Requirements for Recycling Class B(5) Regulated Recyclable Materials

- (1) Persons who own or operate facilities which receive Class B(5) regulated recyclable materials from offsite for the storage of spent lead-acid batteries and subsequently recycles them onsite for lead value shall maintain such facilities in compliance with all applicable provisions of 310 CMR 30.500, 30.600, 30.700, 30.800 and 30.900, and all other applicable provisions of 310 CMR 30.000.

30.280: continued

- (2) Except as otherwise provided in 30.280, the provisions of 310 CMR 30.000 shall not apply to the generation, accumulation, storage, collection, and transport of spent lead-acid batteries if:
 - (a) said batteries are not, and are not intended to be, reclaimed for their lead content onsite, and
 - (b) the electrolyte is safely contained within said batteries.
- (3) Open or leaking lead-acid batteries, and electrolyte removed from lead-acid batteries, shall not be handled as regulated recyclable material and shall be handled as hazardous waste in compliance with all applicable provisions of 310 CMR 30.000.
- (4) Any person who intends to or does recycle Class B(5) regulated recyclable material, and who does not intend to and does not store such material before recycling it, shall at all times manage Class B(5) regulated recyclable material in full compliance with a Class C recycling permit issued by the Department pursuant to 310 CMR 30.296.

30.290: Requirements for Recycling Class C Regulated Recyclable Materials

310 CMR 30.290 through 30.299, cited collectively as 310 CMR 30.290, set forth standards for the handling of Class C regulated recyclable materials, describe procedures for obtaining a permit to recycle Class C regulated recyclable materials, and set forth the basic and optional conditions that may be imposed in such permits.

30.291: General Provisions

- (1) No person shall recycle any Class C regulated recyclable material, or engage in any other activity involving Class C regulated recyclable material if a Class C permit is required for that activity, unless either:
 - (a) that person has applied for and obtained a Class C permit, said permit is in effect when the recycling or other activity is being done, and said permit authorizes the recycling or other activity being done, or
 - (b) the Class C regulated recyclable material is recycled or otherwise handled in compliance with all provisions of 310 CMR 30.000 other than 310 CMR 30.200.
- (2) If a person described in 310 CMR 30.291(1) has a Class C permit issued pursuant to 310 CMR 30.290, and does not have a license issued pursuant to 310 CMR 30.500, 30.600, 30.700, and 30.800, that person shall:
 - (a) not recycle any Class A, Class B(1), Class B(2), Class B(3), Class B(4), or Class B(5) regulated recyclable material, or any other material that is regulated pursuant to 310 CMR 30.000, unless that person also has whatever license or permit is required by 310 CMR 30.000 for such activity, and
 - (b) not receive from off the site of generation, or contract to receive from off the site of generation, any Class A, Class B(1), Class B(2), Class B(3), Class B(4), or Class B(5) regulated recyclable material, or any other material that is regulated pursuant to 310 CMR 30.000, unless that person also has whatever license or permit is required by 310 CMR 30.000 for such activity, and
 - (c) notify the EPA and the Department pursuant to 310 CMR 30.060 through 30.064.
- (3) Unless otherwise specified in 310 CMR 30.290, Class C regulated recyclable materials shall not be handled as recyclable material and shall be handled as hazardous waste in compliance with all applicable provisions of 310 CMR 30.000.

30.292: Generator Standards for Class C Regulated Recyclable Materials

Generators of Class C regulated recyclable material shall at all times manage such material in full compliance with 310 CMR 30.300 and all other applicable provisions of 310 CMR 30.000.

30.293: Transporter Standards for Class C Regulated Recyclable Materials

Transporters of Class C regulated recyclable material shall at all times manage such material in full compliance with 310 CMR 30.400 and all other applicable provisions of 310 CMR 30.000.

30.294: Standards for Those Who Store Class C Regulated Recyclable Materials before Those Materials Are Recycled

(1) The provisions of 310 CMR 30.294 shall apply to any person who intends to or does

- (a) recycle Class C regulated recyclable material not generated at the site of recycling, and receive and store such material at the site of recycling before recycling it, or
- (b) receive and store Class C regulated recyclable material not generated at the site of storage.

(2) Any person who intends to or does engage in any activity described in 310 CMR 30.294(1) shall at all times manage Class C regulated recyclable material as hazardous waste in full compliance with 310 CMR 30.001 through 30.064, 30.100, 30.500, 30.600, 30.700, 30.800, and 30.900.

30.295: Standards for Those Who Recycle Class C Regulated Recyclable Materials without Prior Storage

(1) Any person who intends to or does recycle Class C regulated recyclable material not generated at the site of recycling, and who intends to or does receive that material from off the site of generation directly into the recycling process so that there is no storage of that material at the site of recycling before that material is recycled, shall at all times manage all such materials in the recycling process, and all such materials received from off the site of generation, in compliance with either:

- (a) a hazardous waste license issued pursuant to 310 CMR 30.800, and all provisions of 310 CMR 30.000 other than 310 CMR 30.200, or
- (b) a Class C permit issued pursuant to 310 CMR 30.296.

(2) Any person who intends to or does recycle Class C regulated recyclable material not generated at the site of recycling, and who intends to or does receive that material from off the site of generation directly into the recycling process so that there is no storage of that material at the site of recycling before that material is recycled, all in compliance with a Class C permit issued pursuant to 310 CMR 30.296, shall at all times

- (a) be in compliance with requirements set forth in 310 CMR 30.001 through 30.064 and 30.100; and
- (b) be in compliance with requirements set forth in 310 CMR 30.502, 30.511 through 30.516, 30.521 through 30.524, 30.530 through 30.534, 30.540 through 30.544, 30.560, 30.561, and 30.580 through 30.586; and
- (c) be in compliance with requirements set forth in 310 CMR 30.602, 30.605, 30.660 through 30.675, and 30.680 through 30.698, provided that no Class C regulated recyclable material shall be placed into any waste pile or surface impoundment; and
- (d) be in compliance with requirements set forth in 310 CMR 30.700 with regard to new facilities or modifications of existing facilities; and
- (e) obtain and maintain in effect evidence of financial responsibility acceptable to the Department.

30.296: Recycling Permits and Permit Applications for Those Who Recycle Class C Regulated Recyclable Materials without Prior Storage

(1) Any person wishing to recycle Class C regulated recyclable material not generated at the site of recycling, and who intends to receive that material from off the site of generation directly into the recycling process so that there is no storage of that material at the site of recycling before that material is recycled, all in compliance with a Class C permit, shall apply to the Department for a Class C permit to do so. The application shall be on a form acceptable to the Department. In addition to what is set forth in 310 CMR 30.204, the application shall include:

30.296: continued

- (a) a complete description of how the applicant intends to comply with the requirements set forth or referred to in 310 CMR 30.295(2), including, without limitation, a complete description showing how the applicant proposes to meet the requirements set forth in 310 CMR 30.295(2)(e); and
- (b) a complete description of how the applicant intends to receive the Class C regulated recyclable material from off the site of generation directly into the recycling process so that there will be no storage of that material at the site of recycling before that material is recycled; and
- (c) the information required by 310 CMR 30.803 and 30.804(1) through (5), (24) and (25).

(2) Conditions imposed pursuant to 310 CMR 30.202(2), the general conditions set forth in 310 CMR 30.205 and 310 CMR 30.206, the standards set forth in 310 CMR 30.295(2), and the provisions set forth in 310 CMR 30.810 through 30.829 and 30.850 through 30.890 shall apply to each Class C permit issued to persons who engage in any activity described in 310 CMR 30.296(1), regardless of whether or not such conditions are written into the permit. Permittees shall comply with such conditions whether or not they are written into the permit. Failure to comply shall be grounds for an enforcement action, including, without limitation, permit suspension or revocation.

(3) A permit issued pursuant to 310 CMR 30.296 shall be issued in compliance with the following public notice and public comment requirements.

- (a) Public Notice. The Department shall cause public notice to be given when:
 - 1. a Class C recycling permit application has been tentatively denied;
 - 2. a draft Class C recycling permit has been prepared;
 - 3. a public hearing on a draft Class C recycling permit has been scheduled. Public notice in this case shall be given at least 21 days prior to the hearing date.
- (b) Notice of More Than One Permit. Public notices may describe more than one permit or permit action.
- (c) Comment Period. Public notices issued pursuant to 310 CMR 30.296(3)(a) shall allow at least 30 days for public comment, except for notices pursuant to 310 CMR 30.296(3)(a)3.
- (d) Method of Notice. Public notice shall be given by the following methods:
 - 1. By mailing notice to:
 - a. the applicant;
 - b. the board of health of the city or town in which the facility is to be located or the permitted activity is proposed;
 - c. abutters of the facility site.
 - 2. By publication, paid for by the applicant, in a daily or weekly newspaper of general circulation in the locality affected by the facility.
- (e) Content of Notice. All public notices shall, at a minimum, contain the following information:
 - 1. a description of the proposed facility including the type of facility, location and hours of operation;
 - 2. the identity and mailing address of the applicant;
 - 3. the public location where the draft Class C recycling permit can be inspected; and
 - 4. either the time period for written comments on the draft Class C recycling permit and the address to which comments should be mailed, or the public hearing information set forth at 310 CMR 30.296(3)(f);
- (f) Comment Period.
 - 1. Written Comments. During the public comment period provided for in 310 CMR 30.296(3)(c) any interested person may submit written comments on the draft decision to the office of the Department processing the permit request.
 - 2. Extending or Reopening the Public Comment Period. The Department may extend or reopen the public comment period prescribed in 310 CMR 30.296(3)(c) to allow for the issuance of a modified draft permit or to give interested persons an opportunity to comment on the information or arguments submitted. If the Department gives such an extension, notice thereof shall be given in the manner prescribed in 310 CMR 30.296(3)(a) through (e). Such notice shall specify any new issues to be considered.

30.296: continued

(g) Public Hearing.

1. Circumstances Requiring Hearing. The Department shall schedule a public hearing within the community wherein the proposed facility is to be located when:
 - a. the applicant requests a public hearing;
 - b. the Commissioner determines that there is sufficient public interest in unresolved issues of concern;
 - c. the Department prepares a modified draft permit with substantial revisions from the original draft permit issued pursuant to 310 CMR 30.296(3)(h) as a result of comments received pursuant to 310 CMR 30.296(3)(f). Copies of the revised draft permit shall be distributed to the applicant, local board of health and, upon written request, to any other person.
2. Content of Public Hearing Notice. Public notice of the public hearing shall be given in the manner described in 310 CMR 30.296(3) and shall include:
 - a. the date, time, and place of the public hearing; and
 - b. the nature and purpose of the public hearing.
3. Public Hearing Procedures.
 - a. The Department shall designate a representative to conduct the public hearing who shall have the authority to ensure an orderly presentation of issues, comments, data, and arguments, and to ensure an adequate and comprehensible record of the proceedings.
 - b. Conduct of Hearings. Hearings shall be as informal as may be reasonable and appropriate under the circumstances. The Department shall ensure that the conduct of persons at the hearing will at all times be orderly.
 - c. Withdrawal of Request for Hearing. The applicant or any other person who requested a hearing may withdraw the request, or may elect to submit any comments or documents without a hearing, by filing with the Department a written withdrawal. If notice of a hearing has already been published pursuant to 310 CMR 30.296(3)(a) through (e), such withdrawal must be filed at least ten days prior to the scheduled hearing, and notice of the withdrawal provided in the same manner specified in 310 CMR 30.296(3)(a) through (e).

(h) Issuance of a Draft Permit.

1. The Department shall prepare either a draft Class C recycling permit or draft denial. A draft Class C recycling permit shall include all appropriate conditions, standards, and requirements necessary to establish a new facility or to conduct approved activities at an existing facility.
2. If the Department decides to deny the facility a Class C recycling permit, it shall issue a draft denial.
3. Each draft Class C recycling permit or denial shall be accompanied by a fact sheet briefly describing:
 - a. the facility or activity which is the subject of the Class C recycling permit;
 - b. the type and quantity of wastes which are to be handled;
 - c. the reasons for the terms and conditions set forth therein; and
 - d. the reasons why requested variances or alternatives to required standards are or are not approved.

(i) Issuance of the Final Permit Decision.

1. Issuance and Public Notice. After the close of the public comment period, or, if applicable, the close of the public hearing, whichever is later, the Department shall issue a final decision on the permit application. Notice of the Department's final decision and summary response to comments shall be given to the applicant by first class mail. Notice shall also be provided to the board of health and each person who has requested notice of the final permit decision.
2. Effective Date. A final license determination shall become effective 21 days after the date of the notice of determination given pursuant to 310 CMR 30.296(3)(i), unless a request for adjudicatory hearing is made pursuant to M.G.L. c. 21C, M.G.L. c.30A and 310 CMR 1.00.
3. Summary Response to Comments. At the time the permit decision is issued, the Department shall prepare a summary of the major comments on the draft permit or denial and a response and shall describe any major changes made to the draft permit or denial as a result of the public hearing.

30.296: continued

4. Legal Challenges. Pursuant to M.G.L. c. 21C, § 11, any person aggrieved by a determination by the Department to issue, deny, modify, revoke, or suspend any license or approval, or to issue an order, may request an adjudicatory hearing before the Department pursuant to the provisions of M.G.L. c. 30A. For the purposes of 310 CMR 30.000, an "aggrieved person" shall be deemed to be any person who is or may become a "party" or "intervenor" pursuant to 310 CMR 1.00. A person aggrieved by a final decision in any adjudicatory proceeding may obtain judicial review thereof pursuant to the provisions of M.G.L. c. 30A.

30.297: Standards for Those Who Recycle Class C Regulated Recyclable Materials at the Site of Generation

- (1) Any person who intends to or does recycle Class C regulated recyclable material generated only at the site of recycling shall at all times manage all such material in compliance with either
 - (a) a hazardous waste license issued pursuant to 310 CMR 30.800, and all provisions of 310 CMR 30.000 other than 310 CMR 30.200, or
 - (b) a Class C permit issued pursuant to 310 CMR 30.298.
- (2) Any person who intends to or does recycle Class C regulated recyclable material generated only at the site of recycling in compliance with a Class C permit issued pursuant to 310 CMR 30.298 shall at all times
 - (a) be in compliance with requirements set forth in 310 CMR 30.001 through 30.064 and 30.100; and
 - (b) be in compliance with requirements set forth in 310 CMR 30.300, provided that requirements set forth in 310 CMR 30.500 through 30.900 shall not apply by virtue of any usage of the Class C regulated recyclable material; and
 - (c) be in compliance with requirements set forth in 310 CMR 30.602, 30.605, and 30.680 through 30.699, provided that no Class C regulated recyclable material shall be placed into any waste pile or surface impoundment.

30.298: Recycling Permits and Permit Applications for Those Who Recycle Class C Regulated Recyclable Materials at the Site of Generation

- (1) Any person wishing to recycle Class C regulated recyclable material generated only at the site of recycling in compliance with a Class C permit shall apply to the Department for a Class C permit to do so. The application shall be on a form acceptable to the Department. In addition to what is set forth in 310 CMR 30.204, the application shall include:
 - (a) a complete description of how the applicant intends to comply with the requirements set forth or referred to in 310 CMR 30.297(2); and
 - (b) a complete description of the recycling process and an explanation of why the recycling system cannot be, and should not be required to be, designed to be a completely enclosed system qualifying for a Class A recycling permit.
- (2) Conditions imposed pursuant to 310 CMR 30.202(2), the general conditions set forth in 310 CMR 30.205 and 30.206, and the standards set forth in 310 CMR 30.297(2) shall apply to each Class C permit issued to persons who engage in any activity described in 310 CMR 30.298(1), regardless of whether or not such conditions are written into the permit. Permittees shall comply with such conditions whether or not they are written into the permit. Failure to comply shall be grounds for an enforcement action, including, without limitation, permit suspension or revocation.

30.300: REQUIREMENTS FOR GENERATORS OF HAZARDOUS WASTES

30.301: Purpose, Scope, and Applicability

- (1) 310 CMR 30.301 through 30.399, cited collectively as 310 CMR 30.300, prescribe standards for generators of hazardous waste.
- (2) Any person who imports hazardous waste into Massachusetts from outside the United States shall comply with the standards applicable to generators prescribed in 310 CMR 30.300.

30.301: continued

(3) A person who generates a hazardous waste, as identified or otherwise described in 310 CMR 30.100, is subject to the compliance requirements and penalties prescribed in M.G.L. c. 21C, § 10 if that person does not comply with 310 CMR 30.000. Such noncompliance may also subject a person who generates a hazardous waste to the federal penalties prescribed in § 3008 of RCRA.

(4) An owner or operator of a facility who initiates a shipment of hazardous waste from a facility shall comply with the generator requirements prescribed in 310 CMR 30.300.

(5) Any laboratory, as defined in 310 CMR 30.010, that generates unwanted material (as defined in 310 CMR 30.010), some of which will be hazardous wastes, and that complies with all of the requirements of 310 CMR 30.354, is not subject to the following generator provisions with respect to unwanted material:

(a) 310 CMR 30.302 - Hazardous Waste Determination; and

(b) 310 CMR 30.340(6) or 310 CMR 30.351(4), or 310 CMR 30.353(6)(i), as applicable - Satellite Accumulation for Large Quantity Generators, Small Quantity Generators or Very Small Quantity Generators.

30.302: Determination of Whether a Waste is Hazardous

Any person who generates a waste shall determine if that waste is a hazardous waste, as identified or otherwise described in 310 CMR 30.100, as follows:

(1) First, determine whether the waste is excluded from 310 CMR 30.104.

(2) Next, determine if the waste is listed as a hazardous waste in 310 CMR 30.130 through 30.136.

(3) For purposes of compliance with the land disposal restrictions set forth in 310 CMR 30.750 or if the waste is not listed as a hazardous waste in 310 CMR 30.130 through 30.136, determine whether the waste is hazardous waste pursuant to 310 CMR 30.120 through 30.125 by doing either of the following:

(a) Testing the waste according to the methods set forth in 310 CMR 30.151 through 30.157 or according to an equivalent method.

(b) Applying knowledge of the hazardous characteristics of the waste in light of the materials or the process used.

(4) Except as provided by 310 CMR 30.302(5), if a generator determines that a waste exhibits one or more characteristics, that generator shall further determine whether there are any underlying hazardous constituents of the waste that are specified in 40 CFR 268.48, Table UTS, as incorporated by reference at 310 CMR 30.750.

(5) A generator need not determine the underlying hazardous constituents of a waste if:

(a) the waste is hazardous solely because it is a D001 nonwastewater; and

(b) it is treated by CMBST, RORGS, OR POLYM (*See* 40 CFR 268.42: *Table 1*, as incorporated by reference at 310 CMR 30.750(1)).

30.303: Requirements Governing Notification, Identification Numbers, and Change of Status Requests

- (1) A generator shall not treat, store, use, dispose of, transport, or offer for transportation, hazardous waste without having received either an EPA identification number from the Department in compliance with 310 CMR 30.060 through 30.064 or a Massachusetts identification number from the Department in compliance with 310 CMR 30.353(5).
- (2) A generator who has not received an identification number may obtain one by applying to the Department on a form prescribed by the Department as follows:
 - (a) a Small Quantity Generator of waste having only Massachusetts hazardous waste numbers and a Very Small Quantity Generator shall register with the Department pursuant to 310 CMR 30.353(5); and
 - (b) all other generators shall notify the Department pursuant to 310 CMR 30.060 through 30.064.
- (3) The following generators shall promptly submit to the Department, in writing, a change of status notification:
 - (a) A Small Quantity Generator pursuant to 310 CMR 30.351 who becomes a Large Quantity Generator subject to 310 CMR 30.340.
 - (b) A Very Small Quantity Generator pursuant to 310 CMR 30.353 who becomes a Small Quantity Generator pursuant to 310 CMR 30.351 or a Large Quantity Generator subject to 310 CMR 30.340.
- (4) Each change of status notification submitted pursuant to 310 CMR 30.303(3) shall be signed and submitted in compliance with 310 CMR 30.006 and 30.009. If the Department prescribes a form for such a notification, the generator submitting the notification shall use such form when making the notification. Such a notification shall specify that the generator's new status is a Small Quantity Generator, or a Large Quantity Generator, whichever is the case. The generator shall not thereafter change status except as provided in 310 CMR 30.303 and all other applicable requirements.
- (5) A Large Quantity Generator subject to 310 CMR 30.340 who ceases to be a Large Quantity Generator and instead becomes a Small Quantity Generator pursuant to 310 CMR 30.351 may submit to the Department, in writing, a change of status request.
- (6) No change of status described in 310 CMR 30.303(5) shall take effect unless and until a change of status request is submitted to the Department in compliance with 310 CMR 30.303. A request submitted in compliance with 310 CMR 30.303 shall include a certification by the generator that the generator is in compliance with 310 CMR 30.351. Such a request and certification shall be signed and submitted in compliance with 310 CMR 30.006 and 30.009. If the Department prescribes a form for such a request and certification, the generator shall use such form when making the request and certification. The generator shall follow such procedures as may be required, requested, or authorized by the Department to change its status to Small Quantity Generator.
- (7) A Large Quantity Generator subject to 310 CMR 30.340 or a Small Quantity Generator subject to 310 CMR 30.351 who becomes a Very Small Quantity Generator pursuant to 310 CMR 30.353 may submit to the Department, in writing, a change of status request.

30.303: continued

(8) No change of status described in 310 CMR 30.303(7) shall take effect unless and until a change of status request is submitted to the Department in compliance with 310 CMR 30.303 and a registration of Very Small Quantity Generator activity is submitted to the Department in compliance with 310 CMR 30.353(5). A request submitted in compliance with 310 CMR 30.303 shall include a certification by the generator that the generator is in compliance with 310 CMR 30.353. Such a request and certification shall be signed and submitted in compliance with 310 CMR 30.006 and 310 CMR 30.009. If the Department prescribes a form for such a request and certification, the generator shall use such form when making the request and certification. The generator shall follow such procedures as may be required, requested, or authorized by the Department to change his status to Very Small Quantity Generator.

(9) Any person who is a hazardous waste generator who ceases to be a generator at a particular site, and who wishes to cease having the status of a generator at that site, may submit to the Department, in writing, a change of status request. No such change of status shall take effect unless and until a change of status request is submitted to the Department in compliance with 310 CMR 30.303(9). Such a request shall include a certification that no hazardous waste or regulated recyclable material is being generated or accumulated at the site for which notification is required, and that the generator has complied with the closure requirements of 310 CMR 30.689. Such a request and certification shall be signed and submitted in compliance with 310 CMR 30.006 and 30.009. The generator shall use a form prescribed by the Department when making the request and certification. The generator shall follow such procedures as may be required, requested, or authorized by the Department to cease his status as a generator at that site. The generator shall not thereafter generate any hazardous waste or regulated recyclable material at that site except in compliance with 310 CMR 30.060 through 30.064 and all other applicable requirements. In addition, the generator shall not accumulate 5,000 kg or more total of universal waste at that site unless such universal wastes are managed in compliance with 310 CMR 30.1000.

30.304: Offering Hazardous Wastes for Transportation

(1) A generator shall not transfer custody or possession of hazardous waste to any person unless that person has at that time both an EPA identification number and a valid license from the Department for the transport of that hazardous waste.

(2) A generator shall not itself transport hazardous waste off the site of generation unless that generator has at that time a valid license from the Department to transport that hazardous waste.

(3) All vehicles used for transportation of hazardous waste shall have at that time a valid vehicle identification device issued by the Department and shall be in compliance with the requirement of 310 CMR 30.416.

30.305: Destination of Hazardous Waste or Regulated Recyclable Material Sent Off-site

A generator sending hazardous waste or regulated recyclable material off the site of generation shall send such waste or material only to the following facilities or persons:

(1) Except as specifically provided otherwise in 310 CMR 30.305(1)(d) or 30.353, hazardous waste shall be sent only to a facility having a valid EPA Identification Number for the treatment, storage, or disposal of those wastes.

(a) If in Massachusetts, the facility shall have at that time:

1. interim status or a valid license issued by the Department pursuant to M.G.L. c. 21C to receive such hazardous waste; or
2. interim status from EPA issued pursuant to 310 CMR 30.099, if required pursuant to § 3006(g) of RCRA; or
3. a valid permit from EPA, if required pursuant to § 3006(g) of RCRA, issued in compliance with 310 CMR 30.800; and
4. complied with 310 CMR 30.512; or

(b) If in a State other than Massachusetts, the facility shall have at that time:

1. interim status from EPA issued pursuant to 40 CFR Parts 270, or
2. a valid permit issued by EPA pursuant to 40 CFR Part 270, or

30.305: continued

3. interim status or a valid permit issued by a State authorized pursuant to 40 CFR Part 271, or
 - (c) If the facility is in a State other than Massachusetts and if the wastes are not hazardous waste in that State, the facility shall at that time have the authority to receive such waste.
 - (d) For facilities that reject waste in accordance with 310 CMR 30.533(6), the hazardous waste shall be sent as a return shipment, with the generator's permission, to the generator site designated on the manifest to receive the waste.
- (2) Regulated recyclable material shall be sent only to a facility or person authorized to receive that material in compliance with 310 CMR 30.200.
- (3) A person outside the United States, in accordance with the provisions of 310 CMR 30.361.
- (4) A facility having at that time a research, development, and/or demonstration permit issued by the EPA pursuant to § 3005(g) of RCRA.
 - (a) If the facility is located in Massachusetts, the facility shall also at that time be approved by the Department pursuant to 310 CMR 30.863, and the hazardous waste delivered to the facility shall be handled in full compliance with the applicable provisions of 310 CMR 30.000 prior to its delivery to the facility.
 - (b) If the facility is located outside of Massachusetts, the facility shall at that time be lawfully in existence pursuant to laws and regulations in effect in the place where the facility is located, and the hazardous waste delivered to the facility shall be handled in full compliance with the applicable provisions of 310 CMR 30.000 prior to its delivery to the facility.
- (5) Generators of hazardous wastes which contain PCBs in concentrations equal to or greater than 50 parts per million shall send such wastes only to facilities which meet all the requirements in 310 CMR 30.501(3)(a) through (c), or shall, with the approval of the Department, otherwise cause such hazardous wastes to be managed in compliance with the provisions of 40 CFR Part 761 and 310 CMR 30.750.

30.310: THE MANIFEST

310 CMR 30.311 through 30.317, cited collectively as 310 CMR 30.310, establish the general requirements for hazardous waste manifest forms 8700-22 and 8700-22A and requirements for manifest completion and distribution.

30.311: General Requirements

- (1) A generator who transports, or offers for transportation, hazardous waste for off-site treatment, storage, disposal or use, must prepare a manifest on EPA form 8700-22, and 8700-22A if necessary, and shall ensure that all required information has been provided in accordance with the Appendix to Part 262--Uniform Hazardous Waste Manifest and Instructions (EPA Forms 8700-22 and 8700-22A and their Instructions), as in effect on July 1, 2006, before the waste is transported off-site. Failure to complete any applicable portion of the manifest in compliance with 310 CMR 30.000 and the instructions on the manifest shall be a violation of M.G.L. c. 21C and of 310 CMR 30.000.
- (2) The generator shall designate on the manifest the primary transporter and all continuing transporters.
- (3) The generator shall designate on the manifest one facility to receive the hazardous waste described on the manifest. The designated facility shall meet the requirements of 310 CMR 30.305.
- (4) The generator may also designate on the manifest one alternate facility to receive the hazardous waste described on the manifest in the event an emergency prevents delivery of the waste to the primary designated facility. The alternate facility shall meet the requirements of 310 CMR 30.305.

30.311: continued

(5) If the transporter is unable to deliver the hazardous waste to the designated facility or the alternate facility, the generator shall either designate another facility, which shall meet the requirements of 310 CMR 30.305, or instruct the transporter to return the waste to the generator. In such a case, the generator shall keep a record of all communications with the transporter regarding what happened to any hazardous waste which has left the generator's custody or possession. The generator shall promptly submit this record to the Department.

30.312: Form of the Manifest

A generator shall use EPA form 8700-22, and form 8700-22A if necessary, in compliance with 310 CMR 30.311 through 30.315, as applicable, and 310 CMR 30.317.

30.313: Number and Distribution of Copies for Six-part Manifest (EPA form 8700-22)

The manifest shall consist of six copies, numbered from top to bottom as, respectively, Copy 1, Copy 2, Copy 3, Copy 4, Copy 5 and Copy 6. Except as provided at 310 CMR 30.314 and 30.315, these copies shall be signed, distributed, and retained as set forth in 310 CMR 30.313(1) through (6).

- (1) Copy 6 shall be: [(bottom copy): "Generator's initial copy".]
 - (a) signed by the generator and transporter, and then
 - (b) retained by the generator.
- (2) Copy 5 shall be: ["Transporter's copy".]
 - (a) signed by the generator and transporter, and by either the continuing transporter (if any) or by the facility owner or operator or his designee, and then
 - (b) retained by the first transporter. If the hazardous waste is transported by a continuing transporter, said continuing transporter shall:
 1. photocopy Copy 1 of the manifest after the facility owner or operator or his designee has signed it; and
 2. retain the photocopy.
- (3) Copy 4 shall be: ["Designated facility's copy".] signed by the generator, the transporter(s), and the facility owner or operator or his designee, and then retained by the facility.
- (4) Copy 3 shall: ["Designated facility to generator".]
 - (a) be signed by the generator, the transporter(s), and the facility owner or operator or his designee, and then transmitted by the facility to the generator within 30 days of the shipment being received by the designated facility; and
 - (b) for shipments by a generator to an out-of-state designated facility, the generator shall submit a photocopy of Copy 3 to the Department within 30 days of receiving the copy from the designated facility.
- (5) Copy 2 shall be: ["Designated facility to generator State".] signed by the generator, the transporter(s), and the facility owner or operator or his designee, and then transmitted by the facility to the Department, or otherwise the Agency of the generator state (if required by such Agency), within 30 days of the shipment being received by the designated facility.
- (6) Copy 1 shall be: [(top copy): "Designated facility to destination State (if required by such destination State)".] signed by the generator, the transporter(s), and the facility owner or operator or his designee, and then transmitted by the facility to the Department, if the facility is located in Massachusetts, within 30 days of the shipment being received by the designated facility.
- (7) For the purposes of complying with the requirements in 310 CMR 30.313(5) and (6) to submit a manifest copy to the Department, Massachusetts designated facilities receiving shipments of hazardous waste from in-state generators need only submit one manifest copy, either Copy 2 or Copy 1, to the Department.
- (8) If a generator sends hazardous waste to a designated facility in an authorized State which has not yet obtained authorization to regulate that particular waste as hazardous, the generator shall assure that:

30.313: continued

- (a) any out-of-state transporter signs and forwards the manifest to the designated facility; and
- (b) any such facility signs the manifest and forwards copy 3 of the manifest to the generator.

(9) For shipments of hazardous waste within the United States solely by water (bulk shipments only), the generator shall send three copies of the manifest, dated and signed in compliance with 310 CMR 30.311 through 30.314, to the owner or operator of the designated facility or the last water (bulk shipment) transporter to handle the waste in the United States if exported by water. Copies of the manifest are not required for each transporter.

(10) For rail shipments of hazardous waste within the United States which originate at the site of generation, the generator shall send at least three copies of the manifest, dated and signed in compliance with 310 CMR 30.311 through 30.313, to:

- (a) The next non-rail transporter, if any; or
- (b) The designated facility, if transported solely by rail; or
- (c) The last rail transporter to handle the waste in the United States if exported by rail.

30.314: Manifest Distribution Requirements for Waste Reclaimed Pursuant to a Contractual Agreement

(1) A generator operating in compliance with 310 CMR 30.300 that ships waste off-site for reclamation pursuant to a contractual agreement shall comply with 310 CMR 30.314 if such wastes are reclaimed and the material thus reclaimed is returned to the generator pursuant to a contractual agreement in which:

- (a) the type of waste and frequency of shipments are specified in the agreement; and
- (b) the vehicles used to transport the waste to the recycling facility and to deliver the reclaimed material back to the generator are owned and operated by the person who reclaims the waste.

(2) The manifest shall be signed, distributed, and retained as follows:

- (a) Copy 6 shall be
 - 1. signed by the generator and transporter, and then
 - 2. retained by the generator in compliance with 310 CMR 30.331(1)(b).
- (b) Copy 4 shall be
 - 1. signed by the generator and the facility owner or operator or his designee, and then
 - 2. retained by the facility.

(3) The Department may prescribe a form for recording the information required pursuant to 310 CMR 30.311. If the Department prescribes such a form, it shall be used by the generator to record such information.

(4) The generator shall retain a copy of all information required by 310 CMR 30.311 and the reclamation agreement in compliance with 310 CMR 30.331.

(5) The provisions of 310 CMR 30.311, 30.312 and 30.314 shall apply whenever a manifest for waste reclaimed pursuant to a contractual agreement is required, and whenever such a manifest is used even if not required.

30.315: Manifest Distribution Requirements for Intrastate Shipments of Waste Oil, Intrastate Shipments by Very Small Quantity Generators, Wastes Sent to Research Demonstration and Development Facilities, and Research Study Waste

(1) The manifest shall be signed, distributed and retained as set forth in 310 CMR 30.315(1)(a) through (d).

- (a) Copy 6 shall be:
 - 1. signed by the generator and transporter, and then
 - 2. retained by the generator in compliance with the applicable provisions of 310 CMR 30.331(1)(a) or (b).
- (b) Copy 5 shall be:
 - 1. signed by the generator and transporter, and by either the continuing transporter (if any) or by the facility owner or operator or his designee, and then

30.315: continued

2. retained by the transporter. If the hazardous waste is transported by a continuing transporter, said continuing transporter shall:
 - a. photocopy Copy 1 of the manifest after the facility owner or operator or his designee has signed it; and
 - b. retain the photocopy.
- (c) Copy 4 shall be:
 1. signed by the generator, the transporter(s), and the facility owner or operator or his designee, and then
 2. retained by the facility.
- (d) Copy 3 shall be:
 1. signed by the generator, the transporter(s), and the facility owner or operator or his designee, and then
 2. within 30 days of the date of the shipment is received by the facility, transmitted by the facility to the generator.
- (e) Either Copy 1 or Copy 2 shall be: signed by the generator, the transporter(s), and the facility owner or operator or his designee, and then transmitted by the facility to the Department within 30 days of the date the shipment is received by the designated facility.

30.316: Manifest Tracking Numbers, Manifest Printing and Obtaining Manifests

A registrant may not print, or have printed, the manifest for use or distribution unless it has received approval from the EPA Director of the Office of Solid Waste to do so pursuant to 40 CFR 262.21 which is hereby incorporated by reference.

30.317: Waste Minimization Certification

A generator who initiates a shipment of hazardous waste must certify to one of the waste minimization certification requirements at 40 CFR 262.27, which are hereby incorporated by reference.

30.320: PRE-TRANSPORT REQUIREMENTS

30.321: Packaging

Before transporting hazardous waste or offering hazardous waste for transportation off-site, the generator shall package the waste in compliance with applicable regulations of the DOT, 49 CFR Parts 173, 178, and 179.

30.322: Labelling

Before transporting or offering hazardous waste for transportation off-site, the generator shall label each package in compliance with the applicable regulations of the DOT, 49 CFR Part 172.

30.323: Marking

(1) Before transporting or offering hazardous waste for transportation off-site, the generator shall mark each package of hazardous waste in compliance with the applicable regulations of the DOT, 49 CFR Part 172.

(2) Before transporting hazardous waste or offering hazardous waste for transportation off-site, the generator shall mark each container of 119 gallons or less used in such transportation with the following words and information displayed in compliance with the requirements of 49 CFR § 172.304.

HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.

Generator's Name and Address _____

Generator's EPA ID Number _____

Manifest Tracking Number _____

30.324: Placarding

Before transporting hazardous waste or offering hazardous waste for transportation off-site, the generator shall placard, or offer the initial transporter the appropriate placards, in compliance with regulations of the DOT, 49 CFR Part 172, Subpart F.

30.330: Recordkeeping and Reporting

30.331: Recordkeeping

- (1) Retention of manifest documents.
 - (a) Whenever required or whenever used even if not required, the following manifests shall be kept by the generator for three years from the date the waste was accepted by the initial transporter: Copy 6 of the form referenced in 310 CMR 30.312; however, once a fully executed copy 3 is received by the generator, then this copy shall be kept on file instead of or in addition to the partially executed copy 6.
 - (b) Whenever required or whenever used even if not required, the following manifests shall be kept by the generator for three years after the termination or expiration of the applicable agreement:
 1. Copy 3 of the form referenced in 310 CMR 30.315.
 2. Copy 6 of the form referenced in 310 CMR 30.314.
- (2) Agreements.
 - (a) A generator that reclaims wastes pursuant to a contractual agreement and uses a form pursuant to 310 CMR 30.314 shall retain a copy of the reclamation agreement referenced therein for three years after its termination or expiration.
 - (b) A generator that sends research study samples to a research facility pursuant to a contractual agreement and uses a manifest pursuant to 310 CMR 30.315 shall retain a copy of the agreement referenced therein for three years after its termination or expiration.
- (3) A generator shall keep a copy of all reports required pursuant to 310 CMR 30.332 or 310 CMR 30.333 as follows:
 - (a) Each Biennial Report shall be kept for a period of at least three years from the due date of the report.
 - (b) Each Exception Report shall be kept for a period of at least three years from the due date of the report.
- (4) A generator shall keep records of any test results, waste analyses, or other determinations made in compliance with 310 CMR 30.302 for at least three years from the date that the hazardous waste was last sent to treatment, use, storage, disposal, at or off the site of generation.

30.332: Biennial Reporting

- (1) A Large Quantity Generator, as described in 310 CMR 30.340(1), who transports or offers for transportation any hazardous waste off the site of generation shall prepare and submit a copy of a Biennial Report to the Commissioner by March 1st of each even-numbered year. The Biennial Report shall be submitted in compliance with 310 CMR 30.006 on EPA Form 8700-13A. The report shall cover activities during the previous calendar year and shall include at least the following information:
 - (a) The EPA identification number, name and address of the generator;
 - (b) The calendar year covered by the report;
 - (c) The EPA identification number, name and address of each off-site facility in the United States to which hazardous waste was sent during the year;
 - (d) The name and EPA identification number of the transporters used during the reporting year for shipments to an off-site facility within the United States;
 - (e) A description, EPA hazardous waste number, DOT hazard class, and the quantity of each hazardous waste sent to an off-site facility within the United States. This information shall be listed by the EPA identification number of each such off-site facility to which waste was sent.
 - (f) A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated.

30.332: continued

(g) A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years going back to 1984. This comparison shall also be made to years prior to 1984 to the extent such information is available for years prior to 1984.

(h) The information described in 310 CMR 30.104(3)(b)2.g.(iii) and 310 CMR 30.104(3)(d)2.f.(iii) on the waste involved in any treatability or research studies.

(i) The certification signed by the generator or authorized representative in compliance with 310 CMR 30.009.

(2) Any Large Quantity Generator who treats, stores, or disposes of hazardous waste at the site of generation shall submit a Biennial Report covering those wastes in compliance with the provisions of 310 CMR 30.544.

(3) Reporting for exports of hazardous waste is not required on the Biennial Report form. A separate annual report requirement is set forth at 40 CFR 262.56, as adopted at 310 CMR 30.361.

(4) Reporting for waste managed in a wastewater treatment unit in compliance with 310 CMR 30.605 is not required on the Biennial Report form.

(5) Reporting for all Class A and state-only regulated Class B and Class C regulated recyclable materials, managed in compliance with 310 CMR 30.200, is not required on the Biennial Report form. Reporting for all federally regulated Class B and Class C regulated recyclable materials, managed in compliance with 310 CMR 30.200, is required on the Biennial Report form.

30.333: Exception Reporting

(1) If a generator does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 35 days of the date the hazardous waste was accepted by the initial transporter, the generator shall contact the transporter or the owner or operator of the designated facility, or both if necessary, to determine the status of the hazardous waste.

(2) If a generator does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 45 days of the date the hazardous waste was accepted by the initial transporter, the generator shall submit an Exception Report to the Department. If the designated facility is located outside of Massachusetts, the generator shall also submit an Exception Report to the State in which the designated facility is located. The Exception Report shall include the following:

(a) A legible copy of the manifest for which the generator does not have confirmation of delivery; and

(b) A cover letter signed by the generator or an authorized representative of the generator explaining the efforts taken to locate the hazardous waste and the results of those efforts.

30.334: Additional Reporting

(1) The Department may require generators to furnish additional reports concerning the quantities and disposition of wastes identified or otherwise described in 310 CMR 30.120 through 30.125 and 30.130 through 30.136.

(2) Duty to Provide Information. Any generator shall provide the Department, within a reasonable time, any information which the Department may request and which is deemed by the Department to be relevant in determining whether the generator is in compliance with 310 CMR 30.000 as applicable. All reports providing such requested information shall be signed and submitted to the Department in compliance with 310 CMR 30.006 and 310 CMR 30.009.

30.340: Large Quantity Generators

(1) A generator who is not a Small Quantity Generator pursuant to 310 CMR 30.351 or a Very Small Quantity Generator pursuant to 310 CMR 30.353 is a Large Quantity Generator.

30.340: continued

- (2) A Large Quantity Generator shall comply with the requirements set forth or referred to in 310 CMR 30.340 through 30.343, and with all other applicable requirements of 310 CMR 30.000, including the land disposal restrictions set forth in 310 CMR 30.750.
- (3) A Large Quantity Generator may manage its regulated recyclable materials in compliance with 310 CMR 30.200 and manage its universal wastes in compliance with 310 CMR 30.1000.
- (4) A Large Quantity Generator may accumulate hazardous waste at the site of generation for 90 days or less without a storage license from the Department and without obtaining interim status provided that the following requirements are complied with:
 - (a) The waste shall be accumulated in compliance with the general accumulation standards of 310 CMR 30.341.
 - (b) The waste shall be accumulated in containers or tanks or both.
 1. Waste placed in containers shall be managed in compliance with 310 CMR 30.342.
 2. Waste placed in tanks shall be managed in compliance with 310 CMR 30.343.
- (5) A Large Quantity Generator may accumulate wastewater treatment sludges from electroplating operations identified in 310 CMR 30.133 as EPA Hazardous Waste No. F006 at the site of generation for 180 days or less without a storage license and without obtaining interim status provided:
 - (a) The F006 waste is accumulated in containers or tanks or both.
 1. F006 waste placed in containers shall be managed in compliance with 310 CMR 30.342.
 2. F006 waste placed in tanks shall be managed in compliance with 310 CMR 30.343.
 - (b) The F006 waste is legitimately recycled off-site through metals recovery;
 - (c) The generator has implemented pollution prevention practices that reduce the amount of any hazardous substances, pollutants or contaminants entering the F006 waste or otherwise released to the environment prior to recycling;
 - (d) No more than 20,000 kg of F006 waste is accumulated on-site at any one time.
- (6) A generator may, for any length of time, without being licensed pursuant to 310 CMR 30.000 or having interim status, and without complying with 310 CMR 30.341 or 30.342 except as specified in 310 CMR 30.340(6), accumulate hazardous waste or waste oil in containers at or near each specific point of generation where wastes initially accumulate, provided that all of the following requirements are met:
 - (a) The wastes must be generated as a result of a process occurring at the specific point of generation where the wastes are initially accumulated.
 - (b) Each such specific point of generation where wastes initially accumulate, and each satellite accumulation container, shall be under the control of the key staff individual directly responsible for the process resulting in the generation of such wastes.
 - (c) For each specific point of generation, only one container per wastestream may be used at any one time. The maximum capacity of said container shall be as follows:
 1. 55 gallons if the hazardous waste or waste oil being accumulated is non-acutely hazardous waste identified or otherwise described in 310 CMR 30.120 through 30.135;
 - or
 2. one quart if the hazardous waste being accumulated is acutely hazardous waste listed or otherwise described in 310 CMR 30.136.
 - (d) Within three days of the time a generator fills a container or accumulates a quantity of hazardous waste or waste oil in excess of the applicable limit described in 310 CMR 30.340(6)(c), whichever comes first, the generator shall, with respect to that container and all the hazardous waste or waste oil accumulated therein, come into full compliance, and thereafter remain in full compliance, with 310 CMR 30.340 through 30.342. If a generator is subject to the preceding sentence, said generator shall, until it comes into full compliance with 310 CMR 30.340 through 30.342, continue to comply with 310 CMR 30.340(6).
 - (e) The generator shall at all times comply with the requirements set forth in 310 CMR 30.341(2)(a) through (c), as well as 30.342(1)(a) through (d)1. and (e)1., and 30.688(4).
- (7) A generator may operate a wastewater treatment unit in compliance with the requirements set forth or referred to in 310 CMR 30.605.

30.340: continued

(8) A large quantity generator may conduct elementary neutralization of corrosive hazardous wastes at the site of generation in an elementary neutralization unit in compliance with 310 CMR 30.1103, without a license to treat hazardous waste, but shall comply with all applicable provisions of 310 CMR 30.0000 while such waste remains hazardous.

(9) A generator who sends a shipment of hazardous waste to a designated facility with the understanding that the designated facility can accept and manage the waste and later receives that shipment back as a rejected load or residue in accordance with the manifest discrepancy provisions of 310 CMR 30.533 or 310 CMR 30.099(6)(a) may accumulate the returned waste on-site in accordance with paragraphs 310 CMR 30.341, 30.351 or 30.353, depending on the amount of hazardous waste on-site in that calendar month. Upon receipt of the returned shipment, the generator shall:

- (a) Sign Item 18c of the manifest, if the transporter returned the shipment using the original manifest; or
- (b) Sign Item 20 of the manifest, if the transporter returned the shipment using a new manifest.

30.341: General Accumulation Standards for Large Quantity Generators

(1) A generator shall comply with the following management standards for facilities:

(a) 310 CMR 30.516, requiring personnel training, subject to the following exceptions, additions, and modifications:

- 1. All references to “facility” shall be substituted with “site.”
- 2. The phrase “and the conditions of the facility’s license” in 310 CMR 30.516(1)(a) (first sentence) is eliminated.
- 3. All references to “owner and operator” shall be substituted with “generator”.
- 4. 310 CMR 30.516(1)(e) is replaced with the following: A current copy of the training plan and training records on current personnel shall be kept on-site and remain available for inspection by the Department at all times while the generator is subject to 310 CMR 30.000. Training records on former personnel shall be kept on-site and remain available for inspection by the Department for at least three years from the date such personnel last worked at the facility or until the generator is no longer subject to 310 CMR 30.000, whichever comes first.

(b) 310 CMR 30.521 governing the purpose, content and implementation of the contingency plan, subject to the following exceptions, additions and modifications:

- 1. All references to owner or operator shall be substituted with “generator”.
- 2. All references to “facility” shall be substituted with “site”.
- 3. 310 CMR 30.521(1)(first sentence) is eliminated and replaced with the following: Each generator shall have a contingency plan that addresses all on-site hazardous waste management units. The contingency plan shall be kept by the generator at an accessible on-site location at all times while the generator is subject to 310 CMR 30.000.
- 4. 310 CMR 30.521(6) is modified to read as follows: If any organization referred to in 310 CMR 30.521(5) refuses to enter into an arrangement listed therein, the generator shall document the refusal in the contingency plan.
- 5. 310 CMR 30.521(8) is modified to read as follows: The contingency plan shall list the names, addresses, and the office and home telephone numbers of all individuals qualified to act as emergency coordinator, and this list shall be kept up-to-date. If more than one individual is listed, one shall be named as primary emergency coordinator and others shall be listed in the order in which they will assume responsibility as alternates.
- 6. 310 CMR 30.521(10)(d) is revised to read as follows: Prevent flooding or comply with the floodproofing standard established pursuant to 310 CMR 30.341(1)(g).

(c) 310 CMR 30.522 governing the distribution of copies of the contingency plan is modified to read as follows: A copy of the contingency plan and all revisions to the plan shall be submitted to local police departments, local fire departments, hospitals, local boards of health, the chief executive officer of the community, state and local emergency response teams that may be called upon to provide emergency services. A copy of the contingency plan shall be kept on-site and be made available for inspection by the Department at all times while the generator is subject to 310 CMR 30.000.

30.341: continued

(d) 310 CMR 30.523 governing amendments of the contingency plan is modified to read as follows: The contingency plan shall be reviewed, and immediately amended, if necessary, whenever:

1. The plan fails in an emergency;
2. The list of emergency coordinators changes;
3. The list of emergency equipment changes;
4. There is any change in the operation or maintenance of any hazardous waste management unit; or
5. There occurs any other circumstance which indicates the need for a change in the contingency plan.

(e) 310 CMR 30.524 governing the standards for emergency prevention and response, subject to the following exceptions, additions, and modifications:

1. 310 CMR 30.524(1) is revised to read as follows: Design and Operation of Hazardous Waste Management Units. Hazardous waste management units shall be designed and operated to prevent, and constructed and maintained to minimize, the possibility of any threat to public health, safety, or welfare, or the environment from a fire, explosion, or any other unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, surface water, or ground water.
2. All references to “owner or operator” shall be substituted with “generator”.
3. All references to “facility” shall be substituted with “site”; “facilities” shall be substituted with “sites”.
4. 310 CMR 30.524(2) (first sentence) is revised to read as follows: All hazardous waste management units shall be equipped with at least the following, unless the generator determines and documents in its files that none of the hazards posed by waste handled at the site could require a particular kind of equipment specified in 310 CMR 30.341(1)(e)5.a. and b.:
5. 310 CMR 30.524(4) is revised as follows:
 - a. 310 CMR 30.524(4)(a) shall read as follows: Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, the generator shall ensure that all personnel involved in the operation always have immediate access to an internal alarm or emergency communications device, either directly or through visual or voice contact with another employee, unless such a device is not required pursuant to 310 CMR 30.524(2).
 - b. 310 CMR 30.524(4)(b) shall read as follows: If, at any time, only one employee is on the premises while hazardous waste management activities are taking place, the generator shall ensure that the employee always has immediate access to a device prescribed in 310 CMR 30.524(2)(b), unless such a device is not required pursuant to 310 CMR 30.524(2).
6. 310 CMR 30.524(5) is revised to read as follows: Required Aisle Space. The generator shall maintain sufficient aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area within the hazardous waste management unit in an emergency, unless the generator determines and documents in its files that aisle space is not needed for any of these purposes.
7. In lieu of 310 CMR 30.524(6), Emergency Procedures, a generator shall comply with the following:
 - a. Whenever there is an imminent or actual emergency, the emergency coordinator shall immediately:
 - (i) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel;
 - (ii) Notify the Bureau of Waste Prevention when there is an imminent or actual emergency which triggers the need to implement the contingency plan even if it does not result in a reportable release pursuant to 310 CMR 40.0000; and
 - (iii) Notify other appropriate State or local agencies with designated response roles if their help is needed.
 - b. Whenever there is a fire, explosion, spill or other release, the emergency coordinator shall:
 - (i) Immediately identify the character, exact source, amount, and extent of all released materials, and concurrently;

30.341: continued

- (ii) Assess possible hazards to public health, safety, or welfare, or the environment that may result from the fire, explosion, spill or other release. This assessment shall consider both direct and indirect effects of the fire, explosion, or other release, e.g. the effects of any hazardous surface water run-off from water or chemical agents used to control fire or heat-induced explosions.
- c. If the emergency coordinator determines that there has been a fire, explosion, spill or other release, which could threaten public health, safety, welfare, or the environment, the emergency coordinator shall:
 - (i) Immediately notify appropriate officials as identified in the contingency plan if the emergency coordinator's assessment indicates that evacuation of local areas may be advisable. The coordinator shall be available to help appropriate officials decide whether local areas should be evacuated;
 - (ii) Call the Bureau of Waste Site Clean-up at the Department's Regional Office serving the location where the release or threat of release occurred when required by and within the time frames established pursuant to 310 CMR 40.0311 through 40.0317. To report a release after normal business hours, dial (617) 556-1133, (888) 304-1133 (or such other telephone number as may be designated by the Department) or follow any instructions provided on the answering message for the Regional Office; and
 - (iii) Immediately notify the National Response Center using its 24-hour toll free telephone number 800-424-8802. The generator shall provide the information required pursuant to 310 CMR 30.351(9)(i)2.a. through g.
- d. During an emergency, the emergency coordinator shall take all reasonable measures necessary to ensure that fires, explosions, runoff, and other releases do not occur, recur, or spread off the site or to other hazardous waste at the facility. These measures shall include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.
- e. If the facility stops operations in response to a potential or actual fire, explosion, or other release,
 - (i) The emergency coordinator shall monitor for leaks, pressure buildup, gas generation, and ruptures in valves, pipes, or other equipment, wherever this is appropriate.
 - (ii) The emergency coordinator shall, immediately after an emergency, provide for the treatment, storage, or disposal of recovered waste, contaminated soil or surface water, or any other material that results from a fire, explosion, or other release at the facility. Unless the owner or operator can demonstrate pursuant to 310 CMR 30.100 that the recovered material is not hazardous waste, the owner or operator also becomes a generator of hazardous waste and shall manage it in compliance with all applicable requirements of 310 CMR 30.000.
 - (iii) The emergency coordinator shall ensure that, in the affected area(s) of the site:
 - (A) no waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
 - (B) all emergency equipment and systems listed in the contingency plan are cleaned, recharged, reactivated, and fit for their intended use before facility operations are resumed.
 - (iv) Operations shall not be resumed at the site until the generator notifies the Department that the site is in compliance with 310 CMR 30.341(1)(e)7.e.(iii).
- f. The generator shall note the time, date, and details of any incident that requires implementing the contingency plan. This record shall be kept by the generator at a readily accessible on-site location at all times while the generator is subject to 310 CMR 30.000. If the incident resulted in a release to the environment requiring notification pursuant to 310 CMR 40.0000, notification to the Bureau of Waste Site Clean-up in compliance with 310 CMR 40.000 shall constitute notice to the Department. If the incident did not require notification pursuant to 310 CMR 40.0000, then the generator shall provide a written report within seven days to the Bureau of Waste Prevention at the Regional Office of the Department where the incident occurred which includes:
 - (i) Name, address, and telephone number of the generator;
 - (ii) Date, time and type of incident (e.g., fire explosion);

30.341: continued

- (iii) Name and quantity of material(s) involved;
 - (iv) The extent of injuries, if any;
 - (v) An assessment of actual or potential hazards to public health, safety, welfare and the environment, where applicable; and
 - (vi) Estimated quantity and disposition of recovered materials that resulted from the incident.
- (f) 310 CMR 30.560(1), (2), and (3), and 310 CMR 30.561, governing ignitable, reactive, or incompatible wastes.
- (g) 310 CMR 30.701(2)(a) and (b), establishing a floodproofing standard; however, these requirements shall only be applicable if a portion of the site is within the boundary of land subject to flooding from the statistical 100-year frequency storm.
- (2) Each tank or container in which hazardous waste is being accumulated shall be clearly marked and labelled throughout the period of accumulation. Marks and labels shall be clearly visible for inspection. For aboveground tanks and containers, marks and labels shall be made on the side of each tank or container. For underground tanks, marks and labels shall be made on the aboveground portion of the tanks or on a sign in close proximity to the tank. Each tank or container shall be marked and labeled with the following:
- (a) The words "Hazardous Waste";
 - (b) The hazardous waste(s) identified in words (*e.g.*, acetone, toluene);
 - (c) The type of hazard(s) associated with the waste(s) indicated in words (*e.g.*, ignitable, toxic, dangerous when wet);
 - (d) The date upon which each period of accumulation begins.
- (3) All areas where wastes are accumulated shall be operated with appropriate security measures at all times to prevent the unknowing entry of persons, reduce as much as possible the unauthorized entry of persons, and prevent the entry of livestock into such areas.
- (4) All areas where wastes are accumulated shall have posted at all times a sign with the words "HAZARDOUS WASTE" in capital letters at least one inch high.
- (5) All areas where wastes are accumulated for purposes of complying with 310 CMR 30.000 generally shall be clearly marked (*e.g.*, by a clearly visible line or piece of tape on the floor, or by a gate or fence, or by a sign at the boundary of a clearly distinguishable area) so that they are clearly distinguishable at all times from all specific points of generation where wastes are initially accumulated solely for purposes of 310 CMR 30.340(6), and from all areas at the site of generation where wastes are not accumulated.
- (6) The period of accumulation begins:
- (a) for hazardous waste subject to 310 CMR 30.340(6), on the date which is three days after the applicable limit described in 310 CMR 30.340(6)(c) is reached (*i.e.*, 55 gallons or one quart) or on the date when the container is moved into a centralized accumulation area, whichever comes first;
 - (b) for hazardous waste received from a Very Small Quantity Generator in compliance with 310 CMR 30.353(8), or hazardous waste received as a rejected load or residue from a designated facility in compliance with 310 CMR 30.340(9), on the date the waste was received; and
 - (c) for all other hazardous wastes, on the date the waste first becomes subject to 310 CMR 30.140(1).
- If the applicable date described in the preceding sentence is not marked and labeled, in compliance with 310 CMR 30.341(2), on any tank or container in which such hazardous waste is accumulated, then the period of accumulation of the hazardous waste in that tank or container shall be deemed to have commenced on the date on which that hazardous waste is originally generated or accumulated.
- (7) Before the end of the applicable 90 day accumulation period, as described in 310 CMR 30.340(4), or the 180 day accumulation period, as described in 310 CMR 30.340(5), the waste shall be either:
- (a) Transported off-site to a facility, or person that meets the criteria of 310 CMR 30.305;
- or

30.341: continued

(b) Transferred to an on-site facility that meets the criteria of 310 CMR 30.305(1)(a)1., 2. or 3., 30.305(4) or 310 CMR 30.305(5).

(8) A Large Quantity Generator who accumulates hazardous waste at the site of generation in excess of the 90 day accumulation period, as described in 310 CMR 30.340(4), or the 180 day accumulation period, as described in 310 CMR 30.340(5), is an operator of a storage facility and shall comply with the requirements of 310 CMR 30.500 through 30.900, or if eligible, the interim status provisions of 310 CMR 30.099.

30.342: On-site Accumulation by Large Quantity Generators in Containers

(1) Throughout the period of accumulation, the generator shall comply with the standards for the use and management of containers set forth in the following regulations subject to the exceptions, additions or modifications, if any, as noted:

(a) 310 CMR 30.683: Condition of Containers.

(b) 310 CMR 30.684: Compatibility of Waste with Containers.

(c) 310 CMR 30.685: Management of Containers.

(d) 310 CMR 30.686: Inspections.

1. In addition to the requirements of 310 CMR 30.686, a generator shall remedy all malfunctions, deteriorations, operator errors, and discharges which any inspection reveals.

2. A generator shall record every inspection in an inspection log or summary.

3. A generator shall keep the records of each inspection at the site of generation for at least three years from the date of inspection or until final closure pursuant to 310 CMR 30.342(1)(g), whichever period is longer. These records shall be furnished to the Department upon request. At a minimum, these records shall include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

(e) 310 CMR 30.687: Containment; except that a generator shall comply with the following in lieu of 310 CMR 30.687(1) and (2):

1. Underlying all containers shall be a base which is free of cracks and gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.

2. All outdoor containers shall be provided with a containment system that has the capacity to contain either 10% of the total possible contained volume of the containers, or 110% of the volume of the largest container, whichever is greater.

3. A generator shall remove all accumulated spillage and/or precipitation from the containment area within 24 hours or in as timely a manner as possible.

(f) 310 CMR 30.688: Special Requirements for Ignitable, Reactive and Incompatible Hazardous Wastes, and Hazardous Wastes That Are Polyhalogenated Aromatic Hydrocarbons, and

(g) 310 CMR 30.689: Closure.

30.343: On-site Accumulation by Large Quantity Generators in Tanks

(1) Throughout the period of accumulation, the generator shall comply with the standards for storage and treatment in tanks set forth in the following regulations subject to the exceptions, additions or modifications, if any, as noted:

(a) 310 CMR 30.691: Applicability.

(b) 310 CMR 30.692(1) through (4): Assessment of Existing Tank System's Integrity;

(c) 310 CMR 30.693: Design and Installation of New Tank Systems or Components.

1. 310 CMR 30.693(1) (first sentence) is replaced with the following: Generators with new tank systems or components shall obtain a written assessment, reviewed and certified by an independent, qualified, registered professional engineer, in accordance with 310 CMR 30.009, attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The generator shall keep such assessment on file at the site of generation until final closure pursuant to 310 CMR 30.343(1)(i).

(d) 310 CMR 30.694: Containment and Detection of Releases.

1. Notwithstanding the requirements of 310 CMR 30.694(1) and 310 CMR 30.692(5), a generator shall provide secondary containment that meets the requirements of 310 CMR 30.694 for all new and existing tank systems except as provided in 310 CMR 30.694(6).

30.343: continued

2. A Large Quantity Generator shall comply with the following in *lieu* of 30.694(5):
 - a. All aboveground tanks shall have a containment system which is free of cracks and gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.
 - i. All indoor above ground tank systems shall have the capacity to contain 100% of the volume of the largest above ground tank;
 - ii. All outdoor aboveground tanks systems shall have the capacity to contain either 10% of the total possible contained volume of the aboveground tanks, or 110% of the volume of the largest aboveground tank, whichever is greater.
 - b. A generator shall remove all accumulated spillage and/or precipitation from the containment area within 24 hours or in as timely a manner as possible.
- (e) 310 CMR 30.695: General Operating Requirements.
- (f) 310 CMR 30.696: Inspections.
 1. In addition, a generator shall also record every inspection in an inspection log or summary.
 2. A generator shall keep the records of each inspection at the site of generation for at least three years from the date of inspection or until final closure pursuant to 310 CMR 30.343(1)(i), whichever period is longer. These records shall be furnished to the Department upon request.
 3. At a minimum, these records shall include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.
 4. All aboveground tanks shall be placed so that all the surface beneath each such tank can be inspected for spills and structural integrity.
- (g) 310 CMR 30.697: Response to Leaks or Spills and Disposition of Leaking Tank Systems.
- (h) 310 CMR 30.698: Special Requirements for Ignitable, Reactive, and Incompatible Hazardous Wastes, and Hazardous Wastes That Are Polyhalogenated Aromatic Hydrocarbons.
- (i) 310 CMR 30.699(1) and (2): Closure and Post-closure Care, except that:
 1. a generator need only comply with the following closure requirements of 310 CMR 30.580:
 - a. 310 CMR 30.582: Closure Performance Standard; and
 - b. 310 CMR 30.585: Disposal or Decontamination of Equipment.
 2. a generator need not comply with the requirements of 310 CMR 30.590: Post-closure and 310 CMR 30.900: Financial Responsibility.

30.350: Special Generator Requirements

30.351: Small Quantity Generators

- (1) Except as provided in 310 CMR 30.353, a generator is a Small Quantity Generator if that generator:
 - (a) Does not generate in a calendar month a total of 1,000 kilograms or more of any hazardous waste, regulated recyclable material, or combination of hazardous waste and regulated recyclable material; and
 - (b) Does not accumulate, at any one time, any hazardous waste, regulated recyclable material, or combination of hazardous waste and regulated recyclable material in quantities exceeding 6,000 kilograms; and
 - (c) Except as provided in 310 CMR 30.351(1)(e) and (g), does not generate in a calendar month one kilogram or more of acutely hazardous waste, acutely hazardous regulated recyclable material, or combination of acutely hazardous waste and acutely hazardous regulated recyclable material; and
 - (d) Except as provided in 310 CMR 30.351(1)(f) and (h), does not accumulate, at any one time, one kilogram or more of acutely hazardous waste, acutely hazardous regulated recyclable material, or combination of acutely hazardous waste and acutely hazardous regulated recyclable material; and
 - (e) Except as provided in 310 CMR 30.351(1)(g), does not generate in a calendar month ten kilograms or more of inner liners removed from containers, or of paper bags containing residues of acutely hazardous waste or acutely hazardous regulated recyclable material; and

30.351: continued

- (f) Except as provided in 310 CMR 30.351(1)(h), does not accumulate, at any one time, a total of 10 kilograms or more of inner liners removed from containers, or of paper bags containing residues of acutely hazardous waste or acutely hazardous regulated recyclable material; and
- (g) Does not generate in a calendar month a total of 100 kilograms or more of any residue, contaminated soil, water, or other debris resulting from the clean-up of a spill, into or on any land or water, of any acutely hazardous waste or any acutely hazardous regulated recyclable material; and
- (h) Does not accumulate, at any one time, a total of 100 kilograms or more of any residue, contaminated soil, water, or other debris resulting from the clean-up of a spill, into or on any land or water, of any acutely hazardous waste or acutely hazardous regulated recyclable material.

(2) For the purpose of determining the quantities in 310 CMR 30.351(1):

(a) a generator shall include:

1. all hazardous waste and regulated recyclable material produced on-site (*i.e.*, at the site of generation), unless excluded pursuant to 310 CMR 30.351(2)(b) or (c);
2. hazardous waste received from off the site of generation including, but not limited to, hazardous waste received from Very Small Quantity Generators pursuant to 310 CMR 30.353(8), and for the purposes of complying with 310 CMR 30.351(1)(b) only;
3. hazardous waste received as a rejected load or residue from a designated facility in compliance with 310 CMR 30.340(9); and

(b) a generator need not include:

1. hazardous waste not subject to 310 CMR 30.000;
2. hazardous waste that is managed upon generation in one of the following units and without first being accumulated:
 - a. a wastewater treatment unit; or
 - b. a unit that provides treatment which is an integral part of the manufacturing process;
3. Class A regulated recyclable material, as defined in 310 CMR 30.212, provided such material is handled in compliance with 310 CMR 30.200;
4. waste that is universal waste managed in compliance with 310 CMR 30.143(2) and 310 CMR 30.1000;
5. waste oil and used oil fuels handled in compliance with 310 CMR 30.253 provided such materials are included in dual status calculations. (*See* 310 CMR 30.253(5)); or
6. for purposes of establishing compliance with 310 CMR 30.351(1)(b), (d), (f) and (h), hazardous waste located in satellite accumulation areas in compliance with 310 CMR 30.351(4). (A generator shall, however, count all satellite accumulation area wastes towards the generation rate limitations of 310 CMR 30.351(1)(a), (c), (e) and (g). *See* also 310 CMR 30.351(5)(a));
7. a hazardous waste that is an unused commercial chemical product (listed in 310 CMR 30.133 or 310 CMR 30.136, or exhibiting one or more of the characteristics in 310 CMR 30.120 through 30.125) that is generated solely as a result of a laboratory clean-out conducted at an eligible academic entity pursuant to 310 CMR 30.354(13). For purposes of 310 CMR 30.351(2)(b)7., the term eligible academic entity shall have the meaning as defined in 310 CMR 30.010; and

(c) a generator, for purposes of establishing compliance with 310 CMR 30.351(1)(a), (c), (e) and (g) only, need not include the following wastes, provided such wastes have already been counted once upon generation:

1. hazardous waste which is removed from on-site accumulation;
2. hazardous waste produced by on-site recycling of regulated recyclable material;
3. spent material that is either a Class B or C regulated recyclable material, provided such material is generated, reclaimed, and subsequently reused at the site of generation; or
4. hazardous waste received as a rejected load or residue from a designated facility in compliance with 310 CMR 30.340(9).

(3) A Small Quantity Generator shall comply with the requirements set forth or referred to in 310 CMR 30.351, and need not comply with any other generator requirements of 310 CMR 30.300. However, a Small Quantity Generator may manage its regulated recyclable materials in compliance with 310 CMR 30.200 and manage its universal wastes in compliance with 310 CMR 30.1000.

30.351: continued

(4) A Small Quantity Generator may, for any length of time, without being licensed pursuant to 310 CMR 30.000 or having interim status, and without complying with 310 CMR 30.351 except as specified in 310 CMR 30.351(4), accumulate hazardous waste or waste oil in containers at or near each specific point of generation where wastes initially accumulate, provided that all of the following requirements are met:

- (a) The wastes must be generated as a result of a process occurring at the specific point of generation where the wastes are initially accumulated.
- (b) Each such specific point of generation where wastes initially accumulate, and each satellite accumulation container, shall be under the control of the key staff individual directly responsible for the process resulting in the generation of such wastes.
- (c) For each specific point of generation, only one container per wastestream may be used at any one time. The maximum capacity of said container shall be as follows:
 - 1. 55 gallons if the hazardous waste or waste oil being accumulated is non-acutely hazardous waste identified or otherwise described in 310 CMR 30.120 through 30.135; or
 - 2. one quart if the hazardous waste being accumulated is acutely hazardous waste listed or otherwise described in 310 CMR 30.136.
- (d) Within three days of the time a generator fills a container or accumulates a quantity of hazardous waste or waste oil in excess of the applicable limit described in 310 CMR 30.351(4)(c), whichever comes first, the generator shall, with respect to that container and all the hazardous waste or waste oil accumulated therein, come into full compliance, and thereafter remain in full compliance, with 310 CMR 30.351. If a generator is subject to the preceding sentence, said generator shall, until it comes into full compliance with 310 CMR 30.351, continue to comply with 310 CMR 30.351(4).
- (e) The generator shall at all times comply with the requirements set forth in 310 CMR 30.341(2)(a) through (c), as well as 310 CMR 30.342(1)(a) through (d)1. and (e)1., and 310 CMR 30.688(4).

(5) A Small Quantity Generator may accumulate the amounts of hazardous waste stated in 310 CMR 30.351(1) at the site of generation for up to 180 days without having to obtain a storage license from the Department and without having interim status provided that the date when the accumulation period begins shall be clearly marked and labeled, in compliance with 310 CMR 30.341(2), on every tank and container in which hazardous waste is accumulated.

- (a) This 180-day period begins:
 - 1. for hazardous waste subject to 310 CMR 30.351(4), on the date which is three days after the applicable limit described in 310 CMR 30.351(4)(c) (*i.e.*, 55 gallons or one quart) is reached or on the date when the container is moved into a centralized accumulation area, whichever comes first;
 - 2. for hazardous waste received from a Very Small Quantity Generator in compliance with 310 CMR 30.353(8), or hazardous waste received as a rejected load or residue from a designated facility in compliance with 310 CMR 30.340(9), on the date the waste was received;
 - 3. for hazardous waste produced by a generator that no longer satisfies all of the requirements of 310 CMR 30.353(1), on the date the generator first becomes subject to 310 CMR 30.351; and
 - 4. for all other hazardous wastes, on the date the waste first becomes subject to regulation pursuant to 310 CMR 30.140(1).
- (b) If the applicable date described in the preceding sentence is not marked and labeled, in compliance with 310 CMR 30.341(2), on any tank or container in which such hazardous waste is accumulated, then the period of accumulation of the hazardous waste in that tank or container shall be deemed to have commenced on the date on which that hazardous waste is originally generated or accumulated.

(6) Before the end of the 180 day period of accumulation, as described in 310 CMR 30.351(5), the waste shall be either:

- (a) Transported off-site to a facility, or person that meets the criteria of 310 CMR 30.305; or
- (b) Transferred to an on-site facility that meets the criteria of 310 CMR 30.305(1)(a)1., 2. or 3., 310 CMR 30.305(4) or 310 CMR 30.305(5).

30.351: continued

(c) A Small Quantity Generator who accumulates hazardous waste in excess of the 180 day period of accumulation, as described in 310 CMR 30.351(5), is an operator of a storage facility and shall comply with the requirements in 310 CMR 30.500, 30.600, 30.700, 30.800, and 30.900 applicable to storage of hazardous waste, or if eligible, the interim status provisions of 310 CMR 30.099.

(7) A generator who generates in any calendar month, or accumulates hazardous waste for any length of time, in amounts exceeding the amounts stated in 310 CMR 30.351(1) is a Large Quantity Generator, and shall comply with 310 CMR 30.303 and with all requirements in 310 CMR 30.000 applicable to Large Quantity Generators.

(8) A Small Quantity Generator shall comply with the following additional requirements governing accumulation:

(a) 310 CMR 30.341(2) through (5) - marking and labeling, security, signs, and lines. However, for purposes of complying with 310 CMR 30.341(2)(d), the date upon which each period of accumulation begins shall be determined as set forth in 310 CMR 30.351(5).

(b) 310 CMR 30.342 – accumulation in containers. However, in *lieu* of complying with 310 CMR 30.342(1)(f), referencing the requirements of 310 CMR 30.688 for managing ignitable, reactive or incompatible wastes, a Small Quantity Generator shall comply with the following:

1. Containers holding ignitable or reactive hazardous waste shall be located at least 15 meters from the property line of the site of generation, unless this is not possible or practical, in which case the generator shall locate such containers in compliance with applicable city and town ordinances and by-laws

2. Incompatible hazardous wastes or materials incompatible with hazardous wastes (*see* 310 CMR 30.561 for examples) shall not be placed in the same container unless the requirement set forth in 310 CMR 30.560(3) is complied with.

3. Hazardous waste shall not be placed in an unwashed container that previously held waste or material incompatible with such hazardous waste.

4. A container holding a hazardous waste that is incompatible with any waste or other material stored nearby in other containers or in piles, open tanks or surface impoundments shall be separated from the other waste or other material or protected from it by means of a dike, berm, wall, or other device.

(c) 310 CMR 30.343 – accumulation in tanks; and

(d) 310 CMR 30.560(1), (2), and (3), and 310 CMR 30.561 - general requirements for ignitable, reactive and incompatible wastes.

(9) A Small Quantity Generator shall comply with the following requirements governing emergency procedures, prevention, and response:

(a) A Small Quantity Generator shall accumulate hazardous waste only in areas that are designed and constructed to prevent, and maintained and operated to minimize the possibility of any threat to public health, safety, or welfare, or the environment, from a fire, explosion, or any other unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, surface water, or ground water.

(b) There shall be at all times at least one employee either on the premises or on call and available to respond to an emergency by reaching the site of generation or accumulation within a short period of time. Each such employee shall be known as the emergency coordinator. The emergency coordinator shall have the responsibility for coordinating all emergency response measures specified in 310 CMR 30.351(9)(h) and (i). Each emergency coordinator shall be thoroughly familiar with all aspects of whatever plans the generator has for responding to an emergency, all operations and activities at the site of generation, the location and characteristics of waste handled, the location of all records at the site of generation, and the layout of the site of generation. Each emergency coordinator shall have access to all areas of the site of generation. Each emergency coordinator shall have the authority to spend or use whatever is necessary to adequately respond to an emergency.

(c) A Small Quantity Generator shall have the following equipment on the premises, unless none of the hazards posed by hazardous waste handled on the premises could require a particular type of equipment specified in 310 CMR 30.351(9)(c)1. through 6.d.:

1. An internal communications or alarm system capable of providing immediate emergency instruction, by voice or signal, to facility personnel; and

30.351: continued

2. A device, immediately available at all areas where hazardous waste is generated or accumulated, such as a telephone or a hand-held two-way radio, call box, or other instrument capable of summoning emergency assistance from, and which is acceptable to, local police departments, fire departments, or Federal, State, or local emergency response teams; and
3. Portable fire extinguishers, fire control equipment, including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals; spill control equipment; and decontamination equipment; and
4. Water at adequate volume and pressure to supply water hose streams or foam producing equipment, or automatic sprinklers or water spray systems.
5. Clear markings identifying all exits so that everyone in the premises during an emergency can quickly find their way out of the premises during the emergency.
6. An up-to-date written list containing the following information, a copy of which shall be prominently posted next to every telephone at the site of generation:
 - a. The name(s) and telephone number(s) of the emergency coordinator(s).
 - b. The location(s) of the fire extinguisher(s) and spill control material(s), and, if present, the fire alarms.
 - c. The telephone number of the fire department, and, if there is a direct alarm system, instructions on how to activate it.
 - d. Evacuation routes, where applicable.
- (d) All communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, shall be tested and maintained as necessary to ensure its proper operation in time of emergency.
- (e) Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, the generator shall ensure that all personnel involved in the operation always have immediate access to an internal alarm or emergency communications device, either directly or through visual or voice contact with another employee, unless such a device is not required pursuant to 310 CMR 30.351(9)(c). If hazardous waste is being poured, mixed, spread, or otherwise handled at a time when there is only one individual at the area where this activity is occurring, the generator shall ensure that this individual has immediate access to a device, such as a telephone or a hand-held two-way radio, that is capable of summoning whatever emergency assistance is necessary from other areas, unless such a device is not required pursuant to 310 CMR 30.351(9)(c).
- (f) The generator shall maintain sufficient aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.
- (g) The generator shall ensure that all employees are properly trained so that they know how to perform their duties so that hazardous waste handling practices and emergency procedures are performed properly and in compliance with all applicable requirements of 310 CMR 30.000.
- (h) The emergency coordinator or designee shall respond promptly and properly to any emergencies that arise. The applicable responses shall be as follows:
 1. In the event of a fire, attempt to extinguish it using a fire extinguisher or other suitable fire control equipment or call the fire department.
 2. In the event of a spill, contain the flow of spilled material to the extent possible, and as soon as practicable, clean up the spilled material and contaminated materials or soil.
- (i) In the event of a fire, explosion, spill or other release or threat of release of oil, hazardous waste, or hazardous material into the environment, the generator shall do the following:
 1. Call the Bureau of Waste Site Clean-up at the Department's Regional Office serving the location where the release or threat of release occurred when required by and within the time frames established pursuant to 310 CMR 40.0311 through 40.0317. To report a release after normal business hours, dial (617) 556-1133, (888) 304-1133 (or such other telephone number as may be designated by the Department) or follow any instructions provided on the answering message for the Regional Office.
 2. In addition to the notification requirements of 310 CMR 30.351(9)(i)1., when a fire, explosion, spill or other release could threaten public health, safety, welfare or the environment, the generator shall immediately notify the National Response Center at its 24-hour toll-free number (1-800-424-8802) and provide the following information:

30.351: continued

- a. the name and telephone number of the reporter;
 - b. the name, address, and U.S. EPA Identification Number of the generator;
 - c. the date, time, and type of incident (*e.g.*, spill or fire);
 - d. the name and quantity of hazardous material(s) involved in the incident;
 - e. the extent of injuries, if any;
 - f. the estimated quantity and disposition of recovered material(s), if any; and
 - g. the possible hazards to human health or the environment.
- (j) The generator shall make every reasonable attempt to make the following arrangements, as appropriate for the type of hazardous waste handled at the site of generation or accumulation and the potential need for the services of the persons or organizations referred to in 310 CMR 30.351(9)(j)1. through 4.:
- 1. Arrangements to familiarize police departments, fire departments, local boards of health, and emergency response teams with the layout of the site, properties of hazardous waste handled at the site, hazards associated with such wastes, places where personnel at the site would normally be working, entrances to and roads inside the site, and possible evacuation routes.
 - 2. If more than one police department and/or fire department might respond to an emergency, agreements designating the specific police department and/or specific fire department which shall have primary emergency authority, and agreements with any other police department(s) and/or fire department(s) to provide support to whoever has primary emergency authority.
 - 3. Agreements with State emergency response teams, emergency response contractors, local boards of health, and equipment suppliers.
 - 4. Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the site and the types of injuries or illnesses which could result from fires, explosions, or other releases at the site.
- (k) For the purposes of 310 CMR 30.351(9)(j), a signed and dated letter that is from the generator to a person set forth in 310 CMR 30.351(9)(j) and that attempts to make arrangements required pursuant to 310 CMR 30.351(9)(j) shall be deemed sufficient documentation of an attempt to make the required arrangements with that person. The generator shall keep these records for as long as the generator is at the site. Such records shall be furnished upon request of, and made available at all reasonable times for inspection by, any duly designated officer, employee, or representative of the Department or of the EPA.
- (10) A Small Quantity Generator shall comply with the following:
- (a) 310 CMR 30.301(1) through (3) - Purpose, Scope, and Applicability of Generator regulations.
 - (b) 310 CMR 30.302 - Determine whether the waste is hazardous.
 - (c) 310 CMR 30.303 - Requirements governing notification, identification numbers, and change of status requests.
 - (d) 310 CMR 30.304 and 30.305 - Transfer of hazardous waste.
 - (e) 310 CMR 30.310 through 30.317 - Manifest Requirements.
 - (f) 310 CMR 30.331(1), (2), (3)(b), and (4), 30.333, and 30.334 - Recordkeeping and reporting.
 - (g) 310 CMR 30.352 and 30.361.
 - (h) 310 CMR 30.001 through 30.100, 30.605, and the land disposal restrictions set forth in 310 CMR 30.750.
 - (i) 310 CMR 30.321 through 30.324 (pre-transport requirements).
- (11) A small quantity generator may conduct elementary neutralization of corrosive hazardous wastes at the site of generation in an elementary neutralization unit in compliance with 310 CMR 30.1103 without a license to treat hazardous waste, but shall comply with all applicable provisions of 310 CMR 30.0000 while such waste remains hazardous.

30.352: Inclusion of Acutely Hazardous Waste

In determining whether the limits of 310 CMR 30.351(1)(a) or (b) are met, a generator shall include acutely hazardous waste and acutely hazardous regulated recyclable materials. A generator who so exceeds the limits in 310 CMR 30.351(1)(a) or (b), is a Large Quantity Generator and the limits for acutely hazardous wastes in 310 CMR 30.351(1)(c) through (h) do not apply. Very Small Quantity Generators are prohibited from generating or accumulating any acutely hazardous waste or acutely hazardous regulated recyclable materials.

30.353: Very Small Quantity Generators

- (1) A generator is a Very Small Quantity Generator if that generator:
- (a) Does not generate in a calendar month a total of 100 kilograms or more of hazardous waste, regulated recyclable material, or combination of hazardous waste and regulated recyclable material; and
 - (b) Does not accumulate, at any one time, any hazardous waste, regulated recyclable material, or combination of hazardous waste and regulated recyclable material in quantities exceeding 1,000 kilograms; and
 - (c) Does not generate or accumulate any acutely hazardous waste or acutely hazardous regulated recyclable material; and
 - (d) Does not generate or accumulate any inner liners removed from containers, or of paper bags containing residues of acutely hazardous waste or acutely hazardous regulated recyclable material; and
 - (e) Does not generate or accumulate any residue, contaminated soil, water, or other debris resulting from the clean-up of a spill, into or on any land or water, of any acutely hazardous waste or acutely hazardous regulated recyclable material.
- (2) For the purpose of determining the quantities in 310 CMR 30.353(1):
- (a) a generator shall include
 1. all hazardous waste and regulated recyclable material produced on-site (*i.e.*, at the site of generation), unless excluded pursuant to 310 CMR 30.353(2)(b) or (c);
 2. hazardous waste received from off the site of generation including, but not limited to, hazardous waste received from other Very Small Quantity Generators pursuant to 310 CMR 30.353(8); and, for the purposes of complying with 310 CMR 30.353(1)(b) only;
 3. hazardous waste received as a rejected load or residue from a designated facility in compliance with 310 CMR 30.340(9); and
 - (b) a generator need not include:
 1. hazardous waste not subject to 310 CMR 30.000;
 2. hazardous waste that is managed upon generation in one of the following units and without first being accumulated:
 - a. a wastewater treatment unit; or
 - b. a unit that provides treatment which is an integral part of the manufacturing process;
 3. Class A regulated recyclable material, as defined in 310 CMR 30.212, provided such material is handled in compliance with 310 CMR 30.200;
 4. waste that is universal waste managed in compliance with 310 CMR 30.143(2) and 310 CMR 30.1000; or
 5. waste oil and used oil fuels handled in compliance with 310 CMR 30.253 provided such materials are included in dual status calculations. (*See* 310 CMR 30.253(5)); or
 6. for purposes of establishing compliance with 310 CMR 30.353(1)(b), hazardous waste located in satellite accumulation areas in compliance with 310 CMR 30.353(6)(i). (A generator shall, however, count all satellite accumulation area wastes towards the generation rate limitations of 310 CMR 30.353(1)(a));
 7. a hazardous waste that is an unused commercial chemical product (listed in 310 CMR 30.133 or 310 CMR 30.136, or exhibiting one or more of the characteristics in 310 CMR 30.120 through 30.125) that is generated solely as a result of a laboratory clean-out conducted at an eligible academic entity pursuant to 310 CMR 30.354(13). For purposes of 310 CMR 30.353(2)(b)7., the term eligible academic entity shall have the meaning as defined in 310 CMR 30.010; and
 - (c) a generator, for purposes of establishing compliance with 310 CMR 30.353(1)(a) only, need not include the following wastes, provided such wastes have already been counted once upon generation:
 1. hazardous waste which is removed from on-site accumulation;
 2. hazardous waste produced by on-site treatment of hazardous waste;
 3. hazardous waste produced by on-site recycling of regulated recyclable material;
 4. spent material that is either a Class B or C regulated recyclable material, provided such material is generated, reclaimed, and subsequently reused at the site of generation; or
 5. hazardous waste received as a rejected load or residue from a designated facility in compliance with 310 CMR 30.340(9).

30.353: continued

(3) A Very Small Quantity Generator shall comply with the requirements set forth or referred to in 310 CMR 30.353, and need not comply with any other generator requirements of 310 CMR 30.300. However, a Very Small Quantity Generator may manage its regulated recyclable materials in compliance with 310 CMR 30.200 and manage its universal wastes in compliance with 310 CMR 30.1000. A person who is not in compliance with the requirements set forth or referred to in 310 CMR 30.353 shall have the status of a Small Quantity Generator, a Large Quantity Generator, or the owner or operator of a facility, as the case may be, and shall comply with all requirements in 310 CMR 30.000 applicable to the status he has at the time.

(4) A Very Small Quantity Generator shall handle all hazardous waste generated, accumulated or treated in a manner which neither could nor does endanger public health, safety, or welfare, or the environment, and in compliance with all applicable local, State, and Federal laws and regulations.

(5) A Very Small Quantity Generator shall register with the Department by notifying the Department in writing of its activity involving hazardous waste or regulated recyclable material. If the Department prescribes a form for such registration, the generator shall use such form when submitting such registration. Such a registration shall be signed and submitted in compliance with 310 CMR 30.006 and 30.009. The generator shall follow such procedures as may be required, requested or authorized by the Department to obtain and keep its status as a Very Small Quantity Generator. If the Very Small Quantity Generator intends to transfer custody or possession of the hazardous waste or regulated recyclable material to another person or persons, the registration shall set forth the name, address, and EPA identification number, if applicable, of each such person. If the Very Small Quantity Generator intends to itself treat or recycle the hazardous waste or regulated recyclable material, the registration shall set forth the process by which the hazardous waste or regulated recyclable material shall be treated or recycled. If the site has an EPA identification number or a Massachusetts identification number, that number shall be included in the registration. An identification number for the site is required if the Very Small Quantity Generator is using a manifest.

(6) A Very Small Quantity Generator shall comply with the following:

- (a) 310 CMR 30.001 through 30.040 – General provisions, definitions, imminent threats and presumption of irreparable harm, and 30.100 – Identification and Listing.
- (b) 310 CMR 30.301(1) through (3) – Purpose, scope, and applicability of generator regulations.
- (c) 310 CMR 30.302 – Determine whether the waste is hazardous. However, a Very Small Quantity Generator need not comply with the land disposal restrictions set forth in 310 CMR 30.750, including the use of multiple waste codes and the determination of underlying hazardous constituents. (*See* 310 CMR 30.302 and 30.103.)
- (d) 310 CMR 30.303(1), (2), (3)(b) and (9) – Requirements governing identification numbers and change of status requests.
- (e) 310 CMR 30.310 through 30.315 (as applicable), as well as 310 CMR 30.331(1), (2), (3)(b), (4) and 30.333 (provided a manifest is required or otherwise used), and 310 CMR 30.334 – manifesting, recordkeeping and reporting.
- (f) 310 CMR 30.351(5)(a)3., 30.352 and 30.361.
- (g) The container management standards at 310 CMR 30.682 through 30.684, and 30.685(1) and (2), 30.688(2) through (4), and 30.689 as well as the tank management standards at 310 CMR 30.695(3) and (5).
- (h) 310 CMR 30.341(3) through (5) (general accumulation standards), 30.342(1)(e) (containment for accumulation in containers), and 30.343(1)(d) (containment for accumulation in tanks).
- (i) A Very Small Quantity Generator may, for any length of time, without being licensed pursuant to 310 CMR 30.000, or having interim status, and without complying with 310 CMR 30.353(6)(g) and (h), accumulate hazardous waste or waste oil in containers at or near each specific point of generation where wastes initially accumulate, provided that all of the following requirements are met:
 1. The wastes must be generated as a result of a process occurring at the specific point of generation where the wastes are initially accumulated;

30.353: continued

2. Each specific point of generation where wastes initially accumulate, and each satellite accumulation container, shall be under the control of the key staff individual directly responsible for the process resulting in the generation of such wastes;
 3. For each specific point of generation, only one container per wastestream may be used at any one time. The maximum capacity of said container shall be 55 gallons;
 4. Within three days of the time a generator fills a container, the generator shall, with respect to that container and all the hazardous waste or waste oil accumulated therein, come into full compliance, and thereafter remain in full compliance, with 310 CMR 30.353(6)(g) and (h). If a generator is subject to the preceding sentence, said generator shall, until it comes under full compliance with 310 CMR 30.353(6)(g) and (h) continue to comply with 310 CMR 30.353(6)(i).
 5. The generator shall at all times comply with the requirements set forth in 310 CMR 30.342(1)(e)1., 30.682 through 30.685(1) and (2), and 30.688(4).
- (7) A Very Small Quantity Generator may transport hazardous waste off the site of generation without having to obtain a license to transport hazardous waste or a vehicle identification device for the vehicle in which the hazardous waste is transported, and without having to use a hazardous waste manifest, but only if all of the following requirements are met:
- (a) The generator may not collect or transport any hazardous waste except hazardous waste generated by that generator.
 - (b) Notwithstanding 310 CMR 30.353(7)(a), a generator may collect and transport hazardous wastes from another generator provided that such transport is done in compliance with 310 CMR 30.353(7) and:
 1. every generator from whom waste is collected is a registered VSQG; and
 2. every generator has the same owner or operator as the generator who collects and transports the waste.
 - (c) the transport of the hazardous waste is not prohibited by the DOT pursuant to 49 CFR 172.101(d).
 - (d) The generator may deliver the hazardous waste only to a destination described in 310 CMR 30.353(8).
 - (e) The generator may not transport more, in the aggregate, than 200 kilograms of hazardous waste in any one vehicle at any one time. Such hazardous waste may be transported only in containers.
 - (f) The generator shall transport the hazardous waste only in containers that are
 1. compatible with the waste; and
 2. tightly sealed; and
 3. tightly secured to the vehicle in which they are transported; and
 4. clearly marked and labelled in a manner which identifies, in words, the hazardous waste(s) in the container (*e.g.*, acetone, toluene) and the hazard(s) associated with the waste (*e.g.*, ignitable, toxic, dangerous when wet); and
 5. clearly marked with the words "Hazardous Waste"; and
 6. in compliance with applicable regulations and standards of the DOT and the Massachusetts Department of Public Works, and the Massachusetts Board of Fire Prevention Regulations, 527 CMR 1.00 through 24.00.
 - (g) Hazardous wastes that are incompatible with each other shall not be transported in the same vehicle at the same time.
 - (h) At all times while hazardous waste is in the vehicle, a copy of the generator's most recent registration with the Department shall be in the vehicle at a location where the operator of the vehicle can obtain quick and easy access to it. Said registration shall be made available to Department or law enforcement personnel on request. If the generator transports hazardous wastes to an event or center pursuant to 310 CMR 30.353(8)(e), said registration shall be made available to the transporter at the event or the attendant at the center.
 - (i) In the event that a fire, explosion, spill or other release or threat of release of oil, hazardous waste, or hazardous material occurs during transport, the generator shall take all appropriate action to protect public health, safety, and welfare and the environment, and shall
 1. Immediately notify the local fire and police departments; and

30.353: continued

2. Call the Bureau of Waste Site Clean-up at the Department's Regional Office serving the location where the release or threat of release occurred when required by and within the time frames established pursuant to 310 CMR 40.0311 through 40.0317. To report a release after normal business hours, dial (617) 556-1133, (888) 304-1133 (or such other telephone number as may be designated by the Department) or follow any instructions provided on the answering message for the Regional Office.
 3. In addition to the notification requirements of 310 CMR 30.353(7)(i)1. and 2., when a fire, explosion, spill or other release could threaten public health, safety, welfare, or the environment, the generator shall immediately notify the National Response Center at its 24-hour toll-free number (1-800-424-8802) and provide the information required pursuant to 310 CMR 30.351(9)(i)2.a. through g.
 - (j) The vehicle in which the hazardous waste is transported shall go directly to the intended destination, without any stops or detours in between except those allowed pursuant to 310 CMR 30.353(7)(b) and those reasonably and immediately necessary in response to road conditions, the driver's need for nourishment or rest, the vehicle's need for service or maintenance, or emergencies.
 - (k) The generator shall comply with the requirements set forth or referred to in 310 CMR 30.353(9).
 - (l) The generator shall placard the vehicle when so required by DOT pursuant to 49 CFR 172.504.
- (8) A Very Small Quantity Generator sending hazardous waste off the site of generation shall send that material only to:
- (a) A facility or person listed or described in 310 CMR 30.305;
 - (b) A Large Quantity Generator who is in compliance with 310 CMR 30.340;
 - (c) A Small Quantity Generator who is in compliance with 310 CMR 30.351;
 - (d) A Very Small Quantity Generator who is in compliance with 310 CMR 30.353; or
 - (e) An event pursuant to 310 CMR 30.392 or a center pursuant to 310 CMR 30.393.
- (9) A Very Small Quantity Generator shall prepare shipping papers if a hazardous waste manifest does not accompany a shipment of hazardous waste. The shipping papers shall identify the generator of the hazardous waste being transported, the quantity and name of the hazardous waste being transported, and the destination to where the hazardous waste is being transported. The Very Small Quantity Generator shall present two copies of the shipping papers together with the hazardous waste being shipped to the person receiving the material. The person receiving that material shall mark the two copies of the shipping papers provided with the date the delivery was accepted. Both the person receiving the material and the Very Small Quantity Generator delivering the material shall sign both copies of the shipping papers to acknowledge acceptance of the materials described. The person receiving the material and the Very Small Quantity Generator delivering the material shall each keep one copy of the signed shipping papers in their records for at least three years after possession of the material is transferred from the Very Small Quantity Generator to the person receiving the material. Such records shall be furnished upon request of, and made available at all reasonable times for inspection by, any duly designated officer, employee, or representative of the Department or of the EPA.
- (10) A Very Small Quantity Generator may treat hazardous waste without having to obtain a license or interim status but only if all of the following requirements are met:
- (a) The Very Small Quantity Generator shall treat only hazardous waste it generates.
 - (b) The Very Small Quantity Generator shall treat the hazardous waste only at the site of generation of that waste.
 - (c) The intended and actual result of the treatment shall be only neutralizing the waste or rendering the waste less hazardous or nonhazardous by means other than thermal treatment. All other treatment, including thermal treatment and all disposal, shall be subject to 310 CMR 30.353(12).
 - (d) The Very Small Quantity Generator shall maintain its status as a Very Small Quantity Generator in good standing at all times in compliance with 310 CMR 30.353.
 - (e) Waste oil and used oil fuel shall not be blended, mixed, commingled, or otherwise treated with any other hazardous waste identified or otherwise described in 310 CMR 30.100.

30.353: continued

(f) On and after November 15, 2019, a Very Small Quantity Generator shall not newly acquire and utilize a drum-top crusher to crush mercury-containing lamps without first obtaining a license to treat hazardous waste. One year after November 15, 2019, a Very Small Quantity Generator that acquired a drum top crusher prior to November 15, 2019, may not continue to utilize the drum top crusher to crush mercury-containing lamps without obtaining a license to treat hazardous waste.

(11) A Very Small Quantity Generator may recycle regulated recyclable materials without having to obtain a license, interim status, or any recycling permit, but only if all of the following requirements are met:

- (a) The Very Small Quantity Generator shall recycle only regulated recyclable material it generates.
- (b) The Very Small Quantity Generator shall recycle the regulated recyclable material only at the site of generation of that material.
- (c) The Very Small Quantity Generator shall comply with all applicable standards and requirements set forth in 310 CMR 30.200 governing the activity in question except the requirements for obtaining a recycling permit or a license.
- (d) The Very Small Quantity Generator shall maintain its status as a Very Small Quantity Generator in good standing at all times in compliance with 310 CMR 30.353.
- (e) Regulated recyclable materials, other than those described at 310 CMR 30.231(2), shall not be used in a manner constituting disposal unless managed in compliance with 310 CMR 30.353(12).
- (f) Waste oil and used oil fuel shall not be blended, mixed, commingled, or otherwise treated with any other hazardous waste identified or otherwise described in 310 CMR 30.100.

(12) Except as provided in 310 CMR 30.353(7), (8), (10) and (11),

- (a) the collection, transport, storage, treatment, and disposal of hazardous waste generated by a Very Small Quantity Generator shall be in compliance with 310 CMR 30.304, 30.305, 30.400 through 30.900, and all other applicable provisions of 310 CMR 30.000; and
- (b) the recycling of regulated recyclable materials generated by a Very Small Quantity Generator shall be in compliance with 310 CMR 30.200, and all other applicable provisions of 310 CMR 30.000.

30.354: Alternative Requirements for Hazardous Waste Determination and Accumulation of Unwanted Material for Laboratories Owned by Eligible Academic Entities: Academic Laboratories Rule

310 CMR 30.354 provides alternative requirements to the requirements in 310 CMR 30.340, 30.351 and 30.353 for the hazardous waste determination and accumulation of hazardous waste in laboratories owned by eligible academic entities that choose to be subject to 310 CMR 30.354. 310 CMR 30.354 is optional.

(1) Applicability. The provisions of 310 CMR 30.354 apply to any laboratory, as defined in 310 CMR 30.010, where laboratory activities result in unwanted material (as defined in 310 CMR 30.010) and where such laboratory:

- (a) submits the notice required by 310 CMR 30.354(3);
- (b) is covered by a laboratory management plan in accordance with 310 CMR 30.354(14); and
- (c) operates in compliance with 310 CMR 30.354.

(2) Purpose. The purpose of 310 CMR 30.354 is to provide an alternative management system for wastes that are generated in college and university laboratories.

(3) How an eligible academic entity indicates it will be subject to the requirements of 310 CMR 30.354.

30.354: continued

(a) An eligible academic entity shall notify the Department in writing, using the RCRA Subtitle C Site Identification Form (EPA Form 8700-12), that it is electing to be subject to the requirements of 310 CMR 30.354 for all the laboratories owned by the eligible academic entity under the same EPA Identification Number. An eligible academic entity that is a very Small Quantity Generator and does not have an EPA Identification Number must notify the Department that it is electing to be subject to the requirements of 310 CMR 30.354 for all the laboratories owned by the eligible academic entity that are on-site, as defined by 310 CMR 30.010. An eligible academic entity must submit a separate notification (Site Identification Form) for each EPA Identification Number that it is electing to be subject to the requirements of 310 CMR 30.354, and must submit the Site Identification Form to the Department before it begins operating under 310 CMR 30.354.

(b) When submitting the Site Identification Form, the eligible academic entity shall, at a minimum, fill out the following fields on the form:

1. Reason for Submittal;
2. Site EPA Identification Number;
3. Site Name;
4. Site Location Information;
5. Site Land Type;
6. North American Industry Classification System (NAICS) Code(s) for the Site;
7. Site Mailing Address;
8. Site Contact Person;
9. Operator and Legal Owner of the Site;
10. Type of Regulated Waste Activity; and
11. Certification.

(c) An eligible academic entity shall keep a copy of the notification on file at the eligible academic entity for as long as its laboratories are subject to 310 CMR 30.354.

(d) A teaching hospital that is not owned by a college or university shall keep a copy of its formal written affiliation agreement with a college or university on file at the teaching hospital with the Director of Laboratories (or person of similar title responsible for overseeing operation of the laboratories) for as long as its laboratories are subject to 310 CMR 30.354.

(e) A nonprofit research institute that is not owned by a college or university shall keep a copy of its formal written affiliation agreement with a college or university on file at the nonprofit research institute with the Director of Laboratories (or person of similar title responsible for overseeing operation of the laboratories) for as long as its laboratories are subject to 310 CMR 30.354.

(4) How an eligible academic entity indicates it will withdraw from the requirements of 310 CMR 30.354.

(a) An eligible academic entity shall notify the Department in writing, using the RCRA Subtitle C Site Identification Form (EPA Form 8700-12), that it is electing to no longer be subject to the requirements of 310 CMR 30.354 for all the laboratories owned by the eligible academic entity under the same EPA Identification Number and that it will comply with the requirements of 310 CMR 30.353, 310 CMR 30.351 and 310 CMR 30.340 for Very Small Quantity Generators, Small Quantity Generators or Large Quantity Generators, as applicable. An eligible academic entity must submit a separate notification (Site Identification Form) to the Department for each EPA Identification Number that it is withdrawing from the requirements of 310 CMR 30.354 and must submit the Site Identification Form to the Department before it begins operating under the requirements for Very Small Quantity Generators, Small Quantity Generators and Large Quantity Generators.

(b) When submitting the Site Identification Form, the eligible academic entity shall, at a minimum, fill out the following fields on the form:

1. Reason for Submittal;
2. Site EPA Identification Number;
3. Site Name;
4. Site Location Information
5. Site Land Type;
6. North American Industry Classification System (NAICS) Code(s) for the Site;
7. Site Mailing Address;

30.354: continued

8. Site Contact Person;
9. Operator and Legal Owner of the Site;
10. Type of Regulated Waste Activity; and
11. Certification.

(c) An eligible academic entity shall keep a copy of the withdrawal notice on file at the eligible academic entity for three years from the date of the notification.

(5) Summary of the Requirements of 310 CMR 30.354. An eligible academic entity that chooses to be subject to 310 CMR 30.354 is not required to have interim status or a RCRA Part B permit for the accumulation of unwanted material and hazardous waste in its laboratories, provided the laboratories comply with the provisions of 310 CMR 30.354 and the eligible academic entity has a Laboratory Management Plan (LMP) in accordance with 310 CMR 30.354(14) that describes how the laboratories owned by the eligible academic entity will comply with the requirements of 310 CMR 30.354.

(6) Labeling and Management Standards for Containers of Unwanted Material in the Laboratory. An eligible academic entity shall manage containers of unwanted material while in the laboratory in accordance with the requirements in 310 CMR 30.354.

(a) Labeling. Label unwanted material as follows:

1. The following information shall be affixed or attached to the container:
 - a. The words "unwanted material" or another equally effective term that is to be used consistently by the eligible academic entity and that is identified in Part I of the Laboratory Management Plan; and
 - b. Sufficient information to alert emergency responders to the contents of the container. Examples of information that would be sufficient to alert emergency responders to the contents of the container include, but are not limited to:
 - i. The name of the chemical(s);
 - ii. The type or class of chemical, such as organic solvents or halogenated organic solvents.
 - c. The hazard(s) of the chemical(s);
 - d. The date that the unwanted material first began accumulating in the container; and
 - e. Information sufficient to allow a trained professional to properly identify whether an unwanted material is a hazardous waste and to assign the proper hazardous waste code(s), pursuant to 310 CMR 30.302.
2. The following information may be affixed or attached to the container, but must at a minimum be associated with (*i.e.*, the container information must be recorded and accessible using an electronic spreadsheet, a bar code or some other printed inventory of containers.) the container:
 - a. The description of the chemical contents or composition of the unwanted material or, if known, the product of the chemical reaction;
 - b. Whether the unwanted material has been used or is unused; and
 - c. A description of the manner in which the chemical was produced or processed, if applicable.

(b) Management of Containers in the Laboratory. An eligible academic entity shall properly manage containers of unwanted material in the laboratory to assure safe storage of the unwanted material, to prevent leaks, spills, emissions to the air, adverse chemical reactions, and dangerous situations that may result in harm to human health or the environment. Proper container management shall include the following:

1. Containers are maintained and kept in good condition, and damaged containers are replaced, over-packed, or repaired;
2. Containers are compatible with their contents to avoid reactions between the contents and the container; and are made of, or lined with, material that is compatible with the unwanted material so that the container's integrity is not impaired; and
3. Containers are kept closed at all times, except:
 - a. When adding, removing or bulking unwanted material;
 - b. A working container may be open until the end of the procedure or work shift, or until it is full, whichever comes first, at which time the working container must either be closed or the contents emptied into a separate container that is then closed; or

30.354: continued

- c. When venting of a container is necessary.
 - i. For the proper operation of laboratory equipment, such as with in-line collection of unwanted materials from high performance liquid chromatographs; or
 - ii. To prevent dangerous situations, such as build-up of extreme pressure.

(7) Training. An eligible academic entity shall provide training to all individuals working in a laboratory at the eligible academic entity, as follows:

- (a) Training for laboratory workers and students shall be commensurate with their duties so they understand the requirements in 310 CMR 30.354 and can implement them.
- (b) An eligible academic entity can provide training for laboratory workers and students in a variety of ways including, but not limited to:
 - 1. Instruction by the professor or laboratory manager before or during an experiment;
 - 2. Formal classroom training;
 - 3. Electronic/written training;
 - 4. On-the-job training; or
 - 5. Written or oral exams.
- (c) An eligible academic entity that is a large quantity generator shall maintain documentation for the durations specified in 310 CMR 30.516(1)(e) demonstrating training for all laboratory workers that is sufficient to determine whether laboratory workers have been trained. Examples of documentation demonstrating training can include, but are not limited to, the following:
 - 1. Sign-in or attendance sheet(s) for training session(s);
 - 2. Syllabus for training session;
 - 3. Certificate of training completion; or
 - 4. Test results.
- (d) A trained professional shall:
 - 1. Accompany the transfer of unwanted material and hazardous waste when the unwanted material and hazardous waste is removed from the laboratory; and
 - 2. Make the hazardous waste determination, pursuant to 310 CMR 30.302, for unwanted material.

(8) Removing Containers of Unwanted Material from the Laboratory.

- (a) Removing containers of unwanted material on a regular schedule. An eligible academic entity shall either:
 - 1. Remove all containers of unwanted material from each laboratory on a regular interval, not to exceed six months; or
 - 2. Remove containers of unwanted material from each laboratory within six months of each container's accumulation start date.
- (b) The eligible academic entity shall specify in Part I of its Laboratory Management Plan whether it will comply with 310 CMR 30.354(8)(a)1. or 310 CMR 30.354(8)(a)2. for the regular removal of unwanted material from its laboratories.
- (c) The eligible academic entity shall specify in Part II of its Laboratory Management Plan how it will comply with 310 CMR 30.354(8)(a)1. or 310 CMR 30.354(8)(a)2. and develop a schedule for regular removals of unwanted material from its laboratories.
- (d) Removing containers of unwanted material when volumes are exceeded.
 - 1. If a laboratory accumulates a total volume of unwanted material (including reactive acutely hazardous unwanted material) in excess of 55 gallons before the regularly scheduled removal, the eligible academic entity shall ensure that all containers of unwanted material in the laboratory, (including reactive acutely hazardous unwanted material):
 - a. Are marked on the label that is affixed or attached to the container with the date that 55 gallons is exceeded; and
 - b. Are removed from the laboratory within ten calendar days of the date that 55 gallons was exceeded, or at the next regularly scheduled removal, whichever comes first.
 - 2. If a laboratory accumulates more than one quart of reactive acutely hazardous unwanted material before the regularly scheduled removal, then the eligible academic entity shall ensure that all containers of reactive acutely hazardous unwanted material:

30.354: continued

- a. Are marked on the label that is affixed or attached to the container with the date that one quart is exceeded; and
- b. Are removed from the laboratory within ten calendar days of the date that one quart was exceeded, or at the next regularly scheduled removal, whichever comes first.

(9) Where and When to Make the Hazardous Waste Determination and Where to Send Containers of Unwanted Material upon Removal from the Laboratory. Large Quantity Generators, Small Quantity Generators and Very Small Quantity Generators – an eligible academic entity shall ensure that a trained professional makes a hazardous waste determination, pursuant to 310 CMR 30.302, for unwanted material in any of the following areas:

- (a) In the laboratory before the unwanted material is removed from the laboratory, in accordance with 310 CMR 30.354(10);
- (b) Within four calendar days of arriving at an on-site central accumulation area, in accordance with 310 CMR 30.354(11); and
- (c) Within four calendar days of arriving at an on-site interim status or licensed treatment, storage or disposal facility, in accordance with 310 CMR 30.354(12).

(10) Making the Hazardous Waste Determination in the Laboratory before the Unwanted Material Is Removed from the Laboratory. If an eligible academic entity makes the hazardous waste determination, pursuant to 310 CMR 30.302, for unwanted material in the laboratory, it shall comply with the following:

- (a) A trained professional shall make the hazardous waste determination, pursuant to 310 CMR 30.302, before the unwanted material is removed from the laboratory.
- (b) If an unwanted material is a hazardous waste, the eligible academic entity shall:
 1. Write the words "hazardous waste" on the container label that is affixed or attached to the container, before the hazardous waste may be removed from the laboratory; and
 2. Write the appropriate hazardous waste code(s) on the label that is affixed or attached to the container before the hazardous waste is transported off-site.
 3. Count the hazardous waste toward the eligible academic entity's generator status, pursuant to 310 CMR 30.351(2)(a) and 310 CMR 30.353(2)(a), in the calendar month that the hazardous waste determination was made.
- (c) A trained professional shall accompany all hazardous waste that is transferred from the laboratory(ies) to an on-site central accumulation area or on-site interim status or licensed treatment, storage or disposal facility.
- (d) When hazardous waste is removed from the laboratory: Large Quantity Generators, Small Quantity Generators and Very Small Quantity Generators shall ensure it is taken directly from the laboratory(ies) to an on-site central accumulation area, or on-site interim status or licensed treatment, storage or disposal facility, or transported off-site.
- (e) An unwanted material that is a hazardous waste is subject to all applicable hazardous waste regulations when it is removed from the laboratory.

(11) Making the Hazardous Waste Determination at an On-site Central Accumulation Area. If an eligible academic entity makes the hazardous waste determination, pursuant to 310 CMR 30.302, for unwanted material at an on-site central accumulation area, it shall comply with the following:

- (a) A trained professional shall accompany all unwanted material that is transferred from the laboratory(ies) to an on-site central accumulation area.
- (b) All unwanted material removed from the laboratory(ies) shall be taken directly from the laboratory(ies) to the on-site central accumulation area.
- (c) The unwanted material becomes subject to the generator accumulation regulations of 310 CMR 30.340 through 30.343 for large quantity generators, 310 CMR 30.351 for small quantity generators or 310 CMR 30.353 for Very Small Quantity Generators as soon as it arrives in the central accumulation area, except for the "hazardous waste" labeling requirements of 310 CMR 30.682.
- (d) A trained professional shall determine, pursuant to 310 CMR 30.302, if the unwanted material is a hazardous waste within four calendar days of the unwanted materials' arrival at the on-site central accumulation area.

30.354: continued

- (e) If the unwanted material is a hazardous waste, the eligible academic entity shall:
 1. Write the words "hazardous waste" on the container label that is affixed or attached to the container, within four calendar days of arriving at the on-site central accumulation area and before the hazardous waste may be removed from the on-site central accumulation area;
 2. Write the appropriate hazardous waste code(s) on the container label that is on the label that is affixed or attached to the container before the hazardous waste may be treated or disposed of on-site or transported off-site;
 3. Count the hazardous waste toward the eligible academic entity's generator status, pursuant to 310 CMR 30.351(2)(a) and 30.353(2)(a) in the calendar month that the hazardous waste determination was made; and
 4. Manage the hazardous waste according to all applicable hazardous waste regulations.

(12) Making the Hazardous Waste Determination at an On-site Interim Status or Licensed Treatment, Storage or Disposal Facility. If an eligible academic entity makes the hazardous waste determination, pursuant to 310 CMR 30.302, for unwanted material at an on-site interim status or licensed treatment, storage or disposal facility, it shall comply with the following:

- (a) A trained professional shall accompany all unwanted material that is transferred from the laboratory(ies) to an on-site interim status or licensed treatment, storage or disposal facility.
- (b) All unwanted material removed from the laboratory(ies) shall be taken directly from the laboratory(ies) to the on-site interim status or licensed treatment, storage or disposal facility.
- (c) The unwanted material becomes subject to the terms of the eligible academic entity's hazardous waste license or interim status requirements as soon as it arrives in the on-site treatment, storage or disposal facility.
- (d) A trained professional shall determine, pursuant to 310 CMR 30.302, if the unwanted material is a hazardous waste within four calendar days of the unwanted materials' arrival at an on-site interim status or licensed treatment, storage or disposal facility.
- (e) If the unwanted material is a hazardous waste, the eligible academic entity shall:
 1. Write the words "hazardous waste" on the container label that is affixed or attached to the container within four calendar days of arriving at the on-site interim status or licensed treatment, storage or disposal facility and before the hazardous waste may be removed from the on-site interim status or licensed treatment, storage or disposal facility;
 2. Write the appropriate hazardous waste code(s) on the container label that is affixed or attached to the container before the hazardous waste may be treated or disposed on-site or transported off-site;
 3. Count the hazardous waste toward the eligible academic entity's generator status, pursuant to 310 CMR 30.351(2)(a) and 310 CMR 30.353(2)(a) in the calendar month that the hazardous waste determination was made; and
 4. Manage the hazardous waste according to all applicable hazardous waste regulations.

(13) Laboratory Clean-outs.

- (a) One time per 12-month period for each laboratory, an eligible academic entity may opt to conduct a laboratory clean-out that is subject to all the applicable requirements of 310 CMR 30.354, except that:
 1. If the volume of unwanted material in the laboratory exceeds 55 gallons (or one quart of reactive acutely hazardous unwanted material), the eligible academic entity is not required to remove all unwanted materials from the laboratory within ten calendar days of exceeding 55 gallons (or one quart of reactive acutely hazardous unwanted material), as required by 310 CMR 30.354(8). Instead, the eligible academic entity shall remove all unwanted materials from the laboratory within 30 calendar days from the start of the laboratory clean-out; and
 2. For the purposes of on-site accumulation, an eligible academic entity is not required to count hazardous waste that is an unused commercial chemical product (listed in 310 CMR 30.133 or 30.136, or exhibiting one or more characteristics in 310 CMR 30.120 through 30.125) generated solely during the laboratory clean-out toward its hazardous waste generator status, pursuant to 310 CMR 30.351(2)(b) and 30.353(2)(b). An unwanted material that is generated prior to the beginning of the laboratory clean-out and is still in the laboratory at the time the laboratory clean-out commences shall be counted toward hazardous waste generator status, pursuant to 310 CMR 30.351(2)(a) and 30.353(2)(a), if it is determined to be hazardous waste; and

30.354: continued

3. For the purposes of off-site management, an eligible academic entity shall count all its hazardous waste, regardless of whether the hazardous waste was counted toward generator status under 310 CMR 30.354(13)(a)2., and the hazardous waste is subject to all applicable hazardous waste regulations when it is transported off-site; and
 4. An eligible academic entity shall document the activities of the laboratory clean-out. The documentation shall, at a minimum, identify the laboratory being cleaned out, the date the laboratory clean-out begins and ends, and the volume of hazardous waste generated during the laboratory clean-out. The eligible academic entity must maintain the records for a period of three years from the date the clean-out ends; and
- (b) For all other laboratory clean-outs conducted during the same 12-month period, an eligible academic entity is subject to all the applicable requirements of 310 CMR 30.354 including, but not limited to:
1. The requirement to remove all unwanted materials from the laboratory within ten calendar days of exceeding 55 gallons (or one quart of reactive acutely hazardous unwanted material), as required by 310 CMR 30.354(8); and
 2. The requirement to count all hazardous waste, including unused hazardous waste, generated during the laboratory clean-out toward its hazardous waste generator status, pursuant to 310 CMR 30.351(2)(a) and 310 CMR 30.353(2)(a).

(14) Laboratory Management Plan. An eligible academic entity shall develop and retain a written Laboratory Management Plan, or revise an existing written plan, and make the Laboratory Management Plan available to the Department upon request. The Laboratory Management Plan is a site-specific document that describes how the eligible academic entity will manage unwanted materials in compliance with 310 CMR 30.354. An eligible academic entity may write one Laboratory Management Plan for all the laboratories owned by the eligible academic entity that have opted into 310 CMR 30.354, even if the laboratories are located at sites with different EPA Identification Numbers. The Laboratory Management Plan shall contain two parts with a total of nine elements identified in 310 CMR 30.354(14)(a) and (b). In Part I of its Laboratory Management Plan, an eligible academic entity shall describe its procedures for each of the elements listed in 310 CMR 30.354(14)(a). An eligible academic entity must implement and comply with the specific provisions that it develops to address the elements in Part I of the Laboratory Management Plan. In Part II of its Laboratory Management Plan, an eligible academic entity must describe its best management practices for each of the elements listed in paragraph 310 CMR 30.354(14)(b). The specific actions taken by an eligible academic entity to implement each element in Part II of its Laboratory Management Plan may vary from the procedures described in the eligible academic entity's Laboratory Management Plan, without constituting a violation of 310 CMR 30.354. An eligible academic entity may include additional elements and best management practices in Part II of its Laboratory Management Plan, if it chooses.

- (a) The eligible academic entity shall implement and comply with the specific provisions of Part I of its Laboratory Management Plan. In Part I of its Laboratory Management Plan, an eligible academic entity shall:
1. Describe procedures for container labeling in accordance with 310 CMR 30.354(6)(a) by:
 - a. Identifying whether the eligible academic entity will use the term "unwanted material" on the containers in the laboratory. If not, identify an equally effective term that will be used in *lieu* of "unwanted material" and consistently by the eligible academic entity. The equally effective term, if used, shall have the same meaning and is subject to the same requirements as "unwanted material"; and
 - b. Identifying the manner in which information that is associated with the container will be imparted.
 2. Identify whether the eligible academic entity will comply with 310 CMR 30.354(8)(a)1. or 310 CMR 30.354(8)(a)2. for regularly scheduled removals of unwanted material from the laboratory.
- (b) In Part II of its Laboratory Management Plan, an eligible academic entity must:
1. Describe its intended best practices for container labeling and management (*see* the required standards at 310 CMR 30.354(6)).
 2. Describe its intended best practices for providing training for laboratory workers and students commensurate with their duties (*see* the required standards at 310 CMR 30.354(7)(a) and (b)).

30.354: continued

3. Describe its intended best practices for providing training to ensure safe on-site transfers of unwanted material and hazardous waste by trained professionals (*see* the required standards at 310 CMR 30.354(7)(d)).
 4. Describe its intended best practices for removing unwanted material from the laboratory, including:
 - a. For regularly scheduled removals, develop a regular schedule for identifying and removing unwanted materials from its laboratories (*see* the required standards at 310 CMR 30.354(8)(a)1. and 310 CMR 30.354(8)(a)2.).
 - b. For removals when maximum volumes are exceeded:
 - i. Describe its intended best practices for removing unwanted materials from the laboratory within ten calendar days when unwanted materials have exceeded their maximum volumes (*see* the required standards at 310 CMR 30.354(8)(d)).
 - ii. Describe its intended best practices for communicating with environmental health and safety personnel that unwanted materials have exceeded their maximum volumes.
 5. Describe its intended best practices for making hazardous waste determinations, including specifying the duties of the individuals involved in the process (*see* the required standards at 310 CMR 30.302 and 310 CMR 30.354(9) through (12)).
 6. Describe its intended best practices for laboratory clean-outs, if the eligible academic entity plans to use the incentives for laboratory clean-outs provided in 310 CMR 30.354(13), including:
 - a. Procedures for conducting laboratory clean-outs (*see* the required standards at 310 CMR 30.354(13)(a)1. through 3.); and
 - b. Procedures for documenting laboratory clean-outs (*see* the required standards at 310 CMR 30.354(13)(a)4.).
 7. Describe its intended best practices for emergency prevention, including:
 - a. Procedures for emergency prevention, notification, and response, appropriate to the hazards in the laboratory;
 - b. A list of chemicals that the eligible academic entity has, or is likely to have, that become more dangerous when they exceed their expiration date and/or as they degrade;
 - c. Procedures to safely dispose of chemicals that become more dangerous when they exceed their expiration date and/or as they degrade; and
 - d. Procedures for the timely characterization of unknown chemicals.
- (c) An eligible academic entity shall make its Laboratory Management Plan available to laboratory workers, students, or any others at the eligible academic entity who request it.
- (d) An eligible academic entity shall review and revise its Laboratory Management Plan, as needed.

(15) Unwanted Material That Is Not Hazardous Waste. If an unwanted material does not meet the definition of hazardous waste in 310 CMR 30.010, it is no longer subject to 310 CMR 30.000, but shall be managed in compliance with any other applicable laws and regulations.

(16) Non-laboratory Hazardous Waste Generated at an Eligible Academic Entity. An eligible academic entity that generates hazardous waste outside of a laboratory is not eligible to manage that hazardous waste under 310 CMR 30.354; and remains subject to:

- (a) the generator requirements of 310 CMR 30.302 and 310 CMR 30.340(6) for large quantity generators, 310 CMR 30.351(5) for small quantity generators and 310 CMR 30.353(6)(i) for Very Small Quantity Generators (if the hazardous waste is managed in a satellite accumulation area); and
- (b) all other applicable generator requirements of 310 CMR 30.300, with respect to that hazardous waste.

(17) Eligible academic entities that choose not to comply with 310 CMR 30.354 with respect to their laboratories are subject to the full requirements of 310 CMR 30.000, as applicable.

30.360: SPECIAL CONDITIONS

30.361: International Shipments

- (1) Any person who exports hazardous waste to a destination outside of the United States shall:
- (a) Comply with the requirements of 40 CFR 262, Subpart E, which are hereby incorporated by reference subject to the following additions, modifications and exceptions: All references to federal hazardous waste regulations are replaced with the corresponding state code analog as shown in Table 30.361:

Table 30.361

Federal Citation	State Analog
[40 CFR] Part 263	310 CMR 30.400
40 CFR 262.58	N/A
40 CFR 260.10	310 CMR 30.010
40 CFR Part 261, Subparts C & D	310 CMR 30.100
[40 CFR] 260.2	310 CMR 3.00
40 CFR 262.20 – 262.23, or 40 CFR Part 262, Subpart B	310 CMR 30.310
40 CFR 264.72(a)	310 CMR 30.533(1)
40 CFR 262.20(d)	310 CMR 311(5)
40 CFR 263.20(g)(4)	310 CMR 30.405(8)(d)
40 CFR 262.42	310 CMR 30.333
40 CFR 262.41	310 CMR 30.332

- (2) When importing hazardous waste from a foreign country into Massachusetts, the generator shall comply with the federally enforceable import requirements of 40 CFR 262, Subpart F, which are hereby incorporated by reference subject to the following additions, modifications and exceptions:

- (a) 40 CFR 262.60(a) is hereby modified by substituting the reference to "the requirements of this part" with "310 CMR 30.300"; and
- (b) 40 CFR 262.60(b) is hereby modified by substituting the reference to "262.20(a)" with "310 CMR 30.311 through 30.314".

30.390: Special Provisions for Accumulation of Household Hazardous Waste and/or Hazardous Waste Generated by Very Small Quantity Generators

310 CMR 30.390 through 30.399, cited collectively as 310 CMR 30.390, set forth standards and requirements to be met by sponsors that wish to accept for accumulation household hazardous waste and/or hazardous waste generated by Very Small Quantity Generators.

30.391: Definitions

As used in 310 CMR 30.390, the following terms shall have the following meanings:

Center means a permanent site established or maintained by a sponsor at which a sponsor offers to accept household hazardous waste and/or hazardous waste generated by Very Small Quantity Generators.

Event means an event at which a sponsor offers to accept household hazardous waste and/or hazardous waste generated by Very Small Quantity Generators for a period not to exceed 48 hours. Hazardous waste may be accumulated for the duration of the event, and for a period not to exceed 24 hours after the closing of the event for the purposes of classifying, consolidating and packing collected hazardous waste in preparation for shipment.

Public Entity means the Commonwealth of Massachusetts or any authority, district, municipality or political subdivision of the Commonwealth of Massachusetts.

Sponsor is a person that is responsible for ensuring that an event or center is and remains in compliance with 310 CMR 30.000, and that notifies the Department of an event or applies for Department approval for a center.

30.391: continued

Surplus Paint means leftover paint products or leftover paint related materials which may include, but not be limited to, latex-based paints, oil-based paints, stains, lacquers, varnishes, and spent or leftover turpentine, thinners and mineral spirits.

30.392: Events for the Accumulation of Household Hazardous Waste and/or Hazardous Waste Generated by Very Small Quantity Generators

- (1) Applicability and Compliance. A sponsor may conduct an event provided that the event is in compliance with the requirements set forth in 310 CMR 30.392.
- (2) Duration of an Event. The event's duration shall not exceed 48 hours. Hazardous waste may be accumulated for the duration of the event, and for a period not to exceed 24 hours after the closing of the event for the purposes of classifying, consolidating and packing collected hazardous waste in preparation for shipment.
- (3) Site Requirements. The site of the event shall meet all the following requirements:
 - (a) The site shall have a work area that is:
 1. located at least 50' from all containers and tanks containing ignitable materials not accepted at the event;
 2. sufficiently impervious to leaks and spills so that any spilled material can be readily collected and removed; and
 3. ventilated to ensure the adequate control of hazardous vapors, if the work area is indoors.
 - (b) The site shall have sufficient space available to allow for:
 1. the accumulation and packaging of hazardous waste;
 2. the entrance and egress of persons bringing hazardous waste to the event and of persons working for the event; and
 3. the entrance and preparation requirements of emergency response vehicles.
 - (c) At all times while the event is in progress, and until all hazardous wastes accepted at the event have been removed from the site of the event, the following requirements shall apply:
 1. Access to the event shall be restricted to those persons participating in the event.
 2. All drains at the site of the event shall be covered or otherwise protected from releases and threats of release of hazardous waste;
 3. Smoking shall be prohibited at the site of the event and "No Smoking" signs shall be posted at the site at locations where such signs shall be easily readable;
 4. Signs that clearly indicate the intended flow of traffic at the site shall be prominently posted at the site of the event;
 5. Emergency, cleanup and protective equipment, including, but not limited to, a respirator, first aid kit, eyewash fluid, broom, dustpan, shovel, and absorbent, and the emergency response plan required pursuant to 310 CMR 30.392(5) shall be located at the site in a place readily accessible in an emergency; and
 6. All areas where hazardous wastes are accumulated shall be operated with appropriate security measures at all times as described in 310 CMR 30.341(3);
 - (d) The use of an underground tank for the accumulation of any hazardous waste accepted at the event is prohibited.
- (4) Use of Licensed Transporter. The sponsor shall retain the services of a transporter licensed by the Department for the transport of the hazardous waste(s) accepted at the event.
- (5) Emergency Response Plan. The sponsor shall adopt and, if necessary, implement an emergency response plan which shall include at least the following:
 - (a) the arrangements specified in 310 CMR 30.351(9)(j) and (k);
 - (b) a map of the layout of the site which shall be distributed at least two business days before commencement of the event to the transporter retained for the event pursuant to 310 CMR 30.392(4) and to the organizations referred to in 310 CMR 30.351(9)(j);
 - (c) provisions for the entrance and exit of emergency vehicles at all times during the event, and for halting and/or redirecting traffic and for clearing the site in an emergency;
 - (d) provisions for cleanup and protective equipment required pursuant to 310 CMR 30.392(3)(c)5.;
 - (e) provisions for traffic control at the site of the event;
 - (f) provisions for compliance with 310 CMR 30.351(9)(c)2. and 310 CMR 30.351(9)(i).
- (6) Event Operational Requirements.
 - (a) Except as otherwise provided in 310 CMR 30.392(6)(b), the sponsor or his designee shall:

30.392: continued

1. comply with the requirements set forth in 310 CMR 30.061, 30.301 through 30.305, 30.310 through 30.314, 30.320 through 30.324, 30.331, 30.333, 30.334, 30.353(9), 30.360, 30.683 and 30.684;
 2. notify in writing the appropriate DEP regional office of the date and location of the event at least one month in advance of the event, and for events with a sponsor that is a private entity, also notify the Board of Health and the Fire Department of the municipality in which the event is to take place;
 3. refuse to accept any waste if there is reason to believe that the hazardous waste is not household hazardous waste or hazardous waste generated by a Very Small Quantity Generator, or waste that is unidentifiable, explosive or reactive, cannot be lawfully disposed of, or is specified as unacceptable in the contract between the sponsor and the transporter;
 4. be available at all times during the event to respond to an emergency;
 5. be familiar with the layout of the site and all emergency response plans; and
 6. verify that the transporter has completed the packaging and labeling of the accumulated hazardous waste prior to the departure of the transporter from the site.
- (b) For events where the sponsor is a public entity (*i.e.*, a municipality), the sponsor shall retain the services of a hazardous waste transporter licensed by the Department who shall:
1. comply with 310 CMR 30.392(6)(a)(1), and (3) through (5);
 2. provide a trained field chemist who shall remain at the site of the event for the duration of the event;
 3. properly, lawfully, and promptly handle and remove the hazardous waste accepted at the event;
 4. provide the sponsor with information on the total quantities of each type of hazardous waste manifested, and a summary of the ultimate waste disposal method or facility used for each type of hazardous waste collected;
- (c) For the purpose of complying with 310 CMR 30.310 through 30.314, and the manifest requirements cited in 310 CMR 30.392(6)(a):
1. if the sponsor is a public entity, the transporter shall sign the manifest as the generator of the hazardous waste accepted at the event;
 2. if the sponsor is a private entity, either the sponsor or the transporter shall sign the manifest as the generator of the hazardous waste accepted at the event.

(7) Determining Hazardous Waste Status for Generators that are Sponsors. A generator of hazardous waste who is also a sponsor of an event is not required to count hazardous waste received during those collection activities toward its hazardous waste generator status, provided the collected hazardous waste is managed independently (*i.e.*, packaged, accumulated, stored and disposed separately) from the generator's own hazardous waste. However, if the generator chooses to combine its own hazardous waste with hazardous waste collected at the event(s), then the hazardous waste collected at the event(s) shall be counted toward the generator's status.

(8) For events that accept any of the wastes listed at 310 CMR 30.143(2), sponsors may manage such wastes as universal wastes under 310 CMR 30.1000 or as household hazardous wastes under 310 CMR 30.390. If wastes are managed as universal wastes, the accumulation limits of 310 CMR 30.392(2) will continue to apply *in lieu* of the time limits of 310 CMR 30.1000.

30.393: Centers for the Accumulation of Hazardous Waste Generated by Households and/or Very Small Quantity Generators

(1) Applicability and Compliance. A sponsor may establish or maintain a center provided that the center is in compliance with the requirements set forth in 310 CMR 30.393, as specified below. All centers shall be subject to 310 CMR 30.393(1) through 30.393(4). A center that accepts waste oil shall also be subject to 310 CMR 30.393(5).

(2) Application for Department Approval. Any sponsor who wishes to establish or operate a center shall, before establishing or operating the center, apply for and obtain the Department's approval.

30.393: continued

The approval of applications for centers that accept only waste oil and/or surplus paint, submitted pursuant to 310 CMR 30.393(3), shall be deemed granted as a "presumptive approval" unless, within 21 days of the Department's receipt of an application, the Department notifies the applicant of a deficiency or denies the application in writing. If deemed granted, the applicant may act in good faith on this approval even though the applicant does not have a written statement by the Department to that effect. For centers that accept hazardous wastes other than waste oil and surplus paint, the applicant shall apply for and receive written approval from the Department. The sponsor shall sign all applications for the Department's approval to establish or maintain a center in compliance with the requirements of 310 CMR 30.009 and 310 CMR 30.807(1). The Department may give an approval pursuant to 310 CMR 30.393 and allow that approval to remain in effect only to the extent the Department is persuaded that such action would not lead to a significant potential hazard to public health, safety, or welfare, or to the environment, or be in noncompliance with 310 CMR 30.393. In addition to any requirements set forth in 310 CMR 30.393, the Department may impose any other conditions in its approval to ensure that the activity in question does not constitute a significant potential hazard to public health, safety, or welfare or the environment.

(3) Application Procedure for Centers. Any sponsor who wishes to establish or maintain a center shall apply for the Department's approval of that activity using a form prescribed by the Department. Application forms required by the Department may vary, depending on the nature of the hazardous waste proposed to be collected. The application shall specify all additional persons retained by the sponsor to operate or maintain the center. A copy of each application shall be submitted to the Board of Health and the Fire Department of the municipality in which the proposed center is to be located.

(4) Management Standards for Centers. A sponsor or his designee shall comply with the following:

- (a) 310 CMR 30.001 through 30.199;
- (b) 310 CMR 30.310 through 30.331, 30.333 through 30.334, 310 CMR 30.341(3) through (5), 30.342(1)(e) and 30.343(1)(d)2;
- (c) 310 CMR 30.351(8)(a), (b)(1) through (4) and 30.351(9) through (11);
- (d) 310 CMR 30.360;
- (e) 310 CMR 30.560(1) through (3) and 310 CMR 30.689;
- (f) The site requirements set forth in 310 CMR 30.392(3), except for 310 CMR 30.392(3)(c)1.;
- (g) A center may accumulate hazardous waste for up to 180 days without having to obtain a license from the Department for such accumulation provided the requirements of 310 CMR 30.393(4) are complied with; the 180-day accumulation period does not begin until the amount accumulated at any one time equals 100 hundred or more kilograms of non-acutely hazardous waste, or any amount of acutely hazardous waste; a center that intends to or does accumulate hazardous waste for more than 180 days is an operator of a storage facility and shall comply with the requirements in 310 CMR 30.500 through 30.900 applicable to the storage of hazardous waste;
- (h) Signs shall be clearly and prominently displayed describing the kinds of hazardous waste accepted at the center;
- (i) An attendant, trained in sorting procedures for determination of hazard, classification for reuse and recycling and potential health and safety issues related to handling hazardous waste, shall be present at all times while the center is open to accept hazardous waste.
- (j) A center that receives hazardous waste generated by Very Small Quantity Generators shall be subject to 310 CMR 30.353(9) and all other regulations applicable to persons who receive hazardous waste generated by Very Small Quantity Generators;
- (k) All centers shall report to the Department by January 15th each year on the previous year's activity. The report shall be submitted on a form prescribed by the Department, and shall describe the quantities and types of hazardous waste and other materials collected during the previous calendar year;
- (l) The sponsor shall retain the services of a transporter licensed by the Department for the transport of the types of hazardous waste accepted at the center;

30.393: continued

- (m) A generator of hazardous waste who is also a center is not required to count hazardous waste received during those collection activities toward its hazardous waste generator status, provided that collected hazardous waste is managed independently (*i.e.*, packaged, accumulated, stored and disposed separately) from the generator's own hazardous waste. However, if the generator chooses to combine its own hazardous waste with hazardous waste collected at the center, then the hazardous waste collected at the center shall be counted toward the generator's status;
- (n) The center shall refuse to accept any waste if there is reason to believe that the waste is not household hazardous waste or hazardous waste generated by a Very Small Quantity Generator, or waste that is unidentifiable, explosive or reactive, cannot be lawfully disposed of, or is specified as unacceptable in the contract between the sponsor and the transporter; and
- (o) A center that accepts waste oil shall accumulate and manage such waste oil in compliance with the requirements in 310 CMR 30.253.

(5) Standards for Waste Oil Recycled in Used Oil Fuel Fired Space Heaters Located in Centers. In addition to the management standards specified in 310 CMR 30.393(4), a center where waste oil is burned for energy recovery shall comply with the following:

- (a) the space heater shall be operated in accordance with 310 CMR 30.222, as applicable;
- (b) each batch of waste oil shall be tested using appropriate analytical methods contained in EPA's Test Methods for Evaluating Solid Waste, SW-846, (*e.g.* the field screening method 9077) to determine whether the waste oil contains 1,000 or more ppm of total halogens; in cases where the total halogen concentration exceeds 1,000 ppm, the waste oil is presumed to be adulterated with halogenated hazardous waste, and therefore must be managed as a hazardous waste unless proved otherwise pursuant to 310 CMR 30.393(6)(c);
- (c) in cases where the concentration of total halogens is greater than 1,000 ppm, the sponsor may use the rebuttable presumption provision cited at 310 CMR 30.215(1)(b) to document that the waste oil does not contain halogenated constituents listed in 310 CMR 30.160 in significant concentration, and therefore can be managed as a used oil fuel;
- (d) If the site of the waste oil collection center and the site of the waste oil fired space heater is different, the sponsor of the waste oil collection center shall be allowed to transport such waste oil to a used oil fired space heater operated by the same sponsor provided that such transport is done in compliance with 310 CMR 30.353(7)(c),(f),(g),(i) and (l).

(6) For centers that accept any of the wastes listed at 310 CMR 30.143(2), sponsors may manage such wastes as universal wastes under 310 CMR 30.1000 or as household hazardous wastes under 310 CMR 30.390. If these wastes are managed as universal wastes, a separate area shall be provided and marked as a universal waste accumulation area.

30.394: Management Standards for the Collection and Transport of Hazardous Waste to and from Events and/or Centers

For the purposes of 310 CMR 30.390 only:

- (1) A licensed transporter participating in an activity authorized pursuant to 310 CMR 30.390, may collect hazardous waste from individual events for the purpose of delivering such waste to a center, may consolidate such waste at centers, and may use a shipping paper in *lieu* of a manifest for transportation of such waste between individual events or between an event and a center; but only if the following conditions are complied with:
 - (a) containers of hazardous waste shall be closed in compliance with 310 CMR 30.685(1), and labelled in compliance with 310 CMR 30.682;
 - (b) partially full containers collected from an event may be unloaded from a vehicle at a center, and consolidation of wastes from such partially full containers may occur only at a center;
 - (c) for full containers, a manifest that identifies the transporter as the generator must be initiated by the transporter upon collection at an event or center; for partially full containers a shipping paper may be used by the transporter to document shipment between any two events or between an event and a center;
 - (d) the transporter must complete collection of hazardous waste from events, for delivery to a center, within 48 hours of collection from the first event; and

30.394: continued

(e) the transporter must comply with 310 CMR 30.408 with regard to all hazardous waste collected and transported on a manifest.

(2) Any person may collect and transport household hazardous waste from households to an event, center or hazardous waste facility without the use of a vehicle licensed by the Department and without the use of a manifest or shipping paper provided that:

- (a) the driver is sufficiently trained in the procedures and practices described in 310 CMR 30.409(1)(c), (d), (e) and 310 CMR 30.415(4) for the safe management of hazardous waste;
- (b) the household hazardous waste is transported in compliance with 310 CMR 30.353(7)(c);
- (c) each waste shall be shipped in an appropriate container that prevents spilling and/or mixing with incompatible wastes, and the container shall otherwise be in good condition for handling and transportation; and
- (d) the total amount of hazardous waste transported at any one time does not exceed 200 kilograms.

30.400: REQUIREMENTS FOR TRANSPORTERS OF HAZARDOUS WASTE

30.401: Purpose and Applicability

(1) 310 CMR 30.401 through 30.499, cited collectively as 310 CMR 30.400, prescribe requirements which apply to all persons transporting hazardous waste within or through the Commonwealth, unless specifically exempted in 310 CMR 30.000.

(2) A transporter of hazardous waste shall also comply with the requirements of 310 CMR 30.300 if that transporter:

- (a) Transports hazardous waste into Massachusetts from outside the United States; or
- (b) Mixes hazardous waste of different DOT shipping descriptions by placing them into a single container.

(3) 310 CMR 30.400 does not apply to the following:

- (a) Transport of hazardous waste by generators within the site where it is generated;
- (b) Transport of hazardous waste within the site of a facility licensed at that time by the Department for the treatment, storage, or disposal of hazardous waste if such transport was done by the owner or operator of the facility;
- (c) Transport of hazardous waste within a site at which such use is licensed at that time by the Department if such transport was done by the person so licensed;
- (d) Any air or rail transporter subject to regulation by the U.S. Department of Transportation, except that 310 CMR 30.401 and the requirements of 310 CMR 30.405, 30.406, 30.413, and 30.415 do apply to such transporters;
- (e) Any bulk shipment water transporter who is subject to regulation by the U.S. Coast Guard, except that 310 CMR 30.401 and the requirements of 310 CMR 30.405, 30.406, 30.413, and 30.415 do apply to such transporters.

(4) Any transporter of hazardous waste who has current and proper ICC approval as a common carrier or contract carrier shall not be required to obtain a license to transport hazardous waste through Massachusetts if:

- (a) That transporter neither accepts hazardous waste from any location in Massachusetts nor delivers hazardous waste to any location in Massachusetts; and
- (b) That transporter only passes through Massachusetts from a State of generation to another State for treatment, storage, use, or disposal of hazardous waste.

(5) Transporters described in 310 CMR 30.401(4) shall comply with all applicable requirements of Federal regulations, of regulations of States in which they pick up or deliver hazardous waste, and of 310 CMR 30.401, 30.408 and 30.413 while they are in Massachusetts, and need not comply with any other requirement of 310 CMR 30.400.

30.401: continued

(6) 310 CMR 30.401(2) and (7), 30.402(1), 30.404, 30.405, 30.406, 30.408, 30.412 and 30.413 shall apply, and all other provisions of 310 CMR 30.400 shall not apply, to:

- (a) explosives which are disposed of, or whose disposal is supervised, by U.S. Army Explosive Ordnance Disposal Personnel; and
- (b) Explosives regulated by the Department of Public Safety pursuant to M.G.L. c. 148, § 9 and regulations codified at 527 CMR 13.00 *et seq.*

(7) Transporters of regulated recyclable materials shall transport such materials in compliance with 310 CMR 30.200 or all applicable provisions of 310 CMR 30.000 other than 310 CMR 30.200.

30.402: Requirements for Transporting Hazardous Waste

No person, unless exempted by 310 CMR 30.401, shall transport hazardous waste without obtaining and maintaining in effect:

- (1) An EPA identification number from the Department, pursuant to 310 CMR 30.060 through 30.064;
- (2) A valid license from the Department to transport hazardous waste;
- (3) A vehicle identification device for each vehicle used by the licensee to transport hazardous waste; and
- (4) A written certification by the Massachusetts Department of Telecommunications and Energy that the person is in compliance with M.G.L. c. 159B.
- (5) A written certification of hazardous waste transporter training in accordance with 310 CMR 30.409(2).

30.403: Accepting Shipment of Hazardous Waste

A transporter may accept hazardous waste only from the following:

- (1) A generator who has an EPA identification number or a valid Massachusetts identification number.
- (2) Another transporter who at that time has a valid license from the Department;
- (3) A bulk shipment water transporter; or
- (4) A rail transporter.

30.404: Delivery of Shipment of Hazardous Waste

(1) A transporter shall deliver the entire quantity of hazardous waste, which that transporter has accepted from a generator or from another transporter to either:

- (a) the designated facility listed on the manifest; or
- (b) the alternate designated facility, if the hazardous waste cannot be delivered to the designated facility due to an emergency; or
- (c) the next transporter designated on the manifest, if any.

(2)(a) If the hazardous waste cannot be delivered in compliance with 310 CMR 30.404(1) and 310 CMR 30.305, because of an emergency condition, then the transporter must contact the generator for further instructions and shall revise the manifest according to the generator's instructions before resuming transport of the hazardous waste.

(b) If no instructions are received from the generator, the transporter shall return all the hazardous waste to the generator.

30.404: continued

- (3) If hazardous waste is rejected by the designated facility while the transporter is on the facility's premises, then the transporter shall obtain the following:
- (a) For a partial load rejection or for regulated quantities of container residues, a copy of the original manifest that includes the facility's date and signature, and the Manifest Tracking Number of the new manifest that will accompany the shipment, and a description of the partial rejection or container residue in the discrepancy block of the original manifest. The transporter must retain a copy of this manifest in accordance with 310 CMR 30.331(1), and give the remaining copies of the original manifest to the rejecting designated facility. If the transporter is forwarding the rejected part of the shipment or a regulated container residue to an alternate facility or returning it to the generator, the transporter must obtain a new manifest to accompany the shipment, and the new manifest shall include all of the information required in 310 CMR 30.533(5)(a) through (f).
 - (b) For a full load rejection that will be taken back by the transporter, a copy of the original manifest that includes the rejecting facility's signature and date attesting to the rejection, the description of the rejection in the discrepancy block of the manifest, and the name, address, phone number, and Identification Number for the alternate facility or generator to whom the shipment must be delivered. The transporter shall retain a copy of the manifest in accordance with 310 CMR 30.331(1), and give a copy of the manifest containing this information to the rejecting designated facility. If the original manifest is not used, then the transporter shall obtain a new manifest for the shipment and comply with 310 CMR 30.533(5)(a) through (f).

30.405: Manifest Requirements

- (1) A transporter shall not accept hazardous waste from a generator or from another transporter unless the hazardous waste is accompanied by a manifest which is signed by the generator and, if applicable, signed by the other transporter in accordance with the requirements of 310 CMR 30.405(2).
- (2) Before accepting or transporting hazardous waste, the transporter shall sign and date the manifest, thereby acknowledging acceptance of the hazardous waste from the generator or other transporter. The first transporter shall return the necessary number of signed copies to the generator before leaving the site of the generator.
- (3) A hazardous waste transporter shall not accept any hazardous waste from a generator or from another transporter if:
 - (a) the hazardous waste is not as described on the manifest, or
 - (b) if the waste is not in containers that are packaged, labelled, and marked in compliance with 310 CMR 30.320 through 30.323.
- (4) The transporter shall ensure that the manifest accompanies the hazardous waste at all times.
- (5) A transporter who delivers a hazardous waste to another transporter or to the designated facility shall:
 - (a) Obtain the date of delivery and the handwritten signature of that transporter or of the owner or operator of the facility designated on the manifest;
 - (b) Retain one copy of the manifest for three years; and
 - (c) Give the remaining copies of the manifest to the accepting transporter or designated facility.
- (6) The requirements of 310 CMR 30.405(4), (5), and (8) do not apply to the transport of hazardous waste in bulk by water if:
 - (a) The hazardous waste is delivered in bulk by water to the designated facility; and
 - (b) A shipping paper containing all the information required on the manifest, excluding only the EPA identification numbers, generator certification and signatures, accompanies the hazardous waste; and
 - (c) The person delivering the hazardous waste to the initial bulk shipment water transporter obtains the date of delivery and signature of that water transporter on the manifest and forwards the manifest to the designated facility or subsequent transporter other than a bulk shipment water transporter; and
 - (d) The delivering transporter obtains the date of delivery and handwritten signature of the owner or operator of the designated facility on either the manifest or the shipping paper; and

30.405: continued

- (e) A copy of the shipping paper or manifest is retained by each bulk shipment water transporter.
- (7) For shipments involving rail transportation, the requirements of 310 CMR 30.405(4), (5), and (8) do not apply and the following requirements do apply:
- (a) When accepting hazardous waste from a non-rail transporter, the initial rail transporter shall:
1. Sign and date the manifest acknowledging acceptance of the hazardous waste;
 2. Return a signed copy of the manifest to the non-rail transporter;
 3. Forward at least three copies of the manifest to either: the next non-rail transporter, if any; or the designated facility, if the shipment is delivered to that facility by rail; or the last rail transporter designated to handle the waste in the United States; and
 4. Retain one copy of the manifest and rail shipping paper in compliance with 310 CMR 30.406.
- (b) Rail transporters shall ensure that a shipping paper containing all the information required on the manifest, excluding only the EPA identification numbers, generator certification, and signatures, accompanies the hazardous waste at all times. Intermediate rail transporters are not required to sign either the manifest or shipping paper.
- (c) When delivering hazardous waste to the designated facility, a rail transporter shall:
1. Obtain the date of delivery and handwritten signature of the owner or operator of the designated facility on either the manifest or the shipping paper if the manifest has not been received by the facility; and
 2. Retain a copy of the manifest or signed shipping paper in compliance with 310 CMR 30.406.
- (d) When delivering hazardous waste to a non-rail transporter, a rail transporter shall:
1. Obtain the date of delivery and the handwritten signature of the non-rail transporter on the manifest; and
 2. Retain a copy of the manifest in compliance with 310 CMR 30.406.
- (e) Before accepting hazardous waste from a rail transporter, a non-rail transporter shall sign and date the manifest and provide a copy to the rail transporter.
- (8) Transporters who transport hazardous waste out of the United States shall:
- (a) Sign and date the manifest in the international shipment block to indicate the date that the shipment left the United States and retain one copy in compliance with 310 CMR 30.406;
- (b) Return to the generator a copy of the manifest with the handwritten signature of the owner or operator of the facility or transporter to whom the shipment was delivered;
- (c) Give a copy of the manifest to a U.S. Customs official at the point of departure from the United States; and
- (d) In the case of exports other than those subject to subpart H of 40 CFR part 262, a transporter shall not accept such waste from a primary exporter or other person if he knows the shipment does not conform to the EPA Acknowledgment of Consent; and unless, in addition to a manifest signed by the generator as provided in this section, the transporter shall also be provided with an EPA Acknowledgment of Consent which, except for shipments by rail, is attached to the manifest (or shipping paper for exports by water (bulk shipment)). For exports of hazardous waste subject to the requirements of subpart H of 40 CFR Part 262, a transporter shall not accept hazardous waste without a tracking document that includes all information required by 40 CFR 262.84.
- (9) Transporters who own and operate their own vehicles to transport waste to their own recycling facility and deliver the recycled material back to the generator who generated it shall use the manifest described in 310 CMR 30.312 and shall comply with the requirements of 310 CMR 30.314, 30.405(1) through (4), and 30.406(1).

30.406: Record Keeping

- (1) A transporter of hazardous waste shall keep a copy of the manifest signed by the generator, by that transporter, and by the next designated transporter or the owner or operator of the designated facility, for a period of three years from the date the hazardous waste was accepted by the initial transporter.

30.406: continued

- (2) For shipments delivered to the designated facility by water in bulk shipment, each bulk shipment water transporter shall keep a copy of the shipping paper containing all the information required for a period of three years from the date the hazardous waste was accepted by the initial transporter.
- (3) For shipments of hazardous waste by rail within the United States:
 - (a) The initial rail transporter shall keep a copy of the manifest and shipping paper containing all the information required for a period of three years from the date the hazardous waste was accepted by the initial transporter; and
 - (b) The final rail transporter shall keep a copy of the manifest, or the shipping paper in *lieu* of the manifest, for a period of three years from the date the hazardous waste was accepted by the initial transporter.
- (4) The periods prescribed in 310 CMR 30.406 for keeping records shall be extended automatically for the duration of any unresolved enforcement action regarding the activity in question, or as ordered by the Department.

30.407: Reporting

- (1) All transporters licensed by the Department pursuant to 310 CMR 30.000 shall submit monthly operating reports to the Department no later than the last day of the following month. Such reports shall be on a machine readable file in a format prescribed by the Department and shall include, but not be limited to, for each shipment of hazardous waste, the following information:
 - (a) Generator EPA identification number, name, generator city, generator state, generator zip code, and site address;
 - (b) Manifest tracking number;
 - (c) Transporter(s) EPA identification number, transporter(s) state identification number;
 - (d) Designated facility EPA identification number;
 - (e) Number of containers, type of containers, total quantity, units, waste number, and handling code, for each waste stream;
 - (f) Generator certification date, Transporter(s) signature date, continuing transporter(s) signature date(s) as applicable, and designated facility signature date.
 - (g) Special handling instructions; and
 - (h) Discrepancy indication.
- (2) Wastes in transit at the end of the reporting period shall be reported in the monthly report for the month in which they were collected by the reporting transporter.
- (3) If hazardous waste is transported by a transporter licensed at that time by the Department from a generator to a facility which is licensed at that time by the Department and which is on the site where that hazardous waste was generated, and if that transporter, generator, and facility owner or operator are the same person, that hazardous waste need not be included in the monthly reports of that transporter.
- (4) Transporters who handle no hazardous wastes in a particular month shall submit a monthly report stating that fact to the Department no later than the last day of the following month.

30.408: Hazardous Wastes in Transit

- (1) A hazardous waste transporter shall expeditiously transport all shipments of hazardous waste directly from the generator to the facility designated on the manifest, except that the provisions of 310 CMR 30.408(2) shall apply if:
 - (a) there is a delay in the acceptance of the hazardous waste by the designated facility; or
 - (b) there are weather delays or vehicle breakdowns; or
 - (c) the driver is ill or "out of hours" pursuant to 49 CFR 395.3; or
 - (d) the shipment originated from a prescheduled sequence of combined less-than-truckload pickups from individual generators; or
 - (e) the hazardous wastes being shipped originated from water-contaminated tanks; or

30.408: continued

(f) the hazardous waste was generated pursuant to an emergency response pursuant to M.G.L. c. 21E.

(2) In the event of the occurrence of one or more of the conditions listed in 310 CMR 30.408(1)(a) through (f), the shipment of hazardous waste shall be held by the transporter in the transporter's vehicle in the original container(s) or tank(s) either in a licensed hazardous waste facility or in a transportation-related area. The hazardous waste may be held without being subject to the storage requirements of 310 CMR 30.000, for a period of up to five days, not including weekends or state holidays, provided that the containers are in compliance with the requirements set forth in 310 CMR 30.321 through 30.324. While hazardous waste is being held, the transporter's vehicle shall remain operational at all times so that the vehicle, (including any trailer) can be immediately moved. Parking of the vehicle shall be in compliance with 49 CFR § 397.7.

(3) A transporter who intends to or does hold a shipment of hazardous waste at any location for a period longer than 48 hours shall immediately notify the local fire chief.

(4) Notwithstanding the provisions of 310 CMR 30.408(2), a transporter may hold hazardous waste at or near a school or in a residentially zoned area if work is being conducted at such location or for the purpose of an emergency response pursuant to M.G.L. c. 21E.

(5) The transporter shall not unload any hazardous waste from the vehicle between the site of generation and the facility designated on the manifest except in the following circumstances:

- (a) a vehicle breakdown requires the transfer of the hazardous waste to another authorized vehicle for the purpose of continuing transportation; or
- (b) hazardous waste is unloaded from the vehicle and is transferred directly to another authorized vehicle at a facility which has a condition in its license that allows such transfers for the particular wastes being transported.

30.409: Instruction and Training

(1) All hazardous waste handlers and their employees who may handle hazardous waste or accompany vehicle drivers during handling or transportation of hazardous waste, shall successfully complete a program of instruction that teaches how to perform transportation duties in a way that ensures the transporter's compliance with all DOT requirements at 49 CFR Part 172, Subpart H and Part 177. Such program shall include, but not be limited to, the following:

- (a) Basic knowledge of DOT's labelling, packaging, placarding and shipping requirements as set forth at 49 CFR Parts 171 through 180, and all other applicable DOT regulations.
- (b) Training in safe vehicle operations as required by 49 CFR Section 177.800 including, but not limited to, pre-trip safety inspections, use of vehicle controls and equipment, and loading and unloading of materials.
- (c) Handling of hazardous wastes in a safe manner, and measures to protect drivers and employees from the hazards associated with the wastes.
- (d) Emergency handling procedures in the event of a discharge of hazardous waste during transportation, including containment of hazardous waste to minimize harm to the public health, safety, welfare or the environment in compliance with 49 CFR Section 177.854 and 310 CMR 30.413.
- (e) Emergency Response information required by 49 CFR Section 172.602.
- (f) Evidence of written or oral testing that the instruction program has been effectively completed as required by 49 CFR Section 172.702(d).

(2) All hazardous waste handlers and their employees who may handle hazardous waste or accompany vehicle drivers during handling or transportation of hazardous waste shall create and retain a record of current training in accordance with the DOT requirements at 49 CFR Part 172, Subpart H. The record shall include:

- (a) The hazardous waste employee's name;
- (b) The most recent training completion date of the hazardous waste employee's training;
- (c) A description, copy, or the location of the training materials used to meet the requirements of 310 CMR 30.409(1);

30.409: continued

- (d) The name and address of the person providing the training; and
- (e) A certification that the hazardous waste employee has been trained and tested as required by 49 CFR Part 172, Subpart H and 49 CFR Section 177.800.

(3) All hazardous waste handlers and their employees who may handle hazardous waste or accompany vehicle drivers during handling or transportation of hazardous waste shall furnish a certification to the Department at the time of license application and renewal which shall state that the applicant is subject to the DOT hazardous materials training requirements, and is currently trained and tested.

(4) The Department may independently verify successful completion of the instruction program required above by questioning drivers, trainees, employees, or utilizing other appropriate methods.

30.410: Liability Insurance Requirements

(1) All hazardous waste transporters licensed by the Department shall carry liability insurance for sudden and accidental occurrences, exclusive of legal defense costs, for claims arising out of bodily injury and property damage from the hazardous waste transport operations of the transporter in the minimum amount of one million dollars per incident, provided, however, the Department may require a greater amount if it deems it necessary to protect public health, safety, or welfare or the environment, or to ensure compliance with M.G.L. c. 21C, or 310 CMR 30.000. Such insurance policy shall carry an approved DOT endorsement (Form MCS 90-DOT) covering liability for accidents, including environmental restoration, bodily injury, and property damage, as those terms are defined in said endorsement, or shall carry a comparable endorsement approved by the Department.

(2) The insurance coverage obtained by the transporter to fulfill the requirements of 310 CMR 30.410 shall include the provision that the insurer notify the Department at least 30 days before cancellation of the insurance for any reason or for reduction of limits below the minimum required by the transporter's license.

(3) The licensee shall submit at the time of license application a certificate from an insurance company licensed to do business in the Commonwealth certifying that the policy of liability is in force in the required amount covering the licensee's hazardous waste transportation activities. The certificate shall provide for bodily injury and property damage protection including the required endorsement for environmental restoration.

(4) The insurance policy shall be maintained in full force at all times during the term of the license.

30.411: Bonding Requirements

(1) As used in 310 CMR 30.411, the term "bond" means:

- (a) a surety bond or performance bond; or
- (b) a collateral indemnity agreement in a certain sum payable to the Department in cash or in negotiable bonds of the United States of America, the Commonwealth of Massachusetts or any city, town, or body politic of the Commonwealth; or
- (c) An irrevocable letter of credit of any bank organized or authorized to transact business in the Commonwealth or in the United States of America;
- (d) Any other collateral deemed satisfactory to the Department, provided that all such collateral shall be deposited in an escrow account in a bank authorized to transact business in the Commonwealth, or may be held by the Department, and shall in all cases be in favor of the Department.

(2) No new or revised license to transport hazardous wastes shall be issued by the Department until the applicant for such license has filed a bond payable to the Department on a form provided by the Department, and such bond has been approved by the Department.

30.411: continued

(3) The amount of the bond shall be \$10,000 at a minimum and be in an amount sufficient to assure that the licensee shall faithfully perform all of the requirements of M.G.L. c. 21C and 310 CMR 30.000, the terms and conditions of the license and any Department order issued to the licensee.

(4) Liability under the bond may be terminated by a surety or bank by giving 90 days written notice thereof, by registered or certified mail, to the Department and to the licensee. One year and 90 days from the date of receipt of the notice by both the Department and the licensee, as shown by the later return receipt, the surety or bank shall be discharged from all liability occurring after the expiration of 90 days from the date of receipt of the notice by both the Department and the licensee, as shown by the later return receipt, except that liability shall automatically be extended while administrative and judicial proceedings are pending involving or alleging a violation of M.G.L. c. 21C, 310 CMR 30.000, the terms and conditions of the license, or a Department order to the licensee. After the surety or bank gives such notice, and before the surety or bank's discharge from liability takes effect, or within another period set by order of the Department, the licensee shall provide evidence of replacement bond coverage; otherwise, the licensee shall be deemed to be without bond coverage in violation of 310 CMR 30.411.

(5) The Department may require additional bond amounts at any time if the licensee changes the kind of wastes transported, or the way it transports them, or the Department determines such additional bond amounts are necessary to protect public health, safety, or welfare, or the environment or to ensure compliance with M.G.L. c. 21C, the terms and conditions of the license, or any Department order.

(6) Collateral bonds, *i.e.* bonds described in 310 CMR 30.411(1), shall be subject to the following conditions:

- (a) The Department may obtain possession of and keep in custody all collateral deposited by the licensee, other than funds deposited in escrow with a bank, until authorized by the Department for release;
- (b) The Department shall value collateral at its current market value;
- (c) Collateral shall be in the name of the licensee, not in the name of third parties, and shall be pledged and assigned to the Department free and clear of claims.

(7) Letters of credit shall be subject to the following additional conditions:

- (a) The institution issuing a letter of credit shall be an entity which has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by the Massachusetts Commissioner of Banking, or the institution shall be a national bank.
- (b) They shall be irrevocable. The Department may accept a term of at least three years if:
 - 1. The letter of credit is automatically renewable for additional terms unless the bank gives at least 90 days prior written notice to the Department of its intent to terminate the letter of credit at the end of the current term; and
 - 2. The Department has the right to draw upon the letter of credit before the end of its term and convert it into a cash collateral bond if the licensee fails to replace such letter of credit with other collateral acceptable to the Department within 30 days of the bank's notice to terminate the letter of credit.
- (c) They shall be payable to the Department in part or in full upon demand of the Department in the case of a forfeiture or the failure of the licensee to replace the letter of credit.
- (d) The Department shall not accept letters of credit from a bank for a licensee in excess of 10% of the bank's capital surplus account as shown on a balance sheet certified by a Certified Public Accountant.
- (e) All letters of credit shall be subject to the Uniform Customs and Practice for Documentary Credits, International Chamber of Commerce Publication No. 290, including amendments and successor publications.
- (f) Letters of credit shall provide that the bank shall give prompt notice to the licensee and the Department of a notice received or action filed alleging the insolvency or bankruptcy of the bank, or alleging any violations of regulatory requirements which could result in suspension or revocation of the bank's charter or license to do business.

30.411: continued

(g) Upon the incapacity of a bank by reason of bankruptcy, insolvency, or suspension or revocation of its charter or license, the licensee shall be deemed to be without bond coverage in violation of 310 CMR 30.411. The licensee shall provide evidence of replacement bond coverage within 30 days of receipt of the notice described in 310 CMR 30.411(7)(f), or within another period set by order of the Department.

(8) The Department may declare forfeit all or any amount of the bond if the Department finds that the licensee has violated any of the requirements of M.G.L. c. 21C, 310 CMR 30.000, or conditions of the license or a Department order issued to the licensee, and if the Department also finds that the licensee has failed to promptly remedy such a violation.

30.413: Discharges of Hazardous Wastes in Transit

(1) A transporter shall take appropriate immediate action to protect public health, safety and welfare and the environment and shall notify the Department, local authorities, including police and fire departments, and the generator, in the event of a discharge of hazardous waste in transit.

(2) An air, rail, highway, or bulk shipment water transporter who has discharged hazardous waste shall:

(a) In all cases, notify the Department; and

(b) Report in writing, as required by 49 CFR 171.15, to the National Response Center (800-424-8802 or 202-426-2675); and

(c) Give notice, if required by 49 CFR 171.16, to the Information Systems Manager, PHH-63, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, D.C. 20590-0001. This report may alternatively be submitted electronically to the Information Systems Manager, DHM-63, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590-0001 at <http://hazmat.dot.gov>.

(3) A bulk shipment water transporter who has discharged hazardous waste shall give notice to the Department in all cases and shall give the same notice as required by 33 CFR 153.203 for oil and hazardous substances.

(4) A transporter shall clean up or cause to be cleaned up any hazardous waste discharge that occurs during transportation or take such action as may be required or approved by the Department and by Federal officials, so that the hazardous waste discharge no longer presents a hazard to public health, safety, or welfare or the environment.

30.414: Vehicle Identification Device

(1) General Provisions. No transporter shall transport hazardous waste in any motor vehicle in the Commonwealth unless the Department has issued a Vehicle Identification Device (VID) to that transporter for that vehicle. Said VID issued by the Department shall have an expiration date for the current calendar year. The VID is only effective for one calendar year regardless of when issued. Said VID shall accompany each shipment of hazardous waste in the vehicle. Any VID shall be returned to the Department upon demand.

(2) Annual Vehicle Identification Device (VID).

(a) A transporter shall apply annually for a VID for each vehicle to be used to transport hazardous waste, by submitting a completed Department approved application form. Such application shall have attached four quarterly Massachusetts Hazardous Waste Transporter Fee Reports (as required by 801 CMR 4.00) for hazardous waste transported during the 12 months ending the March 31st prior to the application, and shall convert total annual volume or weight to pounds using the following conversion factors: one gallon equals ten pounds, one ton equals 2000 pounds, one metric ton equals 2204.6 pounds, one liter equals 2.643 pounds, one cubic yard equals 2000 pounds, one cubic meter equals 2515.9 pounds, one kilogram equals 2.205 pounds.

(b) The transporter must receive a hazardous waste license prior to receiving any VIDs.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.414: continued

(c) An application for VID(s) may be filed any business day of the year; however, an application for the following calendar year's VID shall be received between October 1st and November 30th or as otherwise directed by the Department.

(d) After issuance of VID(s) for use during a calendar year, additional or replacement VID(s) for the same calendar year may be requested without an additional application fee.

30.415: Emergency Procedures Guide

All persons who transport hazardous waste in the Commonwealth shall prepare, and follow when necessary, an Emergency Procedures guide, hereafter in 310 CMR 30.415 called the Guide. The Guide shall outline emergency procedures to be followed in the event of a discharge of hazardous waste during transport, including, at a minimum: how and to whom notification of such a discharge shall be given; how the discharge shall be initially contained; and how required equipment shall be used. No transporter shall transport hazardous waste in the Commonwealth without being in possession of the following, all of which shall accompany the driver at all times during transport and shall include, at a minimum, the following:

- (1) The Guide prepared by the transporter.
- (2) Telephone numbers of:
 - (a) The generator whose waste is being transported.
 - (b) The Department and those required by 310 CMR 30.413(2).
 - (c) The Emergency Response contact person(s) required by 49 CFR 172.604.
- (3) A copy of the most recent edition of the Emergency Response Guidebook for Hazardous Materials published by DOT.
- (4) All of the following equipment in good operating condition:
 - (a) an effective means of communication (*e.g.* two-way radio or mobile or cellular telephone).
 - (b) a fully equipped first-aid kit which contains provisions for eye wash.
 - (c) a flashlight.
 - (d) personnel protective equipment appropriate for the types of materials being transported (*e.g.* respirator, gloves, boots, protective suit).
 - (e) spill containment equipment appropriate for the types of materials being transported (*e.g.* shovel, plastic sheets, absorbent, pail, overpack drum).

30.416: Vehicle Markings

That portion of a vehicle (either tractor, trailer, or both) which is used for the transport of hazardous waste and for which the Department has issued a vehicle identification device pursuant to 310 CMR 30.402(3), shall bear the following markings:

- (1) prominent markings that appear on at least two sides of the vehicle and that identify the name of the hazardous waste transport licensee in letters all of which are not less than two inches high and all of which are in a color that contrasts with the background; and
- (2) all other markings, including placards, required by any Federal or State statute or regulation.

30.500: MANAGEMENT STANDARDS FOR ALL HAZARDOUS WASTE FACILITIES

30.501: Applicability

- (1) Except as specifically provided elsewhere in 310 CMR 30.000, 310 CMR 30.501 through 30.599, cited collectively as 310 CMR 30.500, apply to owners and operators of:
 - (a) All facilities which use, store, treat, or dispose of hazardous waste;
 - (b) All facilities which are described in 310 CMR 30.341(8);
 - (c) All facilities which recycle regulated recyclable material, or which store regulated recyclable material prior to its being recycled, unless the regulated recyclable material is stored and recycled in compliance with 310 CMR 30.200.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.501: continued

- (d) All facilities which treat or store hazardous waste before it is loaded onto an ocean vessel for incineration or disposal at sea.
- (2) The requirements of 310 CMR 30.500 do not apply to:
- (a) The accumulation of hazardous waste by a generator at the site of generation for less than 90 days, provided that the requirements of 310 CMR 30.340 through 30.343 are met.
 - (b) A treatment process, method, or technique which is an integral part of the manufacturing process as defined in 310 CMR 30.010.
 - (c) Accumulation by a small quantity generator in compliance with 310 CMR 30.351, or by a very small quantity generator in compliance with 310 CMR 30.353, or by a generator who is in compliance with 310 CMR 30.222(4).
 - (d) Municipal or industrial waste water treatment facilities permitted pursuant to M.G.L. c. 21, § 43, as defined in 310 CMR 30.010. Hazardous waste activities at such facilities are regulated pursuant to 314 CMR 8.00: *Supplemental Requirements for Hazardous Waste Management Facilities*.
 - (e) Universal waste handlers, and universal waste transporters handling the wastes listed at 310 CMR 30.143(2) in compliance with 310 CMR 30.1000.
 - (f) The accumulation of a laboratory waste by a University participating in the Laboratory XL project at the site of generation for less than 120 days, provided that the requirements of 310 CMR 30.340 and 30.355 are met.
 - (g) The accumulation of a laboratory waste by a University participating in the Laboratory XL project at the site of generation for less than 210 days, provided that the requirements of 310 CMR 30.351 and 30.355 are met.
 - (h) elementary neutralization of corrosive hazardous waste at the site of generation in an elementary neutralization unit provided that the generator is in compliance with 310 CMR 30.1103.
- (3) (a) Except as provided in 310 CMR 30.500, 30.305(5) and 30.801, the requirements of 310 CMR 30.060 through 30.999 do not apply to facilities for the storage, treatment, or disposal of hazardous wastes containing PCBs in concentrations equal to or greater than 50 parts per million, provided that such facilities shall meet all of the following requirements:
- 1. They comply with all the applicable standards set forth in 40 CFR Part 761, as in effect July 1, 2002, for the storage, treatment, or disposal, as the case may be, of PCBs.
 - 2. In the case of PCB incinerators or PCB waste landfills, they have been formally approved pursuant to 40 CFR Part 761, and such approval is in effect at the time.
 - 3. If such facilities burn or incinerate PCBs, they do so in compliance with 310 CMR 7.00: *Air Pollution Control*.
 - 4. They are not located within an Area of Critical Environmental Concern (ACEC) as designated by the Secretary of the Executive Office of Energy and Environmental Affairs or, if the facility is located outside but adjacent to or in close proximity to an ACEC, such location is protective of the outstanding resources of the ACEC as identified in the Secretary's designation. 310 CMR 30.501(3)(a)4. shall not apply to an existing facility that is otherwise in compliance with 310 CMR 30.000.
- (b) Any facility which is subject to 310 CMR 30.501(3) and which the Department determines is not in compliance with 310 CMR 30.501(3)(a)1. or 3. shall be deemed in violation of M.G.L. c. 21C and 310 CMR 30.000 regardless of whether or not that facility is in compliance with 310 CMR 30.501(3)(a)2., regardless of that facility's compliance status with respect to 40 CFR Part 761.
- (c) The owner or operator of a facility for the storage of PCBs pursuant to 40 CFR 761.65 shall notify the Department in compliance with the requirements, set forth in 310 CMR 30.060 through 30.064.

30.502: Submission and Amendment of Plans

- (1) The following plans shall be submitted in writing to the Department with the hazardous waste license application, and shall be acted on by the Department, in accordance with the requirements and procedures set forth in 310 CMR 30.800:
- (a) The general waste analysis plan required by 310 CMR 30.513.
 - (b) The security plan required by 310 CMR 30.514.
 - (c) The inspection plan required by 310 CMR 30.515.
 - (d) The personnel training plan required by 310 CMR 30.516.
 - (e) The contingency plan and emergency procedures required by 310 CMR 30.520 through 30.523.
 - (f) The closure plan required by 310 CMR 30.583.
 - (g) The post-closure plan required by 310 CMR 30.593, if applicable.

30.502: continued

- (2) Plans and all amendments to plans shall be prepared by persons knowledgeable in the field in question, provided that the provisions of M.G.L. c. 112 shall be complied with. All plans shall be subject to review and approval by the Department. The Department may establish additional and specific conditions for each facility on a case-by-case basis as the Department may deem necessary to protect public health, safety, and welfare and the environment. All plans and amendments to plans shall, upon a demonstration by the applicant to the Department and a determination by the Department that the plans meet the requirements set forth in 310 CMR 30.500, be made conditions of the license issued by the Department and shall be complied with by the owner or operator.
- (3) In meeting the provisions set forth in 310 CMR 30.500, the plans shall reflect the nature of the proposed activities, special conditions of the facility or the proposed facility and its location, and any special circumstances associated with the operation, facility, and location.
- (4) The owner or operator shall submit to the Department for the Department's approval an amendment to the plans listed in 310 CMR 30.502(1) whenever they may be affected by:
 - (a) changes in operating plans or facility design; or
 - (b) any other event that occurs during the active life or post-closure care period of the facility.
- (5) The owner or operator shall furnish to the Department on request, including, but not limited to, request by mail, a copy of each plan.
- (6) The owner or operator shall keep copies of plans as follows:
 - (a) An up-to-date copy of each plan, except the closure and post-closure plans, shall be kept at the facility at all times during the active life of the facility, during closure, and at all other times when the facility is subject to 310 CMR 30.000, except during the post-closure care period. While a site is being inspected by an officer, employee, or representative of the Department, an up-to-date copy of each such plan shall be provided, on request, to any officer, employee, or representative of the Department.
 - (b) Except as otherwise required in 310 CMR 30.502(6)(b), the owner or operator shall keep an up-to-date copy of the closure plan either at the facility or at some other place readily accessible to the owner or operator and to key staff individuals at all times when the facility is subject to 310 CMR 30.000, except during the post-closure care period. An up-to-date copy of the closure plan shall be kept at the facility at all times between the time notification of closure is first given and the time closure is certified in writing by the Department as being complete. During this period, while a site is being inspected by an officer, employee, or representative of the Department, an up-to-date copy of the closure plan shall be provided, on request, to any officer, employee, or representative of the Department.
 - (c) Except as otherwise required in 310 CMR 30.502(6)(c), the owner or operator shall keep an up-to-date copy of the post-closure plan either at the facility or at some other place readily accessible to the owner or operator and to key staff individuals at all times when the facility is subject to 310 CMR 30.000. After the time closure is certified by the Department as being complete, and throughout the post-closure care period, an up-to-date copy of the post-closure plan shall be kept by the person or office specified pursuant to 310 CMR 30.593(1)(c).

30.510: General Management Standards for all Facilities

30.511: Identification Number

Every facility owner or operator, in compliance with the requirements of 310 CMR 30.060 through 30.064, shall apply to the Department for an EPA identification number if one has not already been obtained.

30.512: Required Notices

(1) The owner or operator of a facility that has arranged to receive hazardous waste, other than State-only hazardous waste, from a source outside the United States should be aware of the need to notify the Regional Administrator of EPA in writing at least four weeks in advance of the date the hazardous waste is expected to arrive at the facility pursuant to 40 CFR 264.12. The owner or operator of a facility that has arranged to receive State-only hazardous waste from a source outside the United States shall notify the Department in writing at least four weeks in advance of the date the hazardous waste is expected to arrive at the facility. Advance notice of subsequent shipments of the same type of waste from the same source is not required.

(2) The owner or operator of a facility that receives hazardous waste from an off-site source shall inform the generator in writing prior to the first shipment that he has the appropriate license and will accept the waste the generator is shipping. The owner or operator shall keep a copy of this written notice as part of the operating record of the facility. The owner or operator shall also inform the generator, in writing, within seven days of receiving notice from the Department of any change in the facility's license status that affects the facility's authority to accept the generator's waste.

30.513: General Waste Analysis

(1) Waste Analysis Requirements.

(a) An owner or operator shall, before treating, storing, using, or disposing of any hazardous waste, obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum this analysis shall contain all the information which needs to be known to treat, store, use, or dispose of the waste in compliance with the requirements of 310 CMR 30.500, 30.750, and with the conditions of the facility's license in effect at that time pursuant to 310 CMR 30.800.

(b) Provided the facility complies with the minimum frequencies specified within its Waste Analysis Plan for testing its waste, contaminated soils, treatment residues, and extracts from treatment residues as established pursuant to 310 CMR 30.513(2), the analysis may include data developed by the generator pursuant to 310 CMR 30.302 and existing published or documented data on the hazardous waste or on hazardous wastes generated from processes similar to those which generate that waste.

(c) The analysis shall be repeated as often as necessary to ensure that it is accurate and up-to-date. At a minimum, the analysis shall be repeated when the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste has changed; and, for facilities which receive shipments from off-site sources, when the results of the inspection required by 310 CMR 30.513(1)(d) indicate that the hazardous waste received at the facility is not as described on the accompanying manifest or shipping paper.

(d) The owner or operator shall inspect and, if necessary, analyze each hazardous waste shipment received at the facility to determine whether it is as described on the accompanying manifest or shipping paper.

(2) Content of Plan.

(a) The owner or operator shall prepare a waste analysis plan which shall describe the procedures which shall be carried out to comply with 310 CMR 30.513(1)(a). At a minimum, the waste analysis plan shall specify:

1. The parameters for which each hazardous waste shall be analyzed and the rationale for the selection of these parameters, *i.e.* how analysis for those parameters will provide sufficient information on the waste's properties to comply with 310 CMR 30.513(1)(a).
2. The test methods which shall be used to test for these parameters.
3. The sampling methods which shall be used to obtain a representative sample of the waste to be analyzed.
4. The frequency with which the initial analysis of the waste shall be reviewed or repeated to ensure that the analysis is accurate and up-to-date.
5. Where applicable, the methods which shall be used to meet the additional waste analysis requirements for specific waste management methods as specified in 310 CMR 30.560, 30.629, 30.750, and 310 CMR 7.08(4).
6. Where applicable, the following procedures and schedule for sampling surface impoundments that are exempted from the land disposal restrictions pursuant to 310 CMR 30.750:

30.513: continued

- a. the sampling of impoundment contents; and
 - b. the analysis of test data; and
 - c. the annual removal of residues which are not delisted pursuant to 310 CMR 30.142 or which exhibit a characteristic of a hazardous waste, and either do not meet the applicable treatment standard(s) of 40 CFR Part 268, Subpart D as incorporated by reference at 310 CMR 30.750 with modifications, or, if there are no applicable treatment standards, are otherwise prohibited from land disposal.
- (b) For facilities which receive shipments from off-site sources, the waste analysis plan shall also specify the procedures which shall be used to inspect and, if necessary, analyze each shipment of hazardous waste received at the facility to ensure that it is as described on the accompanying manifest or shipping paper. At a minimum, the plan shall describe:
1. The procedures which shall be used to determine the content of each shipment of waste managed at the facility;
 2. The sampling method which shall be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling; and
 3. Any waste analysis to be supplied by the generator.

30.514: Security

- (1) Security Standards. The owner or operator shall prevent the unknowing entry of persons, reduce as much as possible the possibility for the unauthorized entry of persons, and prevent the entry of livestock onto the active portion of the facility, unless the Department determines that:
- (a) Physical contact with the waste, structures, or equipment within the active portion of the facility will not injure or endanger the health of unknowing or unauthorized persons and will not injure livestock which might enter the active portion of a facility; and
 - (b) Disturbance of the waste or equipment by the unknowing or unauthorized entry of persons or livestock onto the active portion of a facility will not result in any non-compliance with the requirements of 310 CMR 30.500.
- (2) Security Plan and Security Measures.
- (a) The owner or operator shall prepare a security plan which shall describe the procedures to be carried out to comply with 310 CMR 30.514(1).
 - (b) Unless the owner or operator of the facility demonstrates, and the Department determines, that, in accordance with 310 CMR 30.514(1), the security measures specified below are not required, a facility shall have:
 1. A sign with the legend, "Danger - Unauthorized Personnel Keep Out", posted at each entrance to all active portions of the facility, and at other locations, in sufficient numbers to be seen from any approach to all active portions. Each sign shall be legible from a distance of at least 25 feet. Existing signs with a legend other than "Danger - Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous; and either
 2. A 24-hour surveillance system (*e.g.*, television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the active portion of the facility; or
 3. A barrier at least eight feet in height (such as a fence in good repair) completely surrounding the active portion of the facility; and a means to control entry, at all times, through the gates or other entrances to the active portion of the facility (*e.g.*, an attendant, television monitors, locked entrance, or controlled roadway access to the facility). The requirements of the preceding sentence are satisfied if the facility or plant within which the active portion is located itself has a surveillance system, or a barrier and a means to control entry, which complies with the requirements of 310 CMR 30.514.

30.515: General Inspection

- (1) Inspection Requirements.
- (a) The owner or operator shall inspect the facility for malfunctions and deterioration of equipment or structures, operator error, and discharges, which may be causing or may lead to the release of hazardous waste constituents to the environment. The owner or operator shall conduct these inspections often enough to identify problems in time to correct them before they harm public health, safety, or welfare or the environment.

30.515: continued

(b) To ensure that they do not lead to a threat to public health, safety, or welfare, or to the environment, the owner or operator shall remedy all malfunctions, deteriorations, operator errors, and discharges which any inspection reveals. When a hazard is imminent or has already occurred, the owner or operator shall immediately notify the Department and shall immediately take remedial action.

(c) The owner or operator shall record every inspection in an inspection log or summary. The owner or operator shall keep the records of each inspection for at least three years from the date of inspection or until final closure of the facility, whichever period is longer. At a minimum, these records shall include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

(2) Inspection Plan.

(a) The owner or operator shall prepare a written inspection plan which shall describe the procedures which shall be carried out to comply with 310 CMR 30.515(1). Said plan shall include, at a minimum, a written schedule for inspecting monitoring equipment, safety devices, and operating and structural equipment (such as dikes and sump pumps) that are important in preventing, detecting, or responding to threats to the public health, safety, or welfare or to the environment.

(b) The schedule shall identify the types of problems which shall be looked for during the inspection (*e.g.*, inoperative sump pump, leaking fitting, eroding dike, *etc.*).

(c) The frequency of inspection may vary for the items on the schedule. However, the frequency of inspection shall be based on the rate of possible deterioration of the equipment and the probability of a threat to public health, safety, or welfare or to the environment if the deterioration, malfunction, operator error, or discharge goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, shall be inspected daily when in use. At a minimum, inspections for interim status facilities shall be in compliance with the requirements set forth or referred to in 310 CMR 7.08(4), and 30.099(6)(e) through (k), 30.099(6)(n) through (q) and 30.099(6)(u), as applicable. Inspections for facilities subject to 310 CMR 30.800 shall, at a minimum, be in compliance with 310 CMR 7.08(4), 30.606(3), 30.614, 30.624, 30.644, 30.655, 30.686, 30.692(5) and 30.696.

30.516: Personnel Training(1) Training Program.

(a) Facility personnel assigned to the management of hazardous waste shall successfully complete a program of instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with 310 CMR 30.000 and the conditions of the facility's license. This program shall be directed by a person trained in hazardous waste management procedures and shall include instruction which teaches facility personnel hazardous waste management procedures, including contingency plan implementation, relevant to the position in which they are employed.

(b) Personnel new to a facility shall not work in unsupervised positions until they have successfully completed the training requirements of 310 CMR 30.516(1)(a).

(c) Facility personnel shall successfully complete the program required by 310 CMR 30.516(1)(a) within six months of their employment or their being assigned to a position new to them at the facility.

(d) Facility personnel shall take part in an annual review of the initial training required by 310 CMR 30.516(1)(a).

(e) Training records on current personnel shall be kept until closure of the facility. Training records of former personnel shall be kept for at least three years from the date such personnel last worked at the facility.

(2) Contents of Training Plan.

(a) The owner or operator shall prepare a written personnel training plan designed to ensure compliance with 310 CMR 30.516(1). To ensure that facility personnel are able to respond effectively to emergencies, the training plan, at a minimum, shall specify how personnel will be familiarized with the properties and hazardous nature of the hazardous waste at the facility and with emergency procedures, emergency equipment, emergency systems, and personnel safety equipment, including where applicable:

1. Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;

30.516: continued

2. Use of automatic waste feed cutoff systems;
 3. Communications or alarm systems;
 4. Response to fire or explosions;
 5. Response to potential ground water or surface water contamination incidents; and
 6. Shutdown of operations; and
- (b) Included with the personnel training plan shall be the following documents and records:
1. The job title for each position at the facility related to hazardous waste management;
 2. A written job description for each position listed pursuant to 310 CMR 30.516(2)(b)1. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company locations or bargaining unit, but shall include the requisite skill, education, or other qualifications, and duties, of employees assigned to each such position.
 3. A written description of the type and amount of both introductory and continuing training that will be given to each individual filling a position listed pursuant to 310 CMR 30.516(2)(b)1.
 4. Records that document that the training or job experience required pursuant to 310 CMR 30.516 has been given to, and satisfactorily completed by, facility personnel.

30.520: Contingency Plan, Emergency Procedures, Preparedness, and Prevention

310 CMR 30.521 through 30.524, cited collectively as 310 30.520, prescribe requirements which apply to owners and operators of all facilities to which the requirements of 310 CMR 30.500 apply.

30.521: Purpose, Content, and Implementation of Contingency Plan

- (1) Each owner or operator shall have a contingency plan for each facility. The contingency plan shall be designed to prevent and to minimize hazards to public health, safety, or welfare or the environment from fires, explosions, spills or any other unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, surface water, or ground water.
- (2) The provisions of the contingency plan shall be carried out immediately whenever there is a potential for, or there actually is, a fire, explosion, or other release of hazardous waste or waste constituents which could threaten public health, safety, or welfare, or the environment.
- (3) The contingency plan shall contain a clear outline of the lines of communication among facility personnel and shall describe the actions facility personnel shall take to comply with 310 CMR 30.521(1) and (2), and the equipment to be used and the actions to be taken to comply with 310 CMR 30.524(6), in response to potential or actual fires, explosions, or any other unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, surface water or ground water.
- (4) If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in compliance with 40 CFR Part 112 or Part 151, or some other emergency or contingency plan, the owner or operator need only add to that plan whatever is necessary to comply with 310 CMR 30.521.
- (5) The owner or operator shall make every reasonable attempt to make the following arrangements, as appropriate for the type of hazardous waste handled at the facility and the potential need for the services of the organizations referred to below, and the contingency plan shall describe all of the said arrangements:
 - (a) Arrangements to familiarize police departments, fire departments, local boards of health and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility, hazards associated with such wastes, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes.

30.521: continued

- (b) If more than one police department and/or fire department might respond to an emergency, agreements designating the specific police department and/or specific fire department which shall have primary emergency authority, and agreements with any other police department(s) and/or fire department(s) to provide support to whoever has primary emergency authority;
 - (c) Agreements with State emergency response teams, emergency response contractors, local boards of health, and equipment suppliers.
 - (d) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or other releases at the facility.
- (6) If any organization referred to in 310 CMR 30.521(5) refuses to enter into an arrangement listed therein, the owner or operator shall document the refusal in the facility's operating record and contingency plan and shall promptly so inform the Department.
- (7) Each facility shall at all times have an emergency coordinator either on the facility premises, or, to the extent the facility's operations make this option appropriate, on call and available to respond to an emergency by reaching the facility within one hour. The emergency coordinator shall have the responsibility for coordinating all emergency response measures. This emergency coordinator shall be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. The coordinator shall have access to all parts of the facility. In addition, this individual shall have the authority to spend or use whatever is necessary to carry out the contingency plan.
- (8) The contingency plan shall list the names, addresses, and the office and home telephone numbers of all individuals qualified to act as emergency coordinator, and this list shall be kept up-to-date. If more than one individual is listed, one shall be named as primary emergency coordinator and others shall be listed in the order in which they will assume responsibility as alternates. For new facilities, this information shall be initially supplied to the Department at the time of license application. All facilities shall promptly notify the Department and the organizations listed in 310 CMR 30.521(5)(a) of any change in this information.
- (9) The contingency plan shall include a list of all emergency equipment, including emergency medical equipment, to be kept and maintained at the facility. This list shall be kept up-to-date. In addition, the plan shall include the location and a physical description of each item on the list, and a brief outline of its capabilities.
- (10) The plan shall include a description of procedures, structures, or equipment used at the facility to:
- (a) Prevent uncontrolled reaction of incompatible wastes; for example, procedures to avoid fires, explosions, or toxic gases;
 - (b) Prevent hazards in unloading operations; for example, ramps, special fork lifts, emergency containment equipment;
 - (c) Prevent run-off from hazardous waste handling areas to other areas of the facility or environment;
 - (d) Prevent flooding;
 - (e) Mitigate effects of equipment failure or power outages;
 - (f) Prevent hazards to public health, safety, or welfare or the environment from fires, explosions, spills, or any other unplanned or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, surface water, or ground water; and
 - (g) Prevent undue exposure of personnel to hazardous waste (e.g., protective clothing).
- (11) The plan shall include an evacuation plan for facility personnel if there is a possibility that evacuation could be necessary. This plan shall describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes in case the primary routes were to be blocked by potential or actual releases of hazardous waste or fires.

30.522: Copies of Contingency Plan

A copy of the contingency plan and all revisions to the plan shall be submitted to local police departments, local fire departments, hospitals, local boards of health, the chief executive officer of the community, state and local emergency response teams that may be called upon to provide emergency services, and the Department.

30.523: Amendment of Contingency Plan

The contingency plan shall be reviewed, and immediately amended, if necessary, whenever:

- (1) The facility license is revised;
- (2) The plan fails in an emergency;
- (3) The list of emergency coordinators changes;
- (4) The list of emergency equipment changes;
- (5) There is any change in the operation or maintenance of the facility; or
- (6) There occurs any other circumstance which indicates the need for a change in the contingency plan.

30.524: Standards for Emergency Prevention and Response

(1) Design and Operation of Facility. Facilities shall be designed, constructed, maintained, and operated to prevent and to minimize the possibility of any threat to public health, safety, or welfare, or the environment from a fire, explosion, or any other unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, surface water, or ground water.

(2) Required Equipment. All facilities shall be equipped with at least the following, unless the Department determines in writing that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

- (a) An internal communications or alarm system capable of providing immediate emergency instruction, by voice or signal, to facility personnel;
- (b) A device, immediately available at all areas of operations, such as a telephone or a hand-held two-way radio, call box, or other instrument capable of summoning emergency assistance from, and which is acceptable to, local police departments, fire departments, or Federal, State or local emergency response teams;
- (c) A portable fire extinguisher; fire control equipment, including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals; spill control equipment; and decontamination equipment; and
- (d) Water at adequate volume and pressure to supply water hose streams or foam producing equipment, or automatic sprinklers or water spray systems.
- (e) Clear markings identifying all exits so that everyone in the facility during an emergency can quickly find their way out of the facility during the emergency.
- (f) An up-to-date written list containing the following information, a copy of which list shall be prominently posted near the telephones at the site of accumulation.
 1. The name(s) and telephone number(s) of the emergency coordinator(s).
 2. The location(s) of the fire extinguisher(s) and spill control material(s), and, if present, the fire alarms.
 3. The telephone number of the fire department, or, if there is a direct alarm system, instructions on how to activate it, or both.
 4. Evacuation routes, where applicable.

(3) Testing and Maintenance of Equipment. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment shall be tested and maintained as necessary to ensure its proper operation in time of emergency.

30.524: continued

(4) Access to Communications or an Alarm System.

(a) Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, the owner or operator shall ensure that all personnel involved in the operation always have immediate access to an internal alarm or emergency communications device, either directly or through visual or voice contact with another employee, unless the Department has determined that such a device is not required pursuant to 310 CMR 30.524(2).

(b) If, at any time, only one employee is on the premises while the facility is operating, the owner or operator shall ensure that the employee always has immediate access to a device prescribed in 310 CMR 30.524(2)(b), unless the Department has determined that such a device is not required pursuant to 310 CMR 30.524(2).

(5) Required Aisle Space. The owner or operator shall maintain sufficient aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless the Department determines in writing that aisle space is not needed for any of these purposes.

(6) Emergency Procedures.

(a) Whenever there is an imminent or actual emergency, the emergency coordinator at the facility or then on call, if having an emergency coordinator on call is authorized by the Department pursuant to 310 CMR 30.521(7) and 30.800, shall immediately:

1. Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel,
2. Notify the Department, and
3. Notify other appropriate State or local agencies with designated response roles if their help is needed.

(b) Whenever there is a fire, explosion, or other release, the emergency coordinator shall:

1. Immediately identify the character, exact source, amount, and extent of all released materials, and concurrently,
2. Assess possible hazards to public health, safety, or welfare, or the environment that may result from the fire, explosion, or other release. This assessment shall consider both direct and indirect effects of the fire, explosion, or other release, *e.g.* the effects of any hazardous surface water run-off from water or chemical agents used to control fire or heat-induced explosions.

(c) If the emergency coordinator determines that the facility has had a fire, explosion, or other release which could threaten public health, safety, or welfare of the environment, the emergency coordinator shall:

1. Immediately notify appropriate officials as identified in the facility contingency plan if the emergency coordinator's assessment indicates that evacuation of local areas may be advisable. The coordinator shall be available to help appropriate officials decide whether local areas should be evacuated; and
2. Immediately notify the Department and either the government official identified in the facility's contingency plan as the on-scene coordinator for that geographical area (in the applicable regional contingency plan pursuant to 40 CFR Part 1510), or the National Response Center using its 24-hour toll free telephone number 800-424-8802. The report shall include the name and telephone number of the individual reporting; the name and address of the facility; the time and type of incident (*e.g.*, release, fire); the name(s) and quantity of material(s) involved, to the extent known; the extent of injuries, if any; and the possible hazards to public health, safety, or welfare, or the environment outside the facility.

(d) During an emergency, the emergency coordinator shall take all reasonable measures necessary to ensure that fires, explosions, runoff, and other releases do not occur, recur, or spread off the site or to other hazardous waste at the facility. These measures shall include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.

(e) If the facility stops operations in response to a potential or actual fire, explosion, or other release,

1. The emergency coordinator shall monitor for leaks, pressure buildup, gas generation, and ruptures in valves, pipes, or other equipment, wherever this is appropriate.

30.524: continued

2. The emergency coordinator shall, immediately after an emergency, provide for the treatment, storage, or disposal of recovered waste, contaminated soil or surface water, or any other material that results from a fire, explosion, or other release at the facility. Unless the owner or operator can demonstrate pursuant to 310 CMR 30.100 that the recovered material is not hazardous waste, the owner or operator also becomes a generator of hazardous waste and shall manage it in compliance with all applicable requirements of 310 CMR 30.000.
 3. The emergency coordinator shall ensure that, in the affected area(s) of the facility:
 - a. no waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
 - b. all emergency equipment and systems listed in the contingency plan are cleaned, recharged, reactivated, and fit for their intended use before facility operations are resumed.
 4. Operations shall not be resumed at the facility until the owner or operator notifies the Department and appropriate local authorities that the facility is in compliance with 310 CMR 30.524(6)(e)3. and the Department determines in writing that there is no longer a threat to public health, safety, or welfare, or the environment.
- (f) The owner or operator shall note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within seven days after the incident, the owner or operator shall submit a written report of the incident to the Department. The report shall include:
1. The name, address, and telephone number of the owner or operator;
 2. The name, address, and telephone number of the facility;
 3. The date, time, and type of incident (*e.g.*, fire, explosion);
 4. The name and quantity of material(s) involved;
 5. The extent of injuries, if any;
 6. An assessment of actual or potential hazards to public health, safety, welfare, or the environment, when this is applicable;
 7. The estimated quantity and the disposition of recovered material that resulted from the incident;
 8. All differences between the emergency response activities actually taken and those prescribed in the contingency plan and the reasons for each such difference; and
 9. Proposed measures to prevent similar incidents in the future.

30.530: Manifest System30.531: Applicability

310 CMR 30.532 through 30.535 apply to owners and operators of facilities that receive any hazardous waste from any offsite source, except hazardous waste to which 310 CMR 30.536 applies. 310 CMR 30.536 shall apply to hazardous waste that is collected from a small quantity generator or very small quantity generator by a recycling facility, transported by that recycling facility in vehicles it owns or operates to that recycling facility, recycled at that facility, and then transported by that recycling facility in vehicles it owns or operates to a small quantity generator or very small quantity generator.

30.532: Use of the Manifest System

- (1) Upon receipt by a facility of hazardous waste, the owner or operator or his agent shall:
 - (a) Comply with the requirements of 310 CMR 30.313 through 30.315, as applicable;
 - (b) Sign and date each copy of the manifest to certify that the hazardous waste described by the manifest was received, except as noted in a manifest discrepancy, or if the waste was rejected;
 - (c) Note on the manifest or in attached documentation any significant discrepancies in the shipment as described in 310 CMR 30.533. The owner or operator of a facility does not need to perform a detailed waste analysis before signing the manifest and giving the transporter his copy; however, 310 CMR 30.533(2) requires the reporting of any unreconciled discrepancy discovered during later analysis.

30.532: continued

- (d) Immediately give the transporter at least one copy of the signed manifest;
 - (e) Within 30 days after the delivery, send a copy of the manifest to the generator;
 - (f) Within 30 days after the delivery, send a copy of the manifest to the Department and, if required, to the State of origin of the shipment, if not Massachusetts;
 - (g) Retain at the facility a copy of each manifest for at least three years from the date of receipt of the hazardous waste at the facility; and
 - (h) Determine whether the destination state for a shipment regulates any additional wastes (beyond those regulated Federally) as hazardous wastes under its state hazardous waste program. Facilities shall also determine whether the destination state or generator state requires the facility to submit any copies of the manifest to these states.
- (2) Upon receipt of an unmanifested shipment of hazardous waste, a facility owner or operator shall comply with 310 CMR 30.534.
- (3) If a facility receives, from a rail or bulk shipment water transporter, hazardous waste which is accompanied by a manifest or a shipping paper containing all the information required on the manifest, excluding only the EPA identification numbers, generator's certification, and signatures, the owner or operator, or his agent, shall:
- (a) Sign and date each copy of the manifest, or shipping paper if the manifest has not been received, to certify that the hazardous waste described by the manifest or shipping paper has been received.
 - (b) Note any significant discrepancies, as described in 310 CMR 30.533(1), in the manifest, or shipping paper if the manifest has not been received, on each copy of the manifest or shipping paper;
 - (c) Immediately give the rail or bulk shipment water transporter at least one copy of the manifest, or shipping paper if the manifest has not been received;
 - (d) Within 30 days after receipt of the hazardous waste, send a copy of the signed and dated manifest to the generator. If the manifest has not been received within 30 days after receipt of the hazardous waste, the owner or operator, or his agent, shall send a copy of the shipping paper, signed and dated, to the generator;
 - (e) Within 30 days after the receipt of the hazardous waste, send a copy of the manifest, or shipping paper if the manifest has not been received, to the Department and to the State of origin of the shipment, if not Massachusetts; and
 - (f) Retain at the facility a copy of the manifest, and the shipping paper if signed in lieu of the manifest at the time of delivery, for at least three years from the date of the receipt of the hazardous waste by the facility.
- (4) Whenever a facility initiates a shipment of hazardous waste or generates hazardous waste, the owner or operator of that facility shall comply with the requirements of 310 CMR 30.300 with respect to that hazardous waste.
- (5) If a facility receives hazardous waste imported from a foreign source, the receiving facility shall mail a copy of the manifest to the following address within 30 days of delivery: International Compliance Assurance Division, OFA/OECA (2254A), U.S. Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, NW., Washington, DC 20460.

30.533: Manifest Discrepancies

- (1) Manifest discrepancies are:
- (a) Significant differences, as defined at 310 CMR 30.533(2), between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity and type of hazardous waste a facility actually receives;
 - (b) Rejected wastes, which may be a full or partial shipment of hazardous waste that the TSDF cannot accept; or

30.533: continued

- (c) Container residues, which are residues that exceed the quantity limits for “empty” containers set forth in 310 CMR 30.106(2).
- (2) Significant differences in quantity are: For bulk waste, variations greater than 10% in weight; for batch waste, any variation in piece count, such as a discrepancy of one drum in a truckload. Significant differences in type are obvious differences, which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid.
- (3) Upon discovering a significant difference in quantity or type, the owner or operator must attempt to reconcile the discrepancy with the waste generator or transporter (*e.g.*, with telephone conversations). If the discrepancy is not resolved within 15 days after receiving the waste, the owner or operator shall immediately submit to the Department a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.
- (4) (a) Upon rejecting waste or identifying a container residue that exceeds the quantity limits for “empty” containers set forth in 310 CMR 30.106(2), the facility shall consult with the generator prior to forwarding the waste to another facility that can manage the waste. If it is impossible to locate an alternative facility that can receive the waste, the facility may return the rejected waste or residue to the generator, which shall sign the manifest for the returned shipment in compliance with 310 CMR 30.340(9)(a) or (b). The facility shall send the waste to the alternative facility or to the generator within 60 days of the rejection or the container residue identification.
- (b) While the facility is making arrangements for forwarding rejected wastes or residues to another facility under 310 CMR 30.533(4), it shall ensure that either the delivering transporter retains custody of the waste while present at the facility, or the facility must provide for secure, temporary custody of the waste, pending delivery of the waste to the first transporter designated on the manifest prepared under 310 CMR 30.533(5) and (6).
- (5) Except as provided in 310 CMR 30.533(5)(g), for full or partial load rejections and residues that are to be sent off-site to an alternate facility, the facility shall prepare a new manifest in accordance with 310 CMR 30.311(1) and the following instructions:
- (a) Write the generator's U.S. EPA ID number in Item 1 of the new manifest. Write the generator's name and mailing address in Item 5 of the new manifest. If the mailing address is different from the generator's site address, then write the generator's site address in the designated space in Item 5.
- (b) Write the name of the alternate designated facility and the facility's U.S. EPA ID number in the designated facility block (Item 8) of the new manifest.
- (c) Copy the manifest tracking number found in Item 4 of the old manifest to the Special Handling and Additional Information Block of the new manifest, and indicate that the shipment is a residue or rejected waste from the previous shipment.
- (d) Copy the manifest tracking number found in Item 4 of the new manifest to the manifest reference number line in the Discrepancy Block of the old manifest (Item 18a) of 310 CMR 30.000.
- (e) Write the DOT description for the rejected load or the residue in Item 9 (U.S. DOT Description) of the new manifest and write the container types, quantity, and volume(s) of waste.
- (f) Sign the Generator's/Offeror's Certification to certify, as the offeror of the shipment, that the waste has been properly packaged, marked and labeled and is in proper condition for transportation.
- (g) For full load rejections that are made while the transporter remains present at the facility, the facility may forward the rejected shipment to the alternate facility by completing Item 18b of the original manifest and supplying the information on the next destination facility in the Alternate Facility space. The facility shall retain a copy of this manifest for its records, and then give the remaining copies of the manifest to the transporter to accompany the shipment. If the original manifest is not used, then the facility shall use a new manifest and comply with 310 CMR 30.533(5)(a) through (f).

30.533: continued

(6) Except as provided at 310 CMR 30.533(6)(g), for rejected wastes and residues that are to be sent back to the generator, the facility shall prepare a new manifest in accordance with 310 CMR 30.311(1) of this chapter and the following instructions:

- (a) Write the facility's U.S. EPA ID number in Item 1 of the new manifest. Write the generator's name and mailing address in Item 5 of the new manifest. If the mailing address is different from the generator's site address, then write the generator's site address in the designated space for Item 5.
- (b) Write the name of the initial generator and the generator's U.S. EPA ID number in the designated facility block (Item 8) of the new manifest.
- (c) Copy the manifest tracking number found in Item 4 of the old manifest to the Special Handling and Additional Information Block of the new manifest, and indicate that the shipment is a residue or rejected waste from the previous shipment.
- (d) Copy the manifest tracking number found in Item 4 of the new manifest to the manifest reference number line in the Discrepancy Block of the old manifest (Item 18a).
- (e) Write the DOT description for the rejected load or the residue in Item 9 (U.S. DOT Description) of the new manifest and write the container types, quantity, and volume(s) of waste.
- (f) Sign the Generator's/Offeror's Certification to certify, as offeror of the shipment, that the waste has been properly packaged, marked and labeled and is in proper condition for transportation.
- (g) For full load rejections that are made while the transporter remains at the facility, the facility shall return the shipment to the generator with the original manifest by completing Item 18b of the manifest and supplying the generator's information in the Alternate Facility space. The facility shall retain a copy for its records and then give the remaining copies of the manifest to the transporter to accompany the shipment. If the original manifest is not used, then the facility shall use a new manifest and comply with CMR 30.533(6)(a) through (f).

(7) If a facility rejects a waste or identifies a container residue that exceeds the quantity limits for "empty" containers set forth in 310 CMR 30.106(2) after it has signed, dated, and returned a copy of the manifest to the delivering transporter or to the generator, the facility shall amend its copy of the manifest to indicate the rejected wastes or residues in the discrepancy space of the amended manifest. The facility shall also copy the manifest tracking number from Item 4 of the new manifest to the discrepancy space of the amended manifest, and shall re-sign and date the manifest to certify to the information as amended. The facility shall retain the amended manifest for at least three years from the date of amendment, and shall, within 30 days, send a copy of the amended manifest to the Department, transporter and generator that received copies prior to their being amended.

30.534: Unmanifested Waste Report

If an unmanifested waste shipment arrives at a facility, the owner or operator shall notify the Department immediately upon the arrival of the shipment.

(1) If the facility does not accept the shipment, the owner or operator shall instruct the transporter to take no action until that transporter receives specific instructions from the Department.

(2) If the facility accepts the shipment, the owner or operator shall submit an unmanifested waste report to the Department within 15 days of receipt by the facility of the unmanifested hazardous waste shipment. The report shall be on a form prescribed by the Department and shall include the following information:

- (a) The EPA identification number, name, and address of the facility;
- (b) The date the facility received the waste;
- (c) The EPA identification number, name, and address of the generator and the transporter, if available;
- (d) A description and the quantity of each unmanifested hazardous waste the facility received;
- (e) The method of treatment, storage, use or disposal for each unmanifested hazardous waste;

30.534: continued

- (f) A brief explanation, if known to the facility, of why the waste was unmanifested; and
- (g) The certification required by 310 CMR 30.009, signed by the owner or operator of the facility or his agent.

(3) Except as provided in 310 CMR 30.535, the provisions of 310 CMR 30.534 shall not apply to hazardous waste generated and transported by a Very Small Quantity Generator in compliance with 310 CMR 30.353(1) through (11).

30.535: Waste Generated and Delivered by Very Small Quantity Generators

If a facility receives hazardous waste generated and transported by a very small quantity generator in compliance with 310 CMR 30.353(1) through (11), the owner or operator shall comply with all requirements applicable to him set forth or referred to in 310 CMR 30.353(1) through (11) and need not comply with 310 CMR 30.532 and 30.534 with respect to that hazardous waste. If the hazardous waste is handled pursuant to 310 CMR 30.353(12), the owner or operator of the facility shall comply with 310 CMR 30.532 and 30.534.

30.536: Manifest Requirements for Waste Recycled Pursuant to a Contractual Agreement

Upon receipt by a recycling facility of hazardous waste subject to 310 CMR 30.536, as set forth in 310 CMR 30.531, the owner or operator or his agent shall:

- (a) Comply with the requirements of 310 CMR 30.315, as applicable;
- (b) Sign and date each copy of the manifest to certify that the hazardous waste described by the manifest has been received; and
- (c) Retain at the facility a copy of each manifest for at least three years from the date of receipt of the hazardous waste at the facility; and
- (d) Retain a copy of each manifest in compliance with requirements set forth in 310 CMR 30.543(2) and (3).

30.540: Record Keeping and Reporting

30.541: Applicability

310 CMR 30.540 through 30.544 apply to facilities which treat, store, use or dispose of hazardous waste at the site of generation of that waste and to facilities which receive for treatment, storage, use or disposal hazardous wastes from off-site sources.

30.542: Operating Record

- (1) The owner or operator shall keep a written operating record at the premises of the facility, and it shall be readily accessible to personnel of the Department and the EPA.
- (2) The following information shall be recorded, as it becomes available, and maintained in the operating record until closure of the facility, or for at least three years after the information is recorded in the operating record of the facility, whichever period is longer:
 - (a) A description and the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, use or disposal at the facility.
 - (b) The location of each hazardous waste type within the facility and the quantity at each location. For land disposal facilities, the location, quantity and EPA or Massachusetts hazardous waste number of each hazardous waste shall be recorded on a map or diagram of each cell or disposal area. For all facilities, this information shall include cross-references to specific manifest document numbers.
 - (c) Records and results of waste analyses required by 310 CMR 7.08(4), 30.513, 30.560 or 30.629, and 40 CFR 268.4(a) and 268.7 as incorporated by reference at 310 CMR 30.750 with modifications.
 - (d) Summary reports and details of all incidents that require implementing the contingency plan.
 - (e) Records and results of inspections as required by 310 CMR 30.515.
 - (f) For facilities which receive shipments of hazardous waste from off-site sources, notices to generators as required by 310 CMR 30.512.

30.542: continued

- (g) Records, results of inspections, and monitoring, testing, or analytical data required for interim status facilities by 310 CMR 30.099(6)(f) through (j) and, for facilities subject to 310 CMR 30.800, by 310 CMR 30.606(3), 30.610, 30.620, 30.640, 30.650, 30.680, 30.690, and 30.750, as well as by the conditions of the facility's license in effect at that time.
- (h) A certification by the owner or operator no less often than once every 12 months that the facility has a program in place to reduce the volume and toxicity of hazardous waste that it generates to the degree determined by the owner or operator to be economically practicable; and the proposed method of treatment, storage or disposal is that practicable method currently available to the owner or operator which minimizes the present and future threat to public health, safety and welfare, and the environment.
- (i) Records of the quantities and date of placement for each shipment of hazardous waste placed in land disposal units pursuant to:
 - 1. an extension of the effective date of any land disposal restriction granted by EPA pursuant to 40 CFR 268.5; or
 - 2. the approval of a petition granted by EPA pursuant to 40 CFR 268.6; and
 - 3. the applicable notice and certification required by a generator pursuant to 40 CFR 268.7(a) as incorporated by reference at 310 CMR 30.750 with modifications.
- (j) For a facility that treats hazardous waste generated off the site of the facility, a copy of each certification and demonstration, if applicable, required of the generator or owner or operator pursuant to 40 CFR 268.7 as incorporated by reference at 310 CMR 30.750 with modifications.
- (k) For a facility that treats hazardous waste generated only at the site of the facility, the information, except the manifest number, contained in the notice, and the certification and demonstration, if applicable, required of the generator or the owner or operator pursuant to 40 CFR 268.7 as incorporated by reference at 310 CMR 30.750 with modifications.
- (l) For a land disposal facility that disposes of hazardous waste generated off the site of the facility, a copy of the notice, and the certification and demonstration if applicable, required of the generator or the owner or operator of a treatment facility pursuant to 40 CFR 268.7 as incorporated by reference at 310 CMR 30.750 with modifications.
- (m) For a land disposal facility that disposes of hazardous waste generated only at the site of the facility, the information, except for the manifest number, contained in the notice, and the certification and demonstration, if applicable, required of the generator or owner or operator of the treatment facility pursuant to 40 CFR 268.7 as incorporated by reference at 310 CMR 30.750 with modifications.

30.542: continued

(n) For a facility that stores hazardous waste generated off the site of the facility, a copy of the notice, and the certification and demonstration if applicable, required of the generator or the owner or operator pursuant to 40 CFR 268.7 as incorporated by reference at 310 CMR 30.750 with modifications.

(o) For a facility that stores hazardous waste generated only at the site of the facility, the information, except the manifest number, contained in the notice, and the certification and demonstration, if applicable, required of the generator or the owner or operator pursuant to 40 CFR 268.7 as incorporated by reference at 310 CMR 30.750 with modifications.

30.543: Availability, Retention, and Disposition of Records

(1) All plans required by 310 CMR 30.513 through 30.523, 30.583, and 30.593 and all approved revisions thereof shall be kept at the facility until completion of the certification of closure in compliance with 310 CMR 30.586.

(2) All records, including plans required pursuant to 310 CMR 30.000, shall be furnished upon request of, and made available at all reasonable times for inspection by, any duly designated officer, employee, or representative of the Department or of the EPA.

(3) The retention period for all records required pursuant to 310 CMR 30.500 shall be extended automatically during the course of any unresolved enforcement action regarding the facility, or as requested or ordered by the Department.

(4) A copy of records of waste disposal locations and quantities shall be submitted to the Department upon closure of the facility.

30.544: Biennial Report

The owner or operator of any facility subject to licensing pursuant to 310 CMR 30.801 shall prepare and submit a copy of a Biennial Report to the Commissioner by March 1st of each even numbered year. The Biennial Report shall be submitted on EPA Form 8700-13A. The report shall cover facility activities during the previous calendar year and shall include, at a minimum, the following information:

(1) The EPA identification number, name, and address of the facility, and the name and telephone number of the principal contact at the facility.

(2) The calendar year covered by the report.

(3) For facilities that receive any hazardous waste from any off-site source, the EPA identification number of each hazardous waste generator from which the facility received a hazardous waste during the year; for imported shipments, the report shall include the name and address of the foreign generator.

(4) A description of and the quantity of each hazardous waste the facility treated, stored or disposed of during the year; for facilities that receive any hazardous waste from any off-site source, this information must be listed by the EPA identification number of each generator.

(5) The method of treatment, storage, or disposal for each hazardous waste.

(6) The most recent closure cost estimate made pursuant to 310 CMR 30.580 through 30.586 and, if applicable, the most recent post-closure cost estimate made pursuant to 310 CMR 30.590 through 30.595.

(7) For generators who treat, store, or dispose of hazardous waste on-site, a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated.

(8) For generators who treat, store, or dispose of hazardous waste on-site, a description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for the years prior to 1984.

30.544: continued

- (9) A summary of every incident that required implementing the contingency plan.
- (10) The certification signed by the owner or operator of the facility or his authorized representative pursuant to 310 CMR 30.009.

30.560: General Requirements for Ignitable, Reactive, or Incompatible Wastes

- (1) The owner or operator shall take precautions to prevent accidental ignition or reaction of ignitable or reactive hazardous waste at the facility. Such waste shall be separated and protected from sources of ignition or reaction which include, but are not limited to:
 - (a) Open flames;
 - (b) Smoking;
 - (c) Cutting and welding;
 - (d) Hot surfaces;
 - (e) Frictional heat;
 - (f) Static, electrical, or mechanical sparks;
 - (g) Spontaneous ignition, e.g. from heat producing chemical reactions; and
 - (h) Radiant heat.
- (2) While ignitable or reactive waste is being handled, the owner or operator shall confine smoking and open flames to specially designated locations. "No Smoking" signs shall be conspicuously placed wherever there is a potential or actual hazard from ignitable or reactive waste.
- (3) The treatment, storage, disposal, or use of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials, shall be conducted so that such treatment, storage, use or disposal does not, and does not threaten to:
 - (a) Generate extreme heat or pressure, fire or explosion, or violent reaction;
 - (b) Produce uncontrolled toxic mists, fumes, dusts, or gases which may threaten public health, safety, or welfare or the environment;
 - (c) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of explosion;
 - (d) Damage the structural integrity of the device or facility containing the waste; or
 - (e) Through other means threaten public health, safety, or welfare, or the environment.
- (4) When conditions exist which require the owner or operator to comply with 310 CMR 30.560(1), (2), and (3), the owner or operator shall document that compliance. The plans specified in 310 CMR 30.513, 30.514, 30.515, 30.516, and 30.520 through 30.523 shall indicate how the requirements of 310 CMR 30.560 shall be met. This documentation may be based on:
 - (a) References to published scientific or engineering literature;
 - (b) Data from trial tests, e.g. bench scale or pilot scale tests;
 - (c) Waste analyses as specified in 310 CMR 30.513; or
 - (d) The results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

30.561: Examples of Potentially Incompatible Wastes

Many hazardous wastes, when mixed with other waste or material, can produce effects which are harmful to human health and the environment, such as (1) heat or pressure, (2) fire or explosion, (3) violent reaction, (4) toxic dusts; mists, fumes, or gases, or (5) flammable fumes or gases.

Below are examples of potentially incompatible wastes, waste components, and materials, along with the harmful consequences which might result from mixing material in one group with material in another group. The list is intended only as a guide to indicate the need for special precautions when managing these potentially incompatible waste materials or components.

30.561: continued

This list is not intended to be exhaustive. An owner or operator shall, as regulations require, adequately analyze his wastes so that he can prevent creating uncontrolled substances or reactions of the type listed below, whether they are listed below or not.

In the lists below, the mixing of a Group A material with a Group B material might have the potential consequences as noted.

Group 1-A

Acetylene sludge
Alkaline caustic liquids
Alkaline cleaner
Alkaline corrosive liquids
Alkaline corrosive battery fluid
Caustic wastewater
Lime sludge and other corrosive
alkalies
Lime wastewater
Lime and water
Spent caustic

Group 1-B

Acid sludge
Acid and water
Battery acid
Chemical cleaners
Electrolyte, acid
Etching acid liquid or solvent
Pickling liquor and other
corrosive acids
Spent acid
Spent mixed acid
Spent sulfuric acid

Potential consequences: Heat generation; violent reaction.

Group 2-A

Aluminum
Beryllium
Calcium
Lithium
Magnesium
Potassium
Sodium
Zinc powder
Other reactive metals and metal
hydrides

Group 2-B

Any waste in Group 1-A or 1-B

Potential consequences: Fire or explosion; generation of flammable hydrogen gas.

Group 3-A

Alcohols
Water

Group 3-B

Any concentrated waste
in Groups 1-A or 1-B
Calcium
Lithium
Metal hydrides
Potassium
SO₂Cl₂, SOCl₂, PCl₃, CH₃SiCl₃
Other water-reactive waste

Potential consequences: Fire, explosion, or heat generation; generation of flammable or toxic gases.

30.561: continued

Group 4-A

Alcohols
Aldehydes
Halogenated hydrocarbons
Nitrated hydrocarbons
Unsaturated hydrocarbons
Other reactive organic compounds
and solvents

Group 4-B

Concentrated Group 1-A
or 1-B wastes
Group 2-A wastes

Potential consequences: Fire, explosion, or violent reaction.

Group 5-A

Spent cyanide and sulfide
solutions

Group 5-B

Group 1-B wastes

Potential consequences: Generation of toxic hydrogen cyanide or hydrogen sulfide gas.

Group 6-A

Chlorates
Chlorine
Chlorites
Chromic acid
Hypochlorites
Nitrates
Nitric acid, fuming
Perchlorates
Permanganates
Peroxides
Other strong oxidizers

Group 6-B

Acetic acid and other
organic acids
Concentrated mineral acids
Group 2-A wastes
Group 4-A wastes
Other flammable and
combustible wastes

Potential consequences: Fire, explosion, or violent reaction.

30.580: CLOSURE

30.581: Applicability

The closure requirements in 310 CMR 30.580 through 30.587, cited collectively as 310 CMR 30.580, apply to all hazardous waste facilities.

30.582: Closure Performance Standard

The owner or operator shall close the facility in a manner that minimizes the need for further maintenance and complies with the closure requirements established within 310 CMR 30.600 that are specific to the type of facility being closed. Post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground water, surface water, soil, or the atmosphere shall be eliminated or minimized to the extent necessary to assure compliance with the previous sentence and to prevent any threat to public health, safety, or welfare, or the environment.

30.583: Contents and Approval of Closure Plan; Notification of Closure

- (1) The owner or operator of a facility shall have a written closure plan that complies with the requirements of 310 CMR 30.580. The owner or operator of a facility at which there is a surface impoundment described in 310 CMR 30.617(5) or a waste pile described in 310 CMR 30.649(3) from which the owner or operator intends to remove all hazardous waste at closure shall have a contingent closure plan that complies with the requirements of 310 CMR 30.590 and, as applicable, in 310 CMR 30.617(5) and 30.649(3). Each closure plan shall identify the activities that shall, and each contingent closure plan shall identify the activities that might, be necessary to close the hazardous waste management unit or facility at any point during its intended operating life or at the end of its intended operating life. The closure plan shall include at least:
- (a) A description of how and when each hazardous waste management unit at the facility will be closed during the facility's intended operating life, and the facility as a whole will be closed at the end of its intended operating life. The plan shall identify how the requirements of 310 CMR 30.580 shall be complied with.
 - (b) A description that shall identify the capacity and extent of the facility's operation that is planned to be active at the time that the capacity and extent of the facility's operation will be at maximum.
 - (c) An estimate of the maximum inventory of hazardous wastes ever on the site of the facility over the active life of the facility.
 - (d) A detailed description of the methods to be used during closure(s), including, but not limited to, methods for removing, transporting, treating, storing, or disposing of all hazardous wastes, and identification of the type(s) of the off-site hazardous waste management units to be used, if applicable.
 - (e) A detailed description of the steps needed to remove hazardous waste residues from, or decontaminate, all contaminated containment system components, and all facility equipment, structures, and soils during closure(s). This description shall include, but not be limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination required to comply with the closure performance standard, 310 CMR 30.582.
 - (f) A detailed description of other activities necessary during the period of each closure to ensure that all closures comply with the closure performance standard, 310 CMR 30.582. This description shall include, but not be limited to, ground water monitoring, leachate collection, and run-on and run-off control.
 - (g) A schedule for closure of each hazardous waste management unit and for final closure of the facility. The schedule shall include, at a minimum, the total time required to close each hazardous waste management unit, and the time required for intervening closure activities which will allow tracking of the progress of closure. For example, in the case of a landfill unit, the plan shall include estimates of the time required to treat or dispose of all hazardous waste inventory and of the time required to place a final cover. In addition, facilities that use trust funds to demonstrate financial assurance for closure pursuant to 310 CMR 30.904 shall include an estimate of the expected year of closure. Facilities not using trust funds are not required to estimate the expected year of closure, provided that the closure fund mechanism is funded appropriately and updated annually.
 - (h) A description of how the requirements of 310 CMR 30.580, and the applicable closure requirements of 310 CMR 30.606(1) through (3), 30.617, 30.633, 30.649, 30.659, 30.689, and 30.699 will be complied with.
- (2) Amendments of closure plans shall be subject to the following provisions:
- (a) All applications to the Department for approval to amend a facility's closure plan shall include a copy of the proposed amended closure plan. The owner or operator shall submit a written notification of or request for a license modification to authorize a change in the approved closure plan in compliance with 310 CMR 30.802 through 30.807. The Department shall classify the proposed amendment in accordance with 310 CMR 30.852. The Department shall act in accordance with the requirements and procedures set forth in 310 CMR 30.852.

30.583: continued

(b) The owner or operator may apply to the Department for approval to amend the closure plan for the facility as a whole, or for a particular hazardous waste management unit or units, at any time prior to giving notification of closure of the facility as a whole, or the hazardous waste management unit(s) in question, as the case may be. Except as provided in 310 CMR 30.852 and 30.890, denial of an application to amend a closure plan shall not be subject to public notice, public comment, or public hearings.

(c) The owner or operator shall apply to the Department for approval to amend the facility's closure plan whenever

1. changes in operating plans or facility design affect the closure plan, or
2. there is a change in the expected year of closure, if applicable, or
3. in conducting closure activities, unexpected events (including, but not limited to, a change in applicable regulations when published in the *Massachusetts Register*) require a modification of the approved closure plan, or
4. the Department requests or orders an amendment of the facility's closure plan.

(d) The deadline for the owner or operator to file required applications to the Department for approval to amend the facility's closure plan shall be as follows:

1. At least 60 days prior to a proposed change in facility design or operation.
2. Not more than 60 days after an unexpected event has occurred (including, but not limited to, a change in applicable regulations when published in the *Massachusetts Register*) that affects the closure plan, if the unexpected event does not occur during a closure period.
3. Not more than 30 days after an unexpected event has occurred (including, but not limited to, a change in applicable regulations when published in the *Massachusetts Register*) that affects the closure plan, if the unexpected event occurs during a closure period.
4. Not more than 60 days after the Department requests or orders an amendment of the facility's closure plan if the event(s) cited by the Department for issuing the request or order do(es) not occur during a closure period.
5. Not more than 30 days after the Department requests or orders an amendment of the facility's closure plan if any event(s) cited by the Department for issuing the request or order occur(s) during a closure period.

(e) If the Department determines that a surface impoundment or waste pile shall be closed as a landfill in accordance with requirements set forth in 310 CMR 30.620, the owner or operator of the surface impoundment or waste pile shall submit an amended closure plan to the Department. The deadline for submittal shall be:

1. Not more than 60 days after the date of the Department's determination if the Department does not make the determination during a closure period.
2. Not more than 30 days after the date of the Department's determination if the Department makes the determination during a closure period.

(3) The owner or operator shall notify the Department of each expected closure subject to the following provisions.

(a) The owner or operator shall notify the Department in writing at least 60 days prior to the date on which he expects to begin closure of a surface impoundment, waste pile, land treatment unit, or landfill unit, or closure of a facility with any such unit.

(b) The owner or operator shall notify the Department in writing at least 45 days prior to the date on which he expects to begin

1. closure of a unit consisting of one or more treatment or storage tanks, a container storage unit, or an incinerator unit, or
2. closure of a facility with only units described in 310 CMR 30.583(3)(b)1., or
3. closure of any other unit or facility not subject to 310 CMR 30.583(3)(a).

(c) The date on which the owner or operator "expects to begin . . . closure" shall be

1. no later than 30 days after the date on which any hazardous waste management unit receives the known final volume of hazardous waste, or
2. if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one year after the date on which the unit received the most recent volume of hazardous waste.

30.583: continued

(d) The Department may approve an extension of the one-year limit set forth in 310 CMR 30.583(3)(c)2. Such an extension shall be in writing, shall be subject to the requirements and procedures set forth in 310 CMR 30.800, and, in addition, may be granted, and may be allowed to remain in effect, only if the owner or operator has persuaded the Department that

1. the hazardous waste management unit or facility has the capacity to receive additional hazardous waste, and
2. he has taken, and will continue to take, all steps to prevent threats to public health, safety, and welfare, and the environment, including compliance with all applicable license requirements.

(e) If the facility's hazardous waste license is suspended or revoked, or if the facility is otherwise ordered by the Department, by a court of competent jurisdiction, or by any other government agency or body politic to cease receiving hazardous waste or to close, then the requirements set forth in 310 CMR 30.583(3)(a) through (d) do not apply. However, the owner or operator shall close the facility in accordance with the deadlines set forth in 310 CMR 30.584, and in compliance with all applicable provisions of 310 CMR 30.000. In addition, the owner or operator shall promptly notify the Department whenever the facility is ordered by a court of competent jurisdiction, or by any government agency or body politic other than the Department, to cease receiving hazardous waste or to close.

(f) Except as provided in 310 CMR 30.583(2)(c)4 and 30.583(2)(e), nothing in 310 CMR 30.583 shall preclude an owner or operator from removing hazardous wastes and decontaminating or dismantling equipment in accordance with the approved closure plan at any time before or after notification of closure.

30.584: Time Allowed for Closure

(1) Within 90 days after receiving the final volume of hazardous wastes at a hazardous waste management unit or facility, the owner or operator shall have treated all hazardous wastes in storage or in treatment, or have removed them from the unit or facility, or disposed of them on-site, in compliance with the approved closure plan. The Department may approve a longer period, but (1) only if the owner or operator applies for such approval at least 30 days prior to the expiration of the 90-day period described in the preceding sentence, and (2) only if the owner or operator applies for such approval in compliance with 310 CMR 30.802 through 30.807, and (3) only after the Department complies with the requirements and procedures set forth in 310 CMR 30.851 and 30.852, and, if applicable, 310 CMR 30.833, 30.835, 30.836, 30.837, and 30.839, and (4) such approval shall be subject to all other applicable provisions of 310 CMR 30.800, and (5) in addition, such approval may be granted, and may be allowed to remain in effect, only if the owner or operator has persuaded the Department that:

(a) He has taken and will continue to take all steps to prevent threats to public health, safety, or welfare, or the environment, including compliance with all applicable license requirements, and

(b) Either:

1. The activities required to comply with 310 CMR 30.584(1) will, of necessity, take longer than 90 days to complete, or
2. a. The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, and
 - b. There is a reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or facility within one year, and
 - c. closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site.

30.584: continued

(2) The owner or operator shall complete closure activities in accordance with the approved closure plan and within 180 days after receiving the final volume of hazardous wastes at the hazardous waste management unit or facility. The Department may require and specify a shorter closure period if the Department determines that such action is necessary to protect public health, safety, or welfare, or the environment. The Department may approve an extension to the closure period, but (1) only if the owner or operator applies for such approval at least 30 days prior to the expiration of the 180-day period described in the preceding sentence, and (2) only if the owner or operator applies for such approval in compliance with 310 CMR 30.802 through 30.807, and (3) only after the Department complies with the requirements and procedures set forth in 310 CMR 30.851 and 30.852, and, if applicable, 310 CMR 30.833, 30.835, 30.836, 30.837, and 30.839, and (4) such approval shall be subject to all other applicable provisions of 310 CMR 30.800, and (5) in addition, such approval may be granted, and may be allowed to remain in effect, only if the owner or operator has persuaded the Department that:

(a) He has taken and will continue to take all steps to prevent threats to public health, safety, or welfare, or the environment from the unclosed but not operating hazardous waste management unit or facility, including compliance with all applicable license requirements, and

(b) Either:

1. The activities required to comply with 310 CMR 30.584(1) will, of necessity, take longer than 180 days to complete, or
2. a. The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, and
b. There is a reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or facility within one year, and
c. Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site.

30.585: Disposal or Decontamination of Equipment

Closure shall not be considered complete until all facility equipment, structures, and soil have been properly disposed of or decontaminated by removal of all hazardous wastes and residues. During each closure period, all contaminated equipment, structure, and soils shall be properly disposed of or decontaminated unless otherwise specifically specified in 310 CMR 30.000. In addition, during the closure period of a hazardous waste incinerator, the owner or operator shall remove from the incinerator site all hazardous waste and hazardous waste residues, including, but not limited to, ash, scrubber waters, and scrubber sludges. By removing any hazardous wastes or hazardous constituents during closure, the owner or operator might become a generator of hazardous waste and, if he does, he shall handle that waste in compliance with all applicable provisions of 310 CMR 30.000.

30.586: Recording Survey Plat

No later than the submission of the certification of closure, in compliance with 310 CMR 30.587(1), of each land disposal unit or facility, the owner or operator of the land disposal unit or facility shall record in the appropriate Registry of Deeds or, if the land in question is registered land, in the registry section of the land court for the district wherein the land lies, and shall submit to the Department and to the Board of Health of the city or town wherein the land lies, a survey plat indicating the location and dimensions of landfill cells and other disposal units with respect to permanently surveyed benchmarks. This plat shall be prepared and certified by a professional land surveyor and shall be in a form acceptable to the Registry of Deeds. The plat shall contain a note prominently displayed which states the obligation to restrict disturbance of the site of the land disposal unit or facility in accordance with 310 CMR 30.590. In addition, the plat shall be accompanied by a record of the type, location, and quantity of hazardous wastes in the land disposal unit or facility. For wastes placed in the land disposal unit or facility before the effective date of 310 CMR 30.000, the owner or operator shall identify the type, location, and quantity of the wastes to the best of his knowledge and in accordance with any records kept by him or his predecessors. After the survey plat and record of wastes has been recorded, any changes that occur in the type, location, or quantity of hazardous wastes within each land disposal unit or area of the facility, or in what the owner or operator knows or learns about the type, location, or quantity of hazardous wastes within each land disposal unit or area of the facility, shall be noted on a revised plat which shall be promptly recorded in the appropriate Registry of Deeds or Land Court and promptly reported to the Department.

30.587: Completion and Certification of Closure

(1) Within 60 days of completion of closure of each hazardous waste surface impoundment, waste pile, land treatment unit, and landfill unit, within 60 days of completion of closure of any other hazardous waste management unit, and within 60 days of completion of final closure of the facility, the owner or operator shall submit to the Department, either by hand-delivery or by certified mail, a certification signed by both the owner or operator and by an independent Massachusetts registered professional engineer that:

- (a) the hazardous waste management unit or facility, as applicable, has been closed in compliance with the requirements of 310 CMR 30.000 and of the approved closure plan, and
- (b) the survey plat required by 310 CMR 30.586 has been recorded in the appropriate Registry of Deeds or, if the land in question is registered land, in the registry section of the land court for the district wherein the land lies, and copies of the plat have been submitted to the Department and to the Board of Health of the city or town wherein the land lies, in compliance with 310 CMR 30.586.

(2) Until the Department, pursuant to 310 CMR 30.904(8), notifies the owner or operator in writing that he is no longer required to maintain financial assurance for closure of the facility, the owner or owner and the independent Massachusetts registered professional engineer who signed the certification required pursuant to 310 CMR 30.587(1) shall each promptly submit to the Department on request any documentation supporting said certification.

(3) Closure shall not be considered complete until the Department has notified the owner or operator in writing that he is no longer required to maintain financial assurance for the closure of the facility pursuant to 310 CMR 30.587(2).

30.590: Post-closure

30.591: Applicability

The requirements in 310 CMR 30.590 through 30.596, cited collectively as 310 CMR 30.590, apply to the owners and operators of all hazardous waste management units and facilities at which hazardous waste and/or hazardous waste residues will remain after closure.

30.592: Post-closure Care and Use of Property

- (1) Post-closure care for each hazardous waste management unit subject to the requirements of 310 CMR 30.590 shall begin after completion of closure of the unit, shall continue for 30 years after that date, and shall consist of at least the following:
 - (a) Monitoring and reporting in accordance with the requirements set forth in 310 CMR 30.606 through 30.675; and
 - (b) Maintenance and monitoring of waste containment systems in accordance with the requirements set forth in 310 CMR 30.606 through 30.675.

- (2) At any time preceding completion of closure of a particular hazardous waste management unit subject to the requirements of 310 CMR 30.590, or at any time during the post-closure period of that hazardous waste management unit or facility, the Department may shorten the post-closure period applicable to that hazardous waste management unit or facility
 - (a) if all hazardous waste management units or facilities have been closed, and
 - (b) if the Department determines that such action is sufficient to protect public health, safety, or welfare, or the environment (*e.g.*, leachate or ground water monitoring results, characteristics of the hazardous wastes, application of advanced technology, or alternative disposal, treatment, or re-use techniques indicate that the hazardous waste management unit or facility is and would continue to be secure), and
 - (c) if the owner or operator requests the Department to take such action by filing an application that complies with the requirements in 310 CMR 30.802 through 30.807, and
 - (d) only after the Department complies with the requirements and procedures set forth in 310 CMR 30.851 and 30.852, and, if applicable, 310 CMR 30.833, 30.835 through 30.837, and 30.839, and
 - (e) if such action is accordance with all other applicable provisions of 310 CMR 30.800.

- (3) At any time preceding completion of closure of a particular hazardous waste management unit or facility subject to the requirements of 310 CMR 30.590, or at any time during the post-closure period of that hazardous waste management unit or facility, the Department may extend the post-closure period applicable to that hazardous waste management unit or facility
 - (a) if the Department determines that such action is necessary to protect public health, safety, or welfare, or the environment (*e.g.*, leachate or ground water monitoring results indicate a potential for migration of hazardous wastes at levels which might be harmful to public health, safety, or welfare, or the environment), and
 - (b) after the Department complies with the requirements and procedures set forth in 310 CMR 30.851 and 30.852, and, if applicable, 310 CMR 30.833, 30.835 through 30.837, and 30.839, except as provided in 310 CMR 30.020 and 30.030, and
 - (c) if such action is accordance with all other applicable provisions of 310 CMR 30.800.

- (4) The Department may require continuation, after closure, of any of the security requirements of 310 CMR 30.514 during part or all of the post-closure period if:
 - (a) Hazardous wastes might remain exposed after completion of closure, or
 - (b) Access by the public or domestic livestock might pose a hazard to public health, safety, or welfare, or the environment.

- (5) Post-closure use of property on or in which hazardous wastes remain after closure shall never be allowed to disturb the integrity of the final cover, liner(s), or any other components of any containment system, or the function of the facility's monitoring systems, unless the Department determines in writing that the disturbance:
 - (a) Is necessary to the proposed use of the property and will not increase the potential hazard to public health, safety, or welfare or the environment; or
 - (b) Is necessary to reduce a threat to public health, safety or welfare or the environment.

- (6) All post-closure care activities shall be in compliance with the provisions of the approved post-closure plan as specified in 310 CMR 30.593.

30.593: Post-closure Plan

(1) The owner or operator of a hazardous waste management unit or facility subject to the requirements of 310 CMR 30.590 shall have a written post-closure plan that complies with the requirements in 310 CMR 30.590. The owner or operator of a facility at which there is a surface impoundment described in 310 CMR 30.617(5) or a waste pile described in 310 CMR 30.649(3) from which the owner or operator intends to remove all hazardous waste at closure shall have a contingent post-closure plan that complies with the requirements of 310 CMR 30.590 and, as applicable, in 310 CMR 30.617(5) and 30.649(3). Owners or operators of surface impoundments or waste piles not otherwise required to have contingent post-closure plans shall submit a post-closure plan to the Department within 90 days after the owner or operator or the Department determines that the surface impoundment or waste pile shall be closed as a landfill. Each post-closure plan shall identify the activities that shall, and each contingent post-closure plan shall identify the activities that might, be carried on after closure and the frequency of these activities, and shall include at least:

- (a) A description of the planned monitoring activities and frequencies at which they will be performed to comply with the requirements set forth in 310 CMR 30.606 through 30.675, and
- (b) A description of the planned maintenance activities, and frequencies at which they will be performed, to ensure:
 - 1. The integrity of the cap and final cover or other containment systems in accordance with the requirements set forth in 310 CMR 30.606 through 30.659, and
 - 2. The function of the monitoring equipment in accordance with the requirements set forth in 310 CMR 30.606 through 30.675, and
- (c) The name, address, and telephone number of the person or office to contact about the hazardous waste management unit or facility during the post-closure care period. This individual or office shall keep at all times during the post-closure period an updated copy of the approved post-closure plan.

(2) Amendments of post-closure plans shall be subject to the following provisions.

- (a) All applications to the Department for approval to amend a facility's post-closure plan shall include a copy of the proposed amended post-closure plan. The owner or operator shall submit a written notification of or request for a license modification to authorize a change in the approved post-closure plan in compliance with 310 CMR 30.802 through 30.807. The Department shall classify the proposed amendment in accordance with 310 CMR 30.852. The Department shall act in accordance with the requirements and procedures set forth in 310 CMR 30.852.
- (b) The owner or operator may apply to the Department for approval to amend the facility's post-closure plan at any time during the active life of the facility or during the post-closure care period. Except as provided in 310 CMR 30.852 and 30.890, denial of an application to amend a post-closure plan shall not be subject to public notice, public comment, or public hearings.
- (c) The owner or operator shall apply to the Department for approval to amend the facility's post-closure plan whenever
 - 1. changes in operating plans or facility design affect the post-closure plan, or
 - 2. there is a change in the expected year of final closure, if applicable, or
 - 3. events which occur during the active life of the facility, including but not limited to closures (and changes in applicable regulations when published in the *Massachusetts Register*), require a modification of the approved post-closure plan, or
 - 4. the Department requests or orders an amendment of the facility's post-closure plan.
- (d) The deadline for the owner or operator to file required applications to the Department for approval to amend the facility's post-closure plan shall be as follows:
 - 1. At least 60 days prior to a proposed change in facility design or operation.
 - 2. Not more than 60 days after an unexpected event has occurred (including, but not limited to, a change in applicable regulations when published in the *Massachusetts Register* that affects the post-closure plan.
 - 3. Not more than 60 days after the Department requests or orders an amendment of the facility's closure plan, or 90 days if the hazardous waste management unit is a surface impoundment or waste pile not previously required to prepare a contingent post-closure plan.

30.594: Recording Notice of License and of Past Disposal

(1) Within 60 days of certification of closure of the first hazardous waste management unit subject to the requirements of 310 CMR 30.590, and within 60 days of certification of closure of the last hazardous waste management unit subject to the requirements of 310 CMR 30.590, the owner or operator shall record in the appropriate Registry of Deeds or, if the land in question is registered land, in the registry section of the land court for the district wherein the land lies, a notice that:

- (a) the land has been used to manage hazardous wastes, and
- (b) the land's use is restricted pursuant to 310 CMR 30.592(5), and
- (c) the survey plat and record required by 310 CMR 30.586 have been recorded in the Registry of Deeds and copies thereof have been submitted to the Department and to the Board of Health of the city or town wherein the land lies.

(2) The landowner shall submit to the Department a certified copy of each notice described in 30.594(1), including the date and book and page numbers of recording of such notice, within 30 days after the landowner receives the recorded notice from the registry.

30.595: Subsequent Removal of Hazardous Waste and Hazardous Waste Containment Systems

(1) If the owner or operator or any subsequent owner or operator of the land upon which is located a hazardous waste management unit or facility subject to the requirements of 310 CMR 30.590 wishes to remove hazardous wastes, hazardous waste residues, the liner if any, or contaminated soils, he shall apply to the Department for approval to do so. The Department may grant such approval but

- (a) only if the owner or operator applies for such approval in compliance with the requirements and procedures set forth in 310 CMR 30.802 through 30.807, and
- (b) only after the Department complies with the requirements and procedures set forth in 310 CMR 30.851 and 30.852, and, if applicable, 310 CMR 30.833, 30.835, 30.836, 30.837, and 30.839, and
- (c) such approval shall be subject to all other applicable provisions of 310 CMR 30.800, and
- (d) in addition, such approval may be granted, and may be allowed to remain in effect, only if the owner or operator has persuaded the Department that the removal of the material in question will be in compliance with the requirements set forth in 310 CMR 30.592(5).

(2) If the Department grants the approval described in 310 CMR 30.595(1), the person granted such approval may request that the Department give written verification of such removal. If the Department verifies in writing that the material in question has been removed in compliance with such approval, the person requesting the verification may record that verification in the appropriate Registry of Deeds or, if the land in question is registered land, in the registry section of the land court for the district wherein the land lies.

30.596: Completion and Certification of Post-closure Care

(1) No later than 60 days after completion of the established post-closure care period for each hazardous waste management unit or facility subject to the requirements of 310 CMR 30.590, the owner or operator shall submit to the Department, either by hand-delivery or by certified mail, a certification signed by both the owner or operator and by an independent Massachusetts registered professional engineer that

- (a) post-closure care was performed for the hazardous waste management unit or facility, as applicable, for the required period in compliance with the requirements of 310 CMR 30.000 and of the approved post-closure plan, and
- (b) the survey plat required by 310 CMR 30.586 has been recorded in the appropriate Registry of Deeds or, if the land in question is registered land, in the registry section of the land court for the district wherein the land lies, and copies of the plat have been submitted to the Department and to the Board of Health of the city or town wherein the land lies, in compliance with 310 CMR 30.586.

30.596: continued

(c) the notices required by 310 CMR 30.040 and 30.594 have been recorded in the appropriate Registry of Deeds or, if the land in question is registered land, in the registry section of the land court for the district wherein the land lies, and copies of the notices have been submitted to the Department in compliance with 310 CMR 30.040 and 30.594.

(2) Until the Department, pursuant to 310 CMR 30.906(8), notifies the owner or operator in writing that he is no longer required to maintain financial assurance for post-closure care of the facility, the owner or owner and the independent Massachusetts registered professional engineer who signed the certification required pursuant to 310 CMR 30.596(1) shall each promptly submit to the Department on request any documentation supporting said certification.

(3) Post-closure care shall not be considered complete until so certified in writing by the Department.

30.600: TECHNICAL STANDARDS FOR ALL HAZARDOUS WASTE FACILITIES

30.601: Applicability

(1) 310 CMR 30.601 through 30.699, cited collectively as 310 CMR 30.600, set standards for the design, performance, operation, maintenance, and monitoring of facilities subject to 310 CMR 30.000. Different provisions of 310 CMR 30.600 apply to different classes and categories of facilities. 310 CMR 30.600 applies to owners and operators of:

- (a) All facilities which use, store, treat or dispose of hazardous waste;
- (b) All facilities which are described in 310 CMR 30.341(8);
- (c) All facilities which recycle regulated recyclable material, or which store regulated recyclable material prior to its being recycled, unless the regulated recyclable material is stored and recycled in compliance with 310 CMR 30.200.
- (d) All facilities which treat or store hazardous waste before it is loaded onto a vessel for incineration or disposal at sea.

(2) The requirements of 310 CMR 30.600 do not apply to:

- (a) The accumulation of hazardous waste by a generator at the site of generation for less than 90 days, provided that the requirements of 310 CMR 30.340 through 30.343 are met;
- (b) A treatment process, method or technique which is an integral part of the manufacturing process, as defined in 310 CMR 30.010, provided that an owner or operator conducting treatment which is an integral part of the manufacturing process shall conduct inspections, maintenance or other activities to ensure that the treatment operation does not result in spills, leaks, or emissions into the environment;
- (c) Accumulation by a small quantity generator in compliance with 310 CMR 30.351(5); and
- (d) Municipal or industrial waste water treatment facilities permitted pursuant to M.G.L. c. 21, § 43. Such facilities shall be subject to 314 CMR 8.00.
- (e) Universal waste handlers and universal waste transporters handling the wastes listed at 310 CMR 30.143(2) in compliance with 310 CMR 30.1000.
- (f) The accumulation of a laboratory waste by a University participating in the Laboratory XL project at the site of generation for less than 120 days, provided that the requirements of 310 CMR 30.340 and 30.355 are met.
- (g) The accumulation of a laboratory waste by a University participating in the Laboratory XL project at the site of generation for less than 210 days, provided that the requirements of 310 CMR 30.351 and 30.355 are met.
- (h) Elementary neutralization of corrosive hazardous waste at the site of generation in an elementary neutralization unit provided that the generator is in compliance with 310 CMR 30.1103.

30.602: General Requirements for All Facilities

(1) Hazardous waste storage operations shall be conducted in such a manner that all hazardous wastes are contained throughout the life of the storage operation.

30.602: continued

(2) Notwithstanding any provision of 310 CMR 30.660, the Department may require the owner or operator of any facility which uses, stores, or treats hazardous waste to comply with, and such owner or operator shall comply with, all or part of 310 CMR 30.660: *Groundwater Protection* if the Department determines that such action is appropriate to protect public health, safety or welfare or the environment.

(3) The Department may require any facility which uses, stores, treats or disposes of hazardous waste to implement, and such owner or operator shall implement, emission monitoring and/or ambient air quality monitoring programs if the Department determines that such action is appropriate to protect public health, safety, or welfare or the environment.

(4) Each unit in which hazardous waste is used, stored, treated or disposed of shall have such process controls and emission controls as the Department may require to protect public health, safety, and welfare and the environment from toxic or otherwise harmful fumes, mists, dusts or gases. The Department may prohibit the use, storage, treatment or disposal of certain hazardous wastes in impoundments, piles, landfills or other units if the Department determines that use, storage, treatment or disposal of such waste might result in the production of hazardous emissions in concentrations in excess of air quality standards or in quantities sufficient to present a potential hazard to public health, safety, or welfare or the environment.

(5) Pursuant to 310 CMR 7.02(5) and 30.000, the Department may require the owner or operator of an existing facility (as defined in 310 CMR 30.010) to submit to the Department plans and specifications for reconstruction, alteration or repair of the facility and/or proposed standard operating procedures for the facility whenever the Department determines that the facility is in need of reconstruction, alteration or repair and/or that new or revised standard operating procedures are necessary to prevent the facility from causing or contributing to a condition of air pollution.

(6) Each owner or operator shall take all appropriate measures to minimize odors originating from each facility for the use, treatment, storage or disposal of hazardous waste. No operation at a facility which uses, stores, treats or disposes of hazardous waste shall result in the creation of a noisome or unwholesome odor (as defined in 310 CMR 30.010).

(7) Each owner or operator shall pave or line each truck dock or similar area where hazardous waste is loaded or unloaded with a material which is sufficiently impervious to spills or leaks of hazardous waste that such waste shall be prevented from coming in contact with soil or groundwater.

(8) Each owner or operator shall operate each facility so that, at the site of the facility, traffic patterns and volume are controlled and access roads are surfaced so that traffic, including emergency vehicles, has safe and expeditious access to the facility.

(9) For all facility owners and operators who are required to seek a new permit/license or a renewal permit/license (including a post-closure permit/license) for the treatment, storage, or disposal of hazardous waste pursuant to 310 CMR 30.099 or 40 CFR 270.1(c), the corrective action provisions of 40 CFR 264.101 are hereby incorporated by reference, and will be applied at the time of permit/license issuance, subject to the following additions, modifications, and exceptions:

(a) In 40 CFR 264.101(b), delete "Subpart S of this part" and substitute "310 CMR 40.0000."

(b) In 40 CFR 264.101(c), delete "Regional Administrator" and substitute "Department."

(c) At the end of 40 CFR 264.101(d), add, "The management of remediation waste is subject to the requirements of 310 CMR 40.0030."

Notwithstanding the foregoing, the requirements of 310 CMR 30.602(9) shall not apply to the owner and/or operator of an Interim Status Disposal Facility that is conducting corrective action pursuant to the terms of a federal RCRA Corrective Action permit issued by EPA under the authority of 40 CFR 264.101, and in effect as of the date that EPA authorizes Massachusetts to implement the HSWA Corrective Action Rule pursuant to RCRA § 3006 and 40 CFR Part 271, Subpart A, for so long as the EPA permit continues in effect and for so long as any requirements established by the EPA permit continue in effect pursuant to a federal court order, unless otherwise agreed to by the parties and ordered by a court of competent jurisdiction.

30.602: continued

(10) Any post closure permit/license that is issued will address all applicable 310 CMR 30.000 groundwater monitoring, unsaturated zone monitoring, corrective action, and post-closure care requirements at 310 CMR 30.000. The Department may issue a post closure order under M.G.L. c. 21C, or M.G.L. c. 21E, or both, in lieu of a post closure permit/license. Any such order that is issued will address all applicable 310 CMR 30.000 groundwater monitoring, unsaturated zone monitoring, corrective action, and post-closure care requirements at 310 CMR 30.000. The Department will assure a meaningful opportunity for public involvement regarding any such post closure order:

- (a) At the time when the post closure order is being issued;
- (b) At the time when the post closure remedy is being selected, and
- (c) At the time when the remedy has been completed, by providing a public notice reflecting the Department's tentative determination. Any such notice shall:
 1. Be published, at the Department's expense, in a newspaper having a substantial circulation in the affected area;
 2. Be provided to the owner or operator of the facility and to all persons on the facility mailing list maintained pursuant to 310 CMR 30.833(4); and
 3. Indicate the basis for the Department's tentative determination and that the Department will accept public comments on the tentative determination for at least 30 days from the date of publication. Notice of the Department's final determination shall be provided to the owner or operator of the facility and to all persons who commented on the Department's tentative determination. The Department may combine the public comment periods regarding issuance of an order and remedy selection, if the Department has tentatively selected a remedy at the time when it is proposing to issue an order. The Department may modify the public comment procedures set forth above to the extent provided by 40 CFR 265.121(b)(2) and (3) as incorporated by reference.

(11) Facilities subject to 310 CMR 30.602(9) or (10) must also comply with the provisions of 310 CMR 40.0113 in order to be considered to be Adequately Regulated pursuant to M.G.L. c. 21E.

(12) The Corrective Action Management Unit (CAMU) provisions of 40 CFR Part 264, Subpart S, § 264.552 which are hereby incorporated by reference.

(13) Temporary Unit (TU) provisions of 40 CFR Part 264, Subpart S, § 264.553 which are hereby incorporated by reference.

(14) Staging pile provisions of 40 CFR Part 264, Subpart S, § 264.554 which are hereby incorporated by reference.

(15) References to the EPA Regional Administrator in 40 CFR 264.550 through 264.555 shall mean the Department, except that the references to Regional Administrator in 40 CFR 264.555(e) regarding oversight of an out-of-state landfill shall mean the State Director or EPA Regional Administrator who has responsibility under 40 CFR 264.555(d) for permitting the landfill.

(16) An owner or operator of a hazardous waste management facility shall comply with the applicable land disposal restrictions of 310 CMR 30.750.

30.603: Preparation of Hazardous Waste for Disposal

(1) The following processes shall not be deemed "treatment" of hazardous waste and shall not be subject to 310 CMR 30.500 through 30.999 if such processes are done at the site of generation of the waste and are done solely for the purpose of making the waste more amenable to disposal in a hazardous waste facility, provided that the accumulation, collection, transport, storage, treatment and disposal of such hazardous waste before and after such processes are done shall be subject to 310 CMR 30.000:

- (a) The addition of an absorbent (*e.g.*, sawdust) in which a chemical reaction does not occur; and
- (b) The use of a gelation process or similar technique in which a chemical reaction does not occur.

30.603: continued

(2) 310 CMR 30.603(1) shall not apply to, and all applicable requirements of 310 CMR 30.000 shall apply to, solidification techniques which employ cement-based processes, pozzolanic processes, thermoplastic techniques, organic polymer processes, surface encapsulating techniques, glassification processes, or similar processes. (Note: For a description of the above-listed processes see *Guide to the Disposal of Chemically Stabilized and Solidified Waste*, U.S. Environmental Protection Agency, SW-872, September 1982.)

30.604: Injection Wells, Leaching Fields, Seepage Pits

- (1) No person shall inject hazardous waste into or through any well.
- (2) No person shall dispose of hazardous waste into:
 - (a) any septic tank, leaching field or leaching pit; or
 - (b) any pit, pond or lagoon that does not meet the requirements set forth in 310 CMR 30.610 for surface impoundments or the requirements set forth in 310 CMR 30.650 for land treatment units.

30.605: Special Requirements for Wastewater Treatment Units

- (1) Applicability.
 - (a) The requirements of 310 CMR 30.605 shall apply, and the other requirements of 310 CMR 30.500 through 30.900 shall not apply, to the following wastewater treatment units, as that term is defined in 310 CMR 30.010, provided that such units meet all of the requirements set forth in 310 CMR 30.605:
 1. wastewater treatment units for the treatment of hazardous waste at the site of generation of the waste; and
 2. wastewater treatment units for the accumulation or storage, at the site of generation, of wastewater treatment sludge which is hazardous waste, prior to reintroduction of such sludge back into the wastewater treatment process.
 - (b) The requirements of 310 CMR 30.605 shall not apply to a wastewater treatment unit which treats hazardous waste by a treatment process, method, or technique which is an integral part of the manufacturing process, as that term is defined in 310 CMR 30.010.
 - (c) The requirements of 310 CMR 30.500 through 30.900 shall not apply to a wastewater treatment unit, as that term is defined in 310 CMR 30.010, which is permitted pursuant to 314 CMR 3.00. Hazardous waste activities at such wastewater treatment units are regulated pursuant to 314 CMR 8.05.
 - (d) 310 CMR 30.605(2) through (6) shall not apply, and all applicable requirements of 310 CMR 30.000 shall apply, to each wastewater treatment unit in which the owner or operator intends to or does treat any hazardous waste generated off the site where the wastewater treatment unit is located.
- (2) Management Standards. The owner or operator of each wastewater treatment unit shall comply with the requirements set forth in the following regulations:
 - (a) 310 CMR 30.511: *Identification Number*;
 - (b) 310 CMR 30.513: *General Waste Analysis*;
 - (c) 310 CMR 30.514(1): *Security Standards*;
 - (d) 310 CMR 30.515: *General Inspection*;
 - (e) 310 CMR 30.516: *Personnel Training*;
 - (f) 310 CMR 30.520 through 30.524: *Contingency Plan, Emergency Procedures, Preparedness and Prevention*;
 - (g) 310 CMR 30.542: *Operating Record*;
 - (h) 310 CMR 30.543: *Availability, Retention and Disposition of Records*; and
 - (i) 310 CMR 30.560: *General Requirements for Ignitable, Reactive, or Incompatible Wastes*.

30.605: continued

(3) Operation and Maintenance.

(a) The owner or operator of each wastewater treatment unit shall ensure that the accumulation, storage, or treatment done in each unit does not:

1. Generate fire, explosion, violent reaction, or excessive heat or pressure;
2. Produce uncontrolled toxic mists, fumes or gases in quantities which might threaten public health, safety or welfare or the environment;
3. Produce uncontrolled flammable fumes or gases in quantities which might pose a risk of fire or explosion;
4. Damage the structural integrity of the tank or equipment containing the waste; or
5. Threaten public health, safety or welfare or the environment by any other means.

(b) No person shall place hazardous waste or any other material into a wastewater treatment unit if such action might result in the unit, or any of its equipment, rupturing, leaking, abnormally corroding, or failing before the end of its intended life.

30.605: continued

(c) Each wastewater treatment unit shall be designed, constructed, operated and maintained so as to prevent hazardous waste from spilling or leaking into or on any land or water.

(4) Additional Waste Analysis Requirements.

(a) By not later than April 16, 1984, the owner or operator of each wastewater treatment unit in existence on October 15, 1983, shall submit a copy of the waste analysis plan prepared in compliance with 310 CMR 30.513 and 30.605(2)(b) to the Department and to the local sewer use authority with jurisdiction over the publicly owned treatment works, hereinafter in 310 CMR 30.605 called the POTW, into which the effluent from the wastewater treatment unit discharges.

(b) In addition to complying with the waste analysis requirements of 310 CMR 30.513 and 30.605(2)(b), the owner or operator shall ensure that the waste analysis plan:

1. Provides for determining the average and maximum effluent flow in gallons per day of the treated waste to be discharged to the POTW.
2. Provides for identifying the waste(s) and the EPA or Massachusetts hazardous waste number(s) of the waste(s) being treated; and
3. Describes the treatment process used.

(5) Location Standards. No person shall construct, maintain or operate a wastewater treatment unit at a site at which hazardous waste is first generated on or after October 15, 1983, unless the following requirements are complied with:

(a) If such unit is to be located on land subject to flooding from the statistical 100-year frequency storm, as determined pursuant to 310 CMR 30.701(1)(a) and (b), it shall be floodproofed in compliance with 310 CMR 30.701(2).

(b) If such unit is also an underground tank pursuant to 310 CMR 30.693(1), it shall not be located:

1. within the watershed of a class A or class SA segment of a surface water body, as that term is defined pursuant to 310 CMR 30.010, unless the owner or operator applies to the Department for approval to construct, operate and maintain such a unit at such a location, and the Department has given such approval in writing; the Department may give such approval only if the Department is persuaded that there is no feasible alternative to treating, storing or accumulating the wastewater in an underground unit (*e.g.*, another permitting authority requires that the waste be accumulated, stored or treated underground); or
2. over an actual, planned, or potential public underground drinking water source, as that term is defined in 310 CMR 30.010, unless the owner or operator has applied to the Department for approval to construct, operate and maintain such a unit at such a location, and the Department has given such approval in writing. The Department may give such approval only if the Department is persuaded that there is no feasible alternative to treating, storing, or accumulating the wastewater in an underground unit (*e.g.*, another permitting authority requires that the waste be accumulated, stored, or treated underground).

(6) Closure Requirements. At closure of the unit, the owner or operator of a wastewater treatment unit shall remove all hazardous waste and hazardous waste residues from the unit. Such waste and residues shall be managed in compliance with 310 CMR 30.000.

30.606: Special Requirements for Miscellaneous Units

(1) Applicability. 310 CMR 30.606(1) through (4), prescribe requirements which apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes in miscellaneous units.

30.606: continued

(2) Environmental Performance Standards. A miscellaneous unit shall be located, designed, constructed, operated, maintained, and closed in a manner that shall ensure protection of public health, safety and welfare and the environment. Licenses for miscellaneous units shall contain such terms and provisions as appropriate to comply with applicable provisions of 310 CMR 30.500 through 30.900 as well as to protect public health, safety and welfare and the environment, including, but not limited to, design and operating requirements, detection and monitoring requirements, and requirements for responses to releases of hazardous waste or hazardous constituents from the unit. Protection of public health, safety and welfare and the environment shall include but is not limited to:

(a) Prevention of any releases that may have adverse effects on public health, safety, welfare, or the environment due to migration of waste constituents in the ground water or subsurface environment, considering

1. The volume and physical and chemical characteristics of the waste in the unit, including its potential for migration through soil, liners, or other containing structures;
2. The hydrologic and geologic characteristics of the unit and the surrounding area;
3. The existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater;
4. The quantity and direction of groundwater flow;
5. The proximity to and withdrawal rates of current and potential groundwater users;
6. The patterns of land use in the region;
7. The potential for deposition or migration of waste constituents into subsurface physical structures, and into the root zone of food-chain crops and other vegetation;
8. The potential for health risks caused by human exposure to waste constituents; and
9. The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

(b) Prevention of any releases that may have adverse effects on public health, safety and welfare, or the environment due to migration of waste constituents in surface water, or in or on any water or land described in 310 CMR 10.02(1), or on the soil surface, considering

1. The volume and physical and chemical characteristics of the waste in the unit;
2. The effectiveness and reliability of containing, confining, and collecting systems and structures in preventing migration;
3. The hydrologic characteristics of the unit and the surrounding area, including the topography of the land around the unit;
4. The patterns of precipitation in the region;
5. The quantity, quality, and direction of groundwater flow;
6. The proximity of the unit to surface waters and to water or land described in 310 CMR 10.02(1);
7. The current and potential uses of nearby surface waters and any water quality standards established for those surface waters;
8. The existing quality of surface waters and surface soils, including other sources of contamination and their cumulative impact on surface waters and surface soils;
9. The patterns of land use in the region;
10. The potential for health risks caused by human exposure to waste constituents; and
11. The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

(c) Prevention of any release that may have adverse effects on public health, safety or welfare or the environment due to migration of waste constituents in the air, considering

1. The volume and physical and chemical characteristics of the waste in the unit, including its potential for the emission and dispersal of gases, aerosols and particulates;
2. The effectiveness and reliability of systems and structures to reduce or prevent emissions of hazardous constituents to the air;
3. The operating characteristics of the unit;
4. The atmospheric, meteorologic, and topographic characteristics of the units and the surrounding area;

30.606: continued

5. The existing quality of the air, including other sources of contamination and their cumulative impact on the air;
6. The potential for health risks caused by human exposure to waste constituents; and
7. The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

(3) Monitoring, Analysis, Inspection, Response, Reporting and Corrective Action. The owner or operator of each miscellaneous unit shall comply with the requirements of 310 CMR 30.515: *General Inspection*, 30.524(3): *Testing and Maintenance of Equipment*, 30.534: *Unmanifested Waste Report*, 30.544: *Biennial Report*, 30.602(9): *Corrective Action*, and 30.606(2): *Environmental Performance Standards*, and all additional requirements as specified in the license.

(4) Post-closure Care. The owner or operator of a miscellaneous unit which is a disposal unit shall maintain the miscellaneous unit during the post-closure care period in a manner that complies with 310 CMR 30.590, 30.606(2), and 30.652. In addition, the owner or operator of a treatment or storage unit which has contaminated soils or groundwater that cannot be completely removed or decontaminated during closure shall maintain the miscellaneous unit in a manner that complies with 310 CMR 30.590 and 30.606(2) during the post-closure care period. The post-closure plan required pursuant to 310 CMR 30.590 shall specify activities that shall or might be carried out to comply with these requirements.

30.610: SURFACE IMPOUNDMENTS

30.611: Applicability

- (1) 310 CMR 30.611 through 30.618, cited collectively as 310 CMR 30.610, prescribe requirements which apply to owners and operators of facilities that use surface impoundments to treat, store, or dispose of hazardous waste.
- (2) The containment of hazardous waste in a surface impoundment at the site of generation for any period of time is "storage" and not "accumulation" of hazardous waste and shall be subject to all the requirements of 310 CMR 30.610.
- (3) All of the provisions of 310 CMR 30.610, except 30.613 and 30.617(2), (3) and (5), apply to each new surface impoundment and each new portion of each existing surface impoundment.
- (4) All of the provisions of 310 CMR 30.610, except 30.612(2), and 30.617(1), apply to each existing portion of each existing surface impoundment.

30.612: Design and Operating Requirements

- (1) Except as provided in 310 CMR 30.613(4), each surface impoundment shall be underlain by two liners which are designed and constructed in a manner that prevents the migration of liquids into or out of the space between the liners. The liners shall be designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent groundwater, surface water, or subsurface soil at any time during the active life and during the closure period of the impoundment. The liners may be constructed of materials (*e.g.*, clays and admixes) that allow waste to migrate into the liners themselves, but not into the space between the liners or into the adjacent groundwater, surface water, or subsurface soil during the active life of the facility provided that the impoundment is closed in compliance with 310 CMR 30.617(1). Each liner shall be:

30.612: continued

- (a) of a hydraulic conductivity not to exceed 1×10^{-7} cm/sec;
 - (b) constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients, including static head and external hydrogeologic forces, physical contact with the waste or leachate to which they are exposed, climatic conditions, exposure to ultraviolet light, ozone, microbes, the stress of installation, and the stress of daily operation, including the use of machinery and equipment upon the liner after installation;
 - (c) placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner due to settlement, compression or uplift; rocks, boulders, irregularities with sharp edges, and all material that may damage the liner shall be removed from the subgrade prior to installation of the liner; and
 - (d) installed to cover all surrounding earth likely to be in contact with the waste or leachate.

- (2) The bottom liner shall be at least four feet above the probable high groundwater level as determined pursuant to 310 CMR 30.675. This shall not prohibit the owner or operator from carrying out design and operating procedures which artificially lower the groundwater table throughout the operating life of the facility, provided that the facility's license specifically authorizes this.

- (3) A leak detection, collection, and removal system shall be designed, constructed, maintained and operated between the liners to detect, collect, and remove any discharge of liquid into the space between the liners. The detection, collection and removal system shall be designed, constructed, operated and maintained so that leakage flows freely from the collection system and is removed either as it accumulates or with sufficient frequency to prevent backwater within the collection system. If liquid leaks into the leak detection, collection, and removal system, the owner or operator shall:
 - (a) Notify the Department of the leak immediately by the quickest available means and also notify the Department in writing within seven days; and
 - (b) Within a period of time which shall be specified by the Department, remove accumulated liquid, repair or replace the liner which is leaking to prevent the migration of liquids through the liner, and obtain a certification from an independent Massachusetts registered professional engineer that, to the best of his knowledge and opinion, the leak has been stopped. If the leakage which is collected is identified as hazardous waste pursuant to 310 CMR 30.100, it shall be managed as hazardous waste in compliance with 310 CMR 30.000.

- (4) The direct discharge onto a liner of hazardous waste or other material shall not be allowed to occur without adequate provision having been made for energy dissipation.

- (5) Each surface impoundment shall be designed, constructed, maintained and operated to prevent overtopping resulting from normal or abnormal operation, overfilling, wind and wave action, precipitation, run-on, malfunction of level controllers, alarms or other equipment, or human error.

- (6) Each surface impoundment shall be designed, constructed, operated and maintained to provide at least 60 centimeters (two feet) of freeboard. The design shall reflect a consideration of the difference between the precipitation and evaporation anticipated for the area.

- (7) Each surface impoundment shall be designed, constructed and maintained so that any flow of waste into the impoundment can be immediately shut off in the event of overtopping or liner failure.

- (8) Run-on shall be diverted away from a surface impoundment. Diversion systems shall have the capacity to handle the run-on during peak discharge from 24-hour, 100-year storm.

30.612: continued

(9) Each surface impoundment shall have dikes that are designed, located, constructed and maintained with sufficient structural integrity to prevent failure of the dikes. In ensuring structural integrity, the owner or operator shall not presume that the liner system will function without leakage during the active life of the impoundment. Each earthen dike shall be kept free of perennial woody plants with root systems which could displace the earthen material upon which the structural integrity of the dike is dependent and free of burrowing animals which could remove earthen material upon which the structural integrity of the dike is dependent. Each earthen dike shall have a protective cover, such as grass, shale or rock, to minimize wind or water erosion and to preserve the structural integrity of the dike.

(10) Completely surrounding each impoundment shall be a barrier (*e.g.*, a fence in good repair) designed to prevent accidental contact between persons at the facility site and hazardous waste in the surface impoundment. This barrier shall be in addition to the barrier required by 310 CMR 30.514(2)(b)3. Posted on or near such barrier shall be at least one sign, the lettering of which shall be legible from a distance of at least 25 feet. The sign shall:

- (a) Identify the contents of the surface impoundment as "Hazardous Waste";
- (b) Identify, in words, the contents of the surface impoundment; and
- (c) Identify, in words, the hazard(s) associated with the hazardous waste.

30.613: Special Provisions for Existing Portions of Existing Surface Impoundments

(1) Except as provided in 310 CMR 30.613(2) or (4), the owner or operator of each existing surface impoundment, each replacement of an existing surface impoundment, and each lateral expansion of an existing surface impoundment, shall comply with the requirements for liners and leak detection, collection and removal systems specified in 310 CMR 30.612(1) and 30.612(3) within a period of time which shall be specified by the Department in the license. This period of time shall not exceed four years from the date of license issuance pursuant to 310 CMR 30.838.

(2) Instead of meeting the requirements of 310 CMR 30.613(1), the owner or operator may either:

- (a) Complete closure of the impoundment in compliance with 310 CMR 30.617(2) within a period not to exceed four years from the date of license issuance pursuant to 310 CMR 30.838; or
- (b) Close the impoundment in compliance with 310 CMR 30.617(2)(a) and design, construct and operate a pretreatment system for hazardous waste such that the treated waste is no longer hazardous pursuant to 310 CMR 30.141. Such treated waste shall be discharged into the impoundment only in compliance with a groundwater discharge permit issued pursuant to 314 CMR 5.00. The impoundment shall be closed in compliance with 310 CMR 30.617(2)(a) within a period of time not to exceed four years from the date of license issuance pursuant to 310 CMR 30.838.

(3) The Department shall include in the license a schedule which shall ensure that the facility is brought into compliance with 310 CMR 30.613(1) or 30.613(2) as soon as possible. In setting the compliance schedule, the Department shall consider the following factors:

- (a) The facility's location with respect to high-quality aquifers, surface water, wells, and other water supplies;
- (b) The hydrogeology of the site;
- (c) The results of groundwater monitoring conducted at the site;
- (d) The availability of alternatives and the time required to implement such alternatives;
- (e) The extent to which the facility is in compliance with all applicable Federal, State and local laws and regulations; and
- (f) Whether or not the impoundment already has a single liner.

30.613: continued

(4) In a license issued pursuant to 310 CMR 30.800, the Department may waive all or part of the design or operating practices specified in 310 CMR 30.612(1) and (3) for a surface impoundment containing hazardous waste which only exhibits the characteristic of corrosivity if the owner or operator demonstrates to the Department that such design and operating practices will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal system specified in 310 CMR 30.612 and allow detection of leaks of hazardous constituents through the top liner at least as effectively. In determining whether to waive any or all of the design or operating practices of 310 CMR 30.612(1) and (3), the Department shall consider the factors listed in 310 CMR 30.613(3) as well as the following factors:

- (a) The rate at which corrosive waste is neutralized in the impoundment;
- (b) The potential for waste in the impoundment to leach hazardous constituents which may be present in the soil; and
- (c) The presence of material other than hazardous waste in the impoundment (*e.g.*, flyash) which may contain hazardous constituents capable of migrating from the impoundment as a result of the introduction of corrosive hazardous waste into the impoundment.

Nothing in 310 CMR 30.613(4) shall relieve the owner or operator of an unlined impoundment from the responsibility of obtaining a groundwater discharge permit pursuant to 314 CMR 5.00.

(5) An owner or operator using an impoundment that has not received a waiver pursuant to 310 CMR 30.613(4) shall be subject to the requirements of 310 CMR 30.613(1) and (2).

30.614: Testing, Monitoring and Inspection

(1) During construction and installation, each liner and cover system (*e.g.*, membranes, sheets and coatings) shall be inspected for uniformity, damage, and imperfections (*e.g.*, holes, cracks, thin spots, or foreign materials). Immediately after construction or installation:

- (a) Each synthetic liner and cover shall be inspected, using methods acceptable to the Department, to ensure tight seams and joints and the absence of tears, punctures, or blisters; and
- (b) Each soil-based and each admixed liner and cover shall be inspected for imperfections, including lenses, cracks, channels, root holes, or other structural defects, that may cause an increase in the permeability of the liner or cover.

(2) After a liner has been installed and prior to introducing hazardous waste into the impoundment, the owner or operator shall obtain from an independent Massachusetts registered professional engineer a certification which states that:

- (a) The liner has been inspected in accordance with 310 CMR 30.614(1); and
- (b) Each defect found has been properly repaired.

(3) While a surface impoundment is in operation, it shall be inspected weekly and also immediately after storms to detect evidence of any of the following:

- (a) a deterioration, malfunction, or improper operation of freeboard control systems;
- (b) A decrease in the level of the impoundment's contents;
- (c) The presence of liquids in leak detection, collection and removal systems installed to comply with 310 CMR 30.612(3); and
- (d) Erosion or other signs of deterioration in dikes or other containment devices.

(4) The owner or operator shall obtain a certification from an independent Massachusetts registered professional engineer that the impoundment's dike, including that portion of the dike which provides freeboard, has structural integrity. This certification shall be obtained:

- (a) For each existing surface impoundment, prior to the issuance of a license;
- (b) For each new surface impoundment, prior to being placed in service and after construction; and
- (c) For any impoundment, prior to being returned to service if the dike has been repaired or after any period of time during which the impoundment was not in service for six months or longer.

30.614: continued

- (5) The certification required by 310 CMR 30.614(4) shall be that the dike:
- (a) Will withstand the stress of the pressure exerted by the type(s) and amount of waste to be placed in the impoundment; and
 - (b) Will not fail due to scouring or piping, and to prevent such failure, there is no dependence on any liner system included in the surface impoundment construction.
- (6) 310 CMR 30.614(6) applies to each liner installed after October 15, 1983. Submitted with the license application shall be a demonstration that the waste(s) and leachate that may be in contact with the liners are compatible with the liner materials to be used. The license applicant shall persuade the Department that the wastes will not cause any detrimental effect (*e.g.*, cause cracks, swelling, decrease in mechanical strength, change in chemical properties or increase in permeability) on the liner materials used to prevent leakage into or out of the space between the liners. This demonstration shall be made by field tests or laboratory tests which are acceptable to the Department. All such testing shall be fully documented and submitted with the license application.
- (7) The Department may specify that, prior to or during installation of a liner, the physical characteristics (*e.g.*, tensile strength, puncture resistance) of a sample from the liner(s) be tested to ensure that the quality of the material being installed meets manufacturer's specifications and any design specifications included in the facility license.
- (8) The Department may specify in the facility license that liner samples be periodically tested to assess the performance or condition of the liner.

Note: For information on liner testing methods, see *Lining of Waste Impoundments and Disposal Facilities*, U.S. E.P.A. Office of Solid Waste and Emergency Response, SW-870, March 1983.

30.615: Emergency Repairs; Contingency Plans

- (1) A surface impoundment shall be removed from service in accordance with 310 CMR 30.615(2) when:
- (a) The level of liquids in the impoundment drops and the drop is not known to be caused by change of the flow into or out of the impoundment; or
 - (b) The dike leaks.
- (2) When a surface impoundment must be removed from service pursuant to 310 CMR 30.615(1), the owner or operator shall:
- (a) Immediately shut off the flow or stop the addition of wastes into the impoundment; if the impoundment is at the site of generation of the waste and if adequate alternate storage is unavailable, the owner or operator shall discontinue every process which is generating the waste;
 - (b) Immediately contain all surface leakage which has occurred or is occurring;
 - (c) Immediately stop the leak;
 - (d) Take all other necessary steps to stop or prevent catastrophic failure;
 - (e) If a leak cannot be stopped by any other means, empty the impoundment and manage such hazardous waste in compliance with 310 CMR 30.000; and
 - (f) Notify the Department immediately by the quickest available means, followed by a written notification within seven days.
- (3) As part of the contingency plan required by 310 CMR 30.520 through 30.524, the owner or operator shall specify a procedure for complying with the requirements of 310 CMR 30.615(2). The contingency plan shall also include a description of the repair techniques to be used in the event of leakage due to containment system failure or deterioration which does not require the impoundment to be removed from service.

30.615: continued

(4) No surface impoundment that has been removed from service pursuant to 310 CMR 30.615 shall be restored to service until the portion of the impoundment which was failing is repaired and the following steps are taken:

(a) If the impoundment was removed from service as a result of actual or imminent dike failure, the dike's structural integrity is recertified in accordance with 310 CMR 30.614(4).

(b) If the impoundment was removed from service as a result of a drop in the liquid level, then:

1. For any existing portion of the impoundment, as a minimum, a single liner is installed in compliance with the requirements of 310 CMR 30.612(1);

2. A newly installed or repaired liner system is certified by an independent Massachusetts registered professional engineer as meeting the design specifications approved in the license or otherwise approved by the Department.

(c) The Department is notified when the impoundment will be restored to service.

(5) A surface impoundment that has been removed from service pursuant to 310 CMR 30.615 and that is not being repaired shall be closed in compliance with 310 CMR 30.617.

30.616: Special Requirements for Ignitable, Reactive, Incompatible, and Acutely Hazardous Wastes, and Hazardous Wastes that are Polyhalogenated Aromatic Hydrocarbons

(1) Ignitable or reactive waste shall not be placed in a surface impoundment unless the waste and impoundment satisfy all applicable requirements of 310 CMR 30.750 and:

(a) The waste is treated before or immediately after placement in the impoundment so that:

1. The resulting material is no longer ignitable or reactive hazardous waste pursuant to 310 CMR 30.122 or 30.124; and

2. 310 CMR 30.560(3) is complied with; or

(b) The surface impoundment is used solely for emergencies.

(2) Ignitable or reactive hazardous wastes which are incidental to the storage or treatment of non-ignitable or non-reactive hazardous wastes in the impoundment shall be concentrated, collected, and removed from the impoundment. Where such ignitable or reactive hazardous wastes are present in the impoundment, such wastes shall be managed so that they are protected from any material or condition which may cause them to ignite or react.

(3) Incompatible hazardous wastes, or materials incompatible with hazardous wastes (*see* 310 CMR 30.561 for examples) shall not be placed in the same surface impoundment unless 310 CMR 30.560(3) is complied with.

(4) Acutely hazardous waste identified in 310 CMR 30.136 shall not be placed in a surface impoundment.

(5) Polyhalogenated aromatic hydrocarbons shall not be placed in a surface impoundment except in accordance with all other applicable provisions of 310 CMR 30.610 and in accordance with the terms and conditions of a management plan, approved by the Department, for such placement. Compliance with such a plan, when approved, shall be a condition of a license issued pursuant to 310 CMR 30.000. The Department may approve a management plan for the placement of polyhalogenated aromatic hydrocarbons in a surface impoundment only if, after considering at least the following criteria, the Department determines that such approval is in accordance with provisions set forth in 310 CMR 30.810 through 30.814.

(a) The volume and physical and chemical characteristics of the polyhalogenated aromatic hydrocarbons, including their potential to migrate through the soil or to volatilize or escape into the atmosphere.

(b) The volume and physical and chemical characteristics of the other materials placed into the surface impoundment, including their potential to migrate through the soil or to volatilize or escape into the atmosphere.

30.616: continued

- (c) The attenuative properties of the soil and other materials surrounding or underlying the surface impoundment.
- (d) The effectiveness of additional treatment, design, or monitoring techniques used by the owner or operator of the surface impoundment. The Department may require the use of additional or different treatment, design, or monitoring techniques to reduce the possibility of migration or emission of these materials into ground water, surface water, soil, or air.

30.617: Closure and Post-Closure Care

- (1) At closure of a new surface impoundment, the owner or operator shall remove or decontaminate all waste residues, contaminated containment system components (*e.g.*, liners), contaminated subsoils, and structures and equipment contaminated with waste or leachate, and manage them as hazardous waste unless 310 CMR 30.141 applies.
- (2) At closure of an existing surface impoundment, either:
 - (a) The owner or operator shall remove or decontaminate all waste residues, contaminated containment system components (*e.g.*, liners), contaminated subsoils, and structures and equipment contaminated with waste or leachate, and manage them as hazardous waste unless 310 CMR 30.141 applies; or
 - (b) If the Department determines that it will be impracticable for the owner or operator to comply with 310 CMR 30.617(2)(a), the Department may approve an alternate closure plan which requires the owner or operator to do the following at closure:
 - 1. Remove wastes, waste residues, contaminated equipment and soils to the extent practicable;
 - 2. Eliminate free liquids by either removing liquid wastes or solidifying the remaining wastes and waste residues;
 - 3. Stabilize remaining wastes to a bearing capacity sufficient to support final cover; and
 - 4. Cover the surface impoundment with a final cover designed and constructed to:
 - a. Provide long-term minimization of the migration of liquid through the closed impoundment;
 - b. Function with minimum maintenance;
 - c. Promote drainage and minimize erosion or abrasion of the final cover;
 - d. Accommodate settling and subsidence so that the cover's integrity is maintained; and
 - e. Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.
- (3) In determining whether or not it is impractical to remove all wastes from an existing impoundment, the Department shall consider the following:
 - (a) The types and volumes of waste in the impoundment;
 - (b) Safety hazards involved in removing hazardous waste from the impoundment; and
 - (c) The extent to which surrounding soil and groundwater have been contaminated.
- (4) (Effective on and after July 1, 1988) If some waste residues or contaminated materials are left in place at final closure, the owner or operator shall comply with all post-closure requirements set forth in 310 CMR 30.590, including maintenance and monitoring throughout the post-closure period as specified in the license. The owner or operator shall:
 - (a) Maintain the integrity and effectiveness of the final cover, including repairing the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;
 - (b) Maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of 310 CMR 30.660;
 - (c) Prevent run-on or run-off from eroding or otherwise damaging the final cover; and
 - (d) Maintain and monitor the leak detection system in accordance with 310 CMR 30.612(3), and comply with all other requirements set forth in 310 CMR 30.612(3).

30.617: continued

(5) If an owner or operator of an existing surface impoundment plans to close the impoundment in accordance with 310 CMR 30.617(2)(a), and the impoundment did not meet the double-liner requirements of 310 CMR 30.612(1) at the time the Part A permit application was submitted to the EPA in accordance with 40 CFR Part 270, as in effect July 1, 1983 then:

(a) The closure plan for the impoundment pursuant to 310 CMR 30.583 shall include both an expected plan for complying with 310 CMR 30.617(2)(a) and a contingent plan for complying with 310 CMR 30.617(2)(b) in the event that not all contaminated subsoil can be practicably removed at closure; and

(b) The owner or operator shall prepare a contingent post-closure plan pursuant to 310 CMR 30.593 for complying with 310 CMR 30.617(4) in case not all contaminated subsoil can be practicably removed at closure.

(c) The cost estimates calculated pursuant to 310 CMR 30.903 and 30.905 for closure and post-closure care of an impoundment subject to 310 CMR 30.617(5) shall include the cost of complying with the expected closure plan, the contingent closure plan, and the contingent post-closure plan. Where the costs of the expected closure plan and the contingent closure plan overlap (*i.e.*, the same items are factored into the cost estimate), the costs need not be counted twice.

30.618: Stand-by Surface Impoundments - Waiver From Groundwater Monitoring Requirements

(1) On a case-by-case basis, the Department may waive all or part of 310 CMR 30.660: *Groundwater Protection* for surface impoundments that are designed and operated solely for the containment of hazardous waste in the event of an emergency at the facility (*e.g.*, equipment failure or overflows). If such a waiver is granted, the owner or operator shall:

(a) Immediately notify the Department by the quickest available means following an emergency which requires that the impoundment be utilized, and follows this up with a written notification within seven days; and

(b) Remove all waste from the impoundment as expeditiously as practicable and in a manner and time period approved by the Department.

(2) If the owner or operator fails to comply with 310 CMR 30.618(1)(a) or (b), the Department may require that the owner or operator comply with 310 CMR 30.660: *Groundwater Protection*.

(3) Nothing in 310 CMR 30.618 relieves the owner or operator from the responsibility to comply with any other provision of 310 CMR 30.610.

30.620: Landfills

30.621: Applicability

310 CMR 30.621 through 30.633, cited collectively as 310 CMR 30.620, prescribe requirements which apply to owners and operators of facilities that dispose of hazardous waste in landfills.

30.622: Design and Operating Requirements

(1) Each landfill shall be underlain by two liners which are designed and constructed in a manner that prevents the migration of liquids into or out of the space between the liners. The liners shall be designed, constructed and installed to prevent any migration of wastes out of the landfill to the adjacent groundwater, surface water or subsurface soil at any time during the active life and during the closure period of the landfill. The upper liner shall be constructed of materials that prevent waste from passing into the liner during the active life of the facility. Clay liners and admixes shall not be acceptable. The bottom liner may be constructed of materials that allow waste to migrate into the liner itself but not into the groundwater, surface water or adjacent subsurface soil during the active life of the facility. The bottom liner shall have a hydraulic conductivity not to exceed 1×10^{-7} cm/sec. Each liner shall be:

- (a) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to:
 - 1. pressure gradients including static head and external hydrogeologic forces;
 - 2. physical contact with and the chemical properties of the waste or leachate to which it is exposed;
 - 3. climatic conditions;
 - 4. exposure to ozone, ultraviolet light or microbes; and
 - 5. the stress of installation and the stress of daily operation, including the use of machinery and equipment upon the liner after installation.
- (b) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression or uplift; rocks, boulders, irregularities with sharp edges, and all material that may damage the liner shall be removed from the subgrade prior to installation of the liner; and
- (c) Installed to cover all surrounding earth likely to be in contact with the waste or leachate.

(2) The bottom liner shall be at least four feet above the probable high groundwater level as determined pursuant to 310 CMR 30.675. This shall not prohibit the owner or operator from installing passive systems designed to artificially lower the groundwater table throughout the operating life of the facility and beyond, provided that the facility's license specifically authorizes this.

(3) A leak detection, collection and removal system shall be designed, constructed, maintained and operated between the liners to detect, collect and remove all discharge of liquid into the space between the liners. The detection, collection and removal system shall be designed, constructed, operated and maintained so that leakage flows freely from the collection system and is removed either as it accumulates or with sufficient frequency to prevent backwater within the collection system. If liquid leaks into the leak detection, collection and removal system, the owner or operator shall:

- (a) Notify the Department of the leak immediately by the quickest available means and also notify the Department in writing within seven days; and
- (b) Either:
 - 1. Within the period of time which shall be specified by the Department:
 - a. Remove accumulated liquid;
 - b. To prevent the migration of liquids through the liner, repair or replace the liner which is leaking; and
 - c. Obtain a certification from an independent Massachusetts registered professional engineer that, to the best of his knowledge and opinion, the leak has been stopped; or
 - 2. Ask the Department to determine that it is impractical to repair or replace the liner that is leaking, in which case the Department may authorize the owner or operator to continue operating the landfill but only if leakage is continually removed by the leakage detection, collection and removal system and 310 CMR 30.660: *Groundwater Protection* is complied with. In making such a determination, the Department may consider the following:

30.622: continued

- a. The type(s) and volume(s) of waste(s) in the landfill;
- b. The ease with which the cause of the leak can be determined;
- c. Safety hazards involved in removing hazardous waste from the landfill;
- d. Availability of temporary storage areas for waste removed from the landfill; and
- e. The types and concentrations of hazardous constituents appearing in the liquid which is leaking from the liner.

(4) The landfill shall have, immediately above the upper liner, a leachate collection and removal system that is designed, constructed, maintained, and operated to collect and remove leachate from the landfill. The leachate depth over the liner at any point over the base of the landfill shall not exceed 30 cm. (one foot). If the collected leachate is hazardous waste pursuant to 310 CMR 30.100, it shall be managed as hazardous waste in compliance with 310 CMR 30.000. If the collected leachate is discharged to surface water or groundwater, such discharge is subject to M.G.L. c. 21, § 43. The leachate collection and removal system shall be:

- (a) Constructed of materials that are:
 1. Chemically resistant to the waste managed in the landfill and to the leachate expected to be generated; and
 2. Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying waste, waste cover material, and by any equipment used at the landfill; and
- (b) Designed and operated to function without clogging through the active life and the closure and post-closure period of the landfill.

(5) The owner or operator shall design, construct, operate and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a 100-year storm.

(6) The owner or operator shall design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 100-year storm. If the collected run-off is hazardous waste pursuant to 310 CMR 30.100, it shall be managed as hazardous waste in compliance with 310 CMR 30.000. If the collected run-off is discharged to surface water or groundwater, such discharge is subject to M.G.L. c. 21, § 43.

(7) To maintain design capacity of the system, collection and holding facilities (*e.g.*, tanks, basins) associated with run-on and run-off control systems shall be emptied or otherwise managed expeditiously after storms.

(8) If a landfill contains any particulate matter which may be subject to wind dispersal, the owner or operator shall cover or otherwise manage the landfill to control wind dispersal.

(9) The owner or operator shall design and operate the facility so that, where necessary to protect public health, safety and welfare and the environment, the migration of toxic, ignitable or otherwise harmful emissions from the facility site shall be controlled.

(10) The owner or operator shall provide, and maintain in good repair, access roads at the landfill site. Such access roads shall be designed, constructed and maintained so that traffic will flow smoothly at all times and will not be interrupted by inclement weather.

(11) Landfills shall be equipped with suitable channeling devices, such as ditches, berms or settling basins, to prevent run-off originating from the landfill site which could cause interference with natural drainage of adjacent land(s).

30.623: Demonstration of Waste/Liner Compatibility

Submitted with the license application shall be a demonstration that the waste(s) and leachate that may be in contact with the liners are compatible with the liner materials to be used. The license applicant shall persuade the Department that the wastes will not cause any detrimental effect (*e.g.*, cause cracks, swelling, decrease in mechanical strength, change in chemical properties or increase in permeability) on the liner material(s) used to prevent leakage into or out of the space between the liners. This demonstration shall be made by:

- (1) conducting field tests or laboratory tests which are approved by the Department; all such testing shall be fully documented and submitted with the license application; or
- (2) submitting to the Department historical data which documents successful use of the particular liner material to be used with the waste(s) and leachate to which the liner materials will be exposed; or
- (3) submitting to the Department scientific and technical literature which demonstrates that the waste(s) and leachate will not adversely affect the liners.

30.624: Monitoring and Inspection

(1) During construction and installation, liners and cover systems (*e.g.*, membranes, sheets and coatings) shall be inspected for uniformity, damage, and imperfections (*e.g.*, holes, cracks, thin spots, or foreign materials). Immediately after construction and installation, each synthetic liner and cover shall be inspected, using methods acceptable to the Department, to ensure tight seams and joints and the absence of tears, punctures or blisters. Immediately after construction and installation, each soil-based and admixed liner and cover shall be inspected for imperfections, including lenses, cracks, channels, root holes, or other structural defects, that might cause an increase in the permeability of the liner or cover.

(2) After a liner has been installed and prior to introducing hazardous waste into the landfill, the owner or operator shall obtain from an independent Massachusetts registered professional engineer a certification which states that:

- (a) The liner has been inspected in accordance with 310 CMR 30.624(1); and
- (b) Each defect found has been properly repaired.

(3) While a landfill is in operation, it shall be inspected weekly and also immediately after storms to detect evidence of any of the following:

- (a) Deterioration, malfunction, or improper operation of run-on and run-off control systems;
- (b) The presence of liquids in leak detection, collection and removal systems installed to comply with 310 CMR 30.622(3);
- (c) Proper functioning of wind dispersal control systems, where present;
- (d) The presence of leachate in leachate collection and removal systems; and
- (e) Proper functioning of leachate collection and removal systems.

(4) All inspections done pursuant to 310 CMR 30.624(3) shall be recorded in the log required pursuant to 310 CMR 30.515(1).

30.625: Supervision of Operation

(1) During the period beginning with commencement of construction of each hazardous waste landfill and ending two years thereafter, there shall be in effect at all times a contract properly executed by the owner or operator and by an independent Massachusetts registered professional engineer knowledgeable in matters of hazardous waste disposal. The owner or operator shall submit a copy of said contract to the Department with the license application. The contract shall provide for the following minimum requirements:

- (a) During site preparation, the engineer shall provide sufficient supervision, assistance and inspection to enable him to certify that preparation of the site has been done in accordance with the plans which were approved by the Department.

30.625: continued

- (b) During the operation of the landfill,
 - 1. The engineer shall provide daily supervision, engineering assistance, and plan interpretation during the first week of operation.
 - 2. The engineer shall conduct monthly inspections during the first year of operation to ensure compliance with the approved plans.
 - 3. Thereafter, the engineer shall conduct inspections of the landfill operation at least once every two months.
- (c) The engineer shall comply with 310 CMR 30.625(3) and (4).

(2) After expiration of the period specified in 310 CMR 30.625(1), there shall be in effect at all times a contract properly executed by the owner or operator and by an independent Massachusetts registered professional engineer knowledgeable in matters of hazardous waste disposal. The owner or operator shall submit to the Department a copy of each such contract. Each such contract shall provide for the following minimum requirements:

- (a) The engineer shall conduct inspections at least once every two months; and
- (b) The engineer shall comply with 310 CMR 30.625(3) and (4).

(3) After each site inspection, the engineer shall prepare a written report for the owner or operator. This report shall be part of the facility's operating record and shall be kept in compliance with 310 CMR 30.541 through 30.543. The engineer shall also submit a copy of this report to the Department within 15 days of the inspection.

(4) The engineer shall promptly notify the Department of any and all deviations from the approved plans and operating procedure.

30.626: Surveying and Record Keeping

The owner or operator of a hazardous waste landfill shall maintain the following items in the operating record required pursuant to 310 CMR 30.542:

- (1) On a map, the exact location and dimensions, including depth, of each cell with respect to permanently surveyed benchmarks; and
- (2) The contents of each cell and the approximate location of each waste type within each cell.

30.627: Equipment

- (1) The owner or operator shall provide equipment in adequate numbers and of appropriate type and size for the proper operation of the landfill in accordance with good engineering practice and in compliance with 310 CMR 30.000.
- (2) The owner or operator shall make provisions for the routine maintenance of equipment and to assure satisfactory performance capability for the various operations necessary for excavation, compaction, transportation, covering and other aspects of a landfill, and for the prompt repair or replacement of said equipment.
- (3) The owner or operator shall provide at the site suitable shelter or protection for all equipment and service supplies used in connection with landfill operation.
- (4) The owner or operator shall make arrangements for providing standby equipment in the event of breakdown of regular equipment. Such standby equipment shall be available for use and shall be provided within 24 hours of such breakdown; otherwise the landfill area shall be closed for receipt of waste until equipment becomes available.

30.628: Special Requirements for Ignitable, Reactive, and Incompatible Hazardous Wastes, and Hazardous Wastes that are Polyhalogenated Aromatic Hydrocarbons

- (1) Ignitable or reactive hazardous waste shall not be disposed of in a landfill.

30.628: continued

(2) Incompatible hazardous wastes, or materials incompatible with hazardous wastes (*see* 310 CMR 30.561 for examples) shall not be placed in the same landfill cell unless 310 CMR 30.560(3) is complied with.

(3) Polyhalogenated aromatic hydrocarbons shall not be placed in a landfill except in accordance with all other applicable provisions of 310 CMR 30.620 and in accordance with the terms and conditions of a management plan, approved by the Department, for such placement. Compliance with such a plan, when approved, shall be a condition of a license issued pursuant to 310 CMR 30.000. The Department may approve a management plan for the placement of polyhalogenated aromatic hydrocarbons in a landfill only if, after considering at least the following criteria, the Department determines that such approval is in accordance with provisions set forth in 310 CMR 30.810 through 30.814.

(a) The volume and physical and chemical characteristics of the polyhalogenated aromatic hydrocarbons, including their potential to migrate through the soil or to volatilize or escape into the atmosphere.

(b) The volume and physical and chemical characteristics of the other materials placed into the landfill, including their potential to migrate through the soil or to volatilize or escape into the atmosphere.

(c) The attenuative properties of the soil and other materials surrounding or underlying the landfill.

(d) The effectiveness of additional treatment, design, or monitoring techniques used by the owner or operator of the landfill. The Department may require the use of additional or different treatment, design, or monitoring techniques to reduce the possibility of migration or emission of these materials into ground water, surface water, soil, or air.

30.629: Special Requirements for Liquid Waste

(1) Non-containerized liquid waste or waste containing free liquids, in each case as determined in accordance with 310 CMR 30.156, shall not be placed in a landfill whether or not sorbents have been added.

(2) A container holding liquid waste or waste containing free liquids, in each case as determined in accordance with 310 CMR 30.156, shall not be placed in a landfill whether or not sorbents have been added.

30.630: Special Requirements for Containers

(1) An empty container shall be crushed flat, shredded, or similarly reduced in volume to the maximum practical extent or filled with solids before it is buried beneath the surface of a landfill.

(2) A partially empty container, before it is buried beneath the surface of a landfill, shall be:

(a) Filled with solids compatible with the wastes already in the container; or

(b) Crushed to the maximum practical extent to eliminate void spaces; or

(c) Emptied and the empty container crushed flat, shredded, or similarly reduced in volume.

30.630: continued

(3) To be considered "filled with solids" in compliance with 310 CMR 30.630(1) or (2)(a), a container shall be filled in compliance with 310 CMR 30.630(3)(a) or (b), whichever results in less void space.

(a) The container shall be filled to within 7.6 centimeters (three inches) of the top of the container, or

(b) The contents of the container shall occupy 90% or more of the volume of the container.

(4) For the purposes of 310 CMR 30.630, the term "partially empty container" shall mean a container that is neither an empty container (*see* 310 CMR 30.010) or a container that is "filled with solids" (*see* 310 CMR 30.630(3)).

(5) Landfill disposal of small containers of hazardous waste in overpacked drums (*e.g.*, lab packs) is prohibited.

30.631: Wastes Unacceptable for Landfilling

(1) Except as provided in 310 CMR 30.631(3), (4) or (5), the following wastes shall not be disposed of in a landfill:

(a) Any sludge or solid containing halogenated organic compounds in a concentration greater than 100 mg/kg;

(b) Any waste containing cyanide;

(c) Any waste which is acutely hazardous waste pursuant to 310 CMR 30.136.

(2) The Department may prohibit the disposal of any hazardous waste in a landfill if it determines that landfilling of such waste may present a hazard to public health, safety or welfare or the environment (*e.g.*, volatile organics).

(3) On a case-by-case basis, the Department may waive any provision of 310 CMR 30.631(1) if the Department determines that:

(a) The waste cannot be recycled, treated or disposed of by some other means in compliance with 310 CMR 30.000; and

(b) The type and volume of waste to be disposed of will not present any significant risk to public health, safety or welfare or the environment.

(4) On a case-by-case basis, the Department may waive any provision of 310 CMR 30.631(1) if the waste is a contaminated soil and the Department determines that the requirements set forth in 310 CMR 30.631(3)(a) and (b) are met.

(5) On a case-by-case basis, the Department may waive any provision of 310 CMR 30.631(1) if the waste has been absorbed by spill clean-up material and the Department determines that the requirements set forth in 310 CMR 30.631(3)(a) and (b) are met.

(6) The Department shall review the feasibility of available hazardous waste management alternatives for all hazardous wastes which the owner or operator proposes to dispose of at the landfill, as stated in the license application pursuant to 310 CMR 30.804(19)(a). The Department shall approve for landfill disposal only those hazardous wastes which cannot be reused, recycled, treated or disposed of by some other means in compliance with 310 CMR 30.000, or which the Department determines cannot be eliminated.

30.632: Stabilization/Solidification Plan

(1) The owner or operator shall prepare a stabilization/solidification plan designed to ensure that all wastes disposed of in the landfill have been treated to the maximum extent practicable to minimize the potential for wastes migrating from the landfill site. At a minimum, the stabilization/solidification plan shall specify:

(a) The wastes which will be stabilized and/or solidified at the landfill site prior to disposal;

(b) The techniques which will be used to limit the solubility and potential for migration of the waste by:

30.632: continued

1. The addition of materials that ensure that hazardous constituents are maintained in their least soluble form;
 2. The production of monolithic blocks of treated waste with high structural integrity; and/or
 3. The placing of a jacket or membrane of material of low permeability and low chemical reactivity between the waste and the landfill;
- (c) The means that will be used to ensure that wastes which will not be stabilized or solidified at the landfill site will, to the maximum extent practicable, be stabilized or solidified at the site of generation of the waste, or at another facility where such stabilization or solidification can be lawfully done, if the landfill is not at the site of generation of the waste;
- (d) A description of the physical and chemical properties of the stabilized/solidified waste (e.g., compressive strength, leachability); and
- (e) A quality assurance program designed to ensure that the stabilized/solidified waste meets the specifications which are outlined in the stabilization/solidification plan.
- (2) The stabilization/solidification plan shall be submitted to the Department with the license application and upon approval by the Department shall become a condition of the license.

30.633: Closure and Post-Closure Care

- (1) At final closure of the landfill or upon closure of any cell, the owner or operator shall cover the landfill or cell with a final cover designed and constructed to:
- (a) Provide long-term minimization of migration of liquids through the closed landfill;
 - (b) Function with minimum maintenance;
 - (c) Promote drainage and minimize erosion or abrasion of the cover;
 - (d) Accommodate settling and subsidence so that the cover's integrity is maintained; and
 - (e) Have a permeability less than or equal to the permeability of the bottom liner system.
- (2) (Effective on and after July 1, 1988) After final closure of the landfill or upon closure of any cell, the owner or operator shall comply with all post-closure requirements set forth in 310 CMR 30.590, including, without limitation, maintenance and monitoring throughout the post-closure care period as specified pursuant to 310 CMR 30.592. The owner or operator shall:
- (a) Maintain the integrity and effectiveness of the final cover, including making repairs to the cap to correct the effects of settling, subsidence, erosion or other events;
 - (b) Maintain and monitor the leak detection, collection and removal system in compliance with 310 CMR 30.622(3);
 - (c) Continue to operate the leachate collection and removal system;

30.633: continued

- (d) Maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of 310 CMR 30.660;
 - (e) Prevent run-off and run-on from eroding or otherwise damaging the final cover;
 - (f) Maintain access roads in compliance with 310 CMR 30.622(10);
 - (g) Maintain gas collection and control systems, where present; and
 - (h) Protect and maintain surveyed benchmarks used in complying with 310 CMR 30.626.
- (3) During the post-closure period, if liquid leaks into the leak detection, collection and removal system, the owner or operator shall comply with the provisions of 310 CMR 30.622(3).

30.640: Waste Piles

- (1) 310 CMR 30.640 through 30.649 prescribe requirements which apply to owners and operators of facilities that use waste piles to store or treat hazardous waste.
- (2) The containment of hazardous waste in a pile at the site of generation for any period of time is "storage" and not "accumulation" of hazardous waste and shall be subject to all the requirements of 310 CMR 30.640 through 30.649.
- (3) 310 CMR 30.640 through 30.649 do not apply to owners or operators using waste piles that are closed with hazardous wastes left in place. Such waste piles are subject to regulation as landfills pursuant to 310 CMR 30.620.
- (4) 310 CMR 30.641 and 30.660: *Groundwater Protection* do not apply to a waste pile that is inside or under a structure that provides protection from precipitation so that neither run-off nor leachate is generated, provided that:
- (a) Neither liquids nor materials containing free liquids are placed in the pile;
 - (b) The pile is protected from surface water run-on by the structure or in some other manner acceptable to the Department;
 - (c) Where necessary, the pile is designed and operated to control dispersal of the waste by wind by means other than wetting; and
 - (d) The pile will not generate leachate through decomposition or any other reaction.

30.641: Design and Operating Requirements

- (1) A waste pile shall have:
- (a) A liner that is designed, constructed and installed to prevent all migration of waste out of the pile into the adjacent groundwater, surface water, or subsurface soil at all times during the active life and during the closure period of the waste pile. The liner may be constructed of materials that may allow waste to migrate into the liner itself, but not the adjacent subsurface soil, groundwater or surface water, during the active life of the pile. The liner shall be:
 - 1. A minimum of four feet above the probable high groundwater level as determined pursuant to 310 CMR 30.675;
 - 2. Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients including static head and external hydrogeologic forces, physical contact with the waste or leachate to which it is exposed, climatic conditions, and the stress of installation. The liner shall also be of sufficient strength and thickness to prevent failure due to puncture, cracking, tearing or other physical damage from equipment used to place waste in or on the pile or to clean and expose the liner surface for inspection.
 - 3. Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression or uplift; rocks, boulders, irregularities with sharp edges, and all material that may damage the liner shall be removed from the subgrade prior to installation of the liner; and
 - 4. Installed to cover all surrounding earth likely to be in contact with the waste or leachate.

30.641: continued

(b) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained and operated to collect and remove leachate from the pile. The leachate depth over the liner shall not exceed 30 cm (one foot) at any point. If the collected leachate is hazardous waste pursuant to 310 CMR 30.100, it shall be managed as hazardous waste in compliance with 310 CMR 30.000. If the collected leachate is discharged to surface water or groundwater, it is subject to regulation pursuant to M.G.L. c. 21, § 43. The leachate collection and removal system shall be:

1. Constructed of materials that are chemically resistant to the waste managed in the pile and the leachate expected to be generated, and that are of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying waste, waste cover material, and by any equipment used at the pile; and
2. Designed and operated to function without clogging during the life of the pile and throughout the closure period of the pile.

(2) The owner or operator shall design, construct, operate and maintain a run-on control system capable of preventing flow onto the active portion of the pile during peak discharge from at least a 100-year storm.

(3) The owner or operator shall design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 100-year storm. If the collected run-off is hazardous waste pursuant to 310 CMR 30.100, it shall be managed as a hazardous waste in compliance with 310 CMR 30.000. If the collected run-off is discharged to surface water or groundwater, it is subject to regulation pursuant to M.G.L. c. 21, § 43.

(4) To maintain design capacity of the system, collection and holding facilities (*e.g.*, tanks, basins) associated with run-on and run-off control systems shall be emptied or otherwise managed expeditiously after storms.

(5) If the pile contains any particulate matter which may be subject to wind dispersal, the owner or operator shall cover or otherwise manage the pile to control wind dispersal.

(6) Except as provided in 310 CMR 30.640(4), each owner or operator using a single-lined waste pile shall comply with 310 CMR 30.660: *Groundwater Protection*.

30.643: Inspection of Liners

The owner or operator shall comply with the following:

(1) The waste in a pile shall be removed periodically, and the liner shall be inspected for deterioration, cracks, and other conditions that might result in leaks. The frequency of inspection shall be specified in the inspection plan required by 310 CMR 30.515 and shall be based on the potential for the liner to crack or otherwise deteriorate under the conditions of operation (*e.g.*, waste type, rainfall, loading rates and subsurface stability).

(2) If deterioration, a crack, or other condition is identified that is causing or could cause a leak, the owner or operator shall:

- (a) Notify the Department of the condition immediately by the quickest available means and also notify the Department in writing within seven days; and
- (b) Repair or replace the liner and obtain a certification from an independent Massachusetts registered professional engineer that, to the best of his knowledge and opinion, the liner has been repaired and leakage will not occur.

30.644: Monitoring and Inspection

- (1) During construction or installation, liners and cover systems (*e.g.*, membranes, sheets or coatings) shall be inspected for uniformity, damage and imperfections (*e.g.*, holes, cracks, thin spots and foreign materials). Immediately after construction or installation:
 - (a) Each synthetic liner and cover shall be inspected, using methods acceptable to the Department, to ensure tight seams and joints and the absence of tears, punctures and blisters; and
 - (b) Each soil-based and admixed liner and cover shall be inspected for imperfections, including lenses, cracks, channels, root holes or other structural defects that may cause an increase in the permeability of the liner or cover.
- (2) While a waste pile is in operation, it shall be inspected weekly and also immediately after storms to detect evidence of any of the following:
 - (a) Deterioration, malfunction, or improper operation of run-on and run-off control systems;
 - (b) Proper functioning of wind-dispersal-control systems, where present;
 - (c) The presence of leachate in leachate collection and removal systems; and
 - (d) Proper functioning of leachate collection and removal systems.

30.645: Demonstration of Waste/Liner Compatibility

The provisions of 310 CMR 30.645 apply only to liners installed after October 15, 1983. Submitted with the license application shall be a demonstration that the waste(s) and leachate that may be in contact with the liners will be compatible with the liner materials to be used. The license applicant shall persuade the Department that the wastes will not have any detrimental effect (*e.g.*, cause cracks, swelling, decrease in mechanical strength, change in chemical properties or increase in permeability) on the liner materials used to prevent leakage into or out of the space between the liners. This demonstration shall be made by conducting field tests or laboratory tests which shall be acceptable to the Department. All such testing shall be fully documented and submitted with the license application.

30.646: Special Requirements for Ignitable, Reactive, and Acutely Hazardous Wastes, Hazardous Wastes that are Polyhalogenated Aromatic Hydrocarbons, and Powders, Dusts, or Friable Materials

- (1) Ignitable or reactive hazardous waste shall not be placed in a waste pile unless the waste and the waste pile satisfy all applicable requirements of 310 CMR 30.750 and the waste is treated before or immediately after placement in the pile so that:
 - (a) The resulting material is no longer ignitable or reactive hazardous waste pursuant to 310 CMR 30.122 and 30.124; and
 - (b) 310 CMR 30.560(3) is complied with.
- (2) Acutely hazardous waste identified in 310 CMR 30.136 shall not be stored or treated in a waste pile.
- (3) Hazardous waste in the form of powder, dust or friable material shall not be stored or treated in a waste pile.
- (4) Polyhalogenated aromatic hydrocarbons shall not be placed in a waste pile except in accordance with all other applicable provisions of 310 CMR 30.640 and in accordance with the terms and conditions of a management plan, approved by the Department, for such placement. Compliance with such a plan, when approved, shall be a condition of a license issued pursuant to 310 CMR 30.000. The Department may approve a management plan for the placement of polyhalogenated aromatic hydrocarbons in a waste pile only if, after considering at least the following criteria, the Department determines that such approval is in accordance with provisions set forth in 310 CMR 30.810 through 30.814.
 - (a) The volume and physical and chemical characteristics of the polyhalogenated aromatic hydrocarbons, including their potential to migrate through the soil or to volatilize or escape into the atmosphere.

30.646: continued

- (b) The volume and physical and chemical characteristics of the other materials placed into the waste pile, including their potential to migrate through the soil or to volatilize or escape into the atmosphere.
- (c) The attenuative properties of the soil and other materials surrounding or underlying the waste pile.
- (d) The effectiveness of additional treatment, design, or monitoring techniques used by the owner or operator of the waste pile. The Department may require the use of additional or different treatment, design, or monitoring techniques to reduce the possibility of migration or emission of these materials into ground water, surface water, soil, or air.

30.647: Special Requirements for Incompatible Wastes

- (1) Incompatible hazardous wastes, or materials incompatible with hazardous wastes (*see* 310 CMR 30.561 for examples) shall not be placed in the same pile unless 310 CMR 30.560(3) is complied with.
- (2) A pile which contains hazardous waste that is incompatible with any waste or other material stored nearby in one or more containers, other piles, open tanks or surface impoundments shall be separated from the other materials or protected from them by means of a dike, berm, wall or other device.
- (3) Hazardous waste shall not be piled on the same base where incompatible wastes or other materials were previously piled, unless the base has been decontaminated sufficiently to ensure compliance with 310 CMR 30.560(3).

30.648: Limited Storage Duration

The Department may place a limit on the period of time that a waste pile may remain on the facility site whenever the Department determines that such action is necessary or appropriate to protect public health, safety or welfare or the environment.

30.649: Closure and Post-Closure Care

- (1) At closure of the pile, the owner or operator shall remove or decontaminate all waste residues, contaminated containment system components (*e.g.*, liners), contaminated subsoils, and structures and equipment contaminated with waste or leachate, and manage them as hazardous waste unless 310 CMR 30.141 applies.
- (2) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures and equipment as required by 310 CMR 30.649(1), the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he shall close the facility and perform post-closure care in compliance with the closure and post-closure care requirements that apply to landfills, 310 CMR 30.633.
- (3) If an owner or operator of an existing waste pile which does not meet the requirements of 310 CMR 30.640(4) plans to close the pile in accordance with 310 CMR 30.649(1), and the pile was not lined in accordance with 310 CMR 30.641(1) at the time the original Part A permit application was submitted to the EPA in accordance with 40 CFR Part 270, as in effect July 1, 1983, then:
 - (a) The closure plan for the pile pursuant to 310 CMR 30.583 shall include both an expected plan for complying with 310 CMR 30.649(1) and a contingent plan for complying with 310 CMR 30.649(2) in the event that not all contaminated subsoil can be practicably removed at closure; and
 - (b) The owner or operator shall prepare a contingent post-closure plan pursuant to 310 CMR 30.593 for complying with 310 CMR 30.649(2) in case not all contaminated subsoils can be practicably removed at closure.

30.649: continued

(4) The cost estimates calculated pursuant to 310 CMR 30.903 and 30.905 for closure and post-closure care of a pile subject to 310 CMR 30.649(3) shall include the cost of complying with the contingent closure plan and the contingent post-closure plan, as well as the cost of expected closure pursuant to 310 CMR 30.649(1). Where the costs of the expected closure plan and the contingent closure plan overlap (*i.e.*, the same items are factored into the cost estimate), the costs need not be counted twice.

30.650: Land Treatment Units

30.651: Applicability

310 CMR 30.651 through 30.659, cited collectively as 310 CMR 30.650, prescribe requirements which apply to owners and operators of facilities that use land treatment units to treat and dispose of hazardous waste.

30.652: Treatment Program

(1) An owner or operator subject to 310 CMR 30.650 shall establish a land treatment program that is designed to ensure that hazardous constituents placed in or on the treatment zone are degraded, transformed, or immobilized within the treatment zone. The licensee shall persuade the Department that:

- (a) The wastes are capable of being treated at the land treatment unit based on a demonstration pursuant to 310 CMR 30.653;
- (b) Design measures and operating practices will be implemented to maximize the success of degradation, transformation, and immobilization processes in the treatment zone in accordance with 310 CMR 30.654;
- (c) Unsaturated zone monitoring provisions will meet the requirements of 310 CMR 30.655;
- (d) All wastes which are to be treated at the facility are comprised primarily of constituents that are degradable or transformable in a soil media, and the primary mechanisms of land treatment at the unit are not immobilization or volatilization of wastes;
- (e) The land treatment of hazardous waste will not present a significant risk to public health, safety or welfare or the environment.

(2) The Department shall specify in the facility license the hazardous constituents that shall be degraded, transformed or immobilized pursuant to 310 CMR 30.650. Such hazardous constituents shall be constituents identified in 310 CMR 30.160 that are reasonably expected to be in, or derived from, waste placed in the treatment zone.

(3) The Department shall specify in the facility license the vertical and horizontal dimensions of the treatment zone. The treatment zone shall consist of soils which meet the criteria for the following United States Department of Agriculture soil texture classes: sandy loam, fine sandy loam, loam, very fine silt, silt, silt loam, clay loam, silty clay loam, sandy clay and silty clay. The maximum depth of the treatment zone shall be:

- (a) No more than 1.5 meters from the initial soil surface; and
- (b) At least four feet above the probable high groundwater level as determined pursuant to 310 CMR 30.675.

30.653: Treatment Demonstration

(1) For each waste that the owner or operator intends to apply to the treatment zone, the owner or operator shall demonstrate, prior to application of the waste to the treatment zone, that hazardous constituents in the waste can be completely degraded, transformed, or immobilized in the treatment zone.

30.653: continued

(2) In making the demonstration required by 310 CMR 30.653(1), the owner or operator shall use field tests. Laboratory analyses and analysis of other available data may be used only as a supplement to field testing and may not be used in lieu of field testing. Before making the demonstration required by 310 CMR 30.653(1), the owner or operator shall obtain a treatment and disposal license pursuant to 310 CMR 30.800. The Department shall specify in the license the testing, analytical, design and operating requirements (including, but not limited to, the duration of the tests and analyses, and in the case of field tests, the horizontal and vertical dimensions of the treatment zone, monitoring procedures, closure and cleanup activities) necessary to meet the requirements of 310 CMR 30.653(3).

(3) Each field test and laboratory analysis conducted in order to make a demonstration pursuant to 310 CMR 30.653(1) shall:

(a) Accurately simulate the characteristics and operating conditions for the proposed land treatment unit including:

1. The properties of the waste including, but not limited to, the presence of constituents identified in 310 CMR 30.160;
2. The climate in the area;
3. The topography of the surrounding area;
4. The characteristics of the soil in the treatment zone (including but not limited to soil depth and texture, and cation exchange capacity); and
5. The operating practices to be used at the unit;

(b) Show that hazardous constituents in the waste to be tested will be completely degraded, transformed or immobilized in the treatment zone of the proposed land treatment unit; and

(c) Be conducted in a manner that protects public health, safety, and welfare and the environment, considering:

1. The properties of the hazardous waste to be tested;
2. The operating and monitoring measures to be taken during the course of the test;
3. The duration of the test;
4. The volume of hazardous waste used in the test; and
5. In the case of field tests, the potential for migration of hazardous constituents to groundwater or surface water.

(4) When the owner or operator has completed the treatment demonstration, he shall submit to the Department a certification, signed by a person authorized to sign a license application or report pursuant to 310 CMR 30.807, that the field tests and laboratory tests have been carried out in accordance with the conditions specified in the land treatment demonstration license for conducting such tests or analyses. The owner or operator shall also submit all data collected during the field tests and laboratory analyses within 90 days of completion of those tests and analyses unless the Department approves a later date.

30.654: Design and Operating Requirements

(1) Each applicant for a license for land treatment shall persuade the Department that the land treatment unit will be designed, constructed, operated and maintained in compliance with 310 CMR 30.654.

(2) The owner or operator shall design, construct, operate, and maintain the land treatment unit to maximize the degradation, transformation, and immobilization of the hazardous constituents in the treatment zone. The owner or operator shall design, construct, operate and maintain the unit in accordance with all design and operating conditions that were used in the treatment demonstration pursuant to 310 CMR 30.653. At a minimum, the Department shall specify the following in each license for a land treatment unit:

- (a) The rate and method of waste application to the treatment zone;
- (b) Measures to control soil pH;
- (c) Measures to enhance microbial or chemical reaction (*e.g.*, fertilization, tilling);
- (d) Measures to control the moisture content of the treatment zone; and
- (e) The maximum quantity of waste that can be applied to the treatment zone over the operating life of the facility.

30.654: continued

- (3) Hazardous waste shall not be applied to soil which is frozen, covered by ice or snow, and/or saturated with water. Hazardous waste shall not be applied to soil during any period of rainfall.
- (4) Hazardous waste shall not be applied to land with a slope of greater than 4%.
- (5) The owner or operator shall design, construct, operate and maintain the treatment zone to minimize run-off of hazardous constituents during the active life of the land treatment unit.
- (6) The owner or operator shall design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 24 hour, 100-year storm. If the collected run-off is hazardous waste pursuant to 310 CMR 30.100, it shall be managed as hazardous waste in compliance with 310 CMR 30.000. If the collected run-off is discharged to surface water or groundwater, it is subject to regulation pursuant to M.G.L. c. 21 § 43.
- (7) The owner or operator shall design, construct, operate, and maintain a run-on control system capable of preventing flow onto the treatment zone during peak discharge from at least a 100-year storm.
- (8) To maintain the design capacity of the system, collection and holding facilities (*e.g.*, tanks or basins) associated with run-on and run-off control systems shall be emptied or otherwise managed expeditiously after storms.
- (9) If the treatment zone contains particulate matter which may be subject to wind dispersal, the owner or operator shall manage the unit to control wind dispersal.
- (10) The owner or operator shall inspect the unit weekly and after storms to detect evidence of:
 - (a) Deterioration, malfunctions, or improper operation of run-on and run-off control systems; and
 - (b) Improper functioning of wind-dispersal control measures.
- (11) The growing of any food chain crop on the active portion or the closed portion of a land treatment facility is prohibited.

30.655: Unsaturated Zone Monitoring

An owner or operator subject to 310 CMR 30.650 shall establish an unsaturated zone monitoring program which shall include the following:

- (1) The owner or operator shall monitor the soil and soil-pore liquid to determine whether hazardous constituents migrate out of the treatment zone.
 - (a) In the land treatment license, the Department shall specify the hazardous constituents to be monitored. Except as provided in 310 CMR 30.655(1)(b), the owner or operator shall monitor for all the hazardous constituents identified pursuant to 310 CMR 30.652(2).
 - (b) The Department may require monitoring for principal hazardous constituents (PHCs) in lieu of the constituents specified pursuant to 310 CMR 30.652(2). PHCs are hazardous constituents contained in the wastes to be land applied at the unit that are the most difficult to treat, considering the combined effects of degradation, transformation, and immobilization. The Department may establish PHCs if the Department determines, based on waste analyses, treatment demonstrations, or other data, that effective degradation, transformation, or immobilization of the PHCs will assure at least equivalent levels of treatment for the other hazardous constituents in the waste.

30.655: continued

(2) The owner or operator shall install an unsaturated zone monitoring system that shall include both soil monitoring using soil cores and also soil-pore liquid monitoring using devices such as lysimeters. The unsaturated zone monitoring system shall consist of a sufficient number of sampling points at appropriate locations and depths to yield samples that:

- (a) Represent the quality of background soil-pore liquid quality and the chemical make-up of soil that has not been affected by leakage from the treatment zone; and
- (b) Indicate the quality of soil-pore liquid and the chemical make-up of the soil below the treatment zone.

(3) The owner or operator shall establish a background value for each hazardous constituent to be monitored pursuant to 310 CMR 30.655(1). The license shall specify the background value for each hazardous constituent or specify the procedures to be used to calculate the background values.

- (a) Background soil values may be based on a one-time sampling at a background plot that is on the site of the facility and that has characteristics similar to those of the treatment zone. The Department shall specify in the land treatment license the number of samples to be taken. In no case shall less than three samples be taken.
- (b) Background soil-pore liquid values shall be based on at least quarterly sampling for one year at a background plot having characteristics similar to those of the treatment zone.
- (c) The owner or operator shall express all background values in a form suitable for the determination of statistically significant increases to be determined pursuant to 310 CMR 30.655(6).
- (d) In taking samples used in the determination of all background values, the owner or operator shall use an unsaturated zone monitoring system that is in compliance with 310 CMR 30.655(2).

(4) The owner or operator shall conduct soil monitoring and soil-pore liquid monitoring immediately below the treatment zone. The Department shall specify the frequency and timing of soil and soil-pore liquid monitoring in the facility license after considering the frequency, timing, and rate of waste application, and the soil permeability. The owner or operator shall express the results of soil and soil-pore liquid monitoring in a form suitable for the determination of statistically significant increases to be determined pursuant to 310 CMR 30.655(6).

(5) The owner or operator shall use consistent sampling and analysis procedures that are designed to ensure sampling results that provide a reliable indication of soil-pore liquid quality and the chemical makeup of the soil below the treatment zone. At a minimum, the owner or operator shall implement and document procedures and techniques for:

- (a) Sample collection;
- (b) Sample preservation and shipment;
- (c) Analytical procedures; and
- (d) Chain-of-custody control.

(6) Using a statistical procedure specified in the land treatment license, the owner or operator shall determine whether there is a statistically significant increase over background values for any hazardous constituent to be monitored, pursuant to 310 CMR 30.655(1), below the treatment zone each time he conducts soil monitoring and soil-pore liquid monitoring pursuant to 310 CMR 30.655(4). In the land treatment license, the Department shall specify a statistical procedure which shall provide reasonable confidence that migration from the treatment zone will be identified, shall be appropriate for the distribution of the data used to establish background values, and shall provide a reasonable balance between the probability of falsely identifying migration from the treatment zone and the probability of failing to identify real migration from the treatment zone.

- (a) In determining whether a statistically significant increase has occurred, the owner or operator shall compare the value of each constituent, as determined pursuant to 310 CMR 30.655(4), to the background value for that constituent, using the statistical procedure specified in the land treatment license.

30.655: continued

(b) Within a reasonable time period after completion of sampling, the owner or operator shall determine whether there has been a statistically significant increase below the treatment zone. The Department shall specify that time period in the land treatment license after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of soil and soil-pore liquid samples.

(7) If the owner or operator determines, pursuant to 310 CMR 30.655(6), that there is a statistically significant increase of hazardous constituents below the treatment zone, he shall:

(a) Notify the Department immediately by the quickest available means and also notify the Department in writing within seven days; the notification shall indicate what constituents have shown statistically significant increases; and

(b) Within 90 days of determining that there is such a statistically significant increase, submit to the Department an application for a land treatment license modification to modify the operating practices at the facility in order to maximize the success of degradation, transformation, or immobilization processes in the treatment zone.

(8) If the owner or operator determines, pursuant to 310 CMR 30.655(6), that there is a statistically significant increase of hazardous constituents below the treatment zone, he may demonstrate to the Department that a source other than licensed land treatment units caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation. Such a demonstration shall be in addition to, and not in lieu of, submitting a land-treatment license modification pursuant to 310 CMR 30.655(7)(b). If such a demonstration is made to the satisfaction of the Department, and the Department so determines in writing before the expiration of the 90 day period specified in 310 CMR 30.655(7)(b), the owner or operator need not submit a land treatment license modification application. If such an application is submitted, it may be withdrawn upon a written determination by the Department that the owner or operator has made this demonstration to the satisfaction of the Department. In making such a demonstration, the owner or operator shall:

(a) Within seven days of determining a statistically significant increase below the treatment zone, notify the Department in writing that he intends to make a determination pursuant to 310 CMR 30.655(8); and

(b) Within 90 days of such a determination, submit a report to the Department demonstrating that a source other than the regulated unit(s) caused the increase or that the increase resulted from error in sampling, analysis, or evaluation; and

(c) Within 90 days of such a determination, submit to the Department an application for a license modification to make any appropriate changes to the unsaturated zone monitoring program at the facility, unless the Department has determined in writing that such an application need not be submitted; and

(d) Continue to monitor in compliance with the unsaturated zone monitoring program established pursuant to 310 CMR 30.655.

30.656: Record Keeping

The owner or operator of a land treatment facility shall include the following in the operating record required by 310 CMR 30.542:

(1) the application dates, application rates, total quantities, and location of each hazardous waste treated at the facility; and

(2) A record of all vegetation grown at the site and of the dates, quantities and destination of all vegetation and soil removed from the site; and

(3) The results of all monitoring done to comply with 310 CMR 30.650, and a record of everything else done to comply with 310 CMR 30.650.

30.657: Special Requirements for Ignitable, Reactive, Incompatible, and Acutely Hazardous Wastes, and Hazardous Wastes that are Polyhalogenated Aromatic Hydrocarbons

(1) The owner or operator shall not apply ignitable or reactive waste to the treatment zone unless the waste and the treatment zone meet all applicable requirements of 310 CMR 30.750 and the waste is immediately incorporated into the soil so that:

30.657: continued

- (a) The resulting material is no longer ignitable or reactive hazardous waste pursuant to 310 CMR 30.122 or 30.124; and
 - (b) 310 CMR 30.560(3) is complied with.
- (2) Incompatible hazardous wastes, or materials incompatible with hazardous wastes (*see* 310 CMR 30.561 for examples) shall not be placed in or on the same treatment zone unless 310 CMR 30.560(3) is complied with.
- (3) Acutely hazardous waste identified in 310 CMR 30.136 shall not be treated or disposed of at a land treatment facility.
- (4) Polyhalogenated aromatic hydrocarbons shall not be placed in a land treatment facility except in accordance with all other applicable provisions of 310 CMR 30.650 and in accordance with the terms and conditions of a management plan, approved by the Department, for such placement. Compliance with such a plan, when approved, shall be a condition of a license issued pursuant to 310 CMR 30.000. The Department may approve a management plan for the placement of polyhalogenated aromatic hydrocarbons in a land treatment facility only if, after considering at least the following criteria, the Department determines that such approval is in accordance with provisions set forth in 310 CMR 30.810 through 30.814.
 - (a) The volume and physical and chemical characteristics of the polyhalogenated aromatic hydrocarbons, including their potential to migrate through the soil or to volatilize or escape into the atmosphere.
 - (b) The volume and physical and chemical characteristics of the other materials placed into the land treatment facility, including their potential to migrate through the soil or to volatilize or escape into the atmosphere.
 - (c) The attenuative properties of the soil and other materials surrounding or underlying the land treatment facility.
 - (d) The effectiveness of additional treatment, design, or monitoring techniques used by the owner or operator of the land treatment facility. The Department may require the use of additional or different treatment, design, or monitoring techniques to reduce the possibility of migration or emission of these materials into ground water, surface water, soil, or air.

30.658: Application Rates and Capacity

- (1) With the land treatment license application, the owner or operator shall submit information identifying the annual rate limiting constituent, the single application limiting constituent, and the soil capacity limiting constituent of the wastes to be treated at the facility (*see* 310 CMR 30.010).
- (2) The annual application rate of hazardous waste shall not be greater than the maximum rate established by the annual rate limiting constituent for that waste.
- (3) The amount of each hazardous waste applied at any one time shall not exceed that established by the single application limiting constituent identified for that waste.
- (4) The total amount of each hazardous waste applied to the land over the operating life of the facility shall not exceed that established by the soil capacity limiting constituent for that waste.
- (5) The application rates and capacities shall be determined taking into consideration:
 - (a) The potential for volatilization of hazardous constituents from the applied waste;
 - (b) The need to prevent migration of hazardous constituents from the treatment zone;
 - (c) The ability of the treatment zone to degrade, transform or immobilize hazardous constituents;
 - (d) The soil characteristics, including the anticipated pH of the soil following the post-closure care period of the facility;

30.658: continued

- (e) The potential for run-off;
- (f) Climatic conditions;
- (g) The toxic effects of the waste to decomposer organisms;
- (h) The toxic effects of the waste on the vegetative cover;
- (i) The potential for odor problems at the site; and
- (j) The potential for long-term anoxic conditions in the soil.

(6) In the waste analysis plan required pursuant to 310 CMR 30.513, the owner or operator shall include provisions for determining the concentrations of the annual rate limiting constituent, the single application limiting constituent, the soil capacity limiting constituent, and those constituents which are within 25% of the concentration level which would make them limiting constituents.

30.659: Closure and Post-Closure Care

- (1) During the closure period of the land treatment facility, the owner or operator shall:
 - (a) Continue all operations (*e.g.*, pH control) necessary to maximize degradation, transformation, and immobilization of hazardous constituents within the treatment zone as required by 310 CMR 30.654(2), except to the extent such measures are inconsistent with 310 CMR 30.659(1)(h);
 - (b) Continue all operations in the treatment zone to minimize runoff of hazardous constituents, as required by 310 CMR 30.654(5);
 - (c) Maintain the run-off management system required by 310 CMR 30.654(6).
 - (d) Maintain the run-on control system required by 310 CMR 30.654(7);
 - (e) Control wind dispersal of hazardous waste if required by 310 CMR 30.654(9);
 - (f) Continue to comply with the prohibition on growing food chain crops as set forth in 310 CMR 30.654(11);
 - (g) Continue unsaturated zone monitoring in compliance with 310 CMR 30.655 except that soil-pore liquid monitoring may be terminated 90 days or more after the last application of waste to the treatment zone; and
 - (h) Establish a vegetative cover on the portion of the land treatment unit being closed at such time that the cover will not substantially impede degradation, transformation or immobilization of hazardous constituents in the treatment zone. The vegetative cover shall be capable of maintaining growth without extensive maintenance.

- (2) For the purpose of complying with 310 CMR 30.587, when closure of the land treatment facility is completed, the owner or operator may submit to the Department certification by an independent qualified soil scientist, in lieu of an independent Massachusetts registered professional engineer, that the land treatment facility has been closed in compliance with the specifications in the approved closure plan.

- (3) During the post-closure care period the owner or operator shall:
 - (a) Continue all operations (*e.g.*, pH control) necessary to maximize degradation and transformation and sustain immobilization of hazardous constituents in the treatment zone to the extent that such measures are consistent with other post-closure activities;
 - (b) Maintain a vegetative cover over closed portions of the land treatment unit;
 - (c) Maintain the run-on control system required by 310 CMR 30.654(7);
 - (d) Maintain the run-off management system required by 310 CMR 30.654(6);
 - (e) Control wind dispersal of hazardous waste if required by 310 CMR 30.654(9);
 - (f) Continue to comply with the prohibition concerning growth of food-chain crops as set forth in 310 CMR 30.654(11); and
 - (g) Continue unsaturated zone monitoring in compliance with 310 CMR 30.655, except that soil-pore liquid monitoring may be terminated 90 days or more after the last application of waste to the treatment zone.

30.659: continued

(4) An owner or operator need not comply with 310 CMR 30.659(1)(h) and (3) if the Department determines that the level of hazardous constituents in the treatment zone soil does not exceed the background value of those constituents by an amount that is statistically significant when using the test specified pursuant to 310 CMR 30.659(4)(c). The owner or operator may submit such a demonstration to the Department at any time during the closure or post-closure care periods. For this purpose:

(a) The owner or operator shall establish background soil values and determine whether there is a statistically significant increase over those values for all hazardous constituents specified in the land treatment license pursuant to 310 CMR 30.652(2).

1. Background soil values may be based on a one-time sampling of a background plot that is on the site and that has characteristics similar to those of the treatment zone. The Department shall specify the number of samples to be taken, which number shall be no less than three.

2. The owner or operator shall express background values and values for hazardous constituents in the treatment zone in a form suitable for the determination of statistically significant increases pursuant to 310 CMR 30.659(4)(c).

(b) In taking samples used in the determination of background soil values and treatment zone values, the owner or operator shall take samples at a sufficient number of sampling points and at appropriate locations and depths to yield samples that represent the chemical makeup of:

1. soil that has not been affected by leakage from the treatment zone; and
2. soil within the treatment zone.

(c) In determining whether a statistically significant increase has occurred, the owner or operator shall compare the value of each constituent in the treatment zone to the background value for that constituent using a statistical procedure that:

1. Provides reasonable confidence that constituent presence in the treatment zone will be identified.
2. Is appropriate for the distribution of the data used to establish background values;
3. Provides a reasonable balance between the probability of falsely identifying the presence of hazardous constituents in the treatment zone and the probability of failing to identify real presence of hazardous constituents in the treatment zone; and
4. Is approved, in writing, by the Department.

(5) The owner or operator need not comply with 310 CMR 30.660: *Groundwater Protection* if the Department finds that the owner or operator meets the requirements of 310 CMR 30.659(4) and if unsaturated zone monitoring required by 310 CMR 30.655 indicates that hazardous constituents have not migrated beyond the treatment zone during the active life of the land treatment unit.

30.660: Groundwater Protection

30.661: Applicability

(1) Except as provided in 310 CMR 30.661(2) and (3), 30.661 through 30.673, cited collectively as 310 CMR 30.660, prescribe requirements which apply to owners and operators of regulated units that receive hazardous waste after July 26, 1982. As used in 310 CMR 30.660, the term "regulated unit" shall mean a surface impoundment, waste pile, miscellaneous units, land treatment unit or landfill which treats, stores or disposes of hazardous waste. Any hazardous waste or hazardous waste constituent found beyond a waste management area described in 310 CMR 30.669(2) shall be presumed to originate from a regulated unit unless the Department determines that such waste or waste constituent originated from another source.

(2) 310 CMR 30.660 shall not apply to a waste pile that is designed and operated in compliance with 310 CMR 30.640(4).

30.661: continued

(3) The requirements in 310 CMR 30.660 apply during the active life of each regulated unit and during the closure period for each regulated unit. After closure of each regulated unit, 310 CMR 30.660 shall:

- (a) Apply during the post-closure period pursuant to 310 CMR 30.590 through 30.595 if the owner or operator is conducting a detection monitoring program pursuant to 310 CMR 30.664;
- (b) Apply during the compliance period specified in 310 CMR 30.670 if the owner or operator is conducting a compliance monitoring program pursuant to 310 CMR 30.671 or a corrective action program pursuant to 310 CMR 30.672.
- (c) Not apply if all hazardous waste, hazardous waste residues, contaminated containment system components, and contaminated subsoils are removed or decontaminated during closure, unless 310 CMR 30.661(3)(b) applies;
- (d) Not apply if the Department determines, pursuant to 310 CMR 30.659(4), that:
 1. The treatment zone of a land treatment unit does not contain levels of hazardous constituents that, by amounts that are statistically significant, are above background levels of those constituents; and
 2. The unsaturated zone monitoring program done in compliance with 310 CMR 30.655 has not shown a statistically significant increase in hazardous constituents below the treatment zone during the operating life of the land treatment unit.

(4) The Department may waive any requirement of 310 CMR 30.660 otherwise applicable to a miscellaneous unit if the Department is persuaded that, as applied to that miscellaneous unit, the requirement is unnecessary to protect public health, safety or welfare or the environment.

30.662: Required Programs

(1) Each owner and operator subject to 310 CMR 30.660 shall conduct a monitoring and response program as follows:

- (a) Whenever those hazardous constituents specified pursuant to 310 CMR 30.666 are detected at a compliance point described in 310 CMR 30.669, the owner or operator shall institute a compliance monitoring program pursuant to 310 CMR 30.671 unless the Department determines that such constituents originated from another source. Detected is defined as statistically significant evidence of increased contamination as described in 310 CMR 30.664(6).
- (b) Whenever a requirement of 310 CMR 30.665: *Groundwater Protection Standard* is not complied with, the owner or operator shall institute a corrective action program pursuant to 310 CMR 30.672.
- (c) Whenever those hazardous constituents specified pursuant to 310 CMR 30.666 exceed concentration limits specified pursuant to 310 CMR 30.667 in groundwater between a compliance point specified pursuant to 310 CMR 30.669 and the downgradient facility property boundary, the owner or operator shall institute a corrective action program pursuant to 310 CMR 30.672, unless the Department determines that such constituents originated from another source. Exceeded is defined as statistically significant evidence of increased contamination as described in 310 CMR 30.671(4).
- (d) In all other cases, the owner or operator shall institute a detection monitoring program pursuant to 310 CMR 30.664.

(2) In the facility license, the Department shall specify the specific elements of the monitoring and response program. The Department may include one or more of the programs identified in 310 CMR 30.662(1) in the facility license and shall specify the circumstances under which each such program shall be required.

30.663: General Groundwater Monitoring Requirements

The owner or operator shall comply with the following requirements for any groundwater monitoring program developed to comply with the requirements of 310 CMR 30.664, 30.671, or 30.672:

30.663: continued

(1) The groundwater monitoring system shall consist of a sufficient number of wells, installed at appropriate locations and depths, to yield from the uppermost aquifer groundwater samples that:

(a) Represent the quality of background groundwater that has not been affected by leakage from a regulated unit.

A determination of background quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:

1. Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; and
2. Sampling at other wells will provide an indication of background ground-water quality that is representative or more representative than that provided by upgradient wells; and

(b) Represent the quality of groundwater passing a point of compliance; and

(c) Allow for the detection of contamination when hazardous waste or hazardous constituents have migrated from the waste management area to the uppermost aquifer.

(2) If a facility contains more than one regulated unit, separate groundwater monitoring systems shall not be required for each regulated unit if sampling of groundwater in the uppermost aquifer at a compliance point will enable detection and measurement of hazardous constituents from the regulated units.

(3) All monitoring wells shall be cased in a manner that maintains the integrity of the monitoring well bore hole. To enable collection of groundwater samples, this casing shall be screened or perforated and, where necessary, packed with gravel or sand. The annular space (*i.e.*, the space between the bore hole and well casing) above and below the sampling depth shall be sealed to prevent contamination of samples and of the groundwater.

(a) The inside diameter shall be sized to facilitate the collection of samples.

(b) The casing shall be constructed of a material which will not be reactive with or corroded by any leachate from any regulated unit.

(c) PVC casing shall be joined in a manner which does not contribute organics to water samples.

(d) The casing shall be screened or perforated in a manner that allows water to enter the well freely at low velocity, prevents sand from entering the well, and serves as the structural retainer to support loose formation material.

(e) All monitoring wells shall be protected by a length of protective casing which is larger in diameter than the monitoring well casing and which extends below the land surface.

1. The protective casing shall be grouted and placed with a protective collar to hold it firmly in position.
2. The protective casing shall be identified by a highly visible color.
3. The protective casing shall be higher above grade than the inner well casing.
4. The protective casing shall have a vented cap that will allow the well to be secured against acts of vandalism.

(f) All borings for monitoring wells shall be done by a technique that enables the well driller to obtain representative soil samples at five-foot intervals.

1. The soil samples shall be placed in covered glass jars and labelled so that a stratigraphic log can be prepared.
2. Sample jars containing soil samples shall be placed in the custody of the facility owner or operator after examination by an engineer or geologist, and shall be available for inspection by the Department.
3. When well clusters are used, soil sampling is only necessary at the deepest boring and at other borings at the screened depth.

(g) As technology changes in the field of groundwater monitoring, the Department may approve, in writing, different but equivalent or better methods for obtaining the information required to prepare a stratigraphic log, take water level measurements, or obtain representative groundwater samples.

30.663: continued

(4) The groundwater monitoring program shall include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide a reliable indication of groundwater quality below the waste management area, as described in 310 CMR 30.669(2). At a minimum, the program shall include procedures and techniques for:

- (a) Sample collection;
- (b) Sample preservation, storage and shipment;
- (c) Analytical procedures, including quality control and assurance techniques; and
- (d) Chain-of-custody control.

(5) The groundwater monitoring program shall include sampling and analytical methods that are appropriate for groundwater sampling and that accurately measure hazardous constituents in groundwater samples.

(6) The groundwater monitoring program shall include a determination of the groundwater surface elevation each time groundwater is sampled. These data shall be plotted to make a map showing water table contours and presumed flow directions. Care shall be taken in preparing this map to consider the portions of the aquifer screened by each of the wells. All measurements shall be referenced to sea level, based on USGS or USC&GS data. By April 30th of each year, the owner or operator shall evaluate the data on groundwater elevations obtained in compliance with 310 CMR 30.663(6) to determine whether the requirements set forth in 310 CMR 30.663(1) for well locations continue to be met. If any such requirement is not met, the owner or operator shall:

- (a) Within ten days, notify the Department of this fact, and request, in writing, a license modification; and
- (b) Within a period of time specified by the Department, locate and install new wells to meet the requirements of 310 CMR 30.663(1).

(7) In detection monitoring or where appropriate in compliance monitoring, data on each hazardous constituent specified in the license shall be collected from background wells and wells at compliance point(s). The number and kinds of samples collected to establish background shall be appropriate for the form of statistical test employed, following generally accepted statistical principles. The sample size shall be as large as necessary to ensure with reasonable confidence that a contaminant release to ground water from a facility will be detected. The owner or operator shall determine an appropriate sampling procedure and interval for each hazardous constituent listed in the facility license which shall be specified in the unit license upon approval by the Department. This sampling procedure shall be:

- (a) A sequence of at least four samples, taken at an interval that assures, to the greatest extent technically feasible, that an independent sample is obtained, by reference to the uppermost aquifer's effective porosity, hydraulic conductivity, and hydraulic gradient, and the fate and transport characteristics of the potential contaminants, or
- (b) An alternate sampling procedure proposed by the owner or operator and approved by the Department.

(8) The owner or operator shall specify one of the following statistical methods to be used in evaluating ground-water monitoring data for each hazardous waste constituent which, upon approval by the Department, shall be specified in the unit license. The statistical test chosen shall be conducted separately for each hazardous constituent in each well. Where practical quantification limits (pql's) are used in any of the following statistical procedures to comply with 310 CMR 30.663(10)(e), the pql shall be proposed by the owner or operator and approved by the Department. Use of any of the following statistical methods shall be protective of public health, safety and welfare and the environment and shall comply with the performance standards outlined in 310 CMR 30.663(10).

- (a) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method shall include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.

30.663: continued

- (b) An analysis of variance (ANOVA) based on ranks followed by multiple comparison procedures to identify statistically significant evidence of contamination. The method shall include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.
 - (c) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.
 - (d) A control chart approach that gives control limits for each constituent.
 - (e) Another statistical test method submitted by the owner or operator and approved by the Department.
- (9) In addition to using a statistical test to determine whether background values or concentration limits have been exceeded, each owner or operator conducting a groundwater monitoring program shall compile the information for each water quality parameter at each sampling point in the form of a table covering the current year and on a graph showing the historical trend. This information shall be submitted to the Department annually by March 1 of each year.
- (10) Any statistical method chosen pursuant to 310 CMR 30.663(8) for specification in the unit license shall comply with the following performance standards, as appropriate:
- (a) The statistical method used to evaluate ground-water monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data shall be transformed or a distribution-free theory test shall be used. If the distributions for the constituents differ more than one statistical method may be needed.
 - (b) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a ground-water protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparison procedure is used, the Type I experimentwise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons shall be maintained. This performance standard does not apply to tolerance intervals, prediction intervals or control charts.
 - (c) If a control chart approach is used to evaluate ground-water monitoring data, the specific type of control chart and its associated parameter values shall be proposed by the owner or operator and approved by the Department if the Department finds it to be protective of public health, safety and welfare and the environment.
 - (d) If a tolerance interval or a prediction interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval shall contain, shall be proposed by the owner or operator and approved by the Department if the Department finds these parameters to be protective of public health, safety and welfare and the environment. These parameters will be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.
 - (e) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of public health, safety and welfare and the environment. Any practical quantification limit (pql) approved by the Department pursuant to 310 CMR 30.663(8) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.
 - (f) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.
- (11) Ground-water monitoring data collected in accordance with 310 CMR 30.663(7), including actual levels of constituents shall be maintained in the facility operating record. The Department will specify in the license when the data shall be submitted for review.

30.664: Detection Monitoring Program

An owner or operator required to establish a detection monitoring program pursuant to 310 CMR 30.661 and 30.662 shall, at a minimum, comply with the following:

(1) The owner or operator shall monitor for all indicator parameters (*e.g.*, pH, specific conductance, total organic carbon, or total organic halogen), waste constituents, or reaction products that provide a reliable indication of the presence of hazardous constituents in groundwater. In the facility license, the Department shall specify the parameters or constituents to be monitored after considering:

- (a) The types, quantities, and concentrations of constituents in hazardous wastes managed at the regulated unit;
- (b) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the waste management area, as described in 310 CMR 30.669(2);
- (c) The detectability of indicator parameters, waste constituents, and reaction products in groundwater; and
- (d) The concentrations or values, and in all cases the coefficients of variation of proposed monitoring parameters or constituents in the groundwater background.

(2) The owner or operator shall install a groundwater monitoring system at compliance points as specified pursuant to 310 CMR 30.669. The groundwater monitoring system shall be in compliance with 310 CMR 30.663(1)(b), (2) and (3).

(3) The owner or operator shall conduct a ground-water monitoring program for each chemical parameter and hazardous constituent specified in the license pursuant to 310 CMR 30.664(1) in accordance with 310 CMR 30.663(7). The owner or operator shall maintain a record of ground-water analytical data as measured and in a form necessary for determination of statistical significance pursuant to 310 CMR 30.663(7).

(4) The Department will specify the frequencies for collecting samples and conducting statistical tests to determine whether there is statistically significant evidence of contamination for any parameter or hazardous constituent specified in the license pursuant to 310 CMR 30.664(1) in accordance with 310 CMR 30.663(7). A sequence of at least four samples from each well (background and compliance wells) shall be collected at least semiannually during detection monitoring.

(5) The owner or operator shall determine the groundwater flow rate and direction in the uppermost aquifer at least annually.

(6) The owner or operator shall determine whether there is statistically significant evidence of contamination for any chemical parameter or hazardous constituent specified in the license pursuant to 310 CMR 30.664(1) at a frequency specified pursuant to 310 CMR 30.664(4).

(a) In determining whether statistically significant evidence of contamination exists, the owner or operator shall use the method(s) specified in the license pursuant to 310 CMR 30.663(8). These methods shall compare data collected at the compliance point(s) to the background ground-water quality data.

(b) The owner or operator shall determine whether there is statistically significant evidence of contamination at each monitoring well as the compliance point within a reasonable period of time after completion of sampling. The Department will specify in the facility license what period of time is reasonable, after considering complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground-water samples.

(7) If the owner or operator determines pursuant to 310 CMR 30.664(6) that there is statistically significant evidence of contamination for chemical parameters or hazardous constituents specified pursuant to 310 CMR 30.664(1) at any monitoring well at the compliance point, the owner or operator shall:

30.664: continued

- (a) Notify the Department of this finding in writing within seven days. The notification shall indicate what chemical parameters or hazardous constituents have shown statistically significant evidence of contamination.
- (b) Immediately sample the ground water in all monitoring wells and determine whether constituents in 310 CMR 30.161 are present and, if so, in what concentration.
- (c) For any 310 CMR 30.161 compounds found in the analysis pursuant to 310 CMR 30.664(7)(b), the owner or operator may resample within one month and repeat the analysis for those compounds detected. If the results of the second analysis confirm the initial results, then these constituents shall form the basis for compliance monitoring. If the owner or operator does not resample for compounds found pursuant to 310 CMR 30.664(7)(b), the hazardous constituents found during the initial analysis for compounds in 310 CMR 30.161 shall form the basis for compliance monitoring.
- (d) Within 90 days, submit to the Department an application for a license modification to establish a compliance monitoring program meeting the requirements of 310 CMR 30.671. The application shall include the following information:
1. An identification of the concentration or any 310 CMR 30.161 constituent detected in the ground water at each monitoring well at the compliance point;
 2. Any proposed changes to the ground-water monitoring system at the facility necessary to meet the requirements of 310 CMR 30.671;
 3. Any proposed additions or changes to the monitoring frequency, sampling and analysis procedures or methods, or statistical methods used at the facility necessary to meet the requirements of 310 CMR 30.671;
 4. For each hazardous constituent detected at the compliance point, a proposed concentration limit pursuant to 310 CMR 30.667(1)(a) or (b), or a notice of intent to seek an alternate concentration limit pursuant to 310 CMR 30.667(2); and
- (e) Within 180 days, submit to the Department:
1. All data necessary to justify an alternate concentration limit sought pursuant to 310 CMR 30.667(2); and
 2. An engineering feasibility plan for a corrective action program necessary to meet the requirements of 310 CMR 30.672, unless:
 - a. All hazardous constituents identified pursuant to 310 CMR 30.664(7)(b) are listed in 310 CMR 30.668 and their concentrations do not exceed the respective values given in Table 30.668; or
 - b. The owner or operator has sought an alternate concentration limit pursuant to 310 CMR 30.667(2) for every hazardous constituent identified pursuant to 310 CMR 30.664(7)(b).
- (f) If the owner or operator determines, pursuant to 310 CMR 30.664(6), that there is a statistically significant difference for chemical parameters or hazardous constituents specified pursuant to 310 CMR 30.664(1) at any monitoring well at the compliance point, the owner or operator may demonstrate that a source other than a regulated unit has caused the contamination or that the detection is an artifact caused by error in sampling, analysis, or statistical evaluation or natural variation in ground water. The owner or operator may make a demonstration pursuant to 310 CMR 30.664(7)(f) in addition to, or in *lieu* of, submitting a license modification application pursuant to 310 CMR 30.664(7)(d); however, the owner or operator is not relieved of the requirement to submit a license modification application within the time specified in 310 CMR 30.664(7)(d) unless the demonstration made pursuant to 310 CMR 30.664(7)(f) successfully shows that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis or evaluation. In making a demonstration pursuant to 310 CMR 30.664(7)(f), the owner or operator shall:
1. Notify the Department in writing within seven days of determining statistically significant evidence of contamination at the compliance point that the owner or operator intends to make a demonstration pursuant to 310 CMR 30.664(7)(f);
 2. Within 90 days, submit a report to the Department which demonstrates that a source other than a regulated unit caused the contamination or that the contamination resulted from an error in sampling, analysis, or evaluation;

30.664: continued

3. Within 90 days, submit to the Department an application for a license modification to make any appropriate changes to the detection monitoring program; and
4. Continue to monitor in accordance with the detection monitoring program established pursuant to 310 CMR 30.664.

(8) If the owner or operator determines that the detection monitoring program no longer satisfies the requirements of 310 CMR 30.664, the owner or operator shall, within 90 days, submit an application for license modification to make any appropriate changes to the program.

30.665: Groundwater Protection Standard

The Department shall impose, and the owner or operator shall comply with, conditions in the facility's license that are designed to ensure that hazardous constituents which are identified pursuant to 310 CMR 30.666 and which are detected in the groundwater from a regulated unit do not exceed the concentration limits specified pursuant to 310 CMR 30.667. Such concentration limits shall not be exceeded in the uppermost aquifer underlying the waste management area at or beyond a point of compliance identified pursuant to 310 CMR 30.669 during the compliance period specified pursuant to 310 CMR 30.670. When hazardous constituents have been detected the groundwater from a regulated unit, the Department shall, in the facility's license, impose conditions which meet the requirements of 310 CMR 30.665. The Department may impose such conditions in the facility's license before hazardous constituents have been detected in the groundwater from a regulated unit.

30.666: Hazardous Constituents

The Department shall specify, in the facility's license, those specific hazardous constituents identified in 310 CMR 30.161 to which the requirements of 310 CMR 30.665: *Groundwater Protection Standard* shall apply. The Department shall identify such hazardous constituents upon establishing a compliance monitoring or corrective action program in the facility's license. Hazardous constituents which shall be specified in the license shall be constituents identified in 310 CMR 30.160 that the Department reasonably expects to be in or derived from waste contained in a regulated unit. The Department may exclude such a constituent from the list of hazardous constituents in the facility's license if the constituent is unstable in water and has not been detected in the groundwater.

30.667: Concentration Limits

(1) If the Department specifies in a facility's license a compliance monitoring program or a corrective action program, the Department shall also specify in the facility's license concentration limits, established pursuant to 310 CMR 30.666, for hazardous constituents in the groundwater. The concentration of a hazardous constituent:

- (a) Shall not, at the time that such limit is specified in the license, exceed the background level of that constituent in the groundwater; or
- (b) For any of the constituents listed in 310 CMR 30.000: *Table 30.668*, shall not exceed the respective maximum concentration set forth in 310 CMR 30.000: *Table 30.668* if the background level of the constituent is below the value set forth in 310 CMR 30.000: *Table 30.668*; or
- (c) Shall not exceed an alternate limit established by the Department pursuant to 310 CMR 30.667(2).

(2) The Department may establish an alternate concentration limit for a hazardous constituent if the Department determines that the constituent will not pose a substantial present or potential hazard to public health or safety or the environment as long as the alternate concentration limit is not exceeded. In establishing each alternate concentration limit, the Department shall consider the following factors:

30.667: continued

- (a) Potential adverse effects on groundwater quality, considering:
 - 1. The physical and chemical properties of the waste in the regulated unit, including its potential for migration;
 - 2. The hydrogeologic characteristics of the facility and surrounding land;
 - 3. The quantity of groundwater and the direction of groundwater flow;
 - 4. The proximity and withdrawal rates of groundwater users;
 - 5. The current and potential uses of groundwater in the area;
 - 6. The existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater quality;
 - 7. The potential for health or safety risks caused by human exposure to waste constituents;
 - 8. The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;
 - 9. The persistence and permanence of the potential adverse effects; and
- (b) Potential adverse effects on hydraulically-connected surface water quality, considering:
 - 1. The volume and physical and chemical properties of the waste in the regulated unit;
 - 2. The hydrogeologic characteristics of the facility and surrounding land;
 - 3. The quantity and quality of groundwater, and the direction of groundwater flow;
 - 4. The patterns of rainfall in the region;
 - 5. The proximity of the regulated unit to surface water(s);
 - 6. The current and potential uses of surface water(s) in the sources of contamination and the cumulative impact on surface water quality;
 - 7. The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality;
 - 8. The potential for health or safety risks caused by human exposure to waste constituents;
 - 9. The potential damage to wildlife, crops, vegetation, and physical structure caused by exposure to waste constituents; and
 - 10. The persistence and permanence of the potential adverse effects.

(3) In making any determination, pursuant to 310 CMR 30.667(2), about the use of groundwater in the area around the facility, the Department shall consider any identification, made pursuant to 310 CMR 27.00: *Underground Water Source Protection*, of underground sources of drinking water and exempted aquifers.

30.668: Maximum Concentration of Constituents for Groundwater Protection

Except as provided in 310 CMR 30.667, the concentration in groundwater of each constituent listed in Table 30.668 shall not exceed the maximum concentration specified in 310 CMR 30.000: *Table 30.688* for that constituent.

30.668: continued

Table 30.668

Constituent	Maximum Concentration (Milligrams per liter)
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Lead	0.05
Mercury	0.002
Selenium	0.01
Silver	0.05
Endrin (1,2,3,4,10,10-hexachloro-1,7-epoxy-1,4,4a,5,6,7,8,9a-octahydro-1,4-endo, endo-5,8-dimethano naphthalene)	0.0002
Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer)	0.004
Methoxychlor (1,1,1-Trichloro-2,2-bis (p-methoxyphenylethane)	0.1
Toxaphene (C ₁₀ H ₁₀ Cl ₆ , Technical chlorinated camphene, 67-69% chlorine)	0.005
2,4-D (2,4-Dichlorophenoxyacetic acid)	0.1
2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)	0.01

30.669: Point of Compliance

- (1) In the facility's license, the Department shall specify points of compliance at which the requirements of 310 CMR 30.665: *Groundwater Protection Standard* shall apply and at which monitoring shall be conducted. A point of compliance is a vertical surface which is located at the hydraulically downgradient limit of the waste management area and which extends down into the uppermost aquifer underlying the regulated unit(s).
- (2) The waste management area is the limit projected in the horizontal plane of the area on which hazardous waste will be placed during the active life of the regulated unit(s).
- (a) The waste management area includes, without limitation, horizontal space taken up by any liner, dike, or other barrier designed to contain waste in a regulated unit.
- (b) If the facility contains more than one regulated unit, the waste management area is described by the boundary circumscribing all the regulated units.
- (3) Monitoring wells installed at points of compliance shall be designed and operated in a manner that will provide an early warning system to alert the owner or operator of the migration of hazardous constituents from a regulated unit to the groundwater in the uppermost aquifer. In the license, the Department may require additional downgradient monitoring wells beyond those points of compliance specified pursuant to 310 CMR 30.669(1). The requirements of 310 CMR 30.665 (Groundwater Protection Standard) shall apply to such additional wells.

30.670: Compliance Period

In the facility's license, the Department shall specify the compliance period during which the requirements of 310 CMR 30.665: *Groundwater Protection Standard* shall apply. In no event shall the duration of the compliance period be less than the duration of the active life of the waste management area, including, without limitation, the period prior to licensing, and the closure period. The compliance period shall begin when the owner or operator initiates a compliance monitoring program meeting the requirements of 310 CMR 30.671. If the owner or operator is engaged in a corrective action program, the compliance period shall not end until the owner or operator has persuaded the Department, and the Department has determined in writing, that the requirements of 310 CMR 30.665 have been complied with for a period of at least three consecutive years.

30.671: Compliance Monitoring Program

Each owner or operator required to establish a compliance monitoring program pursuant to 310 CMR 30.661 and 30.662 shall, at a minimum, comply with the following:

- (1) The owner or operator shall monitor the groundwater to determine whether each regulated unit is in compliance with the requirements of 310 CMR 30.665: *Groundwater Protection Standard*. The Department shall specify what the facility shall do to comply with 310 CMR 30.665, including specifying:
 - (a) A list of the hazardous constituents identified pursuant to 310 CMR 30.666;
 - (b) Concentration limits specified pursuant to 310 CMR 30.667 for each of those hazardous constituents;
 - (c) The compliance points specified pursuant to 310 CMR 30.669; and
 - (d) The compliance period specified pursuant to 310 CMR 30.670.
- (2) The owner or operator shall install a groundwater monitoring system at the compliance points as specified pursuant to 310 CMR 30.669. The groundwater monitoring system shall comply with 310 CMR 30.663(1)(b), (2), and (3).
- (3) The Department will specify the sampling procedures and statistical methods appropriate for the constituents and the facility, consistent with 310 CMR 30.664(7) and (8).
 - (a) The owner or operator shall conduct a sampling program for each chemical parameter or hazardous constituent in accordance with 310 CMR 30.664(7).
 - (b) The owner or operator shall record ground-water analytical data as measured and in a form necessary for the determination of statistical significance pursuant to 310 CMR 30.664(8) for the compliance period of the facility.
- (4) The owner or operator shall determine whether there is statistically significant evidence of increased contamination for any chemical parameter or hazardous constituent specified in the license, pursuant to 310 CMR 30.671(1), at a frequency specified pursuant to 310 CMR 30.671(6).
 - (a) In determining whether statistically significant evidence of increased contamination exists, the owner or operator shall use the method(s) specified in the license pursuant to 310 CMR 30.663(8). The method(s) shall compare data collected at the compliance point(s) to a concentration limit developed in accordance with 310 CMR 30.667.
 - (b) The owner or operator shall determine whether there is statistically significant evidence of increased contamination at each monitoring well at the compliance point within a reasonable time period after completion of sampling. The Department will specify that time period in the facility license, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground-water samples.
- (5) The owner or operator shall determine the groundwater flow rate and direction in the uppermost aquifer at least annually.

30.671: continued

(6) The Department will specify the frequencies for collecting samples and conducting statistical tests to determine statistically significant evidence of increased contamination in accordance with 310 CMR 30.663(7). A sequence of at least four samples from each well (background and compliance wells) shall be collected at least semi-annually during the compliance period of the facility.

(7) The owner or operator shall analyze samples from all monitoring wells at the compliance point for all constituents contained in 310 CMR 30.161 at least annually to determine whether additional hazardous constituents are present in the uppermost aquifer and, if so, at what concentration, pursuant to procedures in 310 CMR 30.664(6). If the owner or operator finds constituents in 310 CMR 30.161 in the ground water that are already identified in the license as monitoring constituents, the owner or operator may resample within one month and repeat the 310 CMR 30.161 analysis. If the second analysis confirms the presence of new constituents, the owner or operator shall report the concentration of these additional constituents to the Department within seven days after the completion of the second analysis and add them to the monitoring list. If the owner or operator chooses not to resample, then the owner or operator shall report the concentrations of these additional constituents to the Department within seven days after completion of the initial analysis and add them to the monitoring list.

(8) If the owner or operator determines pursuant to 310 CMR 30.671(4) that any concentration limits pursuant to 310 CMR 30.667 are being exceeded at any monitoring well at the point of compliance the owner or operator shall:

(a) Immediately notify the Department by the quickest available means and also notify the Department in writing within seven days. The notification shall indicate each concentration limit that has been exceeded and by how much.

(b) Within 180 days, submit to the Department an application for a license modification to establish a corrective action program meeting the requirements of 310 CMR 30.672, or within 90 days if an engineering feasibility study has been previously submitted to the Department pursuant to 310 CMR 30.664(8)(e). The application shall at a minimum include the following information:

1. A detailed description of corrective actions that will achieve compliance with the requirements specified in the license pursuant to 310 CMR 30.671(1); and

2. A plan for a groundwater monitoring program that will demonstrate the effectiveness of the corrective action. Such a groundwater monitoring program may be based on a compliance monitoring program developed to meet the requirements of 310 CMR 30.671.

(9) If the owner or operator determines pursuant to 310 CMR 30.671(4) that the ground-water concentration limits pursuant to 310 CMR 30.671 are being exceeded at any monitoring well at the point of compliance, the owner or operator shall demonstrate a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the ground water. In making a demonstration pursuant to 310 CMR 30.671(9), the owner or operator shall:

(a) Within seven days of determining that a requirement of 310 CMR 30.665 is not being met, notify the Department in writing that he intends to make such a demonstration;

(b) Within 90 days of determining that a requirement of 310 CMR 30.665 is not being met, submit a report to the Department which demonstrates that a source other than a regulated unit caused the requirement not to be met or that the apparent noncompliance with the standards resulted from error in sampling, analysis, or evaluation; and

(c) Within 90 days of determining that a requirement of 310 CMR 30.665 is not being met, submit to the Department a completed application for a license modification to make all appropriate changes to the compliance monitoring program at the facility, unless the Department has determined in writing that such an application need not be submitted; and

(d) Continue to monitor in accordance with the compliance monitoring program established pursuant to 310 CMR 30.671.

30.671: continued

(10) If either the owner or operator or the Department determines that the compliance monitoring program no longer satisfies the requirements of 310 CMR 30.671, the owner or operator shall, within 90 days, submit an application for a license modification to make all appropriate changes to the program.

30.672: Corrective Action Program

An owner or operator required to establish a corrective action program pursuant to 310 CMR 30.661 and 30.662 shall, at a minimum, comply with the following:

(1) The owner or operator shall take corrective action to ensure that each regulated unit is in compliance with the requirements of 310 CMR 30.665: *Groundwater Protection Standard* which shall be specified by the Department in the facility's license. These requirements shall include, at a minimum:

- (a) A list of the hazardous constituents specified pursuant to 310 CMR 30.666;
- (b) Concentration limits, specified pursuant to 310 CMR 30.667, for each of those hazardous constituents;
- (c) The compliance points specified pursuant to 310 CMR 30.669; and
- (d) The compliance period specified pursuant to 310 CMR 30.670.

(2) The owner or operator shall implement a corrective action program that prevents hazardous constituents from exceeding their respective concentration limits at compliance points by removing the hazardous waste constituents or treating them in place.

(3) The owner or operator shall begin corrective action within a reasonable time period after a requirement of 310 CMR 30.665: *Groundwater Protection Standard* has not been complied with. The Department shall specify that time period in the facility's license. If a facility's license includes a corrective action program in addition to a compliance monitoring program, the license shall specify when the corrective action will begin and such a requirement will operate in lieu of the requirement of 310 CMR 30.671(9)(b).

(4) In conjunction with a corrective action program, the owner or operator shall establish and implement a groundwater monitoring program to demonstrate the effectiveness of the corrective action program. Such a monitoring program may be based on the requirements for a compliance monitoring program pursuant to 310 CMR 30.671 and shall be as effective as that program in determining compliance with the requirements of 310 CMR 30.665: *Groundwater Protection Standard*, and in determining the success of a corrective action program pursuant to 310 CMR 30.672(5), where appropriate.

(5) In addition to the other requirements of 310 CMR 30.672, the owner or operator shall conduct a corrective action program to remove or treat in place all hazardous constituents that are specified pursuant to 310 CMR 30.666 and that exceed concentration limits, specified pursuant to 310 CMR 30.667, in groundwater between the compliance point, specified pursuant to 310 CMR 30.668, and the downgradient facility property boundary. The license shall specify the measures to be taken.

- (a) Corrective action measures shall be:
 1. Initiated within 60 days of detection of noncompliance with a requirement of 310 CMR 30.665; and
 2. Completed within a reasonable period of time, considering the extent of contamination.
- (b) Corrective action measures may be terminated once the concentration of hazardous constituents specified pursuant to 310 CMR 30.666 is reduced, for three consecutive years, to a level below the respective concentration limits specified pursuant to 310 CMR 30.667.

(6) In addition to the other requirements of 310 CMR 30.672, if so required by the Department, the owner or operator shall conduct a corrective action program to remove or treat in place all hazardous constituents which are specified pursuant to 310 CMR 30.666, and which exceed concentration limits, specified pursuant to 310 CMR 30.667, in groundwater beyond the downgradient property boundary.

30.672: continued

(a) Corrective action measures shall be initiated within 60 days of a determination by the Department that such measures are necessary, and shall be completed within a reasonable period of time considering the extent of contamination. Corrective action measures may be terminated once the concentration of hazardous constituents specified pursuant to 310 CMR 30.666 is reduced, for three consecutive years, to levels below their respective concentration limits specified pursuant to 310 CMR 30.667.

(b) The owner or operator shall, by certified mail, immediately notify the owners of abutting property which may be affected by such contamination. The owner or operator shall take immediate steps to acquire permission from such property owner(s) to initiate groundwater monitoring, and, if necessary, corrective action on such abutting property.

(7) The owner or operator shall continue corrective action measures during the compliance period to the extent necessary to ensure that the requirements of 310 CMR 30.665 are complied with. If the owner or operator is conducting corrective action at the end of the compliance period, he shall continue that corrective action for as long as necessary to achieve compliance with the requirements of 310 CMR 30.665. The owner or operator may terminate corrective action measures when he has persuaded the Department that, based on data from the groundwater monitoring program implemented pursuant to 310 CMR 30.672(4), the requirements of 310 CMR 30.665 have been met for a period of three consecutive years.

(8) The owner or operator shall submit to the Department semi-annual reports on the effectiveness of the corrective action program.

(9) If the owner or operator or the Department determines that the corrective action program no longer satisfies the requirements of 310 CMR 30.672, the owner or operator shall, within 90 days, submit an application for a license modification to make all appropriate changes to the program.

30.673: Cochran's Approximation to the Behrens-Fisher Students' t-Test

(1) Using all the available background data (n_b readings), calculate the background mean (X_b) and background variance (s_b^2). For the single monitoring well under investigation (n_m reading), calculate the monitoring mean (X_m) and monitoring variance (s_m^2).

(2) For any set of data ($X_1, X_2 \dots X_n$) the mean is calculated by:

$$X = \frac{X_1 + X_2 \dots + X_n}{n}$$

and the variance is calculated by:

$$s^2 = \frac{(X_1 - X)^2 + (X_2 - X)^2 \dots + (X_n - X)^2}{n-1}$$

where "n" denotes the number of observations in the set of data.

(3) The t-test uses these data summary measures to calculate a t-statistic (t^*) and a comparison t-statistic (t_c). The t^* value is compared to the t_c value and a conclusion reached as to whether there has been a statistically significant change in any indicator parameter.

30.673: continued

(4) The t-statistic for all parameters except pH and similar monitoring parameters is:

$$t^* = \frac{\overline{X}_m - \overline{X}_B}{\sqrt{\frac{S_m^2}{n_m} + \frac{S_B^2}{n_B}}}$$

If the value of this t-statistic is negative, there is no significant difference between the monitoring data and background data. It should be noted that significantly small negative values may be indicative of a failure of the assumption made for test validity, or errors have been made in collecting the background data.

(5) The t-statistic (t_c), against which t^* will be compared, necessitates finding t_B and t_m from standard (one-tailed) tables where,

t_B = t-tables with $(n_B - 1)$ degrees of freedom, at the 0.05 level of significance.

t_m = t-tables with $(n_m - 1)$ degrees of freedom, at the 0.05 level of significance.

Finally, the special weightings W_B and W_m are defined as:

$$W_B = \frac{s_B^2}{n_B} \quad \text{and} \quad W_m = \frac{S_m^2}{n_m}$$

and so the comparison t-statistic is:

$$t_c = \frac{W_B t_B + W_m t_m}{W_B + W_m}$$

(6) The t-statistic (t^*) is now compared with the comparison t-statistic (t_c) using the following decision-rule:

If t^* is equal to or larger than t_c , then conclude that there most likely has been a significant change in this specific parameter.

If t^* is less than t_c , then conclude that, most likely, there has not been a change in this specific parameter.

(7) The t-statistic for testing pH and similar monitoring parameters is constructed in the same manner as previously described except the negative sign (if any) is discarded and the caveat concerning the negative value is ignored. The standard (two-tailed) tables are used in the construction t_c for pH and similar monitoring parameters.

(8) If t^* is equal to or larger than t_c , then conclude that there most likely has been a significant increase (if the initial t^* had been negative, this would imply a significant decrease). If t^* is less than t_c , then conclude that there most likely has been no change.

(9) A further discussion of the test may be found in *Statistical Methods* (6th Edition, Section 4.14) by G.W. Snedecor and W.G. Cochran, or *Principles and Procedures of Statistics* (1st Edition, Section 5.8) by R.G.D. Steel and J.H. Torrie.

30.673: continued

(10) Standard T-Tables 0.05 Level Of Significance.

<u>Degrees of Freedom</u>	<u>t-values (one-tail)</u>	<u>t-values (two-tail)</u>
1	6.314	12.706
2	2.920	4.303
3	2.353	3.182
4	2.132	2.776
5	2.015	2.571
6	1.943	2.447
7	1.895	2.365
8	1.860	2.306
9	1.833	2.262
10	1.812	2.228
11	1.796	2.201
12	1.782	2.179
13	1.771	2.160
14	1.761	2.145
15	1.753	2.131
16	1.746	2.120
17	1.740	2.110
18	1.734	2.101
19	1.729	2.093
20	1.725	2.086
21	1.721	2.080
22	1.717	2.074
23	1.714	2.069
24	1.711	2.064
25	1.708	2.060
30	1.697	2.042
40	1.684	2.021

Adopted from Table III of *Statistical Tables for Biological, Agricultural, and Medical Research* (1947, R.A. Fisher and F. Yates).

30.675: Probable High Groundwater Levels(1) For areas in Massachusetts other than Cape Cod:

(a) Sand and gravel areas. For estimating the probable high groundwater levels in sand and gravel areas in Massachusetts except Cape Cod, the following formula shall be used wherever practicable. Use of this formula allows for the estimation of the potential groundwater level rise at the facility site by correlation with the potential rise in an off-site observation well if the climatic trends and hydrogeologic conditions at the site and the well are similar. For an in-depth discussion of the derivation of this formula and its use see: *Probable High Groundwater Levels in Massachusetts*, U.S. Geological Survey, Water Resources Investigations, Open-File Report 80-1205 by Michael H. Frimpter.

30.675: continued

$$S_h = \frac{S_c - S_r (OW_c - OW_{max})}{OW_r}$$

where:

- S_h = estimated depth to probable high water level at the site;
- S_c = measured depth to water at the site (ground level to water table);
- OW_c = measured depth to water in the observation well which is used to correlate with the water levels at the site (ground level to water table);
- OW_{max} = depth to recorded maximum water level at the observation well which is used to correlate with the water levels at the site;
- S_r = range of water level where the site is located; and
- OW_r = recorded maximum value of annual range of water level at the observation well which is used to correlate with the water levels at the site.

In the above equation, S_c and OW_c shall be measured in the same month. The observation well which is chosen to correlate with the water levels at the facility site shall be among those included in the report *Groundwater Levels in Massachusetts, 1936-74*: U.S. Geological Survey Open-File report, Massachusetts Hydrologic-Data Report 17 by Anthony Maevsky. The observation well shall be located in the same type of climate and hydrogeologic environment as the facility site.

Values of OW_{max} and OW_r shall be obtained from the chosen observation-well record. OW_{max} shall be found by reviewing the historical record of measurements and finding the depth from ground level to water table level that corresponds to the maximum water level ever recorded at the observation well site. OW_r shall be determined by finding the maximum water level fluctuation that ever occurred during one year of recordings at the observation well (*i.e.*, the "range" or the maximum difference in water table levels ever recorded during a one year period).

The value of S_r shall be as follows:

Sand and gravel deposits on terraces and hillsides	10 feet
Sand and gravel deposits in valleys	4 feet

These values represent a range of water level at the site that is unlikely to be exceeded.

(b) Areas of till. For estimating the probable high groundwater level in areas of till, a series of measurements shall be taken to determine the high groundwater level for a particular year, and the following method shall be used, wherever practicable.

To estimate the maximum water level, a proportion is used. That proportion is: The potential water-level rise at the site is to the maximum annual water-level range at the site as the potential water-level rise at an observation well is to the maximum annual water-level range at the observation well, where the potential rise is the difference between the highest and current water levels. For the use of the formula below, a value of five feet was chosen to represent the maximum annual water-level range at the site. Analysis of records of over 5000 water level measurements in 15 wells in till between 1936 and 1982 show that the mean range of maximum annual water levels is about five feet. For an illustration of the variables which are used in the formula, *see* Figure 30.675(1)(b).

30.675: continued

$$\frac{\text{Difference between current and maximum levels at site}}{\text{Range of maximum annual level at site}} = \frac{\text{Difference between current and maximum levels at observation well}}{\text{Range of maximum annual level at observation well}}$$

$$\frac{S_c - S_m}{5} = \frac{OW_c - OW_m}{OW_r}$$

$$S_m = S_c - 5 \times \frac{OW_c - OW_m}{OW_r}$$

Steps in the method are as follows: Measure and record the water level on a weekly basis from March 15 to May 15. From the observation well location map select the most representative observation well on a basis of geographic proximity. From reports of the U.S. Geological Survey determine the water level (OW_c) in that observation well for the concurrent date, the date closest to the date at which the highest water level was measured at the site. Determine from Table 30.675(1)(b), provided here, the maximum recorded water level (OW_m) and the range of annual maximum water level (OW_r) for the same observation well. Substitute these values of OW_c, OW_m and OW_r, and the current maximum annual water level measured at the site (S_c) in the formula and solve for the estimated maximum water level at the site (S_m).

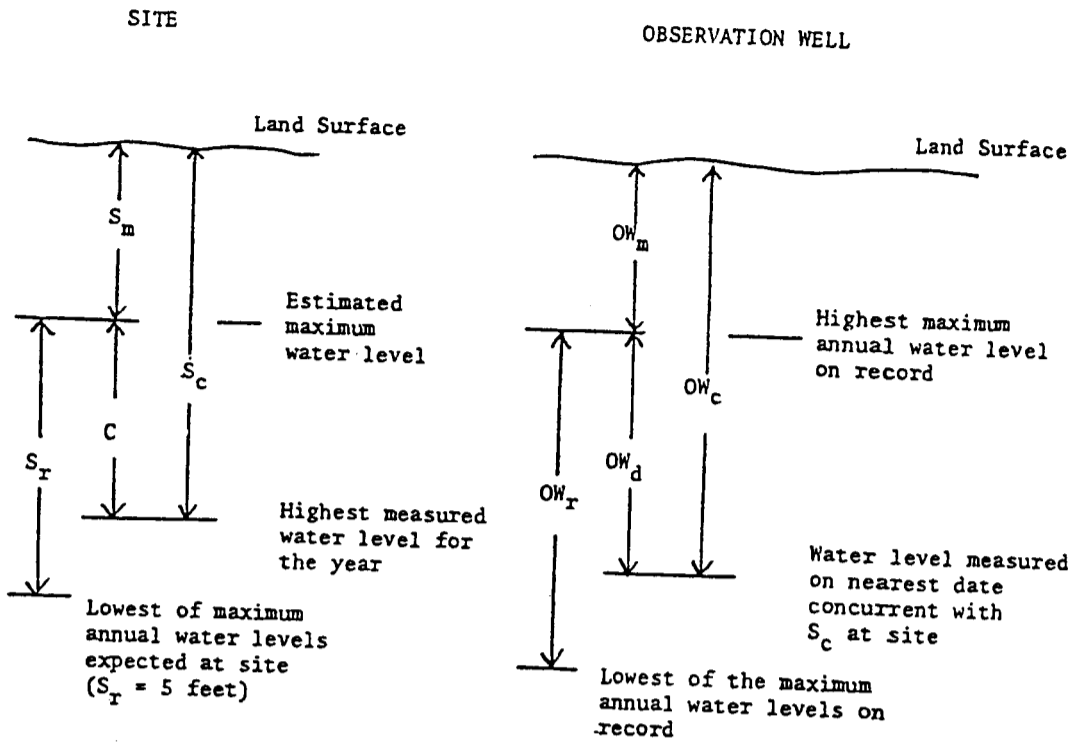
Based on the small available sample of 10 representative observation wells in till there is a 10% chance that the maximum annual range at a site would exceed the estimate by about one foot. See the range of OW_r in Table 30.675(1)(b).

TABLE 30.675(1)(b)

Maximum Water Levels and Maimum Annual Water-Level Ranges for Observation Wells in Till			
LOCATION	NUMBER	OW _m	OW _r
Andover	AJW-26	3.47	5.48
Cheshire	CJW-2	0.14	4.00
East Bridgewater	EBW-30	2.40	5.78
Great Barrington	GMW-2	5.09	5.65
Lowell	L2W-14	7.79	6.11
Middleborough	MTW-82	1.57	4.68
Northborough	NUW-38	0.96	3.58
Topsfield	TQW-1	5.64	4.49
Weymouth	XGW-2	5.25	4.44
Winchester	XOW-14	4.03	4.69

Most, but not all, facility sites will be located in one of the hydrogeologic settings discussed above. As an example, a surface impoundment might be located on a terrace composed largely of silt. In such a case, the formula is not valid. The estimation of the probable high groundwater levels shall be based upon measurements of the water level at the facility site in the months of March, April and May and a best possible prediction of the highest water table levels that can reasonably be expected throughout the facility's operating life (and beyond if a land disposal facility). Soil mottling may help to verify this prediction. In rare instances, long term historical data (15 years or more) of water levels may actually be available at the facility site. In these cases, the probable high groundwater levels can be determined directly from this data.

30.675: continued



(2) Probable High Groundwater Levels For Cape Cod. For estimating the probable high water level in sand and gravel areas of Cape Cod, the following method shall be used wherever practicable. It cannot be applied in areas where low permeability layers of silt, clay or till are present. Some parts of Cape Cod show no pattern for annual water level range. In these locations, soil conditions are unsuitable for water level estimation. In cases where the following procedure is not applicable, tests for water levels shall be conducted at the site during March, April and May and a best possible judgment made of the probable high groundwater levels considering hydro-geologic and climatic trends.

Probable high groundwater levels at a site in Cape Cod shall be made by correlation of a single water-level measurement from a facility test site with water level records from one of nine index wells which have been established by the U.S. Geological Survey. For the rationale behind the establishment of the estimating procedure, and for an in-depth discussion of its use, see: *Probable High Groundwater Levels on Cape Cod, Massachusetts*, U.S. Geological Survey, Water-Resources Investigations, Open-File Report 80-1008 by Michael H. Frimpter. Also, in order to estimate the probable high groundwater levels, Plate 1 and Plate 2 from that report will need to be utilized. These plates subdivide Cape Cod into nine areas in which water level fluctuations in each area are best represented by a particular index well.

The formula which is used to estimate the depth to the probable high water level at the site is similar to the formula that is used for finding probable high water levels for areas in Massachusetts other than Cape Cod:

$$S_h = S_c - S_r \frac{(OW_c - OW_{max})}{OW_r}$$

or

Estimated depth to probable high water table = measured depth to water at the site - water level adjustment

where $\frac{S_r(OW_c - OW_{max})}{OW_r}$ = the water level adjustment

30.675: continued

However, in this case S_r , the maximum value of the annual range of water level at the facility site, will be one of five values (2, 3, 4, 5 or 6 feet), depending upon the particular geographical zone in which the facility is situated. In areas of perched groundwater tables, a value $S_r = 10$ may be used, but only with written approval of the Department.

In order to simplify the use of this formula, a series of nine tables has been developed. These tables appear in the Report cited in 310 CMR 30.675(2). One table has been prepared for each of the nine index observation wells. The water level adjustment value shall be found from these tables once the geographic zone of the facility site is known and the water levels in the index well and at a specific site have been measured.

Procedure

1. Measure, to the nearest 1/10th of a foot, the depth to the water table below land surface at the facility site.
2. Find the location on Plate 1 or Plate 2 of the facility test site. From this Plate determine the geographical zone in which the facility site exists (Zone A, B, C, D or E). Also determine the index well which shall be used.
3. Determine the depth to water in the appropriate index well for the month in which the depth to water was measured at the facility site (or previous month if current data are not yet available; see the NOTE below). (The U.S. Geological survey reports the index-well measurements monthly to the Regional Environmental Engineers of the Department and to the Cape Cod Planning and Economic Development Commission.)
4. Use the appropriate table (*See* Sample Table 30.675(2)) and find the depth to water level adjustment value from the Table based upon the geographical zone where the site is located and the reported depth to water in the index well. (Refer to the U.S.G.S. report for the complete set of tables).
5. Subtract the water-level adjustment value from the measured depth to water at the facility site to obtain the estimate of depth to the probable high water level.

NOTE: Because the locations of the boundaries between the areas represented by the index wells are somewhat inexact, the above-cited report suggests that, when the site being evaluated is within 1,000 feet of such a boundary, estimates should be calculated from both index wells. The higher of the two groundwater levels calculated would be less likely to be exceeded. The water level for the month in which the site testing was done should be used in Procedure 3. However, the water level reported for the index well for the month previous to the month in which the site was tested may be used, provided that 0.25 feet is subtracted from the depth to the water level for each week or fraction thereof between the date of the site test and the end of the previous month. For example, if an estimate for a site test made on the 8th of August ($8/7 = 1.14$) should be adjusted by subtracting 0.3 feet from the reported July water level for the index well. This adjustment need only be applied when the test site is measured in the months of May, June, July, August, September, or October. The adjustment is based on the recorded maximum water level decline of 0.99 feet over a one month period in all nine index wells and the observation that groundwater levels on Cape Cod generally decline from May through October.

30.675: continued

SAMPLE TABLE 30.675(2)

Water-level Adjustments, in Feet, for Use with
Index Well Barnstable A1W-230 (Located in Zone C)

Measured water level (OW _c in feet below land surface)	Zone A	Zone B	Zone C	Zone D	Zone E
	(2/4) ¹	(3/4) ¹	(4/4) ¹	(5/4) ¹	(6/4) ¹
21.1 ²	0.0	0.0	0.0	0.0	0.0
21.2	.0	.1	.1	.1	.1
21.3	.1	.1	.2	.2	.3
21.4	.1	.2	.3	.4	.4
21.5	.2	.3	.4	.5	.6
21.6	.2	.4	.5	.6	.7
21.7	.3	.4	.6	.7	.9
21.8	.3	.5	.7	.9	1.0
21.9	.4	.6	.8	1.0	1.2
22.0	.4	.7	.9	1.1	1.3
22.1	.5	.7	1.0	1.2	1.5
22.2	.5	.8	1.1	1.4	1.6
22.3	.6	.9	1.2	1.5	1.8
22.4	.6	1.0	1.3	1.6	1.9
22.5	.7	1.0	1.4	1.7	2.1
22.6	.7	1.1	1.5	1.9	2.2
22.7	.8	1.2	1.6	2.0	2.4
22.8	.8	1.3	1.7	2.1	2.5
22.9	.9	1.3	1.8	2.2	2.7
23.0	.9	1.4	1.9	2.4	2.8
23.1	1.0	1.5	2.0	2.5	3.0
23.2	1.0	1.6	2.1	2.6	3.1
23.3	1.1	1.6	2.2	2.7	3.3
23.4	1.1	1.7	2.3	2.9	3.4
23.5	1.2	1.8	2.4	3.0	3.6
23.6	1.2	1.9	2.5	3.1	3.7
23.7	1.3	1.9	2.6	3.2	3.9
23.8	1.3	2.0	2.7	3.4	4.0
23.9	1.4	2.1	2.8	3.5	4.2
24.0	1.4	2.2	2.9	3.6	4.3
24.1	1.5	2.2	3.0	3.7	4.5
24.2	1.5	2.3	3.1	3.9	4.6
24.3	1.6	2.4	3.2	4.0	4.8
24.4	1.6	2.5	3.3	4.1	4.9
24.5	1.7	2.5	3.4	4.2	5.1
24.6	1.7	2.6	3.5	4.4	5.2
24.7	1.8	2.7	3.6	4.5	5.4
24.8	1.8	2.8	3.7	4.6	5.5
24.9	1.9	2.8	3.8	4.7	5.7
25.0	1.9	2.9	3.9	4.9	5.8
25.1	2.0	3.0	4.0	5.0	6.0
25.2	2.0	3.1	4.1	5.1	6.1
25.3	2.1	3.1	4.2	5.2	6.3
25.4	2.1	3.2	4.3	5.4	6.4
25.5	2.2	3.3	4.4	5.5	6.6
25.6	2.2	3.4	4.5	5.6	6.7

30.675: continued

SAMPLE TABLE 30.675(2) (continued)
Water-level Adjustments, in Feet, for Use with
Index Well Barnstable A1W-230 (Located in Zone C)

Measured water level (OW ^c in feet below land surface)	Zone A (2/4) ¹	Zone B (3/4) ¹	Zone C (4/4) ¹	Zone D (5/4) ¹	Zone E (6/4) ¹
25.7	2.3	3.4	4.6	5.7	6.9
25.8	2.3	3.5	4.7	5.9	7.0
25.9	2.4	3.6	4.8	6.0	7.2
26.0	2.4	3.7	4.9	6.1	7.3
26.1	2.5	3.7	5.0	6.2	7.5
26.2	2.5	3.8	5.1	6.4	7.6
26.3	2.6	3.9	5.2	6.5	7.8
26.4	2.6	4.0	5.3	6.6	7.9
26.5	2.7	4.0	5.4	6.7	8.1
26.6	2.7	4.1	5.5	6.9	8.2
26.7	2.8	4.2	5.6	7.0	8.4

¹ $S_r / OW_r =$

² Recorded highest water level (OW_{max}).

(3) Alternative Methods. The Department may accept alternative methods for determining probable high groundwater levels if such methods are demonstrated to give equally reliable results. For the purposes of 310 CMR 30.000, alternative methods may be used only following written approval by the Department.

30.680: Use and Management of Containers

30.681: Applicability

310 CMR 30.681 through 30.689, cited collectively as 310 CMR 30.680, prescribe requirements which apply to owners and operators of all facilities that use containers to store hazardous waste.

30.682: Labelling and Marking

Throughout the period of storage, the side of each container of hazardous waste shall be clearly labeled and marked in a manner which identifies, in words, the hazardous waste(s) being stored in the container (*e.g.*, acetone, toluene) and the hazard(s) associated with the waste (*e.g.*, ignitable, toxic, dangerous when wet). Each container shall also be marked with the words "Hazardous Waste".

30.683: Condition of Containers

If a container holding hazardous waste is not in good condition (*e.g.*, severe rusting, apparent structural defects) or if it begins to leak, the owner or operator shall transfer the hazardous waste from this container to a container that is in good condition, or manage the hazardous waste in some other way that complies with the requirements of 310 CMR 30.000.

30.684: Compatibility of Waste with Containers

The owner or operator shall store hazardous waste in a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored in the container.

30.685: Management of Containers

- (1) A container holding hazardous waste shall always be closed during storage, except when waste is being added or removed. In the event that Federal, State or local law or regulation requires a container to be vented, the container shall be vented only through devices such as pressure relief valves that satisfy ASTM or fire prevention standards (as opposed to open venting) and only in a manner that does not present a threat to public health, safety, or welfare or the environment.
- (2) A container holding hazardous waste shall not be opened, handled or stored in a manner which may rupture the container or cause it to leak. If containers are stacked, they shall be stacked in a manner that allows the containers to be easily and safely inspected, and pallets shall be used to separate the containers.
- (3) Aisle spacing for container storage of ignitable or reactive hazardous waste shall meet the guidelines set forth in the National Fire Protection Association's Flammable and Combustible Liquids Code (NFPA-30, Chapter 4) 2003 Edition.
- (4) Aisle spacing for container storage of hazardous waste shall be such that the owner or operator or the Department can inspect each row of containers to ensure compliance with 310 CMR 30.680.

30.686: Inspections

At least weekly, the owner or operator shall inspect areas where containers are stored, looking for leaking and for deterioration, caused by corrosion or other factors, of containers and the containment system.

30.687: Containment

- (1) Each container storage area shall have a containment system that is designed and operated in compliance with 310 CMR 30.687(2), except as otherwise provided by 310 CMR 30.687(3).
- (2) Each containment system shall be designed, constructed, operated and maintained as follows:
 - (a) Underlying the containers shall be a base which is free of cracks and gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;
 - (b) Unless the containers are elevated or are otherwise protected from contact with accumulated liquids, the base shall be sloped or the containment system shall be otherwise designed, constructed, operated and maintained to drain and remove liquids resulting from leaks, spills, or precipitation.
 - (c) For containers which are stored indoors or under a roof, the containment system shall have the capacity to contain either 10% of the total possible contained volume of the containers or 100% of the volume of the largest container, whichever is greater. For containers which are stored outdoors, the containment system shall have the capacity to contain either 10% of the total possible contained volume of the containers or 110% of the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in determining the containment system's required capacity.
 - (d) The owner or operator shall prevent run-on into the containment system, unless the collection system has sufficient excess capacity, in addition to that required by 310 CMR 30.687(2)(c), to contain the run-on which would enter the system from a 24-hour, 25-year storm.
 - (e) To prevent overflow of the collection system, the owner or operator shall remove spilled or leaked waste and accumulated precipitation from the sump or collection area in as timely a manner as possible. If the collected material is hazardous waste pursuant to 310 CMR 30.100, it shall be managed as hazardous waste in compliance with 310 CMR 30.000.

30.687: continued

(3) Storage areas that store containers holding only hazardous wastes that do not contain free liquids and that do not contain any polyhalogenated aromatic hydrocarbons, need not have a containment system required by 310 CMR 30.687(2), if:

- (a) The storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation; or
- (b) The containers are elevated or are otherwise protected from contact with accumulated liquid.

30.688: Special Requirements for Ignitable, Reactive, and Incompatible Hazardous Wastes, and Hazardous Wastes that are Polyhalogenated Aromatic Hydrocarbons

(1) Containers holding ignitable or reactive hazardous waste shall be located at least 15 meters from the facility's property line.

(2) Incompatible hazardous wastes or materials incompatible with hazardous wastes (*see* 310 CMR 30.561 for examples) shall not be placed in the same container unless 310 CMR 30.560(3) is complied with.

(3) Hazardous waste shall not be placed in an unwashed container that previously held waste or material incompatible with such hazardous waste.

(4) A container holding a hazardous waste that is incompatible with any waste or other material stored nearby in other containers or in piles, open tanks or surface impoundments shall be separated from the other waste or other material or protected from it by means of a dike, berm, wall, or other device.

(5) If containers holding polyhalogenated aromatic hydrocarbons are to be located or used at the facility, the facility's contingency plan shall include the following:

- (a) Procedures for responding to spills or leaks of polyhalogenated aromatic hydrocarbons into the containment system.
- (b) Procedures for removing polyhalogenated aromatic hydrocarbons from the containment system.
- (c) Procedures for repairing or replacing leaking containers.

30.689: Closure

(1) At closure, the owner or operator shall remove all hazardous waste and hazardous waste residues from the containment system and shall decontaminate or remove all remaining containers, liners, bases and soil containing or contaminated with hazardous waste or hazardous waste residues.

(2) Upon removing hazardous waste from the containment system, the owner or operator shall become a generator of hazardous waste and shall manage it in compliance with all applicable requirements of 310 CMR 30.000.

30.690: STORAGE AND TREATMENT IN TANKS

30.691: Applicability

310 CMR 30.691 through 30.699, cited collectively as 310 CMR 30.690, prescribe requirements which apply to owners and operators of facilities that use tanks to treat or store hazardous waste, except:

(1) Tank systems that are used to store or treat hazardous waste which contains no free liquids and are situated inside a building with an impermeable floor are exempted from the requirements in 310 CMR 30.694. To demonstrate the absence or presence of free liquids in the stored/treated waste, EPA method 9095B (Paint Filter Liquids Test) as specified in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA Publication SW-846, as incorporated by reference at 310 CMR 30.012 shall be used.

30.691: continued

(2) Tank systems, including sumps, that serve as part of a secondary containment system to collect or contain releases of hazardous waste are exempted from the requirements of 310 CMR 30.694.

30.692: Assessment of Existing Tank System's Integrity

(1) For each existing tank system that does not have secondary containment meeting the requirements of 310 CMR 30.694, the owner or operator shall determine that the tank system is not leaking and does not pose a threat of release of hazardous waste to the environment. By no later than June 1, 1989, the owner or operator shall obtain a written assessment that has been reviewed and certified by a Massachusetts registered professional engineer, in accordance with 310 CMR 30.009, and that attests to the system's integrity. Once obtained, this assessment shall be kept on file at the facility until the facility has been closed pursuant to 310 CMR 30.699.

(2) This assessment shall correctly determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be stored or treated, to ensure that it will not collapse, rupture, or fail. In addition, the assessment shall correctly demonstrate that a minimum shell thickness has been maintained at all times to ensure sufficient shell strength. At a minimum, this assessment shall consider the following:

- (a) Design standard(s), if available, according to which the tank and ancillary equipment were constructed;
- (b) The design of the tank, including, without limitation, the foundation, structural support, seams, and pressure controls;
- (c) Hazardous characteristics of the waste(s) that have been or are intended to be, handled;
- (d) Existing corrosion protection measures;
- (e) Documented age of the tank system, if available (otherwise, an estimate of the age);
- (f) A soil corrosion survey as described in 310 CMR 30.693(1)(c);
- (g) The width, height, and materials of construction of the tank, and the specific gravity of the waste that has been, and is intended to be, placed in the tank, in establishing minimum shell thickness; and
- (h) Results of a leak test, internal inspection, or other tank integrity examination such that
 1. For non-enterable underground tanks, the assessment shall include a leak test method that has been approved by the State Fire Marshal and that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects. Such a leak test must have an accuracy equal to or greater than 0.1 gallons per hour for detecting leakage from the tank with a probability of detection of 0.99 and a probability of false positive of 0.01. As the state of the art of the technology for testing underground tanks improves, the Department may specify that a test with an accuracy of better than 0.1 gallons per hour be used; and
 2. For other than non-enterable underground tanks and for ancillary equipment, this assessment shall include a leak test in compliance with 310 CMR 30.692(2)(h)1., or other integrity examination, that is certified by a Massachusetts registered professional engineer in accordance with 310 CMR 30.009, that addresses leaks, cracks, corrosion, and erosion. (Note: The practices described in the American Petroleum Institute (API) Publication, Guide for Inspection of Refinery Equipment, Chapter XIII, *Atmospheric and Low-Pressure Storage Tanks*, 4th edition, 1981, may be used, where applicable, as guidelines for conducting other than a leak test.)

(3) Owners or operators of tank systems in which are stored or treated materials that are classified as hazardous waste, pursuant to amendments to 310 CMR 30.000, that take effect on or after June 1, 1989, shall conduct and complete this assessment within 12 months after the date on which the materials became a hazardous waste.

30.692: continued

- (4) If, as a result of the assessment conducted in accordance with 310 CMR 30.692(2)(h), a tank system is found to be leaking or to pose a threat of release to the environment, the owner or operator must comply with the requirements of 310 CMR 30.697.
- (5) Until such time as secondary containment in compliance with 310 CMR 30.694 is provided, all existing tank systems shall comply with the following:
- (a) For non-enterable underground tanks, a leak test that meets the requirements of 310 CMR 30.692(2)(h)1. must be conducted at least once every 12 months;
 - (b) For other than non-enterable tanks, an integrity assessment in compliance with 310 CMR 30.692(2)(h)1. or 2. must be conducted at least once every 12 months;
 - (c) For all existing tanks:
 - 1. The owner or operator shall maintain accurate daily inventory records and shall check such records for indication of possible leakage from each tank. Inventory shall be based on the actual daily measurement and recording of tank liquid levels and the daily recording of a material balance for wastes entering and exiting the tank. Measurements shall be taken on all days except days (e.g., Sundays, holidays) when facility business is not transacted. The inventory records shall include a daily computation of gain or loss. All records shall be made part of the operating record of the facility and shall be kept at the facility, readily available to the personnel of the Department for inspection until the facility has been closed pursuant to 310 CMR 30.699.
 - 2. With the license application, the owner or operator shall submit a proposed test for determining whether any gain or loss of material in the tank system shall be considered a statistically significant gain or loss for any one (daily) material balance or series of material balances (e.g., the running balance for a weekly period). Upon approval by the Department, this test for statistical significance shall be made a condition of the license;
 - 3. If the inventory control program required by 310 CMR 30.692(5)(c)1. indicates a statistically significant gain or loss of material as determined in compliance with 310 CMR 30.692(5)(c)2., the owner or operator shall comply with 310 CMR 30.697.
 - 4. If the Department determines in writing that it is infeasible for the owner or operator to comply with the inventory control program specified in 310 CMR 30.692(5)(c), the Department may specify in writing an alternate leak detection program.

30.693: Design and Installation of New Tank Systems or Components

- (1) Owners or operators of new tank systems or components shall obtain and submit to the Department, at the time information is submitted to the Department pursuant to 310 CMR 30.099(6) and 310 CMR 30.802, 310 CMR 30.099(7) and (8), or 310 CMR 30.850, a written assessment, reviewed and certified by an independent, qualified, registered professional engineer, in accordance with 310 CMR 30.009, attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The assessment shall show that the foundation, structural support, seams, connections and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection to ensure that it shall not collapse, rupture, or fail. This assessment be used by the Department, but which the Department will not be limited to considering, to determine the acceptability of the tank system design, must include, at a minimum, the following information:
- (a) Design standard(s) according to which the tank(s) and/or ancillary equipment are constructed.
 - (b) Hazardous characteristics of the waste(s) to be handled.
 - (c) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with water, a determination by a corrosion expert of

30.693: continued

1. Factors affecting the potential for corrosion, including but not limited to:
 - a. Soil moisture content;
 - b. Soil pH;
 - c. Soil sulfides level;
 - d. Soil resistivity;
 - e. Structure to soil potential;
 - f. Influence of nearby underground structures (*e.g.* piping);
 - g. Existence of stray electric current;
 - h. Existing corrosion protection measures (*e.g.* coating, cathodic protection); and
2. The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following
 - a. Corrosion-resistant materials of construction such as special alloys, fiberglass reinforced plastic, *etc.*;
 - b. Corrosion-resistant coating (such as epoxy, fiberglass, *etc.*) with cathodic protection (*e.g.* impressed current or sacrificial anodes); and
 - c. Electrical isolation devices such as insulating joints, flanges, *etc.*

(NOTE - Practices in providing corrosion protection for tank systems are published in the National Association of Corrosion Engineers (NACE) standard, *Recommended Practice (RP-02-85) - Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems*, and the American Petroleum Institute (API) Publication 1632, *Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems*.)

(d) For underground tank system components that are likely to be adversely affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage; and

(e) Design considerations to ensure that:

1. Tank foundations will maintain the load of a full tank;
2. Tank systems will be anchored to prevent flotation or dislodgement where the tank system is placed within ten feet of a saturated zone; and
3. Tank systems will withstand the effects of a frost heave.

(2) All tanks installed on or after October 15, 1983 must be equipped with a means (*e.g.* manhole) for an individual to enter for inspection.

(3) The owner or operator of a new tank system shall ensure that proper handling procedures shall be adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing, or placing a new tank system or component in use, a Massachusetts registered professional engineer who is trained and experienced in the proper installation of tank systems or components shall inspect the system for the presence of weld breaks, punctures, scrapes of protective coatings, cracks, corrosion, or other structural damage or inadequate construction/installation. All discrepancies shall be remedied before the tank system is covered, enclosed, or placed in use.

(4) New tank systems or components that are placed underground and that are backfilled must be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.

(5) All new tanks and ancillary equipment must be tested for tightness pursuant to 310 CMR 30.692(2)(h)1. prior to being covered, enclosed, or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the leak(s) in the system must be performed before the tank system is covered, enclosed, or placed into use.

30.693: continued

- (6) Ancillary equipment must be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.
- (7) The owner or operator must provide the type and degree of corrosion protection recommended by an independent corrosion expert, based on the information provided in 310 CMR 30.693(1)(c), or other corrosion protection if the Department believes that other corrosion protection is necessary to ensure the integrity of the tank system during use of the tank system. The installation of a tank system that is field fabricated must be supervised by an independent corrosion expert to ensure proper installation.
- (8) There shall be a rebuttable presumption that the Department should not license the storage or treatment, in an underground tank, of acutely hazardous waste identified or described in 310 CMR 30.136. Without limiting the generality of 310 CMR 30.810 through 30.813, the owner or operator may rebut this presumption by persuading the Department that there are no feasible alternatives to the storage or treatment of acutely hazardous waste in an underground tank (*e.g.*, by showing that another permitting authority requires that the waste be stored or treated underground).
- (9) No portion of an underground tank storing or treating hazardous waste shall be placed at or below the probable high groundwater level, as determined pursuant to 310 CMR 30.675, unless the owner or operator takes suitable measures, approved by the Department, which shall minimize the potential for corrosion or collapse of the tank and prevent flotation of the tank in the event that the tank is emptied.
- (10) The owner or operator must obtain written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of 310 CMR 30.693(3), (4), (5), (6), and (7), that attest that the tank system was properly designed and installed and that repairs pursuant to 310 CMR 30.693(3) and (5), were performed. These written statements must be in compliance with 310 CMR 30.009. Once obtained, these statements shall be kept on file at the facility until the facility has been closed pursuant to 310 CMR 30.699.

30.694: Containment and Detection of Releases

- (1) In order to prevent the release of hazardous waste or hazardous constituents into the environment, secondary containment that meets the requirements of 310 CMR 30.694 must be provided except as provided in 310 CMR 30.694(6):
 - (a) For all new tank systems or components, before they are put into service;
 - (b) For all existing tank systems which are, or are intended to be, used to store polyhalogenated aromatic hydrocarbons or the hazardous waste no. F023, or located in an interim Zone II, or constructed of porous materials such as brick or concrete, by no later than two years from June 1, 1989;
 - (c) For all existing tank systems in which the tank is single-walled, bare steel, and cathodically unprotected, before the tank system reaches ten years of age, or by no later than two years from June 1, 1989, whichever comes later;
 - (d) For those tank systems referred to in 310 CMR 30.694(1)(c) for which the age cannot be documented, by no later than three years from June 1, 1989; but if the age of the facility is greater than seven years, secondary containment shall be provided before the facility reaches ten years of age, or by no later than two years from June 1, 1989, whichever comes later;
 - (e) For all other existing tank systems, when they reach 15 years of age, or by no later than two years from June 1, 1989, whichever comes later;
 - (f) For those tank systems referred to in 310 CMR 30.694(1)(e) for which the age cannot be documented, by no later than eight years from June 1, 1989; but if the age of the facility is greater than seven years, secondary containment shall be provided by the time the facility reaches 15 years of age, or by no later than two years from June 1, 1989, whichever comes later; and

30.694: continued

(g) For tank systems in which are stored or treated materials that are classified as hazardous waste pursuant to 310 CMR 30.000, on or after June 1, 1989, by no later than the time intervals required in 310 CMR 30.694(1)(a) through (f), except that the date that a material becomes a hazardous waste shall be used in place of the June 1, 1989 date set forth therein.

(2) Secondary containment systems must be:

- (a) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, groundwater, surface water, sewer system, or adjoining property at any time during the use of the tank system; and
- (b) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

(3) To meet the requirements of 310 CMR 30.694(2), secondary containment systems must be at a minimum:

- (a) Constructed of or lined with materials that are compatible with the waste(s) to be placed in the tank system. Such material must have sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and external hydrological forces), physical contact with the waste to which it is exposed, climatic conditions, and the stress of daily operation (including stresses from nearby vehicular traffic);
- (b) Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression, or uplift; and
- (c) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks spills, or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment within 24 hours, or in as timely a manner as is possible to prevent a threat to public health, safety, welfare, or the environment, if the owner or operator can demonstrate to the Department that removal of the released waste or accumulated liquid cannot be accomplished within 24 hours. If the collected material is hazardous waste pursuant to 310 CMR 30.100, it shall be managed as hazardous waste in compliance with 310 CMR 30.000.

(4) Secondary containment for all underground tanks must consist of either a double wall that is:

- (a) Designed as an integral structure (*i.e.* an inner structure completely enveloped within an outer shell) so that any release from the inner tank is contained by the outer shell;
- (b) Designed to prevent deterioration of the primary tank interior and of the external surface of the outer shell; and
- (c) Provided with a leak detection system that is designed and operated so that that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system. Leak detection systems must be equipped with a visual or audible alarm to signal such a failure or release.

(5) Secondary containment for aboveground tanks shall consist of:

- (a) A double wall in compliance with 310 CMR 30.694(4)(a); or
- (b) An external liner system that is:
 - 1. Designed or operated to contain either 10% of the total possible contained volume of the tanks or 110% of the volume of the largest single tank, whichever is greater. Where two or more tanks are connected, the owner or operator shall make provisions for shutting off the connection in the event of a release or threat of a release from the tank system;

30.694: continued

2. Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the containment system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event;
 3. Provided with a continuous, impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of the waste into the substrate material;
 4. Free of cracks or gaps; and
 5. Designed and installed to surround the tank completely and to cover all surrounding surface likely to come into contact with the waste if the waste is released from the tank(s) (*i.e.*, capable of preventing lateral as well as vertical migration of the waste); or
- (c) A vault system that is:
1. In compliance with 310 CMR 30.694(5)(b)1. through 3.;
 2. Constructed with chemical resistant water stops in place at all joints (if any);
 3. Provided with a means to protect against the formation and ignition of vapors within the vault, if the waste being stored or treated is ignitable or reactive as defined in 310 CMR 30.122 or 30.124;
 4. Provided with an exterior moisture barrier or is otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.
- (6) Ancillary equipment shall be provided with secondary containment (*e.g.*, trench, jacketing, double-walled piping) that meets the requirements of 310 CMR 30.694(2) and (3) except for any of the following that are visually inspected for leaks on a daily basis:
- (a) Aboveground piping (exclusive of flanges, joints, valves, and other connections);
 - (b) Welded flanges, welded joints, and welded connections;
 - (c) Sealless or magnetic coupling pumps and sealless valves; and
 - (d) Pressurized aboveground piping systems with automatic shut-off devices (*e.g.*, excess flow check valves, flow metering shutdown devices, loss of pressure actuated shut-off devices).

30.695: General Operating Requirements

- (1) Hazardous wastes and other materials (*e.g.*, treatment reagents) which are incompatible with the material of construction of the tank shall not be placed in the tank unless the tank is protected from accelerated corrosion, erosion or abrasion through the use of:
 - (a) An inner liner or coating which is compatible with the hazardous waste or other material and which is free of leaks, cracks, holes and other deterioration; or
 - (b) Alternate means of protection (*e.g.*, cathodic protection or corrosion inhibitors).
- (2) The owner or operator shall use appropriate controls and practices to prevent overfilling (*e.g.*, waste feed cut-off or by-pass system to standby tank).
 - (a) Controls to prevent overfilling (*e.g.*, waste feed cut-off or by-pass system to standby tank); and
 - (b) For uncovered tanks, maintenance of sufficient freeboard to prevent overtopping by wave or wind action or by precipitation.
- (3) Throughout the period of storage or treatment, each tank shall be clearly marked and labelled in a manner which clearly identifies, in words, the hazardous waste(s) being stored or treated in the tank (*e.g.*, acetone, toluene) and the hazard(s) associated with the hazardous waste (*e.g.*, ignitable, toxic, dangerous when wet). Each tank shall also be marked clearly with the words "Hazardous Waste".
- (4) In the event of a release of hazardous waste from the tank system, the owner or operator shall comply with 310 CMR 30.697.
- (5) A tank holding hazardous waste shall always be closed during storage, except when waste is being added or removed.

30.696: Inspections

- (1) The owner or operator shall inspect:
 - (a) Controls to prevent overfilling (*e.g.*, waste feed cut-off systems and by-pass systems to a stand-by tank) at least once each operating day to ensure that such controls are in good working order;
 - (b) Data gathered from monitoring equipment (*e.g.*, pressure and temperature gauges), where present, at least once each operating day to ensure that the tank is being operated according to its design;
 - (c) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (*e.g.*, dikes), at least once daily, to detect erosion or signs of releases of hazardous waste (*e.g.*, wet spots, dead vegetation).
- (2) The owner or operator must inspect cathodic protection systems, if present, according to, at a minimum, the following schedule to ensure that they are functioning properly:
 - (a) The proper operation of the cathodic protection system must be confirmed within six months after initial installation and annually thereafter; and
 - (b) All sources of impressed current must be inspected and/or tested, as appropriate, at least bimonthly (*i.e.*, every other month).
- (3) The frequency of the comprehensive assessment required by 310 CMR 30.696(2) shall be based on the material of construction of the tank, the type of corrosion or erosion protection used, the rate of corrosion or erosion observed during previous inspections, and the properties of the hazardous waste being treated or stored. The frequency of inspection shall also be based upon any anticipated change(s) in the waste or properties of the waste(s) that will be treated or stored throughout the tank's operating life and any impurities in a waste or mixture(s) of waste(s) which may result in a deterioration rate different from one which would be projected using standard corrosion charts and calculations.
- (4) As part of the contingency plan required by 310 CMR 30.520 through 30.524, the owner or operator shall specify the procedures he intends to use to respond to tank spills or leakage, including procedures and timing for expeditious removal of leaked or spilled waste and for repair of the tank.
- (5) The owner or operator must document in the operating record of the facility an inspection of those items in 310 CMR 30.696.

30.697: Response to Leaks or Spills and Disposition of Leaking Tank Systems

The owner or operator shall remove from service immediately a tank system or secondary containment system from which there has been a leak or spill, or which poses a threat of release to the environment and shall satisfy the following requirements:

- (1) Cessation of Use; Prevent Flow or Addition of Wastes. The owner or operator shall immediately stop the flow of hazardous waste into the tank system or secondary containment system and determine the cause of the release.
- (2) Removal of Waste from the Tank System or Secondary Containment System.
 - (a) If the release was from the tank system, the owner or operator shall within 24 hours of the release or, if the owner or operator demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.
 - (b) If the material released was to a secondary containment system, the owner or operator shall remove all released materials within 24 hours or in as timely a manner as possible to prevent a threat to public health, safety, welfare, or the environment.

30.697: continued

- (3) Containment of Visible Releases to the Environment. The owner or operator shall immediately conduct a visual inspection of the release and, based upon that inspection:
- (a) Prevent further migration of the leak or spill to soils or surface water; and
 - (b) Remove, and properly dispose of, any visible contamination of the soil or surface water.
- (4) Notifications, Reports.
- (a) The owner or operator shall report to the Department all releases or threats of releases of hazardous wastes to the environment as soon as possible but not more than two hours after obtaining knowledge thereof, and in compliance with 310 CMR 40.0000.
 - (b) For any hazardous waste not having a reportable quantity pursuant to 310 CMR 40.0000 the owner or operator shall report to the Department releases or threats of release exceeding one pound in compliance with 310 CMR 30.697(4)(a).
 - (c) The owner or operator shall report to the local fire departments releases from tanks.
 - (d) Within seven days of the detection of a release to the environment, the owner or operator shall submit to the Department's Division of Hazardous Waste a written report containing the following information:
 1. Likely route of migration of the release;
 2. Characteristics of the surrounding soil (soil composition, geology, hydrology, climate);
 3. Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within seven days, these data must be submitted to the Department as soon as they become available;
 4. Proximity to downgradient drinking water, surface water, and populated areas; and
 5. Description of response actions taken or planned.
- (5) Provision of Secondary Containment, Repair, or Closure.
- (a) Unless the requirements of 310 CMR 30.697(5) are met, the owner or operator shall close the tank system in compliance with 310 CMR 30.699.
 - (b) If the cause of the release was a spill that has not damaged the integrity of the system, the owner or operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.
 - (c) If the cause of the release was a leak from the primary tank system into the secondary containment system, the owner or operator shall repair the primary tank system prior to returning the tank system to service.
 - (d) If the source of the release was a leak to the environment from a component of the tank system without secondary containment, the owner or operator shall provide the secondary containment for the component of the system from which the leak occurred. Such secondary containment shall meet the requirements of 310 CMR 30.694 before the component of the tank system may be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually.
 - (e) If the source is an aboveground component that can be inspected visually, the owner or operator shall repair and may return the component to service without secondary containment provided that the requirements of 310 CMR 30.697(6) are met.
 - (f) If a component is replaced to comply with the requirements of 310 CMR 30.697(5)(d), that component must meet the provisions of 310 CMR 30.693 and 30.694.
 - (g) If a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection, (*e.g.*, the bottom of an onground tank), the entire component must be provided with secondary containment in accordance with 310 CMR 30.694 prior to being returned to use.

30.697: continued

(6) Certification of Major Repairs. If the owner or operator has repaired a tank system in accordance with 310 CMR 30.697(5), and the repair has been extensive (*e.g.*, repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the owner or operator has obtained a certification by a Massachusetts registered professional engineer in accordance with 310 CMR 30.009 that the repaired system is capable of handling hazardous waste without release for the intended life of the system. This certification must be submitted to the Department within seven days after returning the tank system to use.

30.698: Special Requirements for Ignitable, Reactive, and Incompatible Hazardous Wastes, and Hazardous Wastes That Are Polyhalogenated Aromatic Hydrocarbons

- (1) Ignitable or reactive waste shall not be placed in a tank unless:
 - (a) The waste is treated before or immediately after placement in the tank so that the resulting waste is no longer ignitable or reactive hazardous waste pursuant to 310 CMR 30.122 or 30.124, and 30.560(3) is complied with; or
 - (b) The waste is stored or treated in such a way that it is protected from any material or conditions which might cause the waste to ignite or react; or
 - (c) The tank is used solely for emergencies.

- (2) The owner or operator of a facility which treats or stores ignitable or reactive waste in covered tanks shall comply with the National Fire Protection Association's (NFPA) buffer zone requirements in tables 2-1 through 2-6 of the *Flammable and Combustible Code*, 1981 and with the tank location requirements of 527 CMR 1.05: *Modifications to NFPA 1 - 2012 Edition*.

- (3) Incompatible hazardous wastes or materials incompatible with hazardous waste (*see* 310 CMR 30.561 for examples) shall not be placed in the same tank unless 310 CMR 30.560(3) is complied with.

- (4) Hazardous waste shall not be placed in an unwashed tank which previously held an incompatible waste or material unless 310 CMR 30.560(3) is complied with.

- (5) If tanks holding polyhalogenated aromatic hydrocarbons are to be located or used at the facility, the following requirements, in addition to any other set forth in 310 CMR 30.000, shall be complied with:
 - (a) Each such tank shall have a system designed and operated to detect and contain spills, leaks, or other releases from each such tank. The Department may approve the design and operation of such a system only if, after considering at least the following criteria, the Department determines that such approval is in accordance with provisions set forth in 310 CMR 30.810 through 30.814.
 1. the capacity of each such tank.
 2. the volume and characteristics of the waste stored or treated in each such tank.
 3. the method used for the collection of spills, leaks, or other releases from each such tank.
 4. the construction materials used for each such tank and for the system.
 5. the method used to prevent precipitation and run-on from entering the system.
 - (b) The facility's contingency plan shall include the following:
 1. procedures for responding to spills or leaks of polyhalogenated aromatic hydrocarbons into the containment system.
 2. procedures for removing polyhalogenated aromatic hydrocarbons from the containment system.
 3. procedures for repairing or replacing leaking tanks.

30.699: Closure and Post-closure Care

- (1) At closure of a tank system, the owner or operator shall remove or decontaminate all waste residues, contaminated containment system components, contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless the conditions of 310 CMR 30.141 are met. The owner or operator shall be in compliance with all requirements for a closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems as set forth in 310 CMR 30.580, 30.590, and 30.900.
- (2) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in 310 CMR 30.699(1), then the owner or operator shall close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills (310 CMR 30.633). In addition, for the purposes of closure, post-closure, and financial responsibility, such a tank system is considered to be a landfill, and the owner or operator shall meet all of the requirements for landfills specified in 310 CMR 30.580, 30.590 and 30.900.
- (3) If an owner or operator has a tank system that does not have secondary containment that meets the requirements of 310 CMR 30.694, then:
 - (a) The closure plan for the tank system shall include a plan for complying with 310 CMR 30.699(1) and a contingent plan for complying with 310 CMR 30.699(2).
 - (b) A contingent post-closure plan for complying with 310 CMR 30.699(2) shall be prepared and submitted as part of the permit application.
 - (c) The cost estimates calculated for closure and post-closure care shall reflect the costs of complying with the contingent closure plan and the contingent post-closure plan, if those costs are greater than the costs of complying with the closure plan prepared for the expected closure under 310 CMR 30.699(1).
 - (d) Financial assurance must be based on the cost estimates in 310 CMR 30.699(3)(c).
 - (e) For the purpose of the contingent closure and post-closure plans, such a tank system is considered to be a landfill, and the owner or operator shall be in compliance with all requirements for all of the closure, post-closure, and financial responsibility requirements for landfills under 310 CMR 30.580, 30.590, and 30.900.

30.700: FACILITY LOCATION STANDARDS

310 CMR 30.701 through 30.799, cited collectively as 310 CMR 30.700, set standards for the location of facilities subject to 310 CMR 30.800: *Licensing Requirements and Procedures*, and establish restrictions for generators, transporters, universal waste handlers, and facilities (whether licensed or operating pursuant to interim status) relating to the land disposal of specified hazardous wastes.

30.701: Land Subject to Flooding

310 CMR 30.701 applies to all inland and coastal land subject to flooding. The provisions that apply vary with the category of hazardous waste management unit and when the unit came into existence. 310 CMR 30.701(6) (for new or expanding units) and 30.701(7) (for existing units) apply to landfills, land treatment units, surface impoundments, waste piles and miscellaneous units. 310 CMR 30.701(1) through (5) apply to all other treatment or storage units.

- (1) No active portion of a new storage or treatment facility which receives hazardous waste from any off-site source shall be located within the boundary of land subject to flooding from the statistical 100-year frequency storm.
 - (a) This boundary shall be determined by reference to the most recently available flood profile data prepared pursuant to the National Flood Insurance Program (NFIP) for the city or town within which the facility is proposed to be located. Said boundary, as so determined, shall be presumed accurate. Whenever required by the Department, the owner or operator shall submit such information with the license application to the Department. This presumption may be overcome only by credible evidence, persuasive to the Department, submitted by an independent Massachusetts registered professional engineer or other professional competent in such matters.

30.701: continued

(b) Where NFIP profile data is unavailable, the license applicant shall determine the boundary of the land subject to flooding by using engineering calculations which shall be based upon the standard methodologies set forth in the U.S. Soil Conservation Service Technical Release No. 55, *Urban Hydrology For Small Watersheds* and section 4 of the U.S. Soil Conservation Service, *National Engineering Hydrology Handbook*. Another methodology may be used with written approval from the Department. This determination shall be made by an independent Massachusetts registered professional engineer or other professional competent in such matters.

(2) The owner or operator of a new or expanding storage or treatment facility which receives no hazardous waste from any off-site source, and the active portion of which is located within the boundary of land subject to flooding from the statistical 100-year frequency storm, shall floodproof the active portion of the facility.

(a) Floodproofing shall be designed, constructed, operated and maintained to prevent floodwaters from coming into contact with hazardous waste.

(b) Either:

1. Floodproofing shall be designed, constructed, operated and maintained to prevent floodwaters from coming into contact with any container or tank or other unit holding hazardous waste; or

2. Any container, tank or other unit holding hazardous waste shall be designed, constructed, operated and maintained to withstand hydrostatic, dynamic and buoyant forces so as to be secured during the 100-year flood.

(3) Each owner or operator shall floodproof each active portion of each existing storage or treatment facility which is located within the boundary of land subject to flooding from the statistical 100-year frequency storm. Floodproofing shall be in compliance with 310 CMR 30.701(2)(a) and (b).

(4) No facility which receives hazardous waste from any off-site source shall be expanded into or within the boundary of land which is subject to flooding from the statistical 100-year frequency storm.

(5) The owner or operator of each new storage or treatment facility which receives hazardous waste from any off-site source shall floodproof each active portion located outside the boundary of land subject to flooding from the statistical 100-year frequency storm but within the boundary of land subject to flooding from the statistical 500-year frequency storm. For the purposes of 310 CMR 30.701(5) only, the term off-site shall not include the same or geographically contiguous property in single ownership which may be divided by public or private right-of-way, other than a limited access highway or a way to which the owner or operator has no physical or legal access, regardless of whether access is by crossing or by going along the right-of-way.

(a) Floodproofing shall be designed, constructed, operated and maintained to prevent floodwaters from coming into contact with hazardous waste.

(b) Either:

1. Floodproofing shall be designed, constructed, operated and maintained to prevent floodwaters from coming into contact with any container, tank or other unit holding hazardous waste; or

2. Any container, tank or other unit holding hazardous waste shall be designed, constructed, operated and maintained to withstand hydrostatic, dynamic and buoyant forces so as to be secured during the 500-year flood.

(6) No active portion of a landfill, land treatment unit, surface impoundment, waste pile or miscellaneous unit shall be constructed or expanded into or within the boundary of land subject to flooding from the statistical 500-year frequency storm. This boundary shall be determined as set forth in 310 CMR 30.701(1)(a) and (b).

30.701: continued

(7) The owner or operator of each existing landfill, land treatment unit, surface impoundment, waste pile, disposal facility, or miscellaneous unit which is located within the boundary of land subject to flooding from the statistical 100-year frequency storm shall floodproof the active portion of the facility so that washout will not occur in the event of such a storm, unless the owner or operator persuades the Department that:

- (a) taking into consideration the volume and physical and chemical properties of the waste in the facility and the impact of the concentrations of hazardous constituents on the current and potential uses of, and water quality standards established for, the affected surface waters and groundwater, as well as the impact on the sediments of affected surface waters or the soils of the 100- year flood plain that could result from washout, there will be no adverse effect on public health and the environment if washout of hazardous waste occurs; and
- (b) for surface impoundments, the waste contained in a surface impoundment is hazardous only because it is corrosive pursuant to 310 CMR 30.123(1).

30.702: Surface Water Supplies

(1) No active portion of a new hazardous waste landfill, land treatment unit, surface impoundment or waste pile shall be located within the watershed of a class A or class SA segment of a surface water body as that term is defined in 310 CMR 30.010. The watershed area shall be as delineated by the Department on overlays of U.S.G.S. topographic maps.

(2) No new or replacement underground tank shall be located within the watershed of a class A or class SA segment of a surface water body unless the owner or operator persuades the Department that there is no feasible alternative to storage or treatment in an underground tank (*e.g.*, another permitting authority requires that a particular waste be stored underground). The watershed area shall be as delineated by the Department on overlays of U.S.G.S. topographic maps.

30.703: Actual, Planned, and Potential Public Underground Drinking Water Supplies

(1) No new or replacement underground tank shall be located on land overlying an actual, planned or potential public underground drinking water source (*see* 310 CMR 30.010) unless the owner or operator persuades the Department that there is no feasible alternative to storage or treatment in an underground tank (*e.g.*, another permitting authority requires that the waste be stored or treated underground).

(2) No active portion of a new hazardous waste landfill, land treatment unit, surface impoundment, miscellaneous unit or waste pile shall be located:

- (a) on land which is overlying an actual, planned or potential public underground drinking water source (*see* 310 CMR 30.010); or
- (b) within a ½ mile (2640 feet) radius of an existing well used as a source of drinking water for a public water system, or within a Zone 2 if a Zone 2 has been delineated for that area.

(3) No active portion of a hazardous waste landfill or land treatment unit shall be located in the flow path of groundwater supplying any well for any public water system. If a well which supplies a public water system is outside the natural flow path of groundwater traversing the facility site, the Department may specify an appropriate buffer zone to ensure that groundwater which has traversed the facility site does not supply such well (*see* Figure 30.703).

(4) No active portion of a new hazardous waste landfill or land treatment facility shall be located in the flow path of a planned or potential public underground drinking water source. For the purposes of 310 CMR 30.703(4), an area shall not be considered to contain a potential public underground drinking water source if the area is already served by a public water system, the drinking water sources of which are all located outside the area described in 310 CMR 30.703(5)(a) and (b).

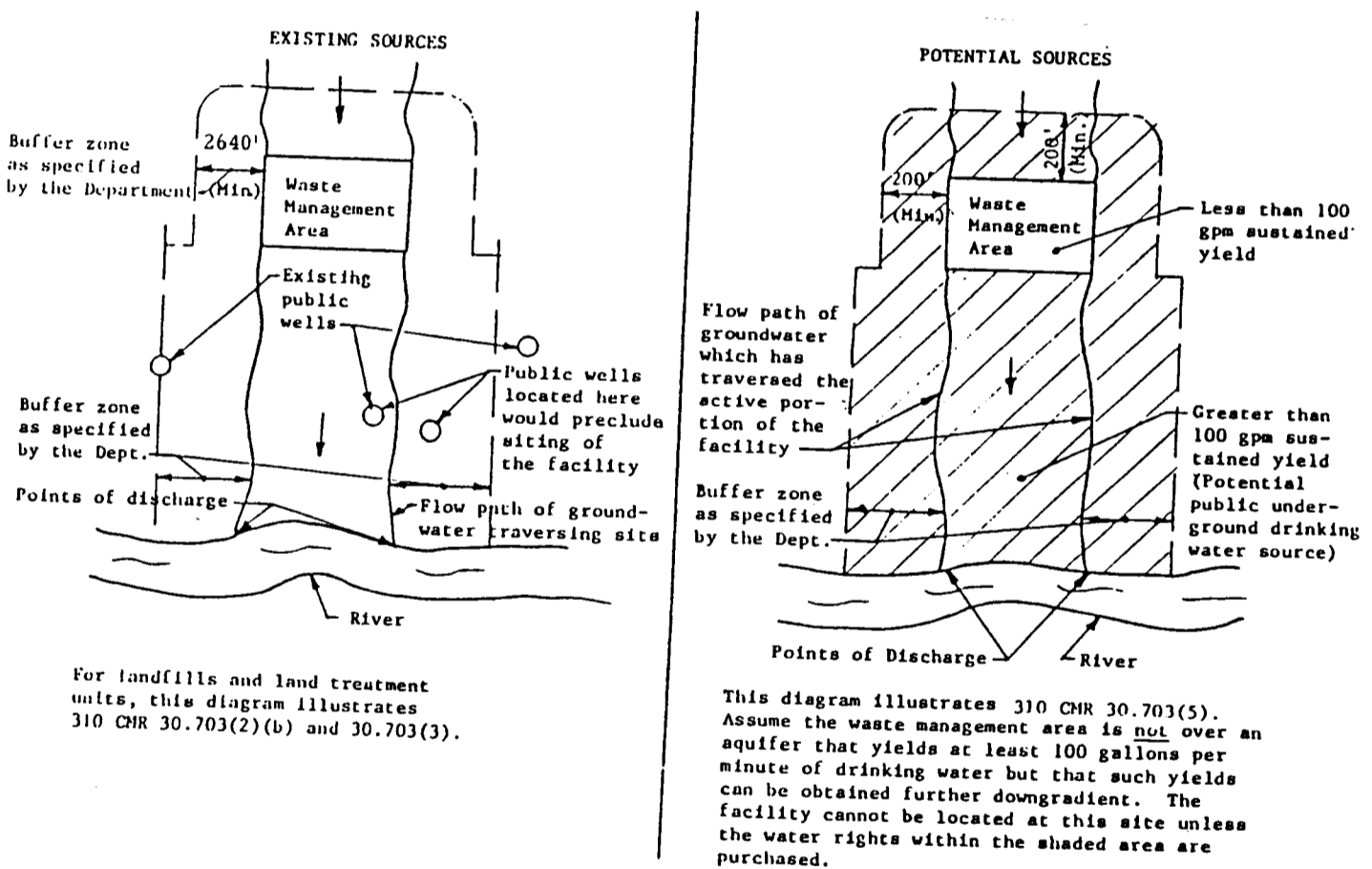
30.703: continued

(5) The owner or operator of a hazardous waste landfill or land treatment unit shall not be subject to 310 CMR 30.703(4) if he or she demonstrates to the Department that he owns the water rights within the area described as follows (*see* Figure 30.703):

- (a) In the downgradient direction, the area is bounded by the edge of the active portion of the facility and by the points of discharge of groundwater traversing the active portion of the facility; and
- (b) The other boundaries of the area are the boundaries of the flow path of groundwater traversing the active portion of the facility plus an adequate buffer zone as specified by the Department.

(6) 310 CMR 30.703(1), (2), or (4) shall not apply to an aquifer if the owner or operator persuades the Department, after public notice and opportunity for public hearing, that said aquifer cannot and will not serve as a source of drinking water for a public water system because it is economically or technologically impractical to render that water fit for human consumption.

FIGURE 30.703: PROTECTION OF EXISTING AND POTENTIAL PUBLIC UNDERGROUND DRINKING WATER SOURCES FROM LANDFILLS AND LAND TREATMENT FACILITIES

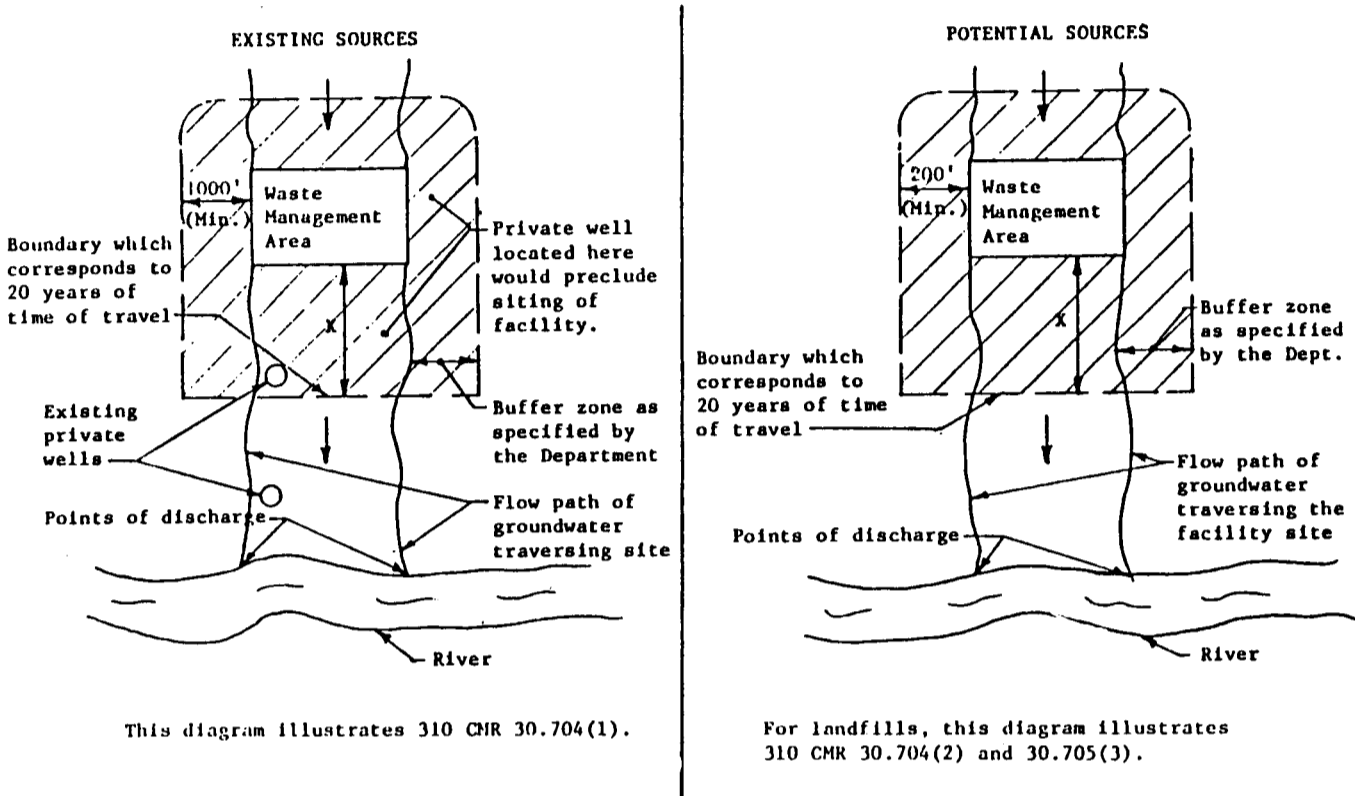


30.704: Private Water Supplies

- (1) (a) Except as provided in 310 CMR 30.704(1)(b), no active portion of a new hazardous waste landfill shall be located in the flow path of groundwater supplying water to an existing well which is used as a source of drinking water supply by a person other than a public water system and which is located within a distance that corresponds to 20 years of travel of groundwater which has traversed the facility site (*see* Figure 30.704). If such a well is located outside the natural flowpath of groundwater traversing the facility site, the Department may specify an appropriate buffer zone to ensure that groundwater traversing the facility site does not supply such a well. The owner or operator need not make such a determination of time-of-travel for any such well located one mile or more downgradient from the active portion of the facility. In no case shall any active portion of any hazardous waste landfill be located within 1000 feet of an existing well used as a source of drinking water supply by a person other than a public water system.
 - (b) 310 CMR 30.704(1)(a) shall not apply if the owner or operator:
 1. provides to the affected person(s) alternative drinking water which is acceptable to the Department; or
 2. purchases the affected water rights.
- (2) No active portion of a hazardous waste landfill shall be located in the flow path of groundwater supplying a potential private underground drinking water source (*see* 310 CMR 30.010) unless the owner or operator owns the water rights within the area described as follows (*see* 310 CMR 30.000: *Figure* 30.704):
 - (a) In the downgradient direction, the area is bounded by the edge of the active portion of the facility and by a boundary downgradient which represents 20 years of travel time of groundwater which has traversed the active portion of the facility; and
 - (b) The other boundaries of the area are the boundaries of the flow path of groundwater which has traversed the active portion of the facility plus an adequate buffer zone as specified by the Department.
- (3) The active portion of a new surface impoundment, land treatment unit or waste pile shall not be located within a 1000-foot radius of an existing well which is used as a source of drinking water supply by a person other than a public water system.
- (4) 310 CMR 30.704(2) shall not apply to a groundwater source if the owner or operator persuades the Department, after public notice and opportunity for public hearing, that said source cannot and will not serve as a source of drinking water because it is economically or technologically impractical to render that water fit for human consumption.

30.704: continued

FIGURE 30.704 PROTECTION OF EXISTING AND POTENTIAL PRIVATE UNDERGROUND DRINKING WATER SOURCES FROM LANDFILLS



NOTE: In order to simplify the diagram, the soil is assumed to be homogeneous and therefore, the boundary representing 20 years of travel is shown as linear.

30.705: Other Location Considerations

- (1) In making each licensing decision pursuant to 310 CMR 30.800, the Department shall evaluate the following factors with regard to the location of each new facility:
 - (a) The transportation risk(s) associated with waste(s) arriving at, or leaving, the facility;
 - (b) The adequacy of buffer zones between the active portion(s) of the facility and areas of public access;
 - (c) The population density in the vicinity of the facility site;
 - (d) The proximity of the facility to sensitive receptors (*e.g.*, schools, hospitals, nursing homes, day care centers); and
 - (e) Where applicable, the proposed method(s) of evacuation of threatened populations within a reasonable time after an accident.

- (2) The owner or operator shall submit with the license application all pertinent data and information so that the Department may make the evaluation specified in 310 CMR 30.705(1).

- (3) The owner or operator of a new landfill, surface impoundment, land treatment unit, or waste pile shall provide for a buffer zone of at least 200 feet between the active portion of the facility and the facility property line (*see* Figure 30.704).

- (4) The requirements of 310 CMR 30.705(4)(a) and (b) apply only to new hazardous waste facilities at new installations, as that term is defined in 310 CMR 30.010, at which a license applicant proposes the storage or treatment of hazardous waste which is ignitable pursuant to 310 CMR 30.122(1) or reactive pursuant to 310 CMR 30.124(1).
 - (a) There shall be a minimum distance of at least 300 feet from the active portion of the facility to the facility property line. The Department may approve a lesser distance if the owner or operator persuades the Department that such lesser distance is sufficient to protect public health, safety and welfare. The owner or operator shall submit with the license application a written justification for a lesser distance. In determining whether a lesser distance would be sufficient to protect public health, safety and welfare, the Department shall consider, but shall not be limited to, the following factors:
 1. The volumes, properties, and degree(s) of hazard of the ignitable or reactive waste(s) to be stored or treated at the facility;
 2. The method(s) of storage or treatment;
 3. Topographic features in the vicinity of the site;
 4. Atmospheric conditions in the vicinity of the site;
 5. Proximity of the facility to receptors and the types of receptors (*e.g.*, homes, businesses, schools, hospitals, nursing homes, day care centers);
 6. Specific facility design features and operation procedures which eliminate or reduce potential dangers to public health, safety or welfare.
 - (b) The Department may require a distance greater 300 feet between the active portion of the facility and the property line if the Department determines, considering the factors listed in 310 CMR 30.705(4)(a)1. through 6., that 300 feet is not sufficient to protect public health, safety or welfare.
 - (c) In no case shall the distance between the active portion of the facility and the property line be less than those distances specified in 310 CMR 30.688(1) for containers and 310 CMR 30.698(2) for tanks.

- (5) The requirements of 310 CMR 30.705(5) apply only to each existing installation at which there is an existing hazardous waste facility, or at which there is a proposed expansion of an existing hazardous waste facility or a new waste facility at which a license applicant does or proposes to store or treat hazardous waste which is ignitable pursuant to 310 CMR 30.122(1) or reactive pursuant to 310 CMR 30.124(1). The owner or operator shall submit with the license application a written evaluation of existing or proposed buffer zones between the active portion(s) of the facility and the facility property line. The evaluation shall include, but not be limited to, consideration of the factors set forth in 310 CMR 30.705(4)(a)1. through 6. In the license, the Department may specify such requirements as may be appropriate to protect public health, safety and welfare.

30.705: continued

(6) No active portion of a landfill, land treatment unit, surface impoundment or waste pile shall be constructed or expanded into wetlands defined pursuant to M.G.L. c. 130, § 105 or M.G.L. c. 131, § 40.

30.706: Disposal into Waterbodies

The disposal of hazardous waste into the ocean, or into any lake or pond, whether naturally occurring or man-made, or into any river, stream, spring, or estuary, or into any land under the ocean or under any lake or pond, whether naturally occurring or man-made, or under any river, stream, spring, or estuary, is prohibited.

30.707: Disposal into Salt Domes, Salt Bed Formations, Underground Mines, and Caves

No person shall place any hazardous waste, or any container or tank holding hazardous waste, in any salt dome, salt bed formation, underground mine, or cave.

30.708: Areas of Critical Environmental Concern

Notwithstanding any other provision of 310 CMR 30.000, no facility shall be located where such location or any portion thereof:

- (1) Would be within an Area of Critical Environmental Concern (ACEC), as designated by the Secretary of the Executive Office of Energy and Environmental Affairs; or
- (2) Would fail to protect the outstanding resources of an ACEC as identified in the Secretary's designation if the facility is to be located outside, but adjacent to or in close proximity to, an ACEC.

30.750: Land Disposal Restrictions

(1) 310 CMR 30.750 identifies those wastes which shall not be land disposed and describes the limited circumstances under which an otherwise prohibited waste may continue to be land disposed.

(a) The requirements for hazardous wastes that are prohibited or restricted from land disposal are contained in the following provisions which are hereby incorporated by reference: 40 CFR 268.1 through 268.4; 268.7, 268.9(b) through (d); 268.14, 268.20, 268.30 through 268.50 (except for 268.42(b) and 268.44(a) through (g)); and Appendices III, IV, VI, and XI, subject to the exceptions, modifications and additions set forth in 310 CMR 30.750(2) and (3).

(b) The requirements regarding the use of hazardous waste numbers for hazardous wastes that are prohibited or restricted from land disposal are contained in 310 CMR 30.103 and 30.302 rather than incorporating by reference 40 CFR 268.9(a).

(c) The following requirements are not incorporated by reference but instead will continue to be administered and enforced by EPA:

1. 40 CFR 268.5, 268.6, 268.42(b) and 268.44(a) through (g);
2. "effective dates" referenced within 40 CFR 268.20 through 268.50 to the extent that they are earlier than the effective dates of these state regulations under 310 CMR 30.004; and
3. Appendices VII and VIII.

(2) Notwithstanding any of the incorporated provisions of 40 CFR 268 to the contrary, the following provisions of the federal land disposal restrictions shall not be incorporated into 310 CMR 30.000 and shall not have effect within the Commonwealth of Massachusetts:

(a) In 40 CFR 268.1(c)(3), 268.2 (definition of land disposal), 268.7(a)(7), 268.37(a) and (b), 268.38(a) and (b), 268.39(b), 268.40(e), fn. 9 of the Treatment Standards Table, and any other applicable provisions - any phrase implicitly or explicitly allowing the use of underground injection within the Commonwealth of Massachusetts as an allowable means of hazardous waste disposal is precluded from having effect within the Commonwealth of Massachusetts. The use of underground injection as a means of land disposal within the Commonwealth of Massachusetts is prohibited.

(b) 40 CFR 268.1(e)(2) - Hazardous waste pesticides discarded by farmers, even when managed in compliance with 40 CFR 262.70, remain subject to the provisions of 310 CMR 30.000 including 30.750.

(c) 40 CFR 268.2(b), (c), (e), (g) and (h) - The definitions of "Debris", "Hazardous constituent or constituents", "Hazardous debris", "Land disposal", "Polychlorinated biphenyls or PCBs" at 310 CMR 30.010 shall apply in *lieu* of the federal definitions.

30.750: continued

(d) In 40 CFR 268.7(a)(9), 268.42(c), Appendix IV, and any other applicable provisions - any phrase implicitly or explicitly allowing the land disposal of lab packs, or ignitable or reactive hazardous wastes, within the Commonwealth of Massachusetts shall not have effect within the Commonwealth of Massachusetts. The placement of any lab packs containing hazardous waste, or ignitable or reactive hazardous wastes, in any land disposal unit within the Commonwealth of Massachusetts are both prohibited. Persons shipping lab packs for land disposal in other States, or for incineration, shall comply with the requirements specified in 40 CFR 268.42(c).

(e) 40 CFR 268.2(k) - The definition of "Soil" at 310 CMR 40.0006 is incorporated by reference and shall apply in *lieu* of the federal definition.

(f) 40 CFR 268.4(a)(3)(ii) and (iii) - The waiver and variance provisions for surface impoundments, are inapplicable within the Commonwealth of Massachusetts.

(g) 40 CFR 268.44(h) through (o) - No variance from treatment standards shall be granted by the Department.

(h) In 40 CFR 268.7(a)(5), 268.50(a)(1), and any other applicable provisions - any phrase implicitly or explicitly allowing generators to conduct treatment other than that which is allowed pursuant to 310 CMR 30.300 and any phrase explicitly or implicitly allowing generators or licensed facilities to accumulate, store or treat hazardous waste in containment buildings shall not have effect within the Commonwealth of Massachusetts.

(3) References to federal provisions within the incorporated provisions of 40 CFR 268 are adopted subject to the following supplementations or substitutions of state terms for the federal program references cited therein:

(a) Statutory references within the incorporated provisions of 40 CFR Part 268 are supplemented in accordance with 310 CMR 30.750: *Table 1*:

30.750: *Table 1*.

Federal Reference:	Corresponding Reference included at 310 CMR 30.750:
Resource Conservation and Recovery Act (RCRA), "Subtitle C" or particular sections within RCRA	M.G.L. c. 21C and implementing regulations; provided however, authority to act relative to RCRA Section 3004(h) remains with EPA
federal permit issued pursuant to § 402 (NPDES) or § 307 (pretreatment) of the Clean Water Act (CWA)	permit issued pursuant to comparable state statutory provisions such as M.G.L. c. 21 and implementing regulations
Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or particular sections within CERCLA	M.G.L. c. 21E and implementing regulations or the comparable state provisions within M.G.L. c. 21E and implementing regulations
Clean Air Act (CAA) or particular sections within the CAA	M.G.L. c. 111, § 142A through § 142O and implementing regulations or the comparable state provisions within M.G.L. c. 111, § 142A through § 142O and implementing regulations
"Subtitle D facility" or "RCRA Subtitle D facility"	facility permitted pursuant to comparable state statutory provisions such as M.G.L. c. 111, §150A (Solid Waste Management Act) and implementing regulations
Clean Water Act (CWA) or particular sections within the CWA	M.G.L. c. 21 and implementing regulations or the comparable state provisions within M.G.L. c. 21 and implementing regulations

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.750: continued

(b) Unless otherwise specified in 310 CMR 30.750: *Table 3*, state regulatory references are substituted for the federal regulatory references within the incorporated provisions of 40 CFR Part 268 in accordance with 310 CMR 30.750: *Table 2*:

30.750: *Table 2*.

Federal Reference to provisions within 40 CFR:	Corresponding Reference Within 310 CMR to be Referenced Within 310 CMR 30.750:
260.10	30.010
260.11/SW-846 incorporation at 260.11	30.012(1)
Part 261	30.100
Subpart C of Part 261...	30.120 - 30.125
Subpart D of Part 261...	30.130 - 30.136
261.21	30.122
261.22	30.123
261.23	30.124
261.24	30.125
261.31	30.131
261.32	30.132
261.33	30.133 (for U wastes)/30.136 (for P wastes)
262.11	30.302
262.34	30.300
264.13/265.13	30.513
Subpart F of Part 264/Subpart F of Part 265	30.660
Subpart O of Part 264	7.00
Subpart H of Part 266	30.240
266.20(b)	30.231(6)
264.554	30.602(14)
debris excluded from the definition of hazardous waste under § 261.3(f) of this chapter	debris exempt from 310 CMR 30.000 pursuant to 310 CMR 30.104(2)(w)

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.750: continued

(c) The following specific state regulatory references are substituted for the federal regulatory references within the incorporated provisions of 40 CFR Part 268 in accordance with 310 CMR 30.750: *Table 3*:

30.750: *Table 3*.

40 CFR 268 provision affected	Internal Reference within incorporated provision	Corresponding Reference to 310 CMR 30.000
268.31(c)	"parts 264 and 265 of this chapter"	30.610 and 30.620
268.42, Table 1	40 CFR 260.10 (1), (6), (7), (11) & (12)	30.010, Industrial Furnace (a), (f), (g) and (k)
268.50(a)(1)	"parts 264 and 265 of this chapter"	30.500 through 30.707 and 30.900
268.50(a)(2)(ii)	264.73 or 265.73	30.542
268.4(a)(2)(ii)	260.22	30.142
268.4(a)(3)	264.221(c) or 265.221(a)	30.612 or 30.099(6)(g) referencing 265.221(a), respectively
268.7(a)(1)	268.9	30.103 and 30.750(1) referencing 268.9(b)
268.7(d)(2)	261.3(f)(1)	30.104(2)(w)

- (d) Additional modifications to the incorporated provisions of 40 CFR 268 are as follows:
1. 40 CFR 268.1(b) is modified to read as follows: Except as specifically provided otherwise in this part, 310 CMR 30.100, or 30.353, the requirements of this part apply to persons who generate or transport hazardous waste and owners and operators of hazardous waste treatment, storage, and disposal facilities.
 2. At 40 CFR 268.1(e)(1), replace "small quantity generators of less than 100 kilograms of non-acute hazardous waste or less than one kilogram of acute hazardous waste per month, as defined in § 261.5 of this chapter" with "Very Small Quantity Generators managing waste in compliance with 310 CMR 30.353".
 3. 40 CFR 268.1(f) is modified to read as follows: Universal waste handlers and universal waste transporters managing universal waste in compliance with 310 CMR 30.1000 are exempt from 40 CFR 268.7 and 268.50.
 4. 40 CFR 268.2 is modified by adding that "Administrator", "Regional Administrator", "EPA Regional Administrator", "EPA Regional Administrator (or his designee) or State authorized to implement part 268 requirements" shall mean "Department" except in regards to the federally enforceable provisions referenced at 310 CMR 30.750(1)(c).
 5. 40 CFR 268.3 is modified by adding the following: Any deliberate mixing of one or more prohibited hazardous wastes with debris that changes its treatment classification from waste to hazardous debris or debris is prohibited.
 6. 40 CFR 268.4(a)(3) is modified to read as follows: Except as provided in 310 CMR 30.613(4), a surface impoundment shall meet the design requirements set forth in 310 CMR 30.612, regardless of whether or not the unit is new, expanded, or a replacement. The impoundment shall be in compliance with all applicable ground water monitoring requirements set forth in 310 CMR 30.660.
 7. 40 CFR 268.7(a)(1) is modified by replacing "RCRA-permitted hazardous waste treatment facility" with "a treatment facility licensed pursuant to 310 CMR 30.800".
 8. 40 CFR 268.7(a)(7) is modified to read as follows: If a generator determines that he is managing a prohibited waste that is exempted from regulation under 310 CMR 30.000 subsequent to the point of generation (including deactivated characteristic hazardous wastes managed in wastewater treatment systems subject to the Clean Water Act (CWA) as specified at 310 CMR 30.104(1)(b) or that are CWA-equivalent), the generator must place a one-time notice describing such generation, subsequent exclusion from hazardous waste regulation, and the disposition of the waste, in the generator's on-site files.
 9. 40 CFR 268.7(a)(8), last sentence is revised to read as follows: The requirements of this paragraph apply to wastes even when the hazardous characteristic is removed prior to disposal or when the waste is exempted from regulation subsequent to the point of generation.

30.750: continued

10. 40 CFR 268.7(a)(10) is modified by replacing "small quantity generators with tolling agreements pursuant to 40 CFR 262.20(e)" with "small quantity generators that reclaim waste pursuant to a contractual agreement in compliance with 310 CMR 30.314".
11. 40 CFR 268.7(e)(2) is modified to read as follows: Maintain that information in the generator's and/or the facility's files and other records for a minimum of three years.
12. At 40 CFR 268.33(d)(1) and footnote 12 to 268.40, Treatment Standard Table, "Subtitle C monofill" is hereby replaced with "hazardous waste landfill".
13. At 40 CFR 268.33(d)(2), footnote 12 to 268.40, Treatment Standard Table, at 268.45(c), and at 268.49(e)(2)(A), "Subtitle C" or "RCRA Subtitle C" is replaced with "hazardous waste".
14. At 40 CFR 268.40, in note regarding Lead Acid Batteries Subcategory (see D008), note is modified by replacing "EPA regulations (see 40 CFR 266.80)" with "hazardous waste regulations (See 310 CMR 30.280.)."
15. At 40 CFR 268.50(a)(3), "transfer facility for ten days or less" is replaced with "transfer- related area in compliance with 310 CMR 30.408".
16. At 40 CFR 268.7(a)(9)(iii), "D001 - D0043" is replaced by "D001 - D008 and D010 - D043."

30.800: LICENSING REQUIREMENTS AND PROCEDURES

310 CMR 30.801 through 30.899, cited collectively as 310 CMR 30.800, set forth the procedures and requirements for licensing hazardous waste facilities and transporters.

30.801: Who Must Have a License

No person shall transport, use, collect, store, treat, or dispose of hazardous waste or construct, operate or maintain any facility for the use, storage, treatment, or disposal of hazardous waste, unless said person has applied for and obtained, and has in effect, a valid license issued by the Department pursuant to M.G.L. c. 21C and 310 CMR 30.000, except that a license is not required for the following:

- (1) The accumulation of hazardous waste at the site of generation by the generator thereof for up to and including 90 days, as provided in 310 CMR 30.340.
- (2) Accumulation by a small quantity generator in compliance with 310 CMR 30.351, or by a very small quantity generator in compliance with 310 CMR 30.353, or by a generator who is in compliance with 310 CMR 30.222(4).
- (3) Treatment which is an integral part of a manufacturing process at the point of generation.
- (4) Municipal or industrial wastewater treatment facilities which are permitted pursuant to M.G.L. c. 21, § 4 3.
- (5) The handling, treating, storing, use, processing or disposing of infectious hazardous waste which is regulated by the Department of Public Health pursuant to M.G.L. c. 111, §§ 3 and 51 through 56.
- (6) The holding of manifested shipments of hazardous waste in transit in compliance with the requirements of 310 CMR 30.408.
- (7) The emergency containment or treatment of a hazardous waste or hazardous material which becomes a waste at the time of the spill.
- (8) The transport of hazardous waste by certain interstate carriers exempted pursuant to 310 CMR 30.401(4).
- (9) The transport of hazardous waste by any air or rail transporter subject to regulation by the DOT.
- (10) The transport of hazardous waste by bulk shipment water transporter subject to regulation by the U.S. Coast Guard.

30.801: continued

(11) The exemptions from the requirement to obtain a license provided in 310 CMR 30.801(11), 310 CMR 40.0031(3) and 40.0041(4) shall apply, subject to the following provisions. In the event of any inconsistency between 310 CMR 30.801(11) and 310 CMR 40.0031(3) or 40.0041(4), the provisions of 310 CMR 30.801(11) shall govern.

(a) No license shall be required for any emergency action initiated or ordered by the Department or by a court of competent jurisdiction and conducted by the Department or a contractor authorized by the Department to secure a site where hazardous waste has been deposited or abandoned. Emergency action shall mean the actions specified in 40 CFR 270.1(c)(3)(i).

(b) No license shall be required for any remedial action ordered by a court of competent jurisdiction or ordered by the Department through issuance of an enforceable order, provided that the applicable substantive requirements from 310 CMR 30.000 governing any activities that would have required a license are instead included in the court or administrative order. The Department will provide an opportunity for public comment on any order being utilized in place of a license. Remedial action is defined in 310 CMR 40.0006: *Terminology, Definitions and Acronyms*.

(c) No license shall be required for any response action involving remediation waste from a disposal site which is conducted within the boundaries of that same disposal site in compliance with the provisions of 310 CMR 40.0000: *Massachusetts Contingency Plan* with the following exceptions:

1. The combustion of Hazardous Waste shall be subject to a License under 310 CMR 30.801(11), as well as an Air Quality permit pursuant to 310 CMR 7.08(4): *Hazardous Waste Incinerators*. Combustion means incineration as defined in 310 CMR 30.010 and any other thermal destruction of hazardous waste. However, the flaring of an uncompressed gaseous material which is not itself a hazardous waste (*e.g.*, the flaring of methane gas from landfills or the flaring of off-gas emissions from thermal oxidation units) is not considered to involve the combustion of Hazardous Waste subject to a license under these regulations if the flaring results from a remedial activity, the gaseous materials are collected in an enclosed system at the site of generation, and the operations is conducted in compliance with all applicable Air Quality requirements including any permit required pursuant to 310 CMR 7.08(4): *Hazardous Waste Incinerators*.

2. A license for other response actions may be required by the Department pursuant to 310 CMR 40.0033(5).

3. Response action and remediation waste are defined in 310 CMR 40.0006: *Terminology, Definitions and Acronyms*. Disposal Site shall be as defined in 310 CMR 40.0006: *Terminology, Definitions and Acronyms*, except that the exemption from licensing with respect to uncontainerized waste, contaminated debris and contaminated soil shall apply only within the place or area where uncontainerized waste, contaminated media and contaminated soil has come to be located whereas the exemption from licensing with respect to contaminated ground or surface water shall apply within the place or area where contaminated ground or surface water has come to be located.

4. The exemption from licensing in 310 CMR 30.801(11)(c) does not apply to any response action conducted outside the boundaries of a disposal site or to any response action involving non-remediation wastes (*e.g.*, containerized wastes). However, any person undertaking such a response action may seek approval from the Department to employ one or more of the management units in 310 CMR 30.602(12) through (14), [Corrective Action Management Units (CAMUs), Temporary Units (TUs), Staging Piles] for increased flexibility in performing the response action.

5. The exemptions from licensing in 310 CMR 30.801(11)(a) through (c) do not exempt persons from any other applicable requirements in 310 CMR 30.000. Remediation wastes which are hazardous wastes (*i.e.*, that meet the criteria defining a listed hazardous waste or which are themselves a characteristic hazardous waste) shall be accumulated, treated, and stored or otherwise managed at a disposal site in a manner that achieves a level of control and protection equivalent to that provided by the technical and management requirements in 310 CMR 30.000. Non-remediation wastes (*e.g.* containerized wastes) which are hazardous wastes shall be accumulated, treated, and stored or otherwise managed at a disposal site in accordance with 310 CMR 30.000. Both remediation wastes and non-remediation, wastes which are hazardous wastes, shall be managed in accordance with 310 CMR 30.000 when transported from a disposal site.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.801: continued

(12) The storage, treatment, or disposal of hazardous wastes containing polychlorinated biphenyls (PCBs) in concentrations equal to or greater than 50 parts per million by facilities which meet all the requirements in 310 CMR 30.501(3)(a) through (c) and 310 CMR 30.708.

(13) The operation of a research, development, and/or demonstration facility having a valid permit issued by the EPA pursuant to § 3005(g) of RCRA and a valid approval issued by the Department pursuant to 310 CMR 30.863, provided that the facility is operated in full compliance with the terms and conditions of the permit issued by the EPA, the approval issued by the Department, and all applicable provisions of 310 CMR 30.000.

(14) the handling of the wastes listed at 310 CMR 30.143(2) in compliance with 310 CMR 30.1000 by universal waste handlers and universal waste transporters.

(15) The accumulation of a laboratory waste by a University participating in the Laboratory XL project at the site of generation for less than 120 days, provided that the requirements of 310 CMR 30.340 and 30.355 are met.

(16) The accumulation of a laboratory waste by a University participating in the Laboratory XL project at the site of generation for less than 210 days, provided that the requirements of 310 CMR 30.351 and 30.355 are met.

(17) The elementary neutralization of corrosive hazardous waste at the site of generation in an elementary neutralization unit provided that the generator is in compliance with 310 CMR 30.1103.

30.802: Application Form

(1) Any person required to have a hazardous waste license shall complete, sign, and submit an original application, plus three copies, to the Department.

(2) The applicant shall be required to submit such information concerning the proposed hazardous waste facility or activity as the Department may require. The Department may prescribe a form(s) which shall be used by all applicants.

30.803: Requirements for all License Applications

All license applications shall include at least the following:

- (1) The name, mailing address, and location of the site or activity.
- (2) The operator's name, address, telephone number, ownership status and status as a public, private or other entity.
- (3) The owner's name, address, telephone number, ownership status and status as a public, private, or other entity, if different from 310 CMR 30.803(2).
- (4) A general description of the hazardous waste facility or activity, and a complete description of all proposed activities, including, but not limited to, processes, structures, and equipment.
- (5) A listing and current status of all required permits or construction approvals for the proposed facility or activity.
- (6) A detailed description of the applicant's qualifications and experience in managing and operating the proposed facility or activity.
- (7) A statement of the applicant's financial condition, prepared by a certified public accountant, including profit and loss statements, balance sheets, and any other information which may be relevant for the three-year period prior to the date of application. For new business entities, the statement shall describe how the business is to be capitalized, the source(s) of loans and in what amount(s), and any other financial data deemed by the Department to be relevant. This provision does not apply to applications for transport licenses or to applications for facilities at the site of generation if the applicant is the generator of all the hazardous wastes which will be stored, treated, used, or disposed of at that facility.
- (8) A description of training programs for all employees, including emergency procedures for preventing or containing spills or explosions of hazardous waste, emergency medical procedures, and basic knowledge of the wastes being handled. For transport license applications, this description shall demonstrate compliance with 310 CMR 30.409. For facility license applications, this description shall demonstrate compliance with 310 CMR 30.516.
- (9) The names and addresses of all officers, directors, or partners of the person applying for a license, all of the applicant's key staff individuals, and all individuals and other persons holding, directly or indirectly, greater than 5% equity in, or more than 5% liability of, the applicant. This provision does not apply to applications for facilities at the site of generation if the applicant is the generator of all the hazardous waste which will be stored, treated, disposed of, or used at that facility.
- (10) The names and addresses of all persons in the field of hazardous waste management, including transportation, doing business in the United States, in which the person applying for a license or in which any officer, director, or partner of said person, or in which any key staff individual of said person, holds an equity interest, directly or indirectly.
- (11) A listing and explanation of all past and pending criminal convictions, criminal indictments, civil penalties, notices of violation, administrative orders, and license revocations and suspensions issued or obtained by any State or Federal authority citing a violation of any statute, regulation, or court order relating to hazardous waste management or transportation, and other related environmental or public health statutes or regulations, or any crime involving moral turpitude by the person applying for a license or by an officer, director, or partner, or any person named in 310 CMR 30.803(9) covering a five year period prior to the date of receipt of the application by the Department.
- (12) A listing, by docket number and court, of all past and pending civil suits relating to the applicant's hazardous waste management or transportation operations or activities.

30.803: continued

(13) The certification required by M.G.L. c. 62C; § 49A(a).

(14) The following statement, which shall be separately signed by the person or persons listed in 310 CMR 30.807:

While this application is pending, and while any license issued pursuant to this application remains in effect, [insert name of applicant] hereby authorizes personnel or authorized agents of the Department, or authorized EPA representatives, to, without a warrant,

(a) enter [insert name of applicant]'s premises at all reasonable times for the purpose of investigating, sampling, or inspecting any records, condition, equipment, practice, or property relating to activities subject to M.G.L. c. 21C or RCRA;

(b) enter [insert name of applicant]'s premises at any time for the purpose of protecting public health, safety, or welfare, or to prevent damage to the environment;

(c) at all reasonable times have access to and copy all of [insert name of applicant]'s records that are relevant to this application or any license issued pursuant to this application.

30.804: Additional Requirements for Facility License Applications

Each facility license application shall state whether the facility is a new facility or an existing facility, whether the application is a first or revised application, and shall include at least the following additional information. The extent of such information, and of any additional information that may be requested by the Department, shall be determined by the Department on a case-by-case basis, depending upon the specifics of the proposed facility or activity and its location.

(1) The names and qualifications of the emergency coordinator and all persons who at any time may be placed in charge of facility operations.

(2) The names and qualifications of key management personnel at the hazardous waste facility.

(3) A U.S.G.S. topographic map showing the location of the site.

(4) Two sets of maps, of which:

(a) One set shall show a distance of 1000 feet around the facility, shall be at a scale of 2.5 cm. equal to not more than 61.0 meters unless specified otherwise by 310 CMR 30.804(19)(k)3. or M.G.L. c. 21C, and shall include, but not be limited to:

1. topographic contours sufficient to clearly show the pattern of water flow in the vicinity of and from each operational unit in the facility;
2. map scale and date;
3. legal boundaries of the site;
4. geology of the site area;
5. groundwater locations;
6. surface water locations;
7. location of residences;
8. roads and access control;
9. wells;
10. 100-year flood elevations; and
11. seismic data, as may be required by the Department.

(b) The other set shall show all aspects of the proposed facility and associated works, including landscaping.

(c) The Department may require that a hydrogeologic study be submitted to the Department.

(5) A description of physical and chemical analyses which the applicant intends to use in treating, storing, using, or disposing of hazardous waste and hazardous debris in compliance with 310 CMR 30.600.

30.804: continued

- (6) The general waste analysis plan required by 310 CMR 30.513.
- (7) The security plan required by 310 CMR 30.514, including any demonstration which the applicant wishes to make pursuant to 310 CMR 30.514(2).
- (8) The inspection plan required by 310 CMR 30.515.
- (9) The personnel training plan required by 310 CMR 30.516.
- (10) The contingency plans and emergency procedures required by 310 CMR 30.520 through 30.524, including any justification for the determination referred to in 310 CMR 30.524(2).
- (11) Detailed engineering plans and specifications of the hazardous waste facility including, without limitation, on-site traffic pattern diagrams, on-site traffic volume and control data, on-site access road surfacing and load-bearing capacity information, and designation of traffic-control signals and estimates of traffic volume.
- (12) The closure plan required by 310 CMR 30.583.
- (13) The post-closure plan required by 310 CMR 30.593, if applicable.
- (14) All meteorological data relevant to the facility, including prevailing winds, as may be required by the Department.
- (15) Data regarding land subject to flooding as specified in 310 CMR 30.701.
- (16) A description of how the applicant intends to meet the financial responsibility requirements of 310 CMR 30.900.
- (17) If the owner or operator of the facility is not the owner of the site on which, or the buildings in which, the proposed activity will take place, a copy of the lease(s) or other written agreement(s) between the owner or operator and the owner of the site or building(s).
- (18) For each facility that stores, treats or disposes of hazardous waste in a surface impoundment:
 - (a) A list of all hazardous wastes placed or to be placed in each surface impoundment.
 - (b) Detailed plans and an engineering report describing how the surface impoundment is or shall be designed, constructed, operated and maintained to meet the requirements of 310 CMR 30.612, including a description of:
 1. The liner system, including the leak detection, collection and removal system, and for each new impoundment, the elevation of the probable high groundwater level;
 2. Measures for prevention of overtopping and the maintenance of freeboard;
 3. The means to shut off flow into the impoundment in the event of an emergency;
 4. Measures for diversion of run-on from the impoundment; and
 5. The design of the dikes and measures for maintaining their structural integrity.
 - (c) If applicable, a demonstration of waste/liner compatibility in compliance with 310 CMR 30.614(6).
 - (d) A description of how each surface impoundment, including the liner and cover systems and appurtenances for control of overtopping, shall be inspected in order to meet the requirements of 310 CMR 30.614(1) and (3). This information shall be included in the inspection plan submitted pursuant to 310 CMR 30.804(8).
 - (e) The owner or operator shall submit a statement by an independent Massachusetts registered professional engineer that he will provide a certification, in accordance with 310 CMR 30.614(2), upon completion of the liner system in accordance with 310 CMR 30.614(1).

30.804: continued

- (f) A certification by an independent Massachusetts registered professional engineer which attests to the structural integrity of each dike as required by 310 CMR 30.614(4). For each new unit, the owner or operator shall submit a statement by an independent Massachusetts registered professional engineer that he will provide such a certification upon completion of construction in compliance with the plans and specifications.
 - (g) A description and listing of all procedures and equipment used to clean and/or expose the liner surface of the impoundment.
 - (h) A description of the procedure to be used for removing a surface impoundment from service, as required pursuant to 310 CMR 30.615(2) and (3). This information shall be included in the contingency plan submitted pursuant to 310 CMR 30.804(10).
 - (i) If ignitable or reactive wastes are to be placed in a surface impoundment, an explanation of how 310 CMR 30.616(1) and (2) shall be complied with.
 - (j) If incompatible hazardous wastes or materials incompatible with hazardous waste will be placed in a surface impoundment, an explanation of how 310 CMR 30.616(3) shall be complied with.
 - (k) A description of how hazardous waste residues and contaminated materials will be removed from the unit at closure, as required pursuant to 310 CMR 30.617(1) or 30.617(2)(a), as applicable.
 - (l) For existing impoundments from which the owner or operator does not intend to remove all hazardous waste residues and contaminated materials at closure, a justification demonstrating that it is impracticable to do so. For any wastes not to be removed from the unit upon closure, the owner or operator shall submit detailed plans and an engineering report describing how 310 CMR 30.617(2)(b) and (4) shall be complied with. This information shall be included in the closure plan and the post-closure plan submitted pursuant to 310 CMR 30.804(12) and 30.804(13).
 - (m) If polyhalogenated aromatic hydrocarbons are to be placed in a surface impoundment, a management plan for such placement pursuant to 310 CMR 30.616(5).
 - (n) Information, reasonably ascertainable by the owner or operator, on the potential for the public to be exposed to hazardous wastes or hazardous constituents through releases related to the unit. At a minimum such information shall address:
 - 1. Reasonably foreseeable potential releases from both normal operations and accidents at the unit, including releases associated with transportation to or from the unit;
 - 2. The potential pathways of human exposure to hazardous wastes or constituents resulting from the releases described in 310 CMR 30.804(18)(n)1.; and
 - 3. The potential magnitude and nature of the human exposure resulting from such releases.
- (19) For each facility that disposes of hazardous waste in a landfill:
- (a) A list of all hazardous wastes to be placed in each landfill or landfill cell.
 - (b) Detailed plans and an engineering report describing how the landfill shall be designed, constructed, operated and maintained to comply with the requirements of 310 CMR 30.622, including a description of:
 - 1. The location of the probable high groundwater level in relation to the landfill liners;
 - 2. The design of the double liner system, including the leak detection, collection and removal system between the liners and the leachate collection and removal system above the liners;
 - 3. The foundation or base for the liners;
 - 4. Measures for control of run-on;
 - 5. Measures for control of run-off;
 - 6. How collection and holding facilities associated with run-on and run-off control systems will be managed;
 - 7. Measures for control of wind dispersal of particulate matter, where applicable;
 - 8. Any gas migration and emission control systems used at the facility; and
 - 9. Any leachate treatment and/or disposal systems at the facility site.

30.804: continued

- (c) A demonstration of waste/liner compatibility in compliance with 310 CMR 30.623.
- (d) A description of how each landfill, including the liner and cover systems, shall be inspected in order to meet the requirements of 310 CMR 30.624(1) and (3). This information shall be included in the inspection plan submitted pursuant to 310 CMR 30.804(8).
- (e) A map which meets the requirements of 310 CMR 30.626.
- (f) If incompatible wastes are to be landfilled, an explanation of how 310 CMR 30.628(2) shall be complied with.
- (g) If containers of hazardous waste are to be landfilled, a description of how 310 CMR 30.629 and 30.630 shall be complied with;
- (h) A copy of the stabilization/solidification plan required pursuant to 310 CMR 30.632.
- (i) Detailed plans and an engineering report describing the final cover which shall be applied to each landfill or landfill cell at closure in compliance with 310 CMR 30.633(1), and a description of how each landfill shall be maintained and monitored after closure in compliance with 310 CMR 30.633(2). This information shall be included in the closure and post-closure plans submitted pursuant to 310 CMR 30.804(12) and (13).
- (j) An indication of the maximum depth of fill of wastes for any portion of the landfill.
- (k) Detailed design drawings, profiles, and maps of the landfill and surrounding geology and hydrology showing the depth to the uppermost aquifer beneath the facility, topographic contours, and a characterization of consolidated and unconsolidated deposits in the vicinity of the site. A detailed description of the hydrology and geology shall accompany the drawings and maps, including:
 - 1. A listing of all pertinent published and open file text material and mapping available from the Department, the United States Geological Survey, the Soil Conservation Service, the Massachusetts Water Resources Commission and other agencies. Text material and mapping from such public sources relied upon in preparing the description shall be referenced and that which was not relied upon shall be discussed with reference to the reasons it was not used. Any other published or unpublished text material or mapping used in preparing the description shall also be referenced.
 - 2. The logs of borings, test pits and wells taken to establish or improve the understanding of the geology and the hydrology of the area of the waste disposal activity and the location of all such borings, wells, and test pits established by field survey.
 - 3. A detailed set of maps, drawn to a scale of 100 feet to one inch, and profiles of the disposal site and surrounding area including, but not limited to, the names and locations of all streams (intermittent or perennial), ponds and groundwater systems. All wells supplying public water systems and all existing wells shall be shown on the map.
 - 4. A description of any change in topographic contours, consolidated rock profiles, groundwater profiles and groundwater flow that will result from the construction or operation of the facility.
 - 5. A characterization of the consolidated and unconsolidated materials in the site vicinity with regard to: type of material, grain size distribution, permeability, porosity, weathering (of consolidated rock), fracturing (of consolidated rock and clay), fault zones (of consolidated rock) and swelling (of clay).
 - 6. A description, including maps and profiles, of the groundwater flow system as shown on a flow net.
 - 7. A report describing the present quality of the groundwater and surface waters in the vicinity of the proposed facility, as determined by chemical analyses, and of any groundwater and surface waters which may receive discharge from the facility in the event of a release of hazardous constituents from the facility.
 - 8. Information demonstrating how the facility shall be in compliance with 310 CMR 30.702 through 30.704.
- (l) If polyhalogenated aromatic hydrocarbons are to be placed in a landfill, a management plan for such placement pursuant to 310 CMR 30.628(3).
- (m) Any other information which the Department deems necessary to ensure compliance with any of the provisions of 310 CMR 30.620.

30.804: continued

- (n) Information, reasonably ascertainable by the owner or operator, on the potential for the public to be exposed to hazardous wastes or hazardous constituents through releases related to the unit. At a minimum such information shall address:
1. Reasonably foreseeable potential releases from both normal operations and accidents at the unit, including releases associated with transportation to or from the unit;
 2. The potential pathways of human exposure to hazardous wastes or constituents resulting from the releases described in 310 CMR 30.804(19)(n)1.; and
 3. The potential magnitude and nature of the human exposure resulting from such releases.
- (20) For facilities that store or treat hazardous waste in waste piles:
- (a) A list of all hazardous wastes placed or to be placed in each waste pile.
 - (b) If an exemption is sought from the liner requirements of 310 CMR 30.641 and the groundwater protection requirements of 310 CMR 30.660, an explanation of how the requirements of 310 CMR 30.640(4) shall be complied with.
 - (c) Detailed plans and an engineering report describing how the pile is or will be designed, constructed, operated and maintained to meet the requirements of 310 CMR 30.641, including a description of:
 1. The liner system, including its relationship to the probable high groundwater level;
 2. The leachate collection and removal system;
 3. Measures for control of run-on;
 4. Measures for control of run-off;
 5. How collection and holding units associated with run-on and run-off control systems will be managed; and
 6. Measures for control of wind dispersal of particulate matter, where applicable;
 - (d) Detailed plans and an engineering report describing how the requirements of 310 CMR 30.642(2) shall be complied with, if an exemption from the inspection requirements of 310 CMR 30.643 is sought, as provided in 310 CMR 30.642, including an explanation of why it is impracticable to meet the inspection requirements of 310 CMR 30.643.
 - (e) Unless an exemption is being sought pursuant to 310 CMR 30.642, a description of how 310 CMR 30.643 shall be complied with.
 - (f) A description of how each waste pile, including the liner and appurtenances for control of run-on and run-off, shall be inspected in order to meet the requirements of 310 CMR 30.644(1) and 30.644(2). This information shall be included in the inspection plan submitted pursuant to 310 CMR 30.804(8).
 - (g) A demonstration of waste/liner compatibility in compliance with 310 CMR 30.645.
 - (h) If treatment is carried out on or in the pile, details of the process and equipment used, and the nature and quality of the residuals.
 - (i) If ignitable or reactive wastes are placed or to be placed in the pile, an explanation of how the requirements of 310 CMR 30.646 shall be complied with.
 - (j) If incompatible wastes, or materials incompatible with hazardous waste, will be placed in the waste pile, an explanation of how 310 CMR 30.647 shall be complied with.
 - (k) A description of how hazardous waste residues and contaminated materials shall be removed from the waste pile at closure, as required pursuant to 310 CMR 30.649(1).
 - (l) If polyhalogenated aromatic hydrocarbons are to be placed in a waste pile, a management plan for such placement pursuant to 310 CMR 30.646(4).
- (21) For land treatment demonstrations pursuant to 310 CMR 30.653:
- (a) A description of plans to conduct a land treatment demonstration required pursuant to 310 CMR 30.653, including a description of:
 1. The hazardous wastes for which the demonstration will be made and the potential hazardous constituents in the wastes;
 2. The data sources to be used to make the demonstration (*e.g.*, literature, laboratory data, field data, operating data);

30.804: continued

3. Any specific laboratory or field test that will be conducted, including:
 - a. the type of test (*e.g.*, column leaching, degradation);
 - b. materials and methods, including analytical procedures;
 - c. expected time for completion; and
 - d. characteristics of the unit that will be simulated in the demonstration, including treatment zone characteristics, climatic conditions, and operating practices;
- (b) A description of the proposed land treatment program, as required pursuant to 310 CMR 30.652, including a description of:
 1. The hazardous wastes to be land treated;
 2. Design measures and operating practices necessary to maximize treatment in compliance with 310 CMR 30.654(2) and 30.658, including:
 - a. Waste application method and rate;
 - b. Measures to control soil pH;
 - c. Enhancement of microbial or chemical reactions;
 - d. Control of moisture content; and
 - e. Treatment zone capacity;
 3. Provisions for unsaturated zone monitoring, including:
 - a. Sampling equipment, procedures, and frequency;
 - b. Procedures for selecting sampling locations;
 - c. Analytical procedures;
 - d. Chain-of-custody control;
 - e. Procedures for establishing background values;
 - f. Statistical methods for interpreting results; and
 - g. The justification for any hazardous constituents recommended for selection as principal hazardous constituents, in accordance with the criteria for such selection in 310 CMR 30.655(1);
 4. A list of hazardous constituents reasonably expected to be in, or derived from, the wastes to be land treated, based on waste analysis performed pursuant to 310 CMR 30.513; and
 5. The proposed dimensions of the treatment zone.
- (c) A description of how the unit is or will be designed, constructed, operated and maintained in order to meet the requirements of 310 CMR 30.654, including a description of:
 1. Measures for control of run-on;
 2. Measures for collection and control of run-off;
 3. Measures for minimization of run-off of hazardous constituents from the treatment zone;
 4. How collection and holding facilities associated with run-on and run-off control systems will be managed;
 5. Periodic inspection of the unit; this information shall be included in the inspection plan submitted pursuant to 310 CMR 30.804(8); and
 6. Measures for control of wind dispersal of particulate matter, if applicable.
- (d) If ignitable or reactive wastes will be placed in or on the land treatment zone, an explanation of how the requirements of 310 CMR 30.657(1) shall be complied with.
- (e) If incompatible wastes, or materials incompatible with hazardous waste, will be placed in or on the same treatment zone, an explanation of how 310 CMR 30.657(2) shall be complied with.
- (f) A description of the treatment zone soil and treatment demonstration zone soil including, but not limited to, soil texture, pH and the cation exchange capacity expressed in milliequivalents per 100 grams of soil.
- (g) A prediction and approximate quantification of any hazardous waste decomposition by-products expected to be produced as a result of the land treatment process or the land treatment demonstration process.
- (h) A description of the quantities and the destination of all soils or vegetation that are to be removed from the site.
- (i) The results of a hydrogeologic investigation of the site as specified in 310 CMR 30.804(19)(k) for landfills.

30.804: continued

(j) If polyhalogenated aromatic hydrocarbons are to be placed in a land treatment facility, a management plan for such placement pursuant to 310 CMR 30.657(4).

(22) For facilities that use land treatment to dispose of hazardous waste:

(a) The results of the land treatment demonstration conducted pursuant to 310 CMR 30.653;
 (b) The information required by 310 CMR 30.804(21)(b) through (i), including all changes made to reflect the results of the land treatment demonstration.

(c) A description of the vegetative cover to be applied to closed portions of the facility, and a plan for maintaining such cover during the post-closure care period, as required pursuant to 310 CMR 30.659(1)(h) and (3)(b). This information shall be included in the closure plan submitted pursuant to 310 CMR 30.804(12) and, where applicable, the post-closure plan submitted pursuant to 310 CMR 30.804(13).

(23) The following additional information, regarding protection of groundwater, from owners or operators of hazardous waste surface impoundments, piles, land-treatment units, and landfills, except as otherwise provided in 310 CMR 30.661(2):

(a) A summary of the groundwater monitoring data obtained during the interim-status period pursuant to 40 CFR 265.90 through 265.94, as incorporated by reference with modifications at 310 CMR 30.099(6), where applicable.

(b) Identification of the uppermost aquifer and aquifers hydraulically interconnected beneath the facility property, including groundwater flow direction and rate and the basis for such identification (*i.e.*, the information obtained from hydrogeologic investigations of the facility area).

(c) On the map required pursuant to 310 CMR 30.804(4)(a), a delineation of the waste management area, the property boundary, the proposed "point of compliance" as described in 310 CMR 30.669, the proposed location of groundwater monitoring wells as required pursuant to 310 CMR 30.663 and, to the extent possible, the information required by 310 CMR 30.804(23)(b).

(d) A description of any plume of contamination that has entered the groundwater from a regulated unit at the time that the application is submitted. This description shall:

1. Delineate the extent of the plume on the topographic map required pursuant to 310 CMR 30.804(4)(a); and
2. Identify the concentration of each constituent listed in 310 CMR 30.161 throughout the plume or identify the maximum concentrations of each such constituent.

(e) Detailed plans and an engineering report describing the proposed groundwater monitoring program to be implemented to meet the requirements of 310 CMR 30.663.

(f) If the presence of hazardous constituents has not been detected in the groundwater at the time the license application is submitted to the Department, the owner or operator shall submit sufficient information, supporting data, and analyses to establish a detection monitoring program which meets the requirements of 310 CMR 30.664, including:

1. A proposed list of indicator parameters, waste constituents or reaction products that will provide a reliable indication of the presence of hazardous constituents in the groundwater;
2. A proposed groundwater monitoring system;
3. Background values for each proposed monitoring parameter or constituent, or procedures to calculate such values; and
4. A description of proposed sampling, analysis and statistical comparison procedures to be utilized in evaluating groundwater monitoring data.

(g) If the presence of hazardous constituents has been detected in the groundwater at the point of compliance at the time the license application is submitted to the Department, the owner or operator shall submit sufficient information, supporting data and analyses to establish a compliance monitoring program which meets the requirements of 310 CMR 30.671. The owner or operator shall also submit an engineering feasibility plan for a corrective action program necessary to meet the requirements of 310 CMR 30.672, except as provided in 310 CMR 30.664(8)(e). To demonstrate compliance with 310 CMR 30.671, the owner or operator shall submit the following:

30.804: continued

1. A description of the wastes previously handled at the facility;
 2. A characterization of the contaminated groundwater, including concentrations of hazardous constituents;
 3. A list of hazardous constituents for which compliance monitoring shall be undertaken in compliance with 310 CMR 30.663 and 30.671;
 4. Proposed concentration limits for each hazardous constituent, based on the criteria set forth in 310 CMR 30.667(1), including a justification for establishing any alternate concentration limit;
 5. Detailed plans and an engineering report describing the proposed groundwater monitoring system, in compliance with the requirements of 310 CMR 30.663; and
 6. A description of proposed sampling, analysis and statistical comparison procedures to be utilized in evaluating groundwater monitoring data.
- (h) If hazardous constituents have been detected in the groundwater in concentrations exceeding the concentration limits established pursuant to 310 CMR 30.668, or if groundwater monitoring conducted pursuant to 40 CFR 265.90 through 265.94 at the time the license application is submitted to the Department indicates the presence in groundwater of hazardous constituents from the facility in concentrations exceeding background concentrations, the owner or operator shall submit sufficient information, supporting data, and analyses to establish a corrective action program which meets the requirements of 310 CMR 30.672. However, an owner or operator is not required to submit information to establish a corrective action program if he persuades the Department that alternate concentration limits will protect human health and the environment, taking into consideration the criteria listed in 310 CMR 30.667(2). Such an owner or operator shall instead submit sufficient information to establish a compliance monitoring program which meets the requirements of 310 CMR 30.671 and 30.804(23)(g). To demonstrate compliance with 310 CMR 30.672, the owner or operator shall submit, at a minimum, the following:
1. A characterization of the contaminated groundwater, including concentrations of hazardous constituents;
 2. The concentration limit for each hazardous constituent found in the groundwater as set forth in 310 CMR 30.667;
 3. Detailed plans and an engineering report describing the corrective action to be taken; and
 4. A description of how the groundwater monitoring program will assess the adequacy of the corrective action.
- (24) For facilities that store hazardous waste in containers:
- (a) A description of the containment system to demonstrate compliance with 310 CMR 30.687, showing at least the following:
1. Basic design parameters, dimensions, and materials of construction;
 2. How the design promotes drainage or how containers are kept from contact with standing liquids in the containment system;
 3. The capacity of the containment system relative to the number and volume of containers to be stored;
 4. Provisions for preventing or managing run-on; and
 5. How accumulated liquids shall be analyzed and removed to prevent overflow.
- (b) For each storage area that stores containers holding wastes that do not contain free liquid, a demonstration of how 310 CMR 30.687(3) will be complied with, including:
1. Test procedures and results or other documentation or information showing that the wastes do not contain free liquid; and
 2. A description of how each storage area is designed or operated to drain and remove liquid, or how containers are kept from contact with standing liquid.
- (c) Sketches, drawings, data, or a description of procedures demonstrating compliance with 310 CMR 30.688: *Special Requirements for Ignitable, Reactive, and Incompatible Hazardous Wastes, and Hazardous Wastes That Are Polyhalogenated Aromatic Hydrocarbons.*

30.804: continued

(25) For facilities that store or treat hazardous waste in tanks, a description of the design and operating procedures to demonstrate compliance with 310 CMR 30.692, 30.693, 30.694, 30.695, and 30.698, including:

- (a) A written assessment that is reviewed and certified by a Massachusetts registered professional engineer as to the structural integrity and suitability for handling hazardous waste of each tank system, as required by 310 CMR 30.692 and 30.693. This assessment shall include an explanation of the inventory control program and the statistical test required by 310 CMR 30.692(5)(c);
- (b) Tank dimensions, capacity and shell thickness;
- (c) A description of feed systems, safety cutoff, bypass systems, pressure controls (e.g., vents), and emission controls;
- (d) A diagram of piping, instrumentation, and process flow for each tank system;
- (e) References to design standards and other available information used in the design and construction of the tank;
- (f) A description of design specifications including identification of construction materials, lining materials, and equipment used to provide external corrosion protection, as required under 310 CMR 30.693(1)(c)2.;
- (g) For new tank systems, a detailed description of how the tank system(s) will be installed in compliance with 310 CMR 30.693(3) through (6);
- (h) Detailed plans and a description of how the secondary containment system is or will be designed, constructed, and operated to meet the requirements of 310 CMR 30.694;
- (i) For new underground tanks, the relationship between the probable high-groundwater level (*see* 310 CMR 30.675) and the bottom of the tank, and a description of how 310 CMR 30.693(9) shall be complied with;
- (j) A description of the procedures for handling incompatible, ignitable, or reactive wastes, or wastes that are polyhalogenated aromatic hydrocarbons, including the use of buffer zones.
- (k) A statement of the capacity of the containment system and of the design capacity of each of the tank(s) within the system, and a description of the methods to be used to prevent precipitation and run-on from entering the containment system; and
- (l) A description of the methods and practices to be used to prevent and detect leaks, spills, and other releases from each of the tank(s) within the containment system.

(26) For land disposal units or facilities that have been closed, documentation that notices required pursuant to 310 CMR 30.040 and 30.594 have been recorded.

(27) For facilities that treat, store, or dispose of hazardous waste in miscellaneous units, except as otherwise provided in 310 CMR 30.606:

- (a) A detailed description of the unit being used or proposed for use, including the following:
 1. Physical characteristics, materials of construction, and dimensions of the unit;
 2. Detailed plans and engineering reports describing how the unit will be located, designed, constructed, operated, maintained, monitored, inspected, and closed to comply with the requirements set forth or referred to in 310 CMR 30.606(2) and (3); and
 3. For disposal units, a detailed description of the plans to comply with the post-closure requirements of 310 CMR 30.606(4).
- (b) Detailed hydrologic, geologic, and meteorologic assessments and land-use maps for the region surrounding the site that address, and that are sufficient to persuade the Department of, the unit's compliance with 310 CMR 30.606(2). If the applicant persuades the Department that 310 CMR 30.606(2) will be complied with, preliminary hydrologic, geologic, and meteorologic assessments will suffice.
- (c) Information on the potential pathways of exposure of humans or environmental receptors to hazardous waste or hazardous constituents and on the potential magnitude and nature of such exposures.
- (d) For any treatment unit, a report on a demonstration of the effectiveness of the treatment, based on laboratory or field data.
- (e) Any additional information determined by the Department to be necessary for evaluation of compliance of the unit with the environmental performance standards set forth or referred to in 310 CMR 30.606(2).

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.804: continued

(28) For land disposal facilities, if a case-by-case extension has been approved by EPA pursuant to the federal land disposal restrictions (*see* 40 CFR 268.5) or a petition has been approved pursuant to the federal land disposal restrictions (*see* 40 CFR 268.6), a copy of the notice of approval for the extension or petition if required.

(29) For facilities subject to corrective action requirements under 310 CMR 30.602(9) or (10), the information required by 40 CFR 270.14(d) (July 1, 2005). For facilities being issued post closure licenses/permits or orders, the information required by 40 CFR 270.28 (July 1, 2005).

30.805: Additional Requirements for Transport License Applications

All hazardous waste transport license applications shall include at least the following additional information, and any other information that may be requested by the Department.

- (1) A certification, issued by the Department of Public Utilities, that the applicant has conformed to all of the requirements of M.G.L. c. 159B.
- (2) A plan for cleaning all vehicles used in transporting hazardous waste.
- (3) Evidence that all employees handling hazardous waste in Massachusetts are bondable for the handling and transport of hazardous waste.
- (4) Evidence of financial responsibility as required by 310 CMR 30.410 and 30.411.
- (5) A list of trucks and other vehicles owned or operated by the applicant for the transport of hazardous waste, including the registration number, state of registration, vehicle identification number and model year of each vehicle.
- (6) A description of the methods, and a list of equipment carried on the vehicles, to be used for handling transportation-related spills of hazardous wastes.
- (7) Information indicating the types and physical states of hazardous waste to be transported and the approximate annual quantity of hazardous waste to be transported.
- (8) Written documentation that the applicant has furnished a copy of the application to the local board of health (*i.e.*, in the Massachusetts town/city of the applicant's office address where transportation related activities take place and license records are maintained) at the time the application was submitted to the Department. Such documentation includes, but is not limited to, a certified mail receipt. Applicants with no office in Massachusetts (as defined above) are exempt from 310 CMR 30.805(8).

30.806: Record Keeping

Every person who applies for and obtains a hazardous waste license shall keep records of all data used to complete the license application for at least three years from the date the application is signed. This period may be extended by order of the Department.

30.807: Signatories

- (1) All license applications and all final licenses issued by the Department shall be signed as follows:
 - (a) If the applicant is a corporation, by an individual who is a responsible corporate officer of the corporation and who is authorized by the corporation, in accordance with corporate procedures, to sign such documents on behalf of the corporation. The corporate seal shall be included. As used in 310 CMR 30.807, the term "responsible corporate officer" shall mean a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation.
 - (b) If the applicant is a partnership, by a general partner.
 - (c) If the applicant is a sole proprietorship, by the proprietor.
 - (d) If the applicant is a municipality or other public agency, by a principal executive officer or ranking elected official who is empowered to enter into contracts on behalf of the municipality or public agency.

30.807: continued

(2) When a facility is owned by one person and operated by another person, both persons shall be considered applicants and both shall sign the application and the final license issued by the Department.

(3) Every person signing a hazardous waste license application and the final license issued by the Department shall do so in compliance with 310 CMR 30.006 and 30.009.

30.810: Requirements For Obtaining and Keeping a License

310 CMR 30.811 through 30.813 set forth requirements and standards which must be met by every person who wishes to obtain and keep in effect any hazardous waste license pursuant to 310 CMR 30.000.

30.811: Burden Of Persuasion

In every proceeding, the burden shall be on the applicant for, or the holder of, a license to persuade the Department that the applicant is competent with respect to the proposed activity, and that if the Department grants a license, or allows a license to remain in effect, the applicant will continue to be otherwise in compliance with M.G.L. c. 21C, and 310 CMR 30.000. The Department shall grant a license, and shall allow a license to remain in effect, only to the extent, and only while, the Department is persuaded that such action is, and will continue to be, in compliance with M.G.L. c. 21C, and 310 CMR 30.000.

30.812: Compliance With Standards

A license authorizing the collection, transport, storage, treatment, use, or disposal of hazardous waste shall be granted, and shall be allowed to remain in effect, only to the extent, and only while, the Department is persuaded that the applicant for or holder of the license is in compliance, and will be in compliance routinely and on a continuing basis, with all standards and requirements set forth in 310 CMR 30.000 and M.G.L. c. 21C for such collection, transport, storage, treatment, use or disposal.

30.813: Competence

In determining whether or not an applicant or licensee is competent with respect to the licensed activity, the Department may consider, among other things:

(1) The record, history and expertise of the applicant or licensee, and any officer, trustee, director, or partner thereof, and any key staff individual thereof, in the field of hazardous waste management and other related environmental and public health matters, including any pertinent information which may be presented to the Department;

(2) Whether all required information has been submitted truthfully, accurately, and completely and on time;

(3) Whether the applicant or licensee, or any officer, director, trustee, or partner thereof, or any key staff individual thereof, has been convicted of a crime involving moral turpitude;

(4) Whether the applicant or licensee, or any officer, director, trustee, or partner thereof, or any key staff individual thereof, has ever been subject to any criminal prosecution, civil penalty, civil action in any court, any notice of violation, administrative order, or license suspension or revocation issued by any State or Federal authority citing a violation of any statute, regulation, or court order relating to hazardous waste management or transportation, or other related environmental or public health statutes or regulations;

(5) If the applicant or licensee is required by 310 CMR 30.803(9) to disclose the names and addresses of all individuals or other persons directly or indirectly holding greater than 5% equity in, or more than 5% liability of, the applicant, the Department may consider, with respect to those persons and individuals, the matters listed in 310 CMR 30.813(1) through (4).

30.814: Additional Requirements for Prevention of Air Pollution

Each hazardous waste facility shall be in compliance with all applicable requirements of 310 CMR 7.00 through 7.99.

30.820: License Conditions

310 CMR 30.820 through 30.829 set forth conditions which apply to all licenses, regardless of whether or not such conditions are written into the license. Licensees shall comply with such conditions whether or not they are written into the license. Failure to comply shall be grounds for an enforcement action, including, without limitation, license suspension or revocation.

30.821: License Expiration

(1) Unless otherwise provided in 310 CMR 30.821, or in a written order by the Department, every license shall expire at the end of its term.

(2) Any license which is scheduled to expire shall be automatically extended if, not less than 30 nor more than 90 days before the scheduled expiration date, the licensee files an application for a new license. This automatic extension shall apply only to that activity which is both authorized by the existing license and included in the application for a new license. Any activity which is authorized by the existing license but not included in the application for a new license shall be deemed not to be licensed after the expiration date on the license. This automatic extension shall remain in effect until:

- (a) The Department issues a new license to the licensee and all opportunities for adjudicatory hearing before the Department have been exhausted, in which case the new license shall supersede the extended license; or
- (b) The Department denies the application for a new license and all opportunities for adjudicatory hearing before the Department have been exhausted, in which case the extended license shall be deemed expired; or
- (c) The Department suspends or revokes the extended license; or
- (d) The Department in writing orders otherwise, in which case the order shall be controlling.

(3) Any license which is scheduled to expire may be extended in writing by the Department when the Department determines such extension would prevent injustice to the licensee and would not harm public health, safety, or welfare, or the environment. Such an extension may be granted and allowed to remain in effect only while an application is pending before the Department for the same activity.

(4) If a license is extended pursuant to 310 CMR 30.831(2) or (3), the terms and conditions of the license shall remain in full force and effect, unless the Department in writing orders otherwise, in which case the order shall be controlling.

30.822: General Conditions

The following conditions apply to all licenses:

(1) Duty to Comply. The licensee shall comply at all times with the terms and conditions of the license, 310 CMR 30.000, M.G.L. c. 21C, and all other applicable State and Federal statutes and regulations.

(2) Duty to Maintain. The licensee shall always properly operate and maintain all facilities, treatment and control systems, vehicles, and equipment which the licensee installs or uses.

(3) Duty to Halt or Reduce Activity. The licensee shall halt or reduce activity whenever necessary to maintain compliance with the license conditions, or to prevent an actual or potential threat to the public health, safety, or welfare, or to the environment.

30.822: continued

- (4) Duty to Mitigate. The licensee shall remedy and shall act to prevent all potential and actual adverse impacts to persons and the environment resulting from non-compliance with the terms and conditions of the license. The licensee shall repair at his own expense all damages caused by such non-compliance.
- (5) Duty to Provide Information. The licensee shall furnish to the Department, within a reasonable time, any information which the Department may request and which is deemed by the Department to be relevant in determining whether cause exists to modify, revoke, or suspend a license, or to determine whether the licensee is complying with the terms and conditions of the license.
- (6) Entries and Inspections. The licensee shall allow personnel or authorized agents of the Department or authorized EPA representatives, upon presentation of credentials or other documents as may be required by law, to, without a warrant:
- (a) Enter at all reasonable times any premises, public or private, for the purpose of investigating, sampling, or inspecting any records, condition, equipment, practice, or property relating to activities subject to M.G.L. c. 21C or RCRA;
 - (b) Enter at any time such premises for the purpose of protecting the public health, safety, or welfare, or to prevent damage to the environment;
 - (c) Have access to and copy at all reasonable times all records that are required to be kept pursuant to the conditions of the license, and all other records relevant to the licensee's hazardous waste activities.
- (7) Records. All records and copies of all reports required by 310 CMR 30.000 shall be kept by the licensee for at least three years. This period shall be extended automatically for the duration of any enforcement action. This period may be extended by order of the Department. All record-keeping shall be in compliance with 310 CMR 30.007.
- (8) Signatory Requirements.
- (a) All reports, and all information requested or ordered by the Department, shall be signed by an individual described in 310 CMR 30.807 or by a duly authorized representative of such individual. An individual is an "authorized representative" only if an individual identified in 310 CMR 30.807 has designated in writing to the Department that such individual is an "authorized representative."
 - (b) Any individual signing a document pursuant to 310 CMR 30.822(8) shall do so in compliance with 310 CMR 30.006 and 30.009.
- (9) Continuing Duty To Inform. The licensee shall have a continuing duty to immediately:
- (a) Correct any incorrect facts in an application.
 - (b) Report or provide to the Department any omitted facts which should have been submitted to the Department at any time.
 - (c) In advance report to the Department each planned change in the licensed facility or activity which may result in non-compliance with a term or condition of the license, except as provided in 310 CMR 30.852.
 - (d) Report to the Department each change in the information listed in 310 CMR 30.803(9), (10), (11), or (12).
- (10) Notification of Bankruptcy. The licensee shall notify the Department by certified mail of the commencement of a voluntary or involuntary proceeding pursuant to Title 11 (Bankruptcy) of the United States Code in which the licensee is named as a debtor within ten days after commencement of the proceeding.

30.823: Additional Conditions of Transport Licenses

The following additional conditions apply to all transport licenses:

- (1) The transporter shall not contract with any subcontractor to perform any of the activities authorized by its transport license.

30.823: continued

(2) The transporter shall ensure that all vehicles which it uses for transporting hazardous waste shall bear prominent markings identifying the vehicle and its owner and operator, and all other markings, including placards, required by statute or regulation.

30.824: Issuance of Transporter License

(1) After the close of the public comment period, the Department shall, by first-class mail, give notice of its final license determination to the applicant and to each person who has submitted written comments, or has otherwise requested notice of the final determination.

(2) A final license determination shall become effective 21 days after the date of the notice of determination given pursuant to 310 CMR 30.824(1), unless a request for adjudicatory hearing is made pursuant to M.G.L. c. 21C, and M.G.L. c. 30A, and 310 CMR 1.00.

30.825: Additional Conditions of Facility Licenses

(1) Compliance With Plans. The owner and operator shall comply with the plans, as approved by the Department, listed in 310 CMR 30.502.

(2) Incident Reporting.

(a) The licensee shall, immediately upon discovering it, orally report to the Department any incident, circumstance, or non-compliance which may endanger public health, safety, or welfare, or the environment. The following shall be included in such report:

1. The name, address, and telephone number of the owner and operator;
2. The name, address, and telephone number of the facility;
3. The date, time, location, and type, of incident;
4. The name, description, and quantity of materials involved;
5. The extent of injuries, if any;
6. An assessment of actual or potential hazards to public health, safety, or welfare, or the environment outside the facility, where this is applicable; and
7. The estimated quantity and disposition of recovered material that resulted from the incident.

(b) The licensee shall also provide a written report to the Department within seven days of the time the licensee becomes aware of the incident, circumstance, or noncompliance. The written report shall contain:

1. A description of the incident, circumstance, or non-compliance and its cause;
2. The exact date(s), time(s), and location(s) of the incident, circumstance, or non-compliance;
3. If the incident, circumstance, or non-compliance has not been corrected, the anticipated time it is expected to continue; and
4. A plan to remedy and prevent recurrence of a similar incident, circumstance, or noncompliance.

(3) Manifest Discrepancy Report. If the licensee discovers a significant discrepancy in a manifest or shipping paper, the licensee shall attempt to reconcile the discrepancy. Within 15 days of receipt of the hazardous waste by the facility, or within 15 days after the licensee first notices the discrepancy if the facility does not receive the hazardous waste during said 15 days, the licensee shall submit to the Department a written report describing the discrepancy and all attempts to reconcile it. A copy of the manifest or shipping paper at issue shall accompany said report.

30.825: continued

(4) Annual Audits. The licensee shall cause to be performed annually a financial audit of the licensee. This audit shall be performed by a certified public accountant ("CPA") according to generally accepted accounting principles. The licensee shall provide a copy of the financial audit to the Department within 30 days of completion by the CPA. Failure to do so shall be a violation of this condition and of 310 CMR 30.000. This provision does not apply to facilities which are licensed solely for the storage, treatment, use, or disposal of hazardous waste at the site of generation thereof if the owner or operator is also the generator.

(5) Monitoring and Record-Keeping. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Records of monitoring information shall include the date, place, and time of sampling or measurement, the person who performed the sampling or measurement, the date the analysis or measurement was performed, the name of the individual who performed the analysis or measurement, the analytical technique(s) or measurement(s) used, and the results of such analysis or measurement. If the monitoring is groundwater monitoring for the purpose of complying with 310 CMR 30.660, the licensee shall maintain records from all groundwater monitoring wells and associated groundwater surface elevations throughout the active life of the facility and, if applicable, throughout the post-closure care period.

30.826: Additional Conditions For Corporations

Every corporate applicant or licensee shall provide the Department with a copy of all records, reports, or other information required to be submitted to the Secretary of the Commonwealth, and shall have a continuing duty to provide the Department with any changes or additions made thereto. Such copies shall include the book and page number assigned by the Secretary of the Commonwealth. This provision does not apply to facilities which are licensed solely for the storage, treatment, use or disposal of hazardous waste at the site of generation thereof if the owner or operator is also the generator.

30.827: License Duration

All licenses shall be for a fixed term of not more than five years, unless sooner revoked or terminated, and shall not be extended by modification except as provided in 310 CMR 30.821.

30.828: Transfer of Licenses

Each license issued pursuant to 310 CMR 30.800 shall be valid only for the person to whom it is issued and may not be transferred. Operation by an owner or operator other than those named in the license shall be in violation of 310 CMR 30.000, and a basis for suspension or revocation of the license, or for other enforcement action.

30.829: Requiring Additional Conditions

All licenses for use, collection, treatment, storage, disposal, or transport shall include additional conditions as may be set by the Department on a case-by-case basis to assure compliance with 310 CMR 30.000 and M.G.L. c. 21C.

30.830: Processing of Applications

30.831: Completeness of Application

(1) A license application shall be deemed complete for the purpose of initiating the review process described in 310 CMR 30.831 through 30.838 when the Department receives the application and determines that all required information has been submitted and all applicable fees have been paid to the Department, provided that the Department may require additional information at any time. The Department shall request such additional information in writing.

30.831: continued

- (2) The Department shall notify the applicant in writing within 60 days of receipt of an application whether the application is complete. If the application is not complete, the Department shall list the information necessary to make the application complete.
- (3) The Department may either deem a license application incomplete or deny a license if an applicant fails or refuses to correct deficiencies in the application.
- (4) For each complete application for a license for a new facility, the Department shall set a project decision schedule estimating dates by which it intends to:
 - (a) Prepare a draft license;
 - (b) Give public notice;
 - (c) Complete the public comment period; and
 - (d) Issue a final license decision.
- (5) The Director may deny a license for the active life of a hazardous waste management facility or unit before receiving a complete application for a license.

30.832: Draft Facility License

- (1) When a facility license application is complete, the Department shall either prepare a draft license or draft denial. A draft license shall include all required conditions, standards, and requirements which are necessary to own and operate the facility and which are in addition to those set forth in 310 CMR 30.820 through 30.829.
- (2) If the Department decides to deny the facility license application, it shall issue a draft denial, the procedures for which shall be the same as for a draft license prepared pursuant to 310 CMR 30.800.
- (3) Each facility license shall be accompanied by a fact sheet briefly describing
 - (a) the facility,
 - (b) the proposed hazardous waste activity at the facility,
 - (c) the reasons for the terms and conditions set forth therein, and
 - (d) reasons why requested alternatives were not accepted.Each facility license and accompanying fact sheet shall be made available for public comment pursuant to 310 CMR 30.833.
- (4) The Department shall send a copy of the draft facility license and of the accompanying fact sheet to the applicant, the local board of health, each person described in 310 CMR 30.833(4)(a)7., and, on request, to any other person.
- (5) A description of the procedures for reaching a final decision on the draft facility license shall accompany the copy of the draft license and shall include:
 - (a) The beginning and ending dates of the comment period and the address where comments will be received;
 - (b) Any other procedures by which the public may participate in the process leading to the final license decision;
 - (c) The relationship, if any, of the application to M.G.L. c. 111 § 150B and M.G.L. c. 21D and regulations thereunder; and
 - (d) The name and telephone number of an individual to contact for additional information.

30.833: Public Notice and Public Comment for Facility License Actions

310 CMR 30.833 applies to facility license applications.

30.833: continued

- (1) The Department shall give public notice of the following:
 - (a) That a facility license application has been tentatively denied;
 - (b) That a draft facility license has been prepared;
 - (c) That a Class 2 or 3 modifications pursuant to 310 CMR 30.852 at a facility has been proposed; and
 - (d) That an informal public hearing on a draft license has been scheduled.
- (2) Public notices may describe more than one license or license action.
- (3) Public notice issued pursuant to 310 CMR 30.833 shall allow at least 45 days for public comment, except for notices pursuant to 310 CMR 30.833(1)(d).
- (4) Public notices pursuant to 310 CMR 30.833, shall be given by the following methods:
 - (a) By mailing notice to:
 1. the applicant;
 2. EPA, c/o Regional Administrator, Region I;
 3. the board of health of the city or town in which the facility is to be located;
 4. the Environmental Monitor, to the extent practicable;
 5. each city or town having jurisdiction over the area in which the facility is proposed to be located;
 6. each State agency having any authority pursuant to State law with respect to the construction and operation of the facility;
 7. each Federal and State agency, including agencies of any affected State other than Massachusetts, with jurisdiction over fish, shellfish, or wildlife resources, coastal zone management plans, or historic preservation; and
 8. persons on a mailing list developed by the Department.
 - (b) By publication, paid for by the applicant, in a daily or weekly newspaper of general circulation within the locality affected by the facility.
 - (c) By broadcasting the notice on radio stations serving the locality affected by the facility.
- (5) All public notices issued pursuant to 310 CMR 30.833 shall, at a minimum, contain the following information:
 - (a) The name and address of the office of the Department processing the license application for which notice is being given;
 - (b) The name and address of the licensee or applicant and, if different, of the facility which is the subject of the application;
 - (c) The name, address, and telephone number of an individual from whom interested persons may obtain further information, including a copy of the draft license or application, and the accompanying fact sheet;
 - (d) A brief description of the required public comment procedures; provided that in the case of a public notice relating to a license modification being proposed pursuant to 310 CMR 30.851, the notice need only describe the proposed modification;
 - (e) Any additional information considered necessary or appropriate, including any other procedures by which a person may request a public hearing or otherwise participate in the process leading to the final license decision; and
 - (f) A tentative schedule for the decision-making process.

30.834: Public Notice of Transport License Actions

310 CMR 30.834 (1), (2), and (5) applies to hazardous waste transporter license applications and 310 CMR 30.834(3), (4), and (5) applies to hazardous waste transporter license modifications.

- (1) The transporter applicant shall publish a "Notice of Application for a Transporter License" in a newspaper with circulation in the Massachusetts town/city of the applicant's office address where transportation-related activities take place and license records are maintained. The notice shall be on a form provided by the Department.
 - (a) The notice must appear in the newspaper within 15 days after the Department signs for receipt of the written application;

30.834: continued

(b) Within 21 days after the Department signs for receipt of the written application, the applicant must provide a copy of the published newspaper notice to the Department and the local (Massachusetts) board of health.

(c) The notice shall provide for a 45-day comment period, beginning on the date of the publication of the notice, during which comments may be submitted to the Department at the address provided in the notice form.

(2) The transporter license application shall be available at the Department's Boston office and, for in-state applicants, at the local board of health for public review and comment for 45 days after the notice publication date.

(3) For changes in office address or parking location address, the transporter license modification applicant shall publish a "Notice of Application for a Transporter License Modification" in a newspaper with circulation in the Massachusetts town/city of the applicant's office address (and proposed office address) where transportation-related activities (e.g. vehicle parking) take place (or are proposed to take place) and license records are maintained (or are proposed to be maintained). Public notice is not required for other types of transporter license modifications, including change in EPA identification number, telephone number, waste code/category, or the following which are not 310 CMR 30.828 license transfers: name changes, stock transfers, or new owners/operators. Public Notice shall be on a form provided by the Department.

(a) The notice must appear in the newspaper within four business days after the Department signs for receipt of the written application;

(b) Within 21 days after the Department signs for receipt of the written application, the applicant must provide a copy of the published newspaper notice to the Department and the local (Massachusetts only) board of health.

(c) The notice shall provide for a 21-day comment period, beginning on the date of the publication of the notice, during which comments may be submitted to the Department at the address provided in the notice form.

(4) The transporter license modification application shall be available to the Department's Boston office for public review and comment for 14 days after the notice publication date.

(5) All public notices issued pursuant to 310 CMR 30.834, shall at a minimum, contain the following information:

(a) The name and address of the office of the Department processing the license application or license modification application for which notice is being given;

(b) The name and address of the licensee or applicant;

(c) A brief description of what is proposed by the applicant, provided that in the case of a public notice of a license modification being proposed pursuant to 310 CMR 30.851, the notice need only describe the proposed modification;

(d) The name, address, and telephone number of an individual from whom interested persons may obtain further information, including a copy of the application;

(e) A brief description of the required public comment procedures; and

(f) Any additional information considered necessary or appropriate, including any other procedures by which a person may participate in the process leading to a final license or license modification determination.

30.835: Written Comments

During the public comment period provided for in 310 CMR 30.833 or 30.834, any interested person may submit written comments on the draft license to the office of the Department processing the license application.

30.836: Extending the Public Comment Period

The Department may extend the public comment period prescribed in 310 CMR 30.833 or 30.834 to allow for issuance of a modified draft license or to give interested persons an opportunity to comment on information or arguments submitted. If the Department gives such an extension, notice thereof shall be given in the manner prescribed in 310 CMR 30.833 or 30.834, whichever is applicable. Such notice shall specify any new issues to be considered.

30.837: Informal Public Hearing for Facility Licenses

310 CMR 30.837 applies to facility license actions.

- (1) If during the comment period or within 15 days of the close of the comment period, pursuant to 310 CMR 30.833, the Department receives written notice requesting an informal public hearing, or if the Department determines on its own that there is significant public interest in a draft license, the Department shall schedule an informal public hearing on the proposed action to give the public an opportunity to present written and oral comment.
- (2) Whenever possible, the Department shall schedule such hearing at a convenient location near the population center nearest the proposed facility or activity. Such notice shall be given in the manner described in 310 CMR 30.833, and shall include:
 - (a) The dates of previous notices relating to the license;
 - (b) The date, time, and place of the informal public hearing;
 - (c) The nature and purpose of the informal public hearing; and
 - (d) A description of how the informal public hearing shall be conducted.
- (3) An informal public hearing concerning a license modification pursuant to 310 CMR 30.851 may be limited by the Department to such modification.
- (4) Any informal public hearing may be scheduled in conjunction with any other public hearing being held in connection with the subject facility or activity.
- (5) The Department shall, when practicable, schedule the informal public hearing to be held within 30 days of receipt of the written request, but in no case sooner than 30 days after the date of the public notice of said hearing.

30.838: Issuance of Facility License

- (1) After the close of the public comment period, or following any informal public hearing, the Department shall, by first-class mail, give notice of the final license determination to the applicant and to each person who has submitted written comments, or has otherwise requested notice of the final license determination.
- (2) A final license determination shall become effective 21 days after the date of the notice of determination given pursuant to 310 CMR 30.838(1), unless a request for adjudicatory hearing is made pursuant to M.G.L. c. 21C, M.G.L. c. 30A, and 310 CMR 1.00.

30.839: Summary Response to Comments

At the time that any license is issued pursuant to 310 CMR 30.838, the Department shall prepare a summary response to comments which shall be available to the public and which shall describe any changes made to the draft license, including the reason(s) for each such change.

30.840: Inspection of New or Modified Facilities

For a new hazardous waste facility, the licensee may not begin treatment, use, storage, or disposal of hazardous waste, and for a facility being modified, the licensee may not treat, store, use, or dispose of hazardous waste in the modified portion of the facility, until:

- (1) The licensee has submitted to the Department, by certified mail or hand delivery, a letter, signed by the owner or operator and by a Massachusetts registered professional engineer, stating that the facility has been constructed or modified in compliance with the license; and
- (2) Either,
 - (a) The Department has inspected the modified or newly constructed facility and has determined in writing that it complies with the conditions of the license, or
 - (b) The Department has determined in writing that no inspection by the Department is required.

30.841: Compliance Schedules in Licenses

When the Department is persuaded that such action is appropriate to protect public health, safety, and welfare and the environment and that such action is not inconsistent with M.G.L. c. 21C and 310 CMR 30.000, the Department may specify in a license a schedule for the licensee to come into compliance with M.G.L. c. 21C and 310 CMR 30.000. Each compliance schedule shall be in accordance with the following requirements:

- (1) Compliance shall be required as soon as possible.

30.841: continued

- (2) Except as provided in 310 CMR 30.841(3), if the compliance schedule exceeds one year from the date of issuance of the license, the schedule shall include interim requirements and interim dates for their achievement. In no event shall the time between any two interim dates exceed one year. If the time for completion of any interim requirement is more than one year and is not readily divisible into stages for completion, the license shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date. Within 14 days after each interim date and the final date of compliance, the licensee shall notify the Department in writing of its compliance or noncompliance with the interim or final requirements, as the case may be.
- (3) The compliance schedule may provide for cessation of activities authorized by the license.
- (a) If the Department decides that activities authorized by the license shall cease on or before the expiration date of the license, the license shall be issued or modified as appropriate to include a compliance schedule leading to timely cessation of such activities. If a license was issued with a compliance schedule, the licensee shall cease such activities before noncompliance with any interim or final requirement specified in such compliance schedule.
- (b) If the Department decides to allow the licensee to choose between ceasing activities authorized by the license and engaging in such activities in compliance with a compliance schedule, the license shall be issued or modified as appropriate to include two schedules as follows:
1. Both schedules shall contain an identical interim deadline requiring the licensee to make a final decision on whether to cease conducting activities authorized by the license. The license shall require the licensee to make this decision by a date established by the Department, which date shall be no later than that necessary to ensure sufficient time for the licensee to comply with applicable requirements in a timely manner if the licensee's decision is to continue engaging in activities authorized by the license.
 2. One schedule shall lead to engaging in activities authorized by the license in timely compliance with applicable requirements. If the licensee makes a final decision to continue engaging in such activities, the licensee shall follow this schedule.
 3. The second schedule shall lead to cessation of activities authorized by the license by a date which shall ensure timely compliance with applicable requirements. If the licensee makes a final decision to cease engaging in such activities, the licensee shall follow this schedule.
- (c) If the licensee decides to cease engaging in activities authorized by the license, the licensee shall make that decision in a form satisfactory to the Department, such as resolution of the board of directors if the licensee is a corporation.

30.850: License Modification, Suspension, and Revocation30.851: License Modifications

- (1) General Provisions.
- (a) A license may be modified by the Department for cause. The filing of a request by a licensee for a license modification or of a notification of planned changes or anticipated non-compliance does not stay any license condition.
- (b) The Department may modify a license upon its own initiative, upon request by a local board of health or other municipal authority, upon request via written application by a licensee, or upon request of any other interested person. If the Department decides to deny a request to modify a license, the Department shall send to the person making the request a brief written response giving a reason for the Department's decision. Except as provided in 310 CMR 30.890, denial of a request for modification of a license shall not be subject to public notice, public comment, or public hearings. If the Department decides to grant a request to modify a license, the Department shall proceed in accordance with 310 CMR 30.850.
- (2) Presumptively Approved Transporter License Modifications.
- (a) A transporter who seeks to modify a license shall submit an application to the Department on a form provided by the Department. Such modification shall be effective 30

30.851: continued

days after the Department's receipt of the application, unless the Department notifies the applicant within that 30 days of a deficiency in accordance with 310 CMR 4.00, or denies the license modification in writing. A presumptively approved license modification shall be a "license modification" as that term is used in 310 CMR 30.851, even though the Department has not issued a written approval.

(b) Licensees must submit presumptive approval modification applications by hand delivery with receipt or by certified mail.

(3) Facility License Modifications.

(a) A license may be modified for reasons which include, but are not limited to, the following:

1. The licensee desires to make material and substantial alterations or additions to the licensed facility, or any other change to a license condition.

2. The Department has information which was not available at the time of license issuance and which would have justified the application of different license conditions.

3. The standards, regulations, or statute on which the license was based have been changed by promulgation of amended standards and regulations, by judicial decision, or by a change in the statute after the license was issued.

4. The corrective action program specified in the license pursuant to 310 CMR 30.672 has not brought the regulated unit(s) into compliance with the requirements of 310 CMR 30.665: *Groundwater Protection Standard*.

5. The owner or operator has been conducting a compliance monitoring program pursuant to 310 CMR 30.671 or a corrective action program pursuant to 310 CMR 30.672 and the compliance period ends, in which case the license modification shall include a detection monitoring program meeting the requirements of 310 CMR 30.664.

6. A license requires a compliance monitoring program pursuant to 310 CMR 30.671 and monitoring data collected indicates that the facility is not meeting the requirements of 310 CMR 30.665: *Groundwater Protection Standard*.

7. A land treatment unit is not achieving complete treatment of hazardous constituents.

(b) Suitability of the facility location shall not be considered at the time of license modification unless new information or standards indicate that a threat to public health, safety, or welfare, or the environment exists which was unknown or not understood at the time of license issuance.

(c) If a license modification is requested by the licensee, the Department shall approve or deny the request according to the procedures set forth in 310 CMR 30.852.

30.852: Facility License Modification at the Request of the Licensee

(1) Prior to submitting any modification request to the Department, the licensee shall comply with M.G.L. c. 21D, if applicable.

(2) Class 1 modifications

(a) Except as provided in 310 CMR 30.852(2)(b), the licensee may put into effect Class 1 modifications listed in Table 310 CMR 30.852 pursuant to the following conditions:

1. The licensee shall notify the Department concerning the modification by certified mail or other means that establish proof of delivery within seven calendar days after the change is put into effect. This notice shall specify the changes being made to license conditions or supporting documents referenced by the license and shall explain why they are necessary. Along with the notice, the licensee shall provide the information required by 310 CMR 30.801 through 30.804 or other information which is relevant to the modification request.

2. The licensee shall send a notice of the modification to all persons on the facility mailing list and the appropriate units of State and local government as specified in 310 CMR 30.833(4). This notification shall be made within 90 calendar days after the change is put into effect. For the Class 1 modifications that require prior Department approval, the notification shall be made within 90 calendar days after the Department approves the request.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.852: continued

3. Any person may request the Department to review, and the Department may for cause reject, any Class 1 modification. The Department shall inform the licensee by certified mail that a Class 1 modification has been rejected, explaining the reasons for the rejection. If the Class 1 modification has been rejected, the licensee shall comply with the original license conditions.
- (b) Class 1 modifications identified in Table 310 CMR 30.852 with a footnote may be made only with the prior written approval of the Department.

30.852: continued

(c) For a Class 1 license modification, the licensee may elect to follow the procedures in 310 CMR 30.852(3) for Class 2 modifications instead of Class 1 procedures. The licensee shall inform the Department of this decision in the notice required in 310 CMR 30.852(3)(a).

(3) Class 2 modifications.

(a) For Class 2 modifications listed in Table 310 CMR 30.852, the licensee shall submit a modification request to the Department that:

1. Describes the exact change to be made to the license conditions and supporting documents referenced by the license;
2. Identifies that the modification is a Class 2 modification;
3. Explains why the modification is needed; and
4. Provides the applicable information required by 310 CMR 30.801 through 30.804 or other information which is relevant to the modification request.

(b) The licensee shall send a notice of the modification request to all persons on the facility mailing list and to the appropriate units of State and local government as specified in 310 CMR 30.833(4) and must publish this notice in a major local newspaper of general circulation. This notice shall be mailed and published within seven days before or after the date of submission of the modification request, and the licensee shall provide to the Department evidence of the mailing and publication. The notice shall include:

1. Announcement of a 60-day comment period, in accordance with 310 CMR 30.852(3)(e), and the name and address of a Department contact to whom comment shall be sent;
2. Announcement of the date, time, and place for a public meeting on the modification request held in accordance with 310 CMR 30.852(3)(d);
3. Name and telephone number of the licensee's contact person;
4. Name and telephone number of the Department's contact person;
5. Location where copies of the modification request and any supporting documents can be viewed and copied; and
6. The following statement: "The licensee's compliance history during the life of the license being modified is available from the Department contact person."

(c) The licensee shall submit two copies of the license modification request and supporting documents to the Department and to the regional office in which the facility is located to give the public opportunity to review the proposed modification.

(d) The Department shall hold a public meeting no earlier than 15 days after the publication of the notice required in 310 CMR 30.852(3)(b) and no later than 15 days before the close of the 60-day comment period. The meeting shall be held to the extent practicable in the vicinity of the licensed facility.

(e) The public shall be provided 60 days to comment on the modification request. The comment period will begin on the date the licensee publishes the notice in the local newspaper. Comments shall be submitted to the Department contact identified in the public notice.

- (f) 1. No later than 120 days after receipt of the modification request, the Department shall:
- a. Approve the modification request, with or without changes, and modify the license accordingly;
 - b. Deny the request;
 - c. Determine that the modification request shall follow the procedures in 310 CMR 30.852(4) for Class 3 modifications for the following reasons:
 - (i) There is significant public concern about the proposed modification; or
 - (ii) The complex nature of the change requires the more extensive procedures of 310 CMR 30.852(4) for Class 3 modifications.
2. In making a decision to approve or deny a modification request, including a decision to reclassify a modification as a Class 3, the Department shall consider all written comments submitted to the Department during the public comment period and shall respond in writing to all significant comments in its decision.
3. With written consent of the licensee, the Department may extend indefinitely or for a specified period the time periods for final approval or denial of a modification request or for reclassifying a modification as a Class 3.

30.852: continued

(g) The Department may deny or change the terms of a Class 2 license modification request for the following reasons:

1. The modification request is incomplete;
2. The requested modification does not comply with the appropriate requirements of 310 CMR 30.500 and 30.600 or other applicable requirements; or
3. The reasons specified in 310 CMR 30.853(3)(f)1..

(4) Class 3 modifications.

(a) For Class 3 modifications listed in Table 310 CMR 30.852, the licensee shall submit a modification request to the Department that:

1. Describes the exact change to be made to the license conditions and supporting documents referenced by the license;
2. Identifies that the modification is a Class 3 modification;
3. Explains why the modification is needed; and
4. Provides the applicable information required by 310 CMR 30.801 through 30.804 or other information which is relevant to the modification request.

(b) The licensee shall send a notice of the modification request to all persons on the facility mailing list maintained by the Department and to the appropriate units of State and local government as specified in 310 CMR 30.833(4) and must publish this notice in a major local newspaper of general circulation. This notice shall be mailed and published within seven days before or after the date of submission of the modification request, and the licensee shall provide to the Department evidence of the mailing and publication. The notice shall include:

1. Announcement of a 60-day comment period, in accordance with 310 CMR 30.853(4)(e), and the name and address of a Department contact to whom comment shall be sent;
2. Announcement of the date, time, and place for a public meeting on the modification request held in accordance with 310 CMR 30.852(4)(d);
3. Name and telephone number of the licensee's contact person;
4. Name and telephone number of the Department's contact person;
5. Location where copies of the modification request and any supporting documents can be viewed and copied; and
6. The following statement: "The licensee's compliance history during the life of the license being modified is available from the Department contact person."

(c) The licensee shall submit two copies of the license modification request and supporting documents to the Department and to the regional office in which the facility is located to give the public opportunity to review the proposed modification.

(d) The Department shall hold a public meeting no earlier than 15 days after the publication of the notice required in 310 CMR 30.852(4)(b) and no later than 15 days before the close of the 60-day comment period. The meeting shall be held to the extent practicable in the vicinity of the licensed facility.

(e) The public shall be provided 60 days to comment on the modification request. The comment period will begin on the date the licensee publishes the notice in the local newspaper. Comments shall be submitted to the Department contact identified in the public notice.

(f) After the conclusion of the comment period, the Department shall grant or deny the license modification request according to the license modification procedures of 310 CMR 30.830 through 30.840.

(5) Other modifications.

(a) In the case of modifications not explicitly listed in Table 310 CMR 30.852, the licensee shall request from the Department a determination of the appropriate class of the modification. The licensee shall provide the Department with the necessary information to support the classification decision.

30.852: continued

(b) The Department shall make the determination described in 310 CMR 30.852(5)(a) as promptly as practicable. In determining the appropriate class for a specific modification, the Department shall consider the similarity of the modification to other modifications codified in Table 310 CMR 30.852 and the following criteria:

1. Class 1 modifications apply to minor changes that keep the license current with routine changes to the facility or its operation. These changes do not substantially alter the license conditions or reduce the capacity of the facility to protect public health, safety and welfare or the environment. In the case of Class 1 modifications, the Department may require prior approval.
2. Class 2 modifications apply to changes that are necessary to enable a licensee to respond, in a timely manner to:
 - a. Common variations in the types and quantities of the wastes managed pursuant to the facility license.
 - b. Technological advancements, and
 - c. Changes necessary to comply with new regulations, where these changes can be implemented without substantially changing design specifications or management practices in the license.
3. Class 3 modifications substantially alter the facility or its operations.

(6) Public notice and appeals of license modification decisions.

(a) The Department shall notify persons on the facility mailing list and appropriate units of State and local government as specified in 310 CMR 30.833(4) within ten days of any decision pursuant to 310 CMR 30.852 to grant or deny a Class 2 or 3 license modification request.

(b) The Department's decision to grant or deny a Class 2 or 3 license modification request pursuant to 310 CMR 30.852 may be appealed pursuant to 310 CMR 30.890.

(7) Newly listed or identified wastes.

(a) The licensee is authorized to continue to manage wastes listed or identified as hazardous pursuant to 310 CMR 30.100 if the licensee:

1. Was in existence as a hazardous waste facility and managed the newly listed or characterized waste prior to and on the effective date of the final rule listing or identifying the waste;
2. Submits a Class 1 modification request on or before the date on which the waste becomes subject to the new requirements;
3. Is in compliance with the standards of 310 CMR 30.099(6);
4. In the case of Class 2 and 3 modifications, also submits a complete license modification request within 180 days after the effective date of the rule listing or identifying the waste; and
5. In the case of land disposal units, certifies that such unit is in compliance with all applicable 310 CMR 30.099(6) ground water monitoring and financial responsibility requirements on the date 12 months after the effective date of the rule identifying or listing the waste as hazardous. If the owner or operator fails to clarify compliance with these requirements, he or she shall lose authority to operate pursuant to 310 CMR 30.852.

(b) New wastes or units added to a facility's license pursuant to 310 CMR 30.852(7) do not constitute expansions for the purpose of the 25% capacity expansion limit for Class 2 modifications.

(8) License modification list. The Department shall maintain a list of all approved license modifications and shall publish a notice once a year in a State-wide newspaper stating that an updated list is available for review.

30.852: continued

310 CMR 30.852: *Classification of License Modifications*

A. General License Provisions

- | | |
|--|----------------|
| 1. Administrative or informational changes | 1 |
| 2. Correction of typographical errors | 1 |
| 3. Equipment replacement or upgrading with functionally equivalent components (<i>e.g.</i> pipes, valves, pumps, conveyors, controls) | 1 ¹ |
| 4. Changes in the frequency of or procedures for monitoring, reporting, sampling, or maintenance activities by the licensee: | |
| a. To provide for more frequent monitoring, reporting, sampling, or maintenance | 1 |
| b. Other changes | 2 |
| 5. Schedule of compliance: | |
| a. Changes in interim compliance dates | 1 ¹ |
| b. Extension of final compliance date | 3 |
| 6. Changes in expiration date of permit to allow earlier license termination | 1 ¹ |

B. General Facility Standards

- | | |
|---|----------------|
| 1. Changes to waste sampling or analysis methods: | |
| a. To conform with Department guidance or regulations | 1 |
| b. To incorporate changes associated with F039 (multisource leachate) sampling or analysis | 1 |
| c. To incorporate changes associated with underlying hazardous constituents in ignitable or corrosive wastes | 1 |
| d. Other changes | 2 |
| 2. Changes to analytical quality assurance/control plan: | |
| a. To conform with Department guidance or regulations | 1 |
| b. Other changes | 2 |
| 3. Changes in procedures for maintaining the operating record | 1 |
| 4. Changes in frequency or content of inspection schedules | 2 |
| 5. Changes in the training plan: | |
| a. That affect the type or decrease the amount of training given to employees | 2 |
| b. Other changes | 1 |
| 6. Contingency plan: | |
| a. Changes in emergency procedures (<i>i.e.</i> spill or release response procedures) | 2 |
| b. Replacement with functionally equivalent, upgrade, or relocate emergency equipment listed | 1 ¹ |
| c. Removal of equipment from emergency equipment list | 2 |
| d. Changes in name, address, or phone numbers of coordinators or other persons or agencies identified in the plan | 1 |

Note: When a license modification (such as introduction of a new unit) requires a change in facility plans or other general facility standards, that change shall be reviewed under the same procedures as the license modification.

C. Ground Water Protection

- | | |
|--|---|
| 1. Changes to wells: | |
| a. Changes in the number, location, depth or design of upgradient or downgradient wells of permitted ground-water monitoring system | 2 |
| b. Replacement of an existing well that has been damaged or rendered inoperable, without change to location, design or depth of the well | 1 |

30.852: continued

Table 310 CMR 30.852 - Classification of License Modifications (con't)

2.	Changes in ground-water sampling or analysis procedures or monitoring schedule	1 ¹
3.	Changes in statistical procedure for determining whether a statistically significant change in ground-water quality between upgradient and downgradient wells has occurred	1 ¹
4.	Changes in point of compliance	2
5.	Changes in indicator parameters, hazardous constituents, or concentration limits (including ACLs):	
	a. As specified in the ground water protection standard	3
	b. As specified in the detection monitoring program	2
6.	Compliance monitoring program:	
	a. Addition of compliance monitoring program	3
	b. Changes to a compliance monitoring program, unless otherwise specified in Table 310 CMR 30.852	2
7.	Corrective action program:	
	a. Addition of a corrective action program	3
	b. Changes to a corrective action program, unless otherwise specified in Table 310 CMR 30.852	2
D. Closure		
1.	Changes to the closure plan:	
	a. Changes in estimate of maximum extent of operations or maximum inventory of waste on site at any time during the active life of the facility	1 ¹
	b. Changes in closure schedule for any unit, changes in the final closure schedule for the facility, or extension of the closure period	1 ¹
	c. Changes in the expected year of final closure, where other license conditions are not changed	1 ¹
	d. Changes in procedures for decontamination of facility equipment or structures	1 ¹
	e. Changes in approved closure plan resulting from unexpected events occurring during partial or final closure, unless otherwise specified in Table 310 CMR 30.852	2
2.	Creation of a new landfill unit as part of a closure	3
3.	Addition of the following new units to be used temporarily for closure activities:	
	a. Surface impoundments	3
	b. Incinerators	3
	c. Waste piles that do not comply with 310 CMR 30.640(4)	3
	d. Waste piles that comply with 310 CMR 30.640(4)	2
	e. Tanks or containers (other than specified below)	2
	f. Tanks used for neutralization, dewatering, phase separation, or component separation	1 ¹
E. Post-Closure		
1.	Changes in name, address or phone number of contact in post-closure plan	1
2.	Extension of post-closure care period	2
3.	Reduction in the post-closure care period	3
4.	Changes to the expected year of final closure, where other license conditions are not changed	1
5.	Changes in post-closure plan necessitated by events occurring during the active life of the facility, including partial and final closure	2

30.852: continued

F. Containers

1. Modification or addition of container units:
 - a. Resulting in greater than 25% increase in the facility's container storage capacity 3
 - b. Resulting in up to 25% increase in the facility's container storage capacity 2
2.
 - a. Modification of a container unit without increasing the capacity of the unit 2
 - b. Addition of a roof to a container unit without alteration of the containment system 1
3. Storage of different wastes in containers:
 - a. That require additional or different management practices from those authorized in the license 3
 - b. That do not require additional or different management practices from those authorized in the license 2

Note: See 310 CMR 30.852(7) for modification procedures to be used for the management of newly listed or identified wastes.

4. Other changes in container management practices (*e.g.* aisle spaces; types of containers; segregation) 2

G. Tanks

1.
 - a. Modification or addition of tank units resulting in greater than a 25% increase in the facility's tank capacity, except as provided in Table 310 CMR 30.852G(1)(c) and G(1)(d) 3
 - b. Modification or addition of tank units resulting in up to 25% increase in the facility's tank capacity, except as provided in Table 310 CMR 30.852 G(1)(d) 2
 - c. Addition of a new tank that will operate for more than 90 days using any of the following physical or chemical treatment technologies: neutralization, dewatering, phase separation or component separation 2
 - d. Addition of a new tank that will operate up to 90 days using any of the following physical or chemical treatment technologies: neutralization, dewatering, phase separation or component separation 1¹
2. Modification of a tank unit or secondary containment system without increasing the capacity of the unit 2
3. Replacement of a tank with a tank that meets the same design standards and has a capacity within +/- 10% of the replaced tank provided
 - the tank difference is no more than 1500 gallons
 - the facility's licensed tank capacity is not increased, and
 - the replacement tank meets the same conditions in the license 1
4. Modification of a tank management practice 2
5. Management of different wastes in tanks:
 - a. That require additional or different management practices, tank design, different fire protection specifications, or significantly different tank treatment process from that authorized in the license 3

30.852: continued

- b. That do not require additional or different management practices tank design, different fire protection specifications or significantly different tank treatment process from that authorized in the license 2

H. Land Disposal Facilities

- 1. The classification of modifications for surface impoundments, enclosed waste piles, landfills and unenclosed waste piles, and land treatment facilities at 40 CFR 270.42, Appendix I, Sections H through K, exclusive of notes, is hereby incorporated by reference 3

Note: See 310 CMR 30.852(7) for modification procedures to be used for the management of newly listed or identified wastes.

¹ Requires prior approval by the Department.

30.853: License Denial, Suspension or Revocation

(1) The Department may deny, suspend, or revoke a license for cause at any time if it determines that any term or condition thereof has been violated, that the licensee or applicant has violated any provision of M.G.L. c. 21C, RCRA, or 310 CMR 30.000, or that the licensee or applicant is not competent with respect to the licensed activity. Such action by the Department shall be subject to opportunity for an adjudicatory hearing pursuant to M.G.L. c. 21C and c. 30A, and 310 CMR 1.00. In an adjudicatory hearing held pursuant to 310 CMR 30.853, the issue to be adjudicated shall be whether the Department's decision to deny, suspend or revoke a license was reasonable in light of the particular facts and circumstances available to the Department at the time of its decision.

(2) Causes for suspending or revoking a license during its term, or for denying a license, shall include, but shall not be limited to, the following:

- (a) Non-compliance by the licensee with 310 CMR 30.000, M.G.L. c. 21C, or any condition of the license;
- (b) Failure of the applicant or licensee to fully and accurately disclose in the application, during the license issuance process, or at any time during the term of the license, all relevant facts which the licensee or applicant knew or should have known;
- (c) The licensee's or applicant's misrepresentation of any relevant facts at any time;
- (d) A determination by the Department that the licensed activity or facility could or does endanger public health, safety, or welfare, or the environment; or
- (e) Failure of the licensee or applicant to meet a standard set forth in 310 CMR 30.811 or 30.812.

(3) Any interested person may request the Department to suspend or revoke a license. If the Department decides to deny a request to suspend or revoke a license, the Department shall send to the person making the request a brief written response giving a reason for the Department's decision. Except as provided in 310 CMR 30.890, denial of a request to suspend or revoke a license shall not be subject to public notice, public comment, or public hearings.

30.854: Effect of License Denial, Suspension, or Revocation on Other Hazardous Waste Activities

The denial, suspension, or revocation of a license for any class of hazardous waste or category of hazardous waste license may be grounds for the denial, suspension, or revocation of a license to that licensee or applicant for all other hazardous waste classes and license categories. Any person whose license renewal is denied or whose license is revoked for cause shall be barred from applying for any class or category of license issued pursuant to 310 CMR 30.000 for a period of not more than five years. The period during which reapplication shall be barred shall be established as part of the decision or determination of the Department in the proceedings relative to the denial or revocation.

30.860: SPECIAL FORMS OF LICENSES

30.861: Emergency License

Notwithstanding any other provision of 310 CMR 30.000, if the Department finds that an imminent and substantial endangerment to public health, safety, or welfare, or the environment may exist unless the Department takes such action, the Department may issue to a non-licensed facility a temporary emergency license for the treatment, storage, or use of hazardous waste by said facility, and may issue a temporary emergency license to a non-licensed transporter for the transportation of hazardous waste by said transporter. This temporary emergency license:

- (1) Shall be either oral or written, provided that if it is oral, it shall be followed within five days by a written temporary emergency license;
- (2) Shall only be for a period necessary to abate the emergency, and in no case shall exceed a period of 90 days;
- (3) Shall clearly specify the hazardous wastes to be received or transported and the manner and location of their transport, treatment, use, or storage, which manner and location shall be in compliance with 310 CMR 30.000, except to the extent that the temporary emergency license expressly specifies otherwise because such compliance is determined by the Department to be not possible or not consistent with the emergency situation;
- (4) May be terminated by the Department at any time the Department deems such action appropriate to protect public health, safety, or welfare, or the environment, or when the Department determines that the emergency has been abated;
- (5) Shall be accompanied by a public notice given in compliance with the notice provisions of 310 CMR 30.833 or 30.834, whichever is applicable. The content of this notice shall include, at a minimum, the following:
 - (a) The address and telephone number of the office of the Department issuing the temporary emergency license;
 - (b) The name and location of the facility or transporter, as applicable;
 - (c) A brief description of the wastes involved;
 - (d) A brief description of the temporary emergency license and the reasons for the issuance thereof;
 - (e) The duration of the temporary emergency license.

30.862: License for Land Treatment Demonstration

- (1) For the purpose of allowing an owner or operator to meet the land treatment demonstration requirements of 310 CMR 30.653, the Department may issue a land treatment demonstration license. The license shall contain those requirements necessary to meet the standards set forth in 310 CMR 30.653(3). The license shall be issued as a treatment and disposal license authorizing only the field test and laboratory analyses.
- (2) In the land treatment demonstration license, the Department shall establish conditions for conducting the field tests and laboratory analyses required by 310 CMR 30.653. These license conditions shall include design and operating parameters (including the duration of the tests and analyses and, in the case of field tests, the horizontal and vertical dimensions of the treatment zone), monitoring procedures, post-demonstration clean-up activities, and any other condition which the Department determines may be necessary or appropriate.

30.863: Research, Development, and Demonstration Facilities and Approvals

- (1) The Department may issue a research, development, and/or demonstration approval for any hazardous waste facility which proposes to utilize an innovative and experimental hazardous waste technology or process for which standards have not been promulgated. Each such approval, and each application for such approval, shall be in writing and shall be subject to the provisions set forth in 310 CMR 30.801 through 30.803, 30.806, 30.807, 30.810 through 30.822, 30.825(2), (3), and (5), 30.831(1) through (3), 30.853, 30.854, 30.870, 30.880, 30.890, and 30.862, and shall not be subject to any other provision of 310 CMR 30.800.

30.863: continued

(2) Such research, development and/or demonstration approval shall include such terms and conditions as will assure protection of public health, safety and welfare and the environment. Such approvals shall:

- (a) Provide for the construction and maintenance of whatever is necessary to assure compliance with requirements set forth or referred to in 310 CMR 30.862;
- (b) Provide for the operation of the research, development, and/or for demonstration for not longer than one year unless renewed as provided in 310 CMR 30.867(3);
- (c) Provide for the receipt and treatment by the facility of only those types and quantities of hazardous waste which the Department determines are necessary for purposes of determining the efficacy and performance capabilities of the technology or process and the effects of such technology or process on public health, safety and welfare and the environment; and
- (d) Include such requirements as the Department determines are necessary to protect public health, safety and welfare and the environment including, but not limited to, requirements regarding monitoring, operation, financial responsibility, closure and remedial action, and such requirements as the Department determines are necessary regarding testing and providing information to the Department, with respect to the operation of the facility.

(3) Any approval issued pursuant to 310 CMR 30.862 may be renewed not more than three times. Each such renewal shall be for a period of not more than one year. A person applying for a renewal shall submit such a renewal request at least one month before the expiration of the approval.

(4) No research, development, and/or demonstration facility subject to 310 CMR 30.862 shall be operated without the prior issuance of an approval issued by the Department pursuant to 310 CMR 30.863. No research, development, and/or demonstration facility subject to 310 CMR 30.862 shall be operated except in accordance with 310 CMR 30.862, all other applicable provisions of 310 CMR 30.000, and the terms and conditions of an approval issued by the Department pursuant to 310 CMR 30.862. The Department may order an immediate termination of all operations at the facility at any time that termination is necessary to protect public health, safety and welfare, and the environment. The Department may order an immediate termination of all operations at the facility at any time the Department determines that such action is necessary to protect public health, safety or welfare or the environment, or to assure compliance with 310 CMR 30.000 or any other applicable statute or regulation.

(5) All hazardous waste delivered to a research, development, and/or demonstration facility shall be handled in full compliance with 310 CMR 30.863 and all other applicable provisions of 310 CMR 30.000.

30.864: Research Facility License

(1) Applicability.

- (a) 310 CMR 30.864 is intended to protect public health, safety, and welfare, and the environment, by regulating the handling of hazardous waste on which a research study, as defined in 310 CMR 30.010, is being conducted. 310 CMR 30.864 applies to hazardous wastes on which a research study is being conducted, and does not apply to non-hazardous wastes on which such study is being conducted.
- (b) 310 CMR 30.864 is promulgated pursuant to the authority set forth in 310 CMR 30.001. 310 CMR 30.864 is also promulgated pursuant to the authority set forth in M.G.L. c. 21C, § 4 to waive regulation where there is no significant potential hazard to the public health, safety, or welfare, or the environment.
- (c) Except as otherwise provided in 310 CMR 30.864, all procedures and requirements for licensing hazardous waste facilities, set forth in 310 CMR 30.000, are presumed to apply unless the Department is persuaded by the applicant for, or the holder of, a research facility license that the waiver of any of these requirements will not present a significant potential hazard to the public health, safety, or welfare, or the environment. The burden shall be on the applicant for, or the holder of, a research facility license to persuade the Department that the waiver of any of these requirements will not present a significant potential hazard to the public health, safety, or welfare, or the environment. The Department may deem any license requirement in 310 CMR 30.800 to be applicable. The Department may modify or waive any

30.864: continued

requirements in 310 CMR 30.800, except that the Department may modify, but may not waive, requirements regarding financial responsibility, including insurance, or procedures regarding public participation.

(d) Nothing in 310 CMR 30.864 shall preclude a site or works licensed or otherwise authorized pursuant to 310 CMR 30.099, 30.104(3)(b) and (c), 30.200, 30.801, 30.862 or 30.863 from being licensed additionally as a research facility pursuant to 310 CMR 30.864, provided that such site or works shall obtain and have in effect a valid research facility license prior to commencing construction, operation or maintenance directly associated with research study activity.

(e) Nothing in 310 CMR 30.864 shall preclude a research facility licensed pursuant to 310 CMR 30.864 from being licensed or otherwise authorized pursuant to 310 CMR 30.099, 30.104(3)(b) and (c), 30.200, 30.801, 30.862 or 30.863, provided that such research facility shall obtain and have in effect such license or authorization prior to commencing construction, operation or maintenance directly associated with such license or authorization.

(f) A license issued pursuant to 310 CMR 30.864 authorizes the licensee to store, treat, dispose or recycle hazardous waste, or otherwise to accept, handle or process hazardous waste at the research facility, only for the purpose of conducting research study activity, and only in strict compliance with the terms and conditions of such license. If any person intends to store, treat, dispose or recycle hazardous waste for a purpose other than to conduct research study activity, such person shall be licensed or otherwise authorized pursuant to 310 CMR 30.099, 30.104(3)(b) and (c), 30.200, 30.801, 30.862, or 30.863.

(2) License Application Process and Requirements.

(a) Application Form and Completeness.

1. Any person required to have a research facility license shall complete, sign, and submit an original application, plus five copies, to the Department. The Department may prescribe a form(s) which shall be used by all applicants.

2. The applicant shall be required to submit such information concerning the proposed research facility or activity as the Department may require.

3. An application, or any part thereof, shall be deemed complete when the Department receives the application or partial submission, and determines that all required information has been submitted and all applicable fees have been paid to the Department. If, however, the Department determines at any time during the review of the application that additional information is required in order to understand and evaluate the proposed research facility or activity, the Department may require such information. The Department shall request such additional information in writing.

4. The Department may either deem a license application incomplete or deny a license if an applicant fails or refuses to correct deficiencies in the application.

5. The Department may deny a research facility license before receiving a complete application for a license.

6. Research facility license applications are designated as individual rule projects and subject to the requirements set forth in 310 CMR 4.05.

(b) Preliminary Application. All research facility license applications shall include at least the following information:

1. All information required in 310 CMR 30.803;

2. A checklist of all requirements applicable to hazardous waste facilities, as set forth in 310 CMR 30.000, on a form provided by the Department, and on which the applicant preliminarily identifies those requirements that may be applicable to the research facility; and

3. A detailed description of the proposed research study activity, including, but not limited to, the following information:

a. A discussion of the purposes of the research study activity, as set forth in the definition of research study, 310 CMR 30.010, and the goals and objectives of each proposed technology, process or activity, and the methods by which the applicant will evaluate whether the proposed technology, process or activity has achieved the specified goals and objectives;

b. An analysis indicating the benefits of each proposed technology, process or activity;

c. A description of the applicability of each proposed technology, process or activity to hazardous waste management in general;

30.864: continued

- d. Identification of all types and quantities of hazardous wastes, including chemical names and waste codes, proposed to be received, handled and processed at the research facility at any one time, and to be necessary for purposes of determining the efficiency and performance capabilities of each proposed technology, process or activity;
- e. A description of how the applicant intends to provide for the receipt, sampling, screening, handling, processing and ultimate treatment or disposal after processing of those types and quantities of hazardous waste proposed to be necessary for purposes of determining the efficiency and performance capabilities of each technology, process or activity;
- f. A technical analysis indicating environmental, public health and safety benefits and risks from each proposed technology, process or activity to the extent such benefits and risks can be evaluated at the time of application;
- g. A site plan indicating the location of the research facility if a location has been selected at the time of application, provided that if a location has not been selected at the time of application, a license decision may be granted, but shall not become final and effective until a site plan has been submitted and reviewed by the Department;
- h. A preliminary operational plan generally outlining operations of the research facility, including a flow diagram, the particular types of equipment required for proper operation, and a discussion of measures to be taken to ensure the protection of public health, safety and the environment;
- i. Such other descriptions, plans or information as the applicant may believe, or the Department may deem necessary to review the preliminary application.

(c) Public Notice of Preliminary Application.

- 1. Within ten days of determining that a preliminary application is complete, the Department will issue public notice inviting comment on the scope of the preliminary application.
- 2. Public notice issued pursuant to 310 CMR 30.864(2)(c) shall allow at least 15 days from the date of the notice for public comment.
- 3. Public notice shall be given, at a minimum, by:
 - a. publication, paid for by the applicant, in a daily newspaper of general circulation within the locality affected by the research facility, or in a daily newspaper of general circulation statewide if a site has not been selected at the time of preliminary application;
 - b. mailing notice to each city or town having jurisdiction over the area in which the facility is proposed to be located;
 - c. mailing notice to the board of health and the fire department of the city or town in which the research facility is proposed to be located; and
 - d. mailing notice to such other persons as the Department may identify.
- 4. All public notices issued pursuant to 310 CMR 30.864(2)(c) shall, at a minimum, contain the following information:
 - a. the name and address of the offices of the Department processing the license application for which notice is being given;
 - b. the name and address of the applicant and, if different, of the facility which is the subject of the application;
 - c. the name, address, and telephone number of an individual(s) from whom interested persons may obtain further information, including the locations where copies of the preliminary application may be reviewed;
 - d. a brief description of the research facility licensing and public comment procedures; and
 - e. any additional information considered necessary or appropriate.

(d) Applicability Determination. Within 15 days of the close of the public comment period provided in 310 CMR 30.864(2)(c), the Department may either:

- 1. Approve the scope of the application, as proposed by the applicant pursuant to 310 CMR 30.864(2)(b)2. and 3., at which time the Department shall establish, consistent with the provisions of 310 CMR 4.05, a schedule with dates by which the applicant shall supplement the preliminary application by submitting information concerning requirements identified by the applicant as being applicable to the research facility; or

30.864: continued

2. Hold a scoping meeting, or otherwise determine, with the applicant whether any license application requirements in 310 CMR 30.800, not identified by the applicant as applicable, should be deemed applicable, modified or waived. Upon such determination, the Department shall establish, consistent with the provisions of 310 CMR 4.05, a schedule with dates by which the applicant shall supplement the preliminary application by submitting information concerning requirements determined to be applicable to the research facility.
- (e) Final Application, Technical Review and Decision Schedule.
1. A final application shall consist of all preliminary application submittals and all information submitted as required by the Department after public comment on the preliminary application and an applicability determination.
 2. Within 30 days of deeming a final license application administratively complete for the purpose of initiating the technical review process, the Department shall prescribe the form of public participation and opportunity for comment appropriate for the level of public interest in the research facility, and establish, consistent with the provisions of 310 CMR 4.05, a decision schedule estimating dates by which it intends to conduct the technical review of the application, give public notice, complete the public comment period and issue a final license decision.
- (f) Extending the Public Comment Period. The Department may extend any public comment period, prescribed pursuant to 310 CMR 30.864, and consistent with the provisions of 310 CMR 4.00, to give interested persons an opportunity to comment on information submitted. If the Department grants such an extension, notice thereof shall be given in the manner prescribed in 310 CMR 30.864(2)(c)3. Such notice shall specify any new issues to be considered.
- (3) Additional Conditions of Research Facilities.
- (a) Accumulation Limits and Inventory Control.
1. The research facility shall initiate, in any one day, processing on no greater total quantity of as received hazardous waste than is necessary for purposes of conducting a research study. The Department may specify limitations on the quantity of hazardous waste processed daily as a specific condition of the license.
 2. The total quantity of hazardous waste accumulated at a research facility at any one time shall not at any time exceed the quantity specified in the license.
 3. Until such time as the Department may issue to the research facility a license for the storage of hazardous waste pursuant to 310 CMR 30.800, the research facility shall accumulate hazardous waste, in compliance with the quantity specified in the license, for a period not to exceed 90 days from the date of generation of such wastes. The date of generation shall be either:
 - a. The date of receipt of as received hazardous waste by the research facility from the original generator or sample collector; or
 - b. The date of the processing run from which hazardous waste results.
 4. Except as otherwise provided in 310 CMR 30.864(3)(a), the research facility shall accumulate all hazardous waste in compliance with the requirements of 310 CMR 30.340.
 5. The research facility shall maintain a daily inventory of the type and volume of hazardous waste in each accumulation, storage, flo-bin and processing unit.
 6. Any deadline set forth in 310 CMR 30.864(3)(a) may be extended only by prior written approval of the Department.
- (b) Disposition of Unprocessed As Received Hazardous Waste.
1. The research facility may return all as received hazardous waste which is not used in processing a specific waste stream to the original generator or sample collector if a contractual agreement exists for the return of such waste. All such waste returned to the original generator or sample collector is subject to all applicable provisions of 310 CMR 30.310 through 30.317.
 2. If the research facility does not return unprocessed as received hazardous waste to the original generator or sample collector, the research facility shall be deemed the generator of all such as received hazardous waste. All such as received hazardous waste is subject to 310 CMR 30.305 and all other applicable provisions of 310 CMR 30.000.

30.864: continued

(c) Disposition of Waste, Residue and Material Remaining After Processing.

1. All waste and residue which result from or remain after processing a specific waste stream shall be considered hazardous waste, subject to all applicable provisions of 310 CMR 30.000, and disposed of pursuant to 310 CMR 30.864(3)(c)3. and all other applicable provisions of 310 CMR 30.000, unless the licensee demonstrates to the satisfaction of the Department that:

a. where the as received waste is a characteristic hazardous waste, the processed waste does not exhibit any of the characteristics identified and defined in 310 CMR 30.120 through 30.125; and

b. where the as received waste is a listed hazardous waste, pursuant to 310 CMR 30.130, the processed waste does not contain any of the constituents listed in Appendix VII, 40 CFR Part 261, as incorporated by reference at 310 CMR 30.162, which caused the as received waste to be listed in 310 CMR 30.130 as a hazardous waste, and does not exhibit any of the characteristics identified and defined in 310 CMR 30.120 through 30.125.

2. All other material which results from or remains after processing a specific waste stream shall be considered hazardous waste, and disposed of pursuant to 310 CMR 30.864(3)(c)3., unless the licensee manages such material as a commodity, and demonstrates to the satisfaction of the Department that such material:

a. Is commodity-like by:

i. Having commercial application as an effective substitute for a similar or corresponding virgin material or commercial product;

ii. Meeting industry-recognized and/or customer-specific quality specifications; and

iii. Being handled and stored in a manner consistent with its use as an analogous virgin material or commercial product substitute; and

b. Does not exhibit any of the characteristics identified and defined in 310 CMR 30.120 through 30.125; and either

c. Does not contain any of the constituents listed in Appendix VII, 40 CFR Part 261, as incorporated by reference at 310 CMR 30.162, which caused the as received waste to be listed in 310 CMR 30.130 as a hazardous waste; or

d. Contains constituents listed in Appendix VII, 40 CFR Part 261, as incorporated by reference at 310 CMR 30.162, which caused the as received waste to be listed in 310 CMR 30.130, and the licensee demonstrates to the Department, and obtains prior approval, that the presence of these constituents does not pose a threat to the public health, safety, and welfare, and the environment.

3. The research facility shall handle all waste, residue and material which is hazardous waste, and is not commodity-like, or if commodity-like, is not being managed as a commodity, by:

a. Returning the hazardous waste to the original generator or sample collector in full compliance with all applicable provisions of 310 CMR 30.310 through 30.317; or

b. Causing the hazardous waste, of which the research facility is deemed the generator, to be sent off-site in full compliance with 310 CMR 30.305 and all other applicable provisions of 310 CMR 30.000; or

c. Petitioning the Department to classify the waste as non-hazardous, pursuant to the terms of 310 CMR 30.142.

(d) Recordkeeping and Reporting.

1. The research facility shall prepare and submit a report to the Department by March 15 of each year, beginning in the 1995 reporting year due March 15, 1996, that estimates the number of research studies and the amount of waste expected to be used in each study during the current year, and includes, but is not limited to, the following information about activity during the previous calendar year:

a. The name, address and EPA identification number of the research facility;

b. The type (by process) of research study being conducted;

c. The total quantity and type, including waste code, of each hazardous waste subjected to research studies;

d. The total quantity of hazardous waste in storage each day, specifying:

i. The total quantity of as received hazardous waste; and

ii. The total quantity of hazardous waste which results from processing a specific waste stream;

30.864: continued

- e. The name, address and EPA identification number of each generator or sample collector for whom a research study is being conducted;
- f. The date on which each shipment was received from each generator or sample collector, and the amount of each shipment;
- g. The dates on which each research study was initiated and completed;
- h. A detailed description of how each as received waste stream was processed throughout the course of a research study, reporting in either mass or volume as appropriate, and specifying:
 - i. The total volume or mass of each waste stream introduced into each processing run;
 - ii. The type and volume or mass of each co-reactant that may be introduced into each processing run;

30.864: continued

- iii. The type, volume or mass, and market value of each product that may be recovered from each processing run;
 - iv. The type, volume or mass, disposition and cost of disposal of all residual waste that may result from each processing run;
 - v. The net incremental operating cost of conducting each processing run; and
 - vi. The gross mass balance of hazardous waste, including total amount of as received waste received from the generator or sample collector, unprocessed as received waste, and the waste, residue and material which result from or remain after processing, including co-reactants and other treatment materials (including non-hazardous solid waste) added to as received waste.
- i. The final disposition of all hazardous waste generated by the research facility, as defined in 310 CMR 30.864(3)(a)1., including:
 - i. The name, address and EPA identification number of each transporter employed by the research facility to transport such waste;
 - ii. The name, address and EPA identification number of each generator or sample collector to which the research facility returns hazardous waste pursuant to a contractual agreement, or each designated facility to which the research facility transports hazardous waste;
 - iii. Types of waste, including waste codes, returned to each generator or sample collector pursuant to a contractual agreement, or transported to each designated facility; and
 - iv. Dates of each shipment.
 - j. An evaluation, with supporting data, analyses and any other documentation necessary to demonstrate the degree to which the research facility is achieving the goals and objectives described in accordance with 310 CMR 30.864(2)(b)3.a., including the rate of treatment, recycling and/or disposal achieved;
 - k. Documentation to demonstrate that the research facility accumulated each waste stream in compliance with 310 CMR 30.864(3)(a) and the terms and conditions of its license; and
 - l. Documentation to demonstrate that the research facility processed each waste stream in compliance with 310 CMR 30.864(3)(a) and any term and condition that may be set forth in its license.
2. The research facility shall keep on-site a copy of each contractual agreement for each research study and all shipping papers associated with the transport of hazardous waste for each study to and from the facility for a period ending not less than three years from the completion date of each study, or for the duration of any unresolved enforcement action, whichever period is longer.
 3. For three years following completion of each research study conducted, or for the duration of any unresolved enforcement action, whichever period is longer, the research facility shall maintain copies of all records, documentation and information required in 310 CMR 30.864(3)(c).
 4. Except as other provided in 310 CMR 30.864(3)(c), all records and copies of all applications, reports, and other documents required by 310 CMR 30.000 and the terms and conditions of a license shall be subject to 310 CMR 30.543.

30.870: License and Vehicle Identification Fees

The amount of any license or vehicle identification device fee charge pursuant to 310 CMR 30.000 shall be as prescribed by M.G.L. c. 21C, unless otherwise prescribed by the Secretary of Administration and Finance pursuant to authorizing legislation. No license shall issue until all applicable license and vehicle identification fees have been paid to the Department.

30.880: Compliance With MEPA

Before the Department may act on an application, it shall determine whether the application is subject to the Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61 through 62H, and 301 CMR 11.00, cited as MEPA throughout 310 CMR 30.000. If the application is subject to MEPA, the Department shall verify that the applicant has satisfactorily complied with all applicable provisions of MEPA.

30.890: ADJUDICATORY HEARING PROCESS

Pursuant to M.G.L. c. 21C, § 11, any person aggrieved by a determination by the Department to issue, deny, modify, revoke, or suspend any license or approval, or to issue an order, may request an adjudicatory hearing before the Department pursuant to the provisions of M.G.L. c. 30A. For the purposes of 310 CMR 30.000, an "aggrieved person" shall be deemed to be any person who is or may become a "party" or "intervenor" pursuant to 310 CMR 1.00. A person aggrieved by a final decision in any adjudicatory proceeding may obtain judicial review thereof pursuant to the provisions of M.G.L. c. 30A.

30.900: FINANCIAL RESPONSIBILITY REQUIREMENTS FOR TREATMENT, STORAGE, AND DISPOSAL FACILITIES

310 CMR 30.901 through 30.999, cited collectively as 310 CMR 30.900, set forth the requirements, procedures and options for obtaining and maintaining in effect financial assurance for all facilities which treat, store, or dispose of hazardous waste.

30.901: Applicability and Compliance

(1) The requirements of 310 CMR 30.900 shall apply to owners or operators of all hazardous waste facilities, except as provided otherwise in 310 CMR 30.901, or in 310 CMR 30.580 and 30.590, except as provided otherwise in 310 CMR 30.901. All documents submitted to the Department for the purpose of demonstrating compliance with 310 CMR 30.900 shall be public records, and no such document shall be deemed to be, or treated as, confidential pursuant to 310 CMR 3.00.

(a) The requirements of 310 CMR 30.905 and 30.906 apply only to owners or operators of facilities subject to 310 CMR 30.590 through 30.595.

(b) The requirements of 310 CMR 30.908(2) apply only to owners or operators of miscellaneous units, hazardous waste landfills, surface impoundments, hazardous waste incinerators, land treatment facilities, waste piles, underground tanks, and above-ground tanks for which secondary containment has not been demonstrated. A waiver from 310 CMR 30.908(2) may be granted, at the discretion of the Department, for miscellaneous units at which there has been no disposal of hazardous waste and underground storage tanks that may be visually inspected.

(c) The State and Federal governments are exempt from the requirements of 310 CMR 30.900.

(2) No owner or operator of a new hazardous waste facility shall accept hazardous waste for treatment, storage or disposal until at least 60 days after:

(a) such owner, operator, or person has submitted to the Department a closure cost estimate pursuant to 310 CMR 30.903; and

(b) such owner, operator, or person has submitted to the Department evidence of financial responsibility meeting the requirements of 310 CMR 30.908; and

(c) such owner, operator, or person has submitted to the Department evidence of:

1. a financial assurance mechanism meeting the requirements of 310 CMR 30.904, and

2. payment, if applicable, into the financial assurance mechanism described in 310 CMR 30.901(2)(c)1.; and

30.901: continued

- (d) the Department has:
 - 1. approved the closure cost estimate submitted pursuant to 310 CMR 30.901(2)(a) and 30.903; and
 - 2. approved the financial mechanism submitted pursuant to 310 CMR 30.901(2)(c)1.; and
 - 3. received evidence that, pursuant to 310 CMR 30.901(2)(c)2, the first required payment has been paid into or for the financial assurance mechanism. The date on which such first required payment was made shall be considered the "anniversary date" as that term is used in 310 CMR 30.904.

- (3) No owner or operator of a new hazardous waste facility described in 310 CMR 30.901(1)(a) shall accept hazardous waste at such facility until at least 60 days after:
 - (a) such owner or operator has submitted to the Department a post-closure cost estimate pursuant to 310 CMR 30.905; and
 - (b) such owner or operator has submitted to the Department evidence of:
 - 1. a financial assurance mechanism meeting the requirements of 310 CMR 30.906, and
 - 2. payment, if applicable, into the financial mechanism described in 310 CMR 30.901(3)(b)1.; and
 - (c) the Department has:
 - 1. approved the post-closure cost estimate submitted pursuant to 310 CMR 30.901(3)(a) and 30.905; and
 - 2. approved the financial mechanism submitted pursuant to 310 CMR 30.901(3)(b)1.; and
 - 3. received evidence that, pursuant to 310 CMR 30.901(3)(b)2., the first required payment has been paid into or for the financial assurance mechanism. The date on which such first required payment was made shall be considered the "anniversary date" as that term is used in 310 CMR 30.906.

- (4) The owner or operator of each facility in existence on October 15, 1983 shall, no later than February 13, 1984:
 - (a) Submit to the Department a current closure cost estimate pursuant to 310 CMR 30.903, and, if the facility is described in 310 CMR 30.901(1)(a), a current post-closure cost estimate pursuant to 310 CMR 30.905; and
 - (b) Provide to the Department evidence of a financial mechanism meeting all applicable requirements of 310 CMR 30.904, 30.906, and 30.908 as in effect on October 15, 1983; and
 - (c) Provide to the Department evidence that the first required payment, if applicable, has been paid into or for the financial mechanism(s) required pursuant to 310 CMR 30.904, and 30.906 if applicable.
 - 1. The date on which the first required payment was paid into or for a financial mechanism meeting the requirements of 310 CMR 30.904 shall be considered the "anniversary date" as that term is used in 310 CMR 30.904.
 - 2. The date on which the first required payment was paid into or for a financial mechanism meeting the requirements of 310 CMR 30.906 shall be considered the "anniversary date" as that term is used in 310 CMR 30.906.

- (5) An owner or operator who fulfills the requirements of 310 CMR 30.900 by establishing a trust fund or by obtaining a surety bond, letter of credit, or insurance policy shall be deemed to be in noncompliance with 310 CMR 30.900 if:
 - (a) the amount of financial assurance provided is at any time less than the amount required; or
 - (b) the trust fund, surety bond, letter of credit, or insurance policy ceases to provide the required financial assurance; or
 - (c) the trustee or issuing institution is named as a debtor in a voluntary or involuntary proceeding pursuant to Title 11 (Bankruptcy) of the United States Code; or
 - (d) there is a suspension or revocation of the trustee's authority to act as trustee or of the issuing institution's authority to issue or keep in effect the surety bond, letter of credit, or insurance policy; or

30.901: continued

- (e) the owner or operator does not have in effect a contract with a Claims Administrator in compliance with 310 CMR 30.908 and 30.910 whenever such a contract is required pursuant to 310 CMR 30.908 and 30.910.
- (6) Owners and operators of facilities shall comply with 310 CMR 30.908 as follows.
- (a) The owner or operator of each facility in existence on December 31, 1985 shall, by no later than January 31, 1986, provide to the Department evidence of a financial mechanism meeting all requirements of 310 CMR 30.908, as in effect on December 31, 1985.
- (b) The owner or operator of each facility in existence on April 1, 1986 shall, by no later than April 30, 1986, provide to the Department evidence of a financial mechanism meeting all requirements of 310 CMR 30.908, as in effect on April 1, 1986. After April 30, 1986, no facility shall commence or continue operating unless the owner or operator has provided to the Department evidence of a financial mechanism meeting all requirements of 310 CMR 30.908, as in effect on April 30, 1986, and said financial mechanism is in effect.
- (c) From July 1 through December 31, 1987, the owner or operator of each facility in existence on July 1, 1987, shall have, and maintain in effect, evidence of a financial mechanism meeting all requirements of 310 CMR 30.908, as in effect on June 30, 1987. After December 31, 1987, no facility in existence on October 1, 1987 shall commence or continue operating unless the owner or operator has provided to the Department evidence of a financial mechanism meeting all requirements of 310 CMR 30.908, as in effect on December 31, 1987, and said financial mechanism is in effect. After July 1, 1987, no facility not in existence on July 1, 1987 shall commence or continue operating unless the owner or operator has provided to the Department evidence of a financial mechanism meeting all requirements of 310 CMR 30.908, as in effect on July 1, 1987, and said financial mechanism is in effect. After October 1, 1987, no facility not in existence on October 1, 1987 shall commence or continue operating unless the owner or operator has provided to the Department evidence of a financial mechanism meeting all requirements of 310 CMR 30.908, as in effect on December 31, 1987, and said financial mechanism is in effect. If an owner or operator is required by 310 CMR 30.908 to obtain and maintain in effect a contract with a Claims Administrator, the requirements and deadlines set forth in 310 CMR 30.901(6)(c) shall apply to said contract.
- (7) Any attempt by any person to obtain money from a trust fund, surety bond, letter of credit, insurance policy, or any other financial responsibility instrument or mechanism established in whole or in part for the purpose of complying with 310 CMR 30.000 by submitting a claim, or assisting in the submission of a claim, that is fraudulent, inflated, or otherwise unlawful or unjustified shall be a violation of 310 CMR 30.000 and, in addition, shall be subject to all laws governing fraud.

30.902: Mailing of Notices

All notices required to be sent to the Department pursuant to 310 CMR 30.900 shall be sent to:

Director
Division of Hazardous Waste
Department of Environmental Quality Engineering
Commonwealth of Massachusetts
One Winter Street
Boston, Massachusetts 02108

30.903: Cost Estimation for Closure

- (1) (Effective on and after July 1, 1988) The owner or operator shall, within the applicable time period prescribed in 310 CMR 30.901, prepare and submit to the Department a written estimate, in current dollars, of the cost of closing the facility pursuant to 310 CMR 30.580. This cost estimate shall equal the cost of closure at the point in the facility's operating life when the extent and manner of its operation would make closure the most expensive, as indicated by the closure plan. This cost estimate shall be certified by an independent Massachusetts registered professional engineer.
- (2) The preparation of a current closure cost estimate shall be subject to the following provisions:
 - (a) To the extent that quantities of different hazardous wastes being stored or treated at the facility vary over the operating life of the facility, the owner or operator shall base the current closure cost estimate upon the cost of removing the maximum inventory of each hazardous waste that may occur during the operating life of the facility, regardless of whether a maximum inventory occurs simultaneously with any other maximum inventory or with the point in the facility's operating life when the extent and manner of its operations would make closure most expensive; and
 - (b) The current closure cost estimate may show at a cost no lower than zero those hazardous wastes for which the owner or operator persuades the Department that there is not a cost of alternate disposal of such hazardous wastes, that such hazardous wastes have a current economic value, and that such economic value will continue over the remaining operating life of the facility.
- (3) Within 30 days after each anniversary of the date on which the first current closure cost estimate was prepared, the owner or operator shall prepare and submit to the Department an adjustment for inflation of the current closure cost estimate. The adjustment shall be made as specified in 310 CMR 30.903, using an inflation factor derived from the annual implicit Price Deflator for Gross Domestic Product as established by the U.S. Department of Commerce in its *Survey of Current Business*. The inflation factor shall be calculated by dividing the latest published annual Deflator by the Deflator for the previous year.
 - (a) The first adjustment shall be made by multiplying the current closure cost estimate by the inflation factor. The result shall be the adjusted current closure cost estimate.
 - (b) Subsequent adjustments shall be made by multiplying the latest adjusted closure cost by the inflation factor.
- (4) The owner or operator shall revise the current closure cost estimate whenever a change in the closure plan increases the cost of closure. The revised current closure cost estimate shall be adjusted for inflation as specified in 310 CMR 30.903(3). The Department may authorize or require the use of an adjusted inflation factor if the Department determines that the inflation factor calculated pursuant to 310 CMR 30.903(3) does not accurately reflect change in the cost of closing the facility.
- (5) During the operating life of the facility, the owner or operator shall keep in the facility's records all closure cost estimates prepared pursuant to 310 CMR 30.903.

30.904: Financial Assurance for Closure

The owner or operator of each facility shall establish and continuously maintain financial assurance for closure of the facility using the options specified in 310 CMR 30.904(1) through (6).

30.904: continued

(1) Closure trust fund.

(a) An owner or operator may satisfy the requirements of 310 CMR 30.904 by establishing a closure trust fund which conforms to 310 CMR 30.904(1) and by sending an originally signed duplicate of the trust agreement to the Department within the applicable time period prescribed in 310 CMR 30.901(2) or (4). The trustee shall be a bank or other financial institution which has the authority to act as a trustee and whose trust operations are regulated and examined by the Massachusetts Commissioner of Banking, or the trustee shall be a national bank.

(b) The wording of the trust agreement shall be identical to the wording specified in 310 CMR 30.909(1)(a), and the trust agreement shall be accompanied by a formal certification of acknowledgement identical to the wording specified in 310 CMR 30.909(1)(b). Schedule A of the trust agreement shall be updated within 60 days after a change in the amount of the current closure cost estimate which is the subject of the trust agreement.

(c) The owner or operator shall make payments into the closure trust fund no less frequently than annually over the term of the license issued pursuant to 310 CMR 30.000 in the case of a new facility, or over a period no greater than ten years in the case any other facility, or the remaining operating life of the facility as estimated in the closure plan, whichever period is the shortest. This period is hereinafter referred to as the "pay-in period". The payments into the closure trust fund shall be made as follows:

1. For each facility, the first payment shall be made pursuant to the applicable time period prescribed in 310 CMR 30.901(2) or (4). A receipt from the trustee for this payment shall be submitted by the owner or operator to the Department as evidence of payment. Except as provided in 310 CMR 30.904(6), the first payment shall be at least equal to the current closure cost estimate, divided by the number of years in the pay-in period. Such pay-in period shall be no greater than the operating life of the facility. Subsequent payments shall be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment shall be calculated by the formula:

$$\text{Next Payment} = \frac{\text{CE} - \text{CV}}{\text{Y}}$$

where CE is the current closure cost estimate, CV is the current value of the trust fund, and Y is the number of years in the pay-in period.

2. If an owner or operator of a facility which has interim status pursuant to RCRA establishes a trust fund pursuant to 310 CMR 30.904(1), and the value of that trust fund is less than the current closure cost estimates when a license is issued for that facility, the amount of the current closure cost estimate still to be paid into the trust fund shall be paid over the pay-in period specified in 310 CMR 30.904(1)(c). Payment by an owner or operator of a facility which has interim status pursuant to RCRA which has become licensed shall continue to be made no later than 30 days after each anniversary date of the first payment made as an interim status facility pursuant to 310 CMR 30.901(4). The amount of each payment shall be determined by the formula:

$$\text{Next Payment} = \frac{\text{CE} - \text{CV}}{\text{Y}}$$

where CE is the current closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

(d) The owner or operator may accelerate payments into the closure trust fund, or deposit into the closure trust fund the full amount of the current closure cost estimate at the time the closure trust fund is established. However, the owner or operator shall maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in 310 CMR 30.904(1)(c).

30.904: continued

(e) If the owner or operator establishes a closure trust fund after having used one or more alternate mechanisms specified in 310 CMR 30.904, the owner's or operator's first payment shall be in at least the amount that the fund would contain if the trust fund were established initially and annual payments made in compliance with 310 CMR 30.904.

(f) After the pay-in period is completed, whenever the current closure cost estimate changes, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund.

1. If the value of the closure trust fund is less than the amount of the new current closure cost estimate, the owner or operator shall, within 60 days after the change in the cost estimate, either deposit an amount into the fund so that the fund's value after this deposit at least equals the amount of the current closure cost estimate, or obtain other financial assurance as specified in 310 CMR 30.904 to cover the difference.

2. If the value of the closure trust fund is greater than the total amount of the new current closure cost estimate, the owner or operator may submit a written request to the Department for release of the amount in excess of the current closure cost estimate.

(g) If an owner or operator substitutes other financial assurance as specified in 310 CMR 30.904 for all or part of the closure trust fund, he may submit a written to the Department for release of the amount in excess of the current closure cost estimate covered by the closure trust fund.

(h) After receiving a written request from the owner or operator for release of the funds as specified in 310 CMR 30.904(1)(f)2., or 310 CMR 30.904(1)(g), the Department may instruct the trustee to release to the owner or operator such funds as the Department may specify in writing.

(i) After beginning final closure, an owner or operator or any other person authorized by the Department to perform closure may request reimbursement for closure expenditures by submitting itemized bills to the Department. After receiving bills for closure activities, the Department shall determine whether the closure expenditures are in accordance with the closure plan or otherwise justified, and, if so, the Department may instruct the trustee to make reimbursement in such amounts as the Department may specify in writing. Whenever the Department is not persuaded that the cost of closure will not be significantly greater than the value of the closure trust fund, the Department may withhold reimbursement of such amounts as it deems prudent until it determines, in accordance with 310 CMR 30.904(8), that the owner or operator is no longer required to maintain financial assurance for closure.

(j) The Department may agree to termination of the trust when:

1. Either the Department is persuaded that the owner or operator has substituted alternate financial assurance for closure as specified in 310 CMR 30.904, or the Department has released the owner or operator from the requirements of 310 CMR 30.904, pursuant to 310 CMR 30.904(8); and

2. The Department gives prior written consent for such termination.

(2) Surety bond guaranteeing payment into a closure trust fund.

(a) An owner or operator may satisfy the requirements of 310 CMR 30.904 by obtaining a surety bond which conforms to 310 CMR 30.904(2) and by submitting the surety bond to the Department within the applicable time period prescribed in 310 CMR 30.901(2) or (4). The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(b) The wording of the surety bond shall be identical to the wording specified in 310 CMR 30.909(2).

(c) An owner or operator who uses a surety bond to satisfy the requirements of 310 CMR 30.904 shall also establish a standby trust fund. Under the terms of the surety bond, all payments made thereunder shall be deposited by the surety directly into the standby trust fund in accordance with instructions from the Department. This standby trust fund shall meet the requirements in 310 CMR 30.904(1), except that:

30.904: continued

1. An originally signed duplicate of the trust agreement shall be submitted to the Department with the surety bond; and
 2. Until the standby trust fund is funded pursuant to the requirements of 310 CMR 30.904, the following are not required:
 - a. Payment into the trust fund as specified in 310 CMR 30.904(1);
 - b. Annual valuations as required by the trust agreement (*see* 310 CMR 90.909(1)(a)10.); and
 - c. Notices of nonpayment as required by the trust agreement (*see* 310 CMR 30.909(1)(a)15.).
 - (d) The bond shall guarantee that the owner or operator shall:
 1. Fund the standby trust fund in an amount equal to the penal sum of the bond (*see* 310 CMR 30.909(2)) before the beginning of final closure of the facility; or
 2. Fund the standby trust fund in an amount equal to the penal sum within 15 days after the Department or a court of competent jurisdiction issues an order to begin closure; or
 3. Provide alternate financial assurance as specified in 310 CMR 30.904, and obtain the Department's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and by the Department of a notice of cancellation of the surety bond from the surety.
 - (e) Under the terms of the bond (*see* 310 CMR 30.909(2)), the surety shall become liable on the bond obligation when the owner or operator does not perform as guaranteed by the bond (*see* 310 CMR 30.909(2)).
 - (f) The penal sum of the bond shall be an amount at least equal to the current closure cost estimate, except as provided in 310 CMR 30.904(6).
 - (g) Whenever the current closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, shall either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Department, or obtain other financial assurance as specified in 310 CMR 30.904 to cover the increase. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the Department.
 - (h) Under the terms of the bond, the surety may cancel the bond by sending written notice of cancellation by certified mail to the owner or operator and to the Department. Cancellation may not take effect, however, until at least 120 days after the date of receipt of the notice of cancellation by both the owner or operator and the Department, as shown by the later return receipt.
 - (i) The Department may agree to cancellation of the bond when:
 1. Either the Department is persuaded that the owner or operator has substituted alternate financial assurance for closure as specified in 310 CMR 30.904, or the Department has released the owner or operator from the requirements of 310 CMR 30.904, pursuant to 310 CMR 30.904(8); and
 2. The Department gives prior written consent for such cancellation.
- (3) Surety bond guaranteeing performance of closure.
- (a) An owner or operator may satisfy the requirements of 310 CMR 30.904, by obtaining a surety bond which conforms to 310 CMR 30.904(3) and by submitting the surety bond to the Department within the applicable time period prescribed in 310 CMR 30.901(2) or (4). The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.
 - (b) The wording of the surety bond shall be identical to the wording specified in 310 CMR 30.909(3).
 - (c) An owner or operator who uses a surety bond to satisfy the requirements of 310 CMR 30.904 shall also establish a standby trust fund. Under the terms of the surety bond, all payments made thereunder shall be deposited by the surety directly into the standby trust fund in accordance with instructions from the Department. This standby trust fund shall meet the requirements in 310 CMR 30.904(1), except that:

30.904: continued

1. An originally signed duplicate of the trust agreement shall be submitted to the Department with the surety bond; and
 2. Until the standby trust fund is funded pursuant to the requirements of 310 CMR 30.904, the following are not required:
 - a. Payment into the trust fund as specified in 310 CMR 30.904(1);
 - b. Annual valuations as required by the trust agreement (*see* 310 CMR 30.909(1)(a)10.); and
 - c. Notices of nonpayment as required by the trust agreement (*see* 310 CMR 30.909(1)(a)15.).
 - (d) The bond shall guarantee that the owner or operator shall:
 1. Perform final closure in accordance with the closure plan and other requirements of the license for the facility whenever required to do so; or
 2. Provide alternate financial assurance as specified in 310 CMR 30.904, and obtain the Department's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and by the Department of a notice of cancellation of the surety bond from the surety.
 - (e) Under the terms of the bond (*see* 310 CMR 30.909(3)), the surety shall become liable on the bond obligation when the owner or operator does not perform as guaranteed by the bond (*see* 310 CMR 30.909(3)). When the owner or operator does not perform final closure in accordance with 310 CMR 30.580A through 30.586A (Effective through 6/30/88) or 30.580B through 30.586B (Effective on and after 7/1/88), the surety shall become liable on the bond obligation to:
 1. Perform final closure as guaranteed by the bond; and
 2. Deposit the amount of the penal sum into the standby trust fund.
 - (f) The penal sum of the bond shall be an amount at least equal to the current closure cost estimate, except as provided in 310 CMR 30.904(6).
 - (g) Whenever the current closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, shall either cause the penal sum to be increased to an amount equal to the current closure cost estimate and submit evidence of such increase to the Department, or obtain other financial assurance as specified in 310 CMR 30.904, to cover the increase. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the Department.
 - (h) Under the terms of the bond, the surety may cancel the bond by sending written notice of cancellation by certified mail to the owner or operator and to the Department. Cancellation may not take effect, however, until at least 120 days after the date of receipt of the notice of cancellation by both the owner or operator and the Department, as shown by the later return receipt.
 - (i) The Department may agree to cancellation of the bond when:
 1. Either the Department is persuaded that the owner or operator has substituted alternate financial assurance for closure as specified in 310 CMR 30.904, or the Department has released the owner or operator from the requirements of 310 CMR 30.904 pursuant to 310 CMR 30.904(8); and
 2. The Department gives prior written consent for such cancellation.
 - (j) The surety will not be liable for deficiencies in the performance of closure by the owner or operator after the Department releases the owner or operator from the requirements of 310 CMR 30.904 pursuant to 310 CMR 30.904(8).
- (4) Closure letter of credit.
- (a) An owner or operator may satisfy the requirements of 310 CMR 30.904, by obtaining an irrevocable standby letter of credit which conforms to 310 CMR 30.904(4) and by submitting the letter to the Department within the applicable time period prescribed in 310 CMR 30.901(2) or (4). The institution issuing the letter of credit shall be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by the Massachusetts Commissioner of Banking, or the institution shall be a national bank.
 - (b) The wording of the letter of credit shall be identical to the wording specified in 310 CMR 30.909(4).

30.904: continued

(c) An owner or operator who uses a letter of credit to satisfy the requirements of 310 CMR 30.904, shall also establish a standby trust fund. Under the terms of the letter of credit, all payments made thereunder shall be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Department. This standby trust fund shall meet the requirements in 310 CMR 30.904(1), except that:

1. An originally signed duplicate of the trust agreement shall be submitted to the Department with the letter of credit; and
2. Until the standby trust fund is funded pursuant to the requirements of 310 CMR 30.904, the following are not required:
 - a. Payment into the trust fund as specified in 310 CMR 30.904(1);
 - b. Annual valuations as required by the trust agreement (*see* 310 CMR 30.909(1)(a)10.); and
 - c. Notices of nonpayment as required by the trust agreement (*see* 310 CMR 30.909(1)(a)15.)

(d) The letter of credit shall be accompanied by a letter from the owner or operator which shall state:

1. The letter of credit number;
2. The name of the issuing institution;
3. The date of issuance of the letter of credit;
4. The EPA identification number of the facility;
5. The name and address of the facility; and
6. The amount of funds assured by the letter of credit for closure of the facility.

(e) The letter of credit shall be irrevocable and shall be issued for a period of at least one year. The letter of credit shall provide that the expiration date will be automatically extended for a period of at least one year unless, no later than 120 days before the current expiration date pursuant to the terms of the letter of credit, the issuing institution notifies both the owner or operator and the Department by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days shall not begin before the date when both the owner or operator and the Department have received the notice, as shown by the later return receipt.

(f) The letter of credit shall be issued in an amount at least equal to the current closure cost estimate, except as provided in 310 CMR 30.904(6).

(g) Whenever the current closure cost estimate increases to an amount greater than the amount of the credit, the owner or operator, within 60 days after the increase, shall either cause the amount of the credit to be increased to an amount equal to the current closure cost estimate and submit evidence of such increase to the Department, or obtain other financial assurance as specified in 310 CMR 30.904, to cover the increase. Whenever the current closure cost estimate decreases, the amount of the credit may be reduced to the amount of the current closure cost estimate following written approval by the Department.

(h) The Department may draw upon the letter of credit when the owner or operator does not perform final closure in accordance with 310 CMR 30.580A through 30.586A (Effective through 6/30/88) or 30.580B through 30.586B (Effective on and after 7/1/88).

(i) If the owner or operator does not establish alternate financial assurance as required by 310 CMR 30.904, and does not obtain written approval from the Department of any such alternate financial assurance within 90 days of receipt by both the owner or operator and by the Department of a notice that the issuing institution will not extend the letter of credit beyond the current expiration date, the Department shall draw on the letter of credit. The Department may delay drawing on the letter of credit if the issuing institution grants an extension of the term of the letter of credit. During the last 30 days of any such extension, the Department shall draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in 310 CMR 30.904, or has failed to obtain written approval by the Department of such assurance.

(j) The Department may return the letter of credit to the issuing institution for termination when:

1. Either the Department is persuaded that the owner or operator has substituted alternate financial assurance for closure as specified in 310 CMR 30.904, or the Department has released the owner or operator from the requirements of 310 CMR 30.904, pursuant to 310 CMR 30.904(8); and
2. The Department gives prior written consent for such termination.

30.904: continued

(5) Closure Insurance.

(a) An owner or operator may satisfy the requirements of 310 CMR 30.904, by obtaining closure insurance which conforms to the requirements of 310 CMR 30.904(5) and by submitting a certificate of such insurance to the Department within the applicable time period prescribed in 310 CMR 30.901(2) or (4). The Department may require submission of a duplicate of the complete insurance policy. At a minimum, the insurer shall be licensed to transact the business of insurance or authorized to provide insurance as an excess or surplus lines insurer in the Commonwealth of Massachusetts.

(b) The wording of the certificate of insurance shall be identical to the wording specified in 310 CMR 30.909(5).

(c) The closure insurance policy shall be issued for a face amount at least equal to the current closure cost estimate, except as provided in 310 CMR 30.904(6). The term "face amount" means the total amount the insurer is obligated to pay pursuant to the policy. Actual payments by the insurer shall not change the face amount, although the insurer's future liability may be lowered by the amount of the payments.

(d) The closure insurance policy shall guarantee that funds in an amount equal to the face amount of the closure insurance policy shall be available to close the facility whenever final closure occurs. The policy shall also guarantee that once final closure begins, the insurer shall be responsible for paying out funds up to an amount equal to the face amount of the closure insurance policy, upon the direction of the Department, to such persons as the Department may specify in writing.

(e) After beginning final closure, an owner or operator or any other person authorized to perform closure may request reimbursement for closure expenditures by submitting itemized bills to the Department. After receiving bills for closure activities, the Department shall determine whether the closure expenditures are in accordance with the closure plan or otherwise justified, and, if so, the Department may instruct the insurer to make reimbursement in such amounts as the Department may specify in writing. Whenever the Department is not persuaded that the cost of closure will not be significantly greater than the face amount of the closure insurance policy, the Department may withhold reimbursement of such amounts as it deems prudent until it determines, in accordance with 310 CMR 30.904(8), that the owner or operator is no longer required to maintain financial assurance for closure.

(f) The Department may agree to termination of the closure insurance policy when:

1. Either the Department is persuaded that the owner or operator has substituted alternate financial assurance for closure as specified in 310 CMR 30.904 or the Department has released the owner or operator from the requirements of 310 CMR 30.904, pursuant to 310 CMR 30.904(8); and
2. The Department gives prior written consent for such termination.

Failure to pay the premium, without substitution of alternate financial assurance as specified in 310 CMR 30.904, shall constitute violation of 310 CMR 30.000. Such violation shall be deemed to begin upon receipt by the Department of a notice of future cancellation, termination, or failure to renew due to nonpayment of premium, rather than upon the date of expiration.

(g) The closure insurance policy shall provide that the insurer may not cancel, terminate, or fail to renew the closure insurance policy except for failure to pay the premium. The automatic renewal of the policy shall, at a minimum, provide the insured with the option of renewal at the face amount of the expiring closure insurance policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate or fail to renew the closure insurance policy by sending notice by certified mail to the owner or operator and to the Department. Cancellation, termination, or failure to renew may not take effect, however, until at least 120 days after the date of receipt of the notice by both the Department and the owner or operator, as shown by the later return receipt. Cancellation, termination, or failure to renew may not occur, and the closure insurance policy shall remain in full force and effect, in the event that on or before the date of expiration:

1. The Department deems the facility abandoned; or
2. The license is suspended or revoked or an application for a new license is denied; or

30.904: continued

3. Closure is ordered by the Department or a court of competent jurisdiction; or
 4. The owner or operator is named a debtor in a voluntary or involuntary bankruptcy proceeding; or
 5. The premium due is paid.
- (h) Whenever the current closure cost estimate increases to an amount greater than the face amount of the closure insurance policy, the owner or operator, within 60 days after the increase, shall either cause the face amount of the closure insurance policy to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Department, or obtain other financial assurance as specified in 310 CMR 30.904, to cover the increase. Whenever the current closure cost estimate decreases, the face amount of the closure insurance policy may be reduced to the amount of the current closure cost estimate following written approval by the Department.
- (i) The Department may agree to cancellation of the closure insurance policy when:
1. Either the Department is persuaded that the owner or operator has substituted alternate financial assurance for closure as specified in 310 CMR 30.904, or the Department has released the owner or operator from the requirements of 310 CMR 30.904, pursuant to 310 CMR 30.904(8); and
 2. The Department gives prior written consent for such cancellation.
- (6) Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of 310 CMR 30.904, by establishing more than one financial mechanism per Massachusetts facility. These mechanisms shall be limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. These mechanisms shall be in compliance with 310 CMR 30.904(1), (2), (3), (4), and (5), except that it shall be the combination of mechanisms, rather than a single mechanism, which shall provide financial assurance for an amount at least equal to the current closure cost estimate. If an owner or operator uses a trust fund in combination with any other mechanism, he shall use the trust fund for those mechanisms for which the establishment of a standby trust fund is required. A single standby trust fund may be used for two or more mechanisms. The Department may use any or all of the mechanisms to provide for closure of the facility.
- (7) Use of a financial mechanism for multiple facilities.
- (a) An owner or operator may use a financial assurance mechanism specified in 310 CMR 30.904 to meet the requirements of 310 CMR 30.904, for more than one Massachusetts facility.
 - (b) Evidence of financial assurance submitted to the Department shall include a list showing, for each facility, the EPA identification number, name, address, and amount of funds for closure assured by the mechanism.
 - (c) The amount of funds available through the mechanism shall be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for closure of any facility covered by the mechanism, the Department may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.
- (8) (Effective on and after July 1, 1988) Release of the owner or operator from the requirements of 310 CMR 30.904. When the Department has certified, pursuant to 310 CMR 30.587(3), that closure of a facility is complete, the Department shall notify the owner or operator in writing that he is no longer required to maintain financial assurance for closure of the facility pursuant to 310 CMR 30.904.

30.905: Cost Estimation for Post-closure Care

(1) The owner or operator shall, within the applicable time period prescribed in 310 CMR 30.901(3) or (4), prepare and submit to the Department a written estimate, in current dollars, of the cost of post-closure monitoring and maintenance of the facility pursuant to 310 CMR 30.590 through 30.595. This cost estimate shall be calculated by multiplying the annual post-closure cost estimate by the number of years of post-closure care required in 310 CMR 30.592. This cost estimate shall be certified by an independent Massachusetts registered professional engineer.

(2) Within 60 days prior to each anniversary of the date on which the first post-closure cost estimate was prepared, the owner or operator shall prepare and submit to the Department an adjustment for inflation of the post-closure cost estimate. The adjustment shall be made as specified in 310 CMR 30.905, using an inflation factor derived from the annual implicit Price Deflator for Gross National Product as established by the U.S. Department of Commerce in its *Survey of Current Business*. The inflation factor shall be calculated by dividing the latest published annual Deflator by the Deflator for the previous year.

(a) The first adjustment shall be made by multiplying the post-closure cost estimate by the inflation factor. The result shall be the adjusted post-closure cost estimate.

(b) Subsequent adjustments shall be made by multiplying the latest adjusted post-closure cost by the inflation factor.

(3) The owner or operator shall revise the post-closure cost estimate whenever a change in the post-closure plan increases the cost of postclosure care. The revised post-closure cost estimate shall be adjusted for inflation as specified in 310 CMR 30.905(2). The Department may authorize or require the use of an adjusted inflation factor if the Department determines that the inflation factor calculated pursuant to 310 CMR 30.905(2) does not accurately reflect change in the cost of post-closure care of the facility.

(4) During the operating life of the facility, the owner or operator shall keep in the facility's records all post-closure cost estimates prepared pursuant to 310 CMR 30.905.

30.906: Financial Assurance for Post-closure Care

The owner or operator of each facility shall establish and continuously maintain financial assurance for post-closure care of the facility using the options specified in 310 CMR 30.906(1) through (6).

(1) Post-closure Trust Fund.

(a) An owner or operator may satisfy the requirements of 310 CMR 30.906, by establishing a post-closure trust fund which conforms to 310 CMR 30.906(1) and by sending an originally signed duplicate of the trust agreement to the Department within the applicable time period prescribed in 310 CMR 30.901(3) or (4). The trustee shall be a bank or other financial institution which has the authority to act as a trustee and whose trust operations are regulated and examined by the Massachusetts Commissioner of Banking, or the trustee shall be a national bank.

(b) The wording of the trust agreement shall be identical to the wording specified in 310 CMR 30.909(1)(a), and the trust agreement shall be accompanied by a formal certification of acknowledgment identical to the wording specified in 310 CMR 30.909(1)(b). Schedule A of the trust agreement shall be updated within 60 days after a change in the amount of the current post-closure cost estimate which is the subject of the trust agreement.

(c) The owner or operator shall make payments into the post-closure trust fund no less frequently than annually over the term of the license issued pursuant to 310 CMR 30.000 in the case of a new facility, or over a period no greater than ten years in the case of any other facility, or the remaining operating life of the facility as estimated in the post-closure plan, whichever period is the shortest. This period is hereinafter referred to as the "pay-in period." The payments into the post-closure trust fund shall be made as follows:

30.906: continued

1. For each facility, the first payment shall be made pursuant to the applicable time period prescribed in 310 CMR 30.901(3) or (4). A receipt from the trustee for this payment shall be submitted by the owner or operator to the Department as evidence of payment. Except as provided in 310 CMR 30.906(6), the first payment shall be at least equal to the current post-closure cost estimate, divided by the number of years in the pay-in period. Such pay-in period shall be no greater than the operating life of the facility. Subsequent payments shall be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment shall be calculated by the formula:

$$\text{Next Payment} = \frac{\text{CE} - \text{CV}}{\text{Y}}$$

where CE is the current post-closure cost estimate, CV is the current value of the trust fund, and Y is the number of years in the pay-in period.

2. If an owner or operator of a facility which has interim status pursuant to RCRA establishes a trust fund pursuant to 310 CMR 30.906(1), and the value of that trust fund is less than the current post-closure cost estimate when a license is issued for that facility, the amount of the current post-closure cost estimate still to be paid into the trust fund shall be paid over the pay-in period specified in 310 CMR 30.906(1)(c). Payment by an owner or operator of a facility which has interim status pursuant to RCRA which has become licensed shall continue to be made no later than 30 days after each anniversary date of the first payment made as an interim status facility pursuant to 310 CMR 30.901(4). The amount of each payment shall be determined by the formula:

$$\text{Next Payment} = \frac{\text{CE} - \text{CV}}{\text{Y}}$$

where CE is the current post-closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

(d) The owner or operator may accelerate payments into the post-closure trust fund, or deposit into the post-closure trust fund the full amount of the current post-closure cost estimate at the time the post-closure trust fund is established. However, the owner or operator shall maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in 310 CMR 30.906(1)(c).

(e) If the owner or operator establishes a post-closure trust fund after having used one or more alternate mechanisms specified in 310 CMR 30.906, the owner's or operator's first payment shall be in at least the amount that the fund would contain if the post-closure trust fund were established initially and annual payments were made in compliance with 310 CMR 30.906.

(f) After the pay-in period is completed, whenever the current post-closure cost estimate changes, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund.

1. If the value of the post-closure trust fund is less than the amount of the new current post-closure cost estimate, the owner or operator shall, within 60 days after the change in the cost estimate, either deposit an amount into the fund so that the fund's value after this deposit at least equals the amount of the current post-closure cost estimate, or obtain other financial assurance as specified in 310 CMR 30.906, to cover the difference.

2. If the value of the post-closure trust fund is greater than the total amount of the new current post-closure cost estimate, the owner or operator may submit a written request to the Department for release of the amount in excess of the current post-closure cost estimate.

30.906: continued

(g) If an owner or operator substitutes other financial assurance as specified in 310 CMR 30.906 for all or part of the post-closure trust fund, he may submit a written request to the Department for release of the amount in excess of the current post-closure cost estimate covered by the post-closure trust fund.

(h) After receiving a written request from the owner or operator for release of the funds as specified in 310 CMR 30.906(1)(f)2, or 310 CMR 30.906(1)(g), the Department may instruct the trustee to release to the owner or operator such funds as the Department may specify in writing.

(i) During the period of post-closure care, the Department may approve a release of funds if the owner or operator demonstrates to the Department that the value of the post-closure trust fund exceeds the remaining cost of post-closure care.

(j) After beginning post-closure care, an owner or operator or any other person authorized by the Department to perform post-closure care may request reimbursement for post-closure expenditures by submitting itemized bills to the Department. After receiving bills for post-closure activities, the Department shall determine whether the post-closure expenditures are in accordance with the post-closure plan or otherwise justified, and, if so, the Department may instruct the trustee to make reimbursement in such amounts as the Department may specify in writing. Whenever the Department is not persuaded that the cost of post-closure care will not be significantly greater than the value of the post-closure trust fund, the Department may withhold reimbursement of such amounts as it deems prudent until it determines, in accordance with 310 CMR 30.906(8), that the owner or operator is no longer required to maintain financial assurance for post-closure care.

(k) The Department may agree to termination of the trust when:

1. Either the Department is persuaded that the owner or operator has substituted alternate financial assurance for post-closure care as specified in 310 CMR 30.906, or the Department has released the owner or operator from the requirements of 310 CMR 30.906, pursuant to 310 CMR 30.906(8); and
2. The Department gives prior written consent for such termination.

(2) Surety bond guaranteeing payment into a post-closure trust fund.

(a) An owner or operator may satisfy the requirements of 310 CMR 30.906, by obtaining a surety bond which conforms to 310 CMR 30.906(2) and by submitting the surety bond to the Department within the applicable time period prescribed in 310 CMR 30.901(3) or (4). The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(b) The wording of the surety bond shall be identical to the wording specified in 310 CMR 30.909(2).

(c) An owner or operator who uses a surety bond to satisfy the requirements of 310 CMR 30.906 shall also establish a standby trust fund. Under the terms of the surety bond, all payments made thereunder shall be deposited by the surety directly into the standby trust fund in accordance with instructions from the Department. This standby trust fund shall meet the requirements in 310 CMR 30.906(1), except that:

1. An originally signed duplicate of the trust agreement shall be submitted to the Department with the surety bond; and
2. Until the standby trust fund is funded pursuant to the requirements of 310 CMR 30.906, the following are not required:
 - a. Payment into the trust fund as specified in 310 CMR 30.906(1);
 - b. Annual valuations as required by the trust agreement (*see* 310 CMR 30.909(1)(a)10.); and
 - c. Notices of nonpayment as required by the trust agreement (*see* 310 CMR 30.909(1)(a)15.).

(d) The bond shall guarantee that the owner or operator shall:

1. Fund the standby trust fund in an amount equal to the penal sum of the bond (*see* 310 CMR 30.909(2)) before the beginning of final closure of the facility; or
2. Fund the standby trust fund in an amount equal to the penal sum within 15 days after the Department or a court of competent jurisdiction issues an order to begin closure; or

30.906: continued

3. Provide alternate financial assurance as specified in 310 CMR 30.906, and obtain the Department's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and by the Department of a notice of cancellation of the surety bond from the surety.
 - (e) Under the terms of the bond (*see* 310 CMR 30.909(2)), the surety shall become liable on the bond obligation when the owner or operator does not perform as guaranteed by the bond (*see* 310 CMR 30.909(2)).
 - (f) The penal sum of the bond shall be an amount at least equal to the current post-closure cost estimate, except as provided in 310 CMR 30.906(6).
 - (g) Whenever the current post-closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, shall either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Department, or obtain other financial assurance as specified in 310 CMR 30.906, to cover the increase. Whenever the current post-closure cost estimate decreases, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the Department.
 - (h) Under the terms of the bond, the surety may cancel the bond by sending written notice of cancellation by certified mail to the owner or operator and to the Department. Cancellation may not take effect, however, until at least 120 days after the date of receipt of the notice of cancellation by both the owner or operator and the Department, as shown by the later return receipt.
 - (i) The Department may agree to cancellation of the bond when:
 1. Either the Department is persuaded that the owner or operator has substituted alternate financial assurance for post-closure care as specified in 310 CMR 30.906, or the Department has released the owner or operator from the requirements of 310 CMR 30.906, pursuant to 310 CMR 30.906(8); and
 2. The Department gives prior written consent for such cancellation.
- (3) Surety bond guaranteeing performance of post-closure care.
- (a) An owner or operator may satisfy the requirements of 310 CMR 30.906, by obtaining a surety bond which conforms to 310 CMR 30.906(3) and by submitting the surety bond to the Department within the applicable time period prescribed in 310 CMR 30.901(3) or (4). The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.
 - (b) The wording of the surety bond shall be identical to the wording specified in 310 CMR 30.909(3).
 - (c) An owner or operator who uses a surety bond to satisfy the requirements of 310 CMR 30.906, shall also establish a standby trust fund. Under the terms of the surety bond, all payments made thereunder shall be deposited by the surety directly into the standby trust fund in accordance with instructions from the Department. This standby trust fund shall meet the requirements in 310 CMR 30.906(1), except that:
 1. An originally signed duplicate of the trust agreement shall be submitted to the Department with the surety bond; and
 2. Until the standby trust fund is funded pursuant to the requirements of 310 CMR 30.906, the following are not required:
 - a. Payment into the trust fund as specified in 310 CMR 30.906(1);
 - b. Annual valuations as required by the trust agreement (*see* 310 CMR 30.909(1)(a)10.); and
 - c. Notices of nonpayment as required by the trust agreement (*see* 310 CMR 30.909(1)(a)15.).
 - (d) The bond shall guarantee that the owner or operator shall:
 1. Perform post-closure care in accordance with the post-closure plan and other requirements of the license for the facility whenever required to do so; or
 2. Provide alternate financial assurance as specified in 310 CMR 30.906, and obtain the Department's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and by the Department of a notice of cancellation of the surety bond from the surety, as shown by the later return receipt.

30.906: continued

(e) Under the terms of the bond (*see* 310 CMR 30.909(3)), the surety shall become liable on the bond obligation when the owner or operator does not perform as guaranteed by the bond (*see* 310 CMR 30.909(3)). When the owner or operator does not perform post-closure care in accordance with 310 CMR 30.590A through 30.595A (Effective through 6/30/88) or 30.590B through 30.595B (Effective on and after 7/1/88), the surety shall become liable on the bond obligation to:

1. Perform post-closure care as guaranteed by the bond; and
2. Deposit the amount of the penal sum into the standby trust fund.

(f) The penal sum of the bond shall be an amount at least equal to the current post-closure cost estimate, except as provided in 310 CMR 30.906(6).

(g) Whenever the current post-closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, shall either cause the penal sum to be increased to an amount equal to the current post-closure cost estimate and submit evidence of such increase to the Department, or obtain other financial assurance as specified in 310 CMR 30.906, to cover the increase. Whenever the current post-closure cost estimate decreases, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the Department.

(h) Under the terms of the bond, the surety may cancel the bond by sending written notice of cancellation by certified mail to the owner or operator and to the Department. Cancellation may not take effect, however, until at least 120 days after the date of receipt of the notice of cancellation by both the owner or operator and the Department, as shown by the later return receipt.

(i) The Department may agree to cancellation of the bond when:

1. Either the Department is persuaded that the owner or operator has substituted alternate financial assurance for post-closure care as specified in 310 CMR 30.906, or the Department has released the owner or operator from the requirements of 310 CMR 30.906, pursuant to 310 CMR 30.906(8); and
2. The Department gives prior written consent for such cancellation.

(j) The surety will not be liable for deficiencies in the performance of post-closure care by the owner or operator after the Department releases the owner or operator from the requirements of 310 CMR 30.906, pursuant to 310 CMR 30.906(8).

(4) Post-closure letter of credit.

(a) An owner or operator may satisfy the requirements of 310 CMR 30.906, by obtaining an irrevocable standby letter of credit which conforms to 310 CMR 30.906(4) and by submitting the letter to the Department within the applicable time period prescribed in 310 CMR 30.901(3) or (4). The institution issuing the letter of credit shall be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by the Massachusetts Commissioner of Banking, or the institution shall be a national bank.

(b) The wording of the letter of credit shall be identical to the wording specified in 310 CMR 30.909(4).

(c) An owner or operator who uses a letter of credit to satisfy the requirements of 310 CMR 30.906, shall also establish a standby trust fund. Under the terms of the letter of credit, all payments made thereunder shall be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Department. This standby trust shall meet the requirements in 310 CMR 30.906(1), except that:

1. An originally signed duplicate of the trust agreement shall be submitted to the Department with the letter of credit; and
2. Until the standby trust fund is funded pursuant to the requirements of 310 CMR 30.906, the following are not required:
 - a. Payment into the trust fund as specified in 310 CMR 30.906(1);
 - b. Annual valuations as required by the trust agreement (*see* 310 CMR 30.909(1)(a)10.); and
 - c. Notices of nonpayment as required by the trust agreement (*see* 310 CMR 30.909(1)(a)15.).

30.906: continued

(d) The letter of credit shall be accompanied by a letter from the owner or operator which shall state:

1. The letter of credit number;
2. The name of the issuing institution;
3. The date of issuance of the letter of credit;
4. The EPA identification number of the facility;
5. The name and address of the facility; and
6. The amount of funds assured by the letter of credit for post-closure care of the facility.

(e) The letter of credit shall be irrevocable and shall be issued for a period of at least one year. The letter of credit shall provide that the expiration date will be automatically extended for a period of at least one year unless, no later than 120 days before the current expiration date pursuant to the terms of the letter of credit, the issuing institution notifies both the owner or operator and the Department by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days shall not begin before the date when both the owner or operator and the Department have received the notice, as shown by the later return receipt.

(f) The letter of credit shall be issued in an amount at least equal to the current post-closure cost estimate, except as provided in 310 CMR 30.906(6).

(g) Whenever the current post-closure cost estimate increases to an amount greater than the amount of the credit during the operating life of the facility, the owner or operator, within 60 days after the increase, shall either cause the amount of the credit to be increased to an amount equal to the current post-closure cost estimate and submit evidence of such increase to the Department, or obtain other financial assurance as specified in 310 CMR 30.906, to cover the increase. Whenever the current post-closure cost estimate decreases, the amount of the credit may be reduced to the amount of the current post-closure cost estimate following written approval by the Department.

(h) The Department may draw upon the letter of credit when the owner or operator does not perform post-closure care in accordance with 310 CMR 30.590A through 30.595A (Effective through 6/30/88) or 30.590B through 30.595B (Effective on and after 7/1/88).

(i) If the owner or operator does not establish alternate financial assurance as required by 310 CMR 30.906, and does not obtain written approval from the Department of any such alternate financial assurance within 90 days of receipt by both the owner or operator and by the Department of a notice that the issuing institution will not extend the letter of credit beyond the current expiration date, the Department shall draw on the letter of credit. The Department may delay drawing on the letter of credit if the issuing institution grants an extension of the term of the letter of credit. During the last 30 days of any such extension, the Department shall draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in 310 CMR 30.906, or has failed to obtain written approval by the Department of any such assurance.

(j) The Department may return the letter of credit to the issuing institution for termination when:

1. Either the Department is persuaded that the owner or operator has substituted alternate financial assurance for post-closure as specified in 310 CMR 30.906, or the Department has released the owner or operator from the requirements of 310 CMR 30.906, pursuant to 310 CMR 30.906(8); and
2. The Department gives prior written consent for such termination.

(5) Post-Closure Insurance.

(a) An owner or operator may satisfy the requirements of 310 CMR 30.906, by obtaining post-closure insurance which conforms to the requirements of 310 CMR 30.906(5) and by submitting a certificate of such insurance to the Department within the applicable time period prescribed in 310 CMR 30.901(3) or (4). The Department may require submission of a duplicate of the complete insurance policy. At a minimum, the insurer shall be licensed to transact the business of insurance or authorized to provide insurance as an excess or surplus lines insurer in the Commonwealth of Massachusetts.

(b) The wording of the certificate of insurance shall be identical to the wording specified in 310 CMR 30.909(5).

30.906: continued

(c) The post-closure care insurance policy shall be issued for a face amount at least equal to the current post-closure cost estimate, except as provided in 310 CMR 30.906(6). The term "face amount" means the total amount the insurer is obligated to pay pursuant to the policy. Actual payments by the insurer shall not change the face amount, although the insurer's future liability may be lowered by the amount of the payments.

(d) The post-closure care insurance policy shall guarantee that funds in an amount equal to the face amount of the post-closure care insurance policy shall be available to perform post-closure care whenever final closure ends. The policy shall also guarantee that once post-closure care begins, the insurer shall be responsible for paying out funds up to an amount equal to the face amount of the post-closure insurance policy, upon the direction of the Department, to such persons as the Department may specify in writing.

(e) After beginning post-closure care, an owner or operator or any other person authorized to perform post-closure care may request reimbursement for post-closure care expenses by submitting itemized bills to the Department. After receiving bills for post-closure care activities, the Department shall determine whether the post-closure care expenditures are in accordance with the post-closure plan or otherwise justified, and, if so, the Department may instruct the insurer to make reimbursement in such amounts as the Department may specify in writing. Whenever the Department is not persuaded that the cost of post-closure care will not be significantly greater than the face amount of the post-closure care insurance policy, the Department may withhold reimbursement of such amounts as it deems prudent until it determines, in accordance with 310 CMR 30.906(8), that the owner or operator is no longer required to maintain financial assurance for post-closure care.

(f) The Department may agree to termination of the post-closure care insurance policy when:

1. Either the Department is persuaded that the owner or operator has substituted alternate financial assurance for post-closure care as specified in 310 CMR 30.906, or the Department has released the owner or operator from the requirements of 310 CMR 30.906, pursuant to 310 CMR 30.906(8); and
2. The Department gives prior written consent for such termination.

Failure to pay the premium, without substitution of alternate financial assurance as specified in 310 CMR 30.906, shall constitute violation of 310 CMR 30.000. Such violation shall be deemed to begin upon receipt by the Department of a notice of future cancellation, termination, or failure to renew due to nonpayment of premium, rather than upon the date of expiration.

(g) The post-closure care insurance policy shall provide that the insurer may not cancel, terminate, or fail to renew the post-closure care insurance policy except for failure to pay the premium. The automatic renewal of the policy shall, at a minimum, provide the insured with the option of renewal at the face amount of the expiring post-closure care insurance policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the post-closure care insurance policy by sending notice by certified mail to the owner or operator and to the Department. Cancellation, termination, or failure to renew may not take effect, however, until at least 120 days after the date of receipt of the notice by both the Department and the owner or operator, as shown by the later return receipt. Cancellation, termination, or failure to renew may not occur, and the post-closure care insurance policy shall remain in full force and effect, in the event that on or before the date of expiration:

1. The Department deems the facility abandoned; or
2. The license is suspended or revoked or an application for a new license is denied; or
3. Closure is ordered by the Department or a court of competent jurisdiction; or
4. The owner or operator is named a debtor in a voluntary or involuntary bankruptcy proceeding; or
5. The premium due is paid.

30.906: continued

(h) Whenever the current post-closure cost estimate increases to an amount greater than the amount of the post-closure care insurance policy, the owner or operator, within 60 days after the increase, shall either cause the face amount of the post-closure care insurance policy to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Department, or obtain other financial assurance as specified in, 310 CMR 30.906, to cover the increase. Whenever the current post-closure cost estimate decreases, the face amount of the post-closure care insurance policy may be reduced to the amount of the current post-closure cost estimate following written approval by the Department.

(i) The Department may agree to cancellation of the post-closure care insurance policy when:

1. Either the Department is persuaded that the owner or operator has substituted alternate financial assurance for post-closure care as specified in 310 CMR 30.906, or the Department has released the owner or operator from the requirements of 310 CMR 30.906, pursuant to 310 CMR 30.906(8); and
2. The Department gives prior written consent for such cancellation.

(j) Commencing on the date that liability accrues to make payments pursuant to the policy, the insurer shall thereafter annually increase the face amount of the policy. At a minimum, such increase shall be equivalent to the face amount of the policy, less any payments made, multiplied by an amount equivalent to 85% of the most recent investment rate or of the equivalent coupon-issue yield announced by the U.S. Treasury for 26 week Treasury securities.

(6) Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of 310 CMR 30.906, by establishing more than one financial mechanism per Massachusetts facility. These mechanisms shall be limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. These mechanisms shall be in compliance with 310 CMR 30.906(1), (2), (3), (4), and (5), except that it shall be the combination of mechanisms, rather than a single mechanism, which shall provide financial assurance for an amount at least equal to the current post-closure cost estimate. If an owner or operator uses a trust fund in combination with any other mechanism, he shall use the trust fund as a standby trust fund for those mechanisms for which the establishment of a standby trust fund is required. A single standby trust fund may be used for two or more mechanisms. The Department may use any or all of the mechanisms to provide for post-closure care of the facility.

(7) Use of a financial mechanism for multiple facilities.

(a) An owner or operator may use a financial assurance mechanism specified in 310 CMR 30.906 to meet the requirements of 310 CMR 30.906, for more than one Massachusetts facility.

(b) Evidence of financial assurance submitted to the Department shall include a list showing, for each facility, the EPA identification number, name, address, and amount of funds for post-closure care assured by the mechanism.

(c) The amount of funds available through the mechanism shall be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for post-closure care of any facility covered by the mechanism, the Department may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

(8) Release of the owner or operator from the requirements of 310 CMR 30.906. When an owner or operator has completed, to the satisfaction of the Department, all post-closure care of the facility pursuant to 310 CMR 30.590A through 30.595A (Effective through 6/30/88) or 30.590B (Effective on and after 7/1/88), the Department shall, at the request of the owner or operator, notify him in writing that he is no longer required to maintain financial assurance for post-closure care of the facility pursuant to 310 CMR 30.906.

30.907: Use of a Mechanism for Financial Assurance of Both Closure and Post-Closure Care

An owner or operator may satisfy the requirements for financial assurance for both closure and post-closure care for more than one facility by using a trust fund, surety bond, letter of credit, or insurance, or a combination thereof, which meets the specifications set forth in 310 CMR 30.904 and 30.906. The amount of funds available through the mechanism(s) shall be no less than the sum of funds that would be available if a separate mechanism(s) were to be established and required to be maintained for financial assurance of closure and post-closure care.

30.908: Liability Requirements (Effective July 1, 1987)

(1) Coverage for sudden accidental occurrences. An owner or operator of a hazardous waste treatment, storage, or disposal facility, or a group of such facilities in Massachusetts, shall demonstrate assurance of financial responsibility for bodily injury and property damage to third parties caused by each sudden accidental occurrence arising from operation of the facility(ies). The owner or operator of each facility shall have and continuously maintain such coverage using either the options specified in 310 CMR 30.908(1)(a) through (d) or the options specified in 310 CMR 30.910. The options specified in 310 CMR 30.908(1)(a) through (d) may be used by the owner or operator of a facility, or a group of such facilities in Massachusetts, provided that the use of such options shall be subject to the provisions of 310 CMR 30.908(5), (6), and (7). The options specified in 310 CMR 30.910 may be used by the owner or operator of each facility, provided that the use of such options shall be subject to the provisions of 310 CMR 30.910. If the owner or operator of a facility, or a group of such facilities in Massachusetts, uses the options specified in 310 CMR 30.908(1)(a) through (d), said owner or operator, subject to the provisions of 310 CMR 30.908(3), (4), and (5), shall have and continuously maintain coverage for sudden accidental occurrences in the amount of at least \$3-million per each sudden accidental occurrence with an annual aggregate of at least \$6-million, exclusive of legal defense costs. If the owner or operator of a facility uses the options specified in 310 CMR 30.910, said owner or operator shall have and continuously maintain coverage for sudden accidental occurrences in the amount set forth in 310 CMR 30.910. Unless such assurance of financial responsibility is demonstrated entirely by liability insurance in compliance with 310 CMR 30.908(1)(a), the owner or operator shall also obtain and maintain in effect a contract with a Claims Administrator in compliance with 310 CMR 30.908(1)(e). As used in 310 CMR 30.908(1), the term "Claims Administrator" shall mean a person who shall be responsible for the processing and administration of all requests to make payments from a trust fund, standby trust fund, surety bond, or letter of credit pursuant to 310 CMR 30.908(1). The owner or operator of each facility shall give notice to both the Department and the Claims Administrator of every claim for bodily injury and/or property damage caused by a sudden accidental occurrence or occurrences arising from the operation of the facility(ies). The owner or operator of each facility shall give such notice to both the Department and the Claims Administrator as soon as possible and in any event no later than 30 days after learning of such claim. The owner or operator of each facility shall give notice to both the Department and the Claims Administrator of every judgment against the owner or operator for bodily injury and/or property damage caused by a sudden accidental occurrence or occurrences arising from the operation of the facility. The owner or operator of each facility shall give such notice to both the Department and the Claims Administrator as soon as possible and in any event no later than 30 days after learning of said judgment. The owner or operator of each facility shall submit to the Department a copy of every judgment against the owner or operator for bodily injury and/or property damage caused by a sudden accidental occurrence or occurrences arising from the operation of the facility. The owner or operator of each facility shall submit a copy of such judgment to the Department as soon as possible and in any event no later than 30 days after receiving a copy thereof.

(a) An owner or operator may demonstrate the required coverage by having liability insurance, as specified in 310 CMR 30.901(2) or (6), which conforms to 310 CMR 30.908(1)(a).

30.908: continued

1. Each liability insurance policy shall include a Hazardous Waste Facility Liability Endorsement (the "endorsement") and may be evidenced by a Certificate of Liability Insurance. The wording of the endorsement shall be identical to the wording specified in 310 CMR 30.909(6). The wording of the certificate of insurance shall be identical to the wording specified in 310 CMR 30.909(7). The owner or operator shall submit a signed duplicate original of the endorsement or the certificate of liability insurance to the Department. If requested by the Department, the owner or operator shall provide a signed duplicate original of the liability insurance policy. An owner or operator of a facility shall submit the signed duplicate original of the Hazardous Waste Facility Liability Endorsement or the Certificate of Liability Insurance to the Department within the applicable period prescribed in 310 CMR 30.901(2) or (6).
 2. At a minimum, the insurer shall be licensed to transact the business of insurance in Massachusetts, or authorized to provide insurance as an excess or surplus lines insurer in Massachusetts, or a risk retention group lawfully providing insurance to its members in Massachusetts.
- (b) An owner or operator may demonstrate the required coverage by establishing a sudden accidental occurrence liability trust fund, as specified in 310 CMR 30.901(2) or (6), which conforms to 310 CMR 30.908(1)(b), and by sending an originally signed duplicate of the trust agreement to the Department within the applicable time period prescribed in 310 CMR 30.901(2) or (6).
1. The trustee shall be a bank or other financial institution which has the authority to act as a trustee and whose trust operations are regulated and examined by the Massachusetts Commissioner of Banking, or the trustee shall be a national bank.
 2. The wording of the trust agreement shall be identical to the wording specified in 310 CMR 30.909(8)(a), and the trust agreement shall be accompanied by a formal certification of acknowledgement identical to the wording specified in 310 CMR 30.909(8)(b).
 3. On the date of the initial establishment of the sudden accidental occurrence liability trust fund, the value of the fund shall be at least \$6,000,000, or such other amount as required by the Department pursuant to 310 CMR 30.908(4) or (5).
 4. If an owner or operator substitutes other financial assurance as specified in 310 CMR 30.908(1) for all or part of the sudden accidental occurrence liability trust fund, he may submit a written request to the Department for release of the amount in excess of the amount to be covered by the sudden accidental occurrence liability trust fund.
 5. Any person who obtains final judgment against the owner or operator for bodily injury and/or property damage caused by a sudden accidental occurrence or occurrences arising from the operation of the facility may request payment from the sudden accidental occurrence liability trust fund in satisfaction of the judgment by submitting to the Claims Administrator a certified copy of the judgment and a statement, signed subject to 310 CMR 30.006 and 30.009, that the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator.
 6. After receiving the material described in 310 CMR 30.908(1)(b)5., the Claims Administrator shall determine whether the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator. If so, the Claims Administrator shall instruct the trustee to pay to the person who obtained the judgment such amounts, not to exceed the amount of the judgment or the amount of the limits set forth in 310 CMR 30.908(1), whichever amount is less, as the Claims Administrator may specify in writing.

30.908: continued

7. No trust shall be terminated without prior written consent of the Department. The Department may agree to termination of the trust when the Department is persuaded that the owner or operator has substituted alternate financial assurance as specified in 310 CMR 30.908(1), or when the Department certifies closure of the facility pursuant to 310 CMR 30.099(6) or 30.586(2).

(c) An owner or operator may demonstrate the required coverage by obtaining a surety bond which conforms to 310 CMR 30.908(1)(c) and by submitting the surety bond to the Department within the applicable time period prescribed in 310 CMR 30.901(2) or (6).

1. The surety company(ies) issuing the bond shall, at a minimum, be among those lawfully selling surety bonds in Massachusetts.

2. The wording of the surety bond shall be identical to the wording specified in 310 CMR 30.909(9).

3. An owner or operator who uses a surety bond to satisfy the requirements of 310 CMR 30.908 shall also establish a standby trust fund. Under the terms of the surety bond, all payments made thereunder shall, in accordance with instructions from the Department, either be paid by the surety directly to a person described in 310 CMR 30.908(1)(c)5. or deposited by the surety directly into the standby trust fund. This standby trust fund shall meet the requirements in 310 CMR 30.908(1)(b), except that:

a. An originally signed duplicate of the trust agreement shall be submitted to the Department with the surety bond; and

b. Until the standby trust fund is funded pursuant to the requirements of 310 CMR 30.908, the following are not required:

(i) payment into the trust fund as specified in 310 CMR 30.908(1)(b);

(ii) annual valuations as required by the trust agreement (*see* 310 CMR 30.909(8)(a)10.); and

(iii) notices of nonpayment as required by the trust agreement (*see* 310 CMR 30.909(8)(a)15.).

4. Any person who obtains final judgment against the owner or operator for bodily injury and/or property damage caused by a sudden accidental occurrence or occurrences arising from the operation of the facility may request payment from the surety bond in satisfaction of the judgment by submitting to the Claims Administrator a certified copy of the judgment and a statement, signed subject to 310 CMR 30.006 and 30.009, that the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator.

5. After receiving the material described in 310 CMR 30.908(1)(c)4., the Claims Administrator shall determine whether the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator. If so, the Claims Administrator shall instruct the surety company(ies) issuing the bond to pay either to the person making the claim or into the standby trust fund, or the Claims Administrator shall instruct the trustee of the standby trust fund to pay to the person who obtained the judgment, such amounts, not to exceed the amount of the judgment or the amount of the limits set forth in 310 CMR 30.908(1), whichever amount is less, as the Claims Administrator may specify in writing.

6. The bond shall guarantee that the owner or operator shall:

a. Fund the standby trust fund in an amount equal to either the sum of the judgment described in 310 CMR 30.908(1)(c)5. and the costs of administering said fund, or the amount of the penal sum, whichever is less, within 15 days after the Department or a court of competent jurisdiction issues an order to that effect; or

30.908: continued

- b. Provide alternate financial assurance as specified in 310 CMR 30.908, and obtain the Department's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and by the Department of a notice of cancellation of the surety bond from the surety.
 - 7. Under the terms of the bond (*see* 310 CMR 30.909(9)), the surety shall become liable on the bond obligation when the owner or operator does not perform as guaranteed by the bond *see* 310 CMR 30.909(9).
 - 8. The penal sum of the bond shall be at least \$6,000,000, or such other amount as required by the Department pursuant to 310 CMR 30.908(4) or (5).
 - 9. Under the terms of the bond, the surety may cancel the bond by sending written notice of cancellation by certified mail to the owner or operator, to the Claims Administrator, and to the Department. Cancellation may not take effect, however, until at least 120 days after the date of receipt of the notice of cancellation by the owner or operator, by the Claims Administrator, and by the Department, as shown by the latest return receipt.
 - 10. No bond shall be cancelled without prior written consent of the Department. The Department may agree to cancellation of the bond when the Department is persuaded that the owner or operator has substituted alternate financial assurance as specified in 310 CMR 30.908(1), or when the Department certifies closure of the facility pursuant to 310 CMR 30.099(6) or 30.586(2).
- (d) An owner or operator may demonstrate the required coverage by obtaining an irrevocable letter of credit which conforms to 310 CMR 30.908(1)(d) and by submitting the letter to the Department within the applicable time period prescribed in 310 CMR 30.901(2) or (6).
- 1. The institution issuing the letter of credit shall be an entity which has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by the Massachusetts Commissioner of Banking, or the institution shall be a national bank.
 - 2. The wording of the letter of credit shall be identical to the wording specified in 310 CMR 30.909(10).
 - 3. An owner or operator who uses a letter of credit to satisfy the requirements of 310 CMR 30.908(1) shall also establish a standby trust fund. Under the terms of the letter of credit, all payments made thereunder shall, in accordance with instructions from the Claims Administrator or the Department, either be paid by the issuing institution directly to a person described in 310 CMR 30.908(1)(d)8. or deposited by the issuing institution directly into the standby trust fund. This standby trust fund shall meet the requirements in 310 CMR 30.908(1)(b), except that:
 - a. An originally signed duplicate of the trust agreement shall be submitted to the Department with the letter of credit; and
 - b. Until the standby trust fund is funded pursuant to the requirements of 310 CMR 30.908, the following are not required:
 - (i) payment into the trust fund as specified in 310 CMR 30.908(1)(b);
 - (ii) annual valuations as required by the trust agreement (*See* 310 CMR 30.909(8)(a)10.); and
 - (iii) notices of nonpayment as required by the trust agreement (*See* 310 CMR 30.909(8)(a)15.).
 - 4. The letter of credit shall be accompanied by a letter from the owner or operator which shall state:
 - a. The letter of credit number;
 - b. The name of the issuing institution;
 - c. The date of issuance of the letter of credit;
 - d. The EPA identification number(s) of the facility(ies);
 - e. The name(s) and address(es) of the facility(ies); and
 - f. The amount of funds assured by the letter of credit.

30.908: continued

5. The letter of credit shall be irrevocable and shall be issued for a period of at least one year. The letter of credit shall provide that the expiration date will be automatically extended for a period of at least one year unless, no later than 120 days before the current expiration date pursuant to the terms of the letter of credit, the issuing institution notifies the owner or operator, the Claims Administrator, and the Department by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days shall not begin before the date when the owner or operator, the Claims Administrator, and the Department have received the notice, as shown by the latest return receipt.
6. The letter of credit shall be issued in an amount at least \$6,000,000, or such other amount as required by the Department pursuant to 310 CMR 30.908(4) or (5).
7. If an owner or operator substitutes other financial assurance as specified in 310 CMR 30.908(1) for all or part of the amount of the letter of credit, he may submit a written request to the Department for release of the amount in excess of the amount to be covered by the letter of credit.
8. Any person who obtains final judgment against the owner or operator for bodily injury and/or property damage caused by a sudden accidental occurrence or occurrences arising from the operation of the facility may request payment from the letter of credit in satisfaction of the judgment by submitting to the Claims Administrator a certified copy of the judgment and a statement, signed subject to 310 CMR 30.006 and 30.009, that the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator.
9. After receiving the material described in 310 CMR 30.908(1)(d)8., the Claims Administrator shall determine whether the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator. If so, the Claims Administrator shall instruct the institution issuing the letter of credit to pay either to the person making the claim or into the standby trust fund, or the Claims Administrator shall instruct the trustee of the standby trust fund to pay to the person who obtained the judgment, such amounts, not to exceed the amount of the judgment or the amount of the limits set forth in 310 CMR 30.908(1), whichever amount is less, as the Claims Administrator may specify in writing.
10. If the owner or operator does not establish alternate financial assurance as required by 310 CMR 30.908(1) and does not obtain written approval from the Department of any such alternate financial assurance within 90 days of receipt by the owner or operator, by the Claims Administrator, and by the Department of a notice that the issuing institution will not extend the letter of credit beyond the current expiration date, the Department shall draw on the letter of credit. The Department may delay drawing on the letter of credit if the issuing institution grants an extension of the term of the letter of credit. During the last 30 days of any such extension, the Department shall draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in 310 CMR 30.908 or has failed to obtain written approval by the Department of such assurance.
11. No letter of credit shall be terminated without prior written consent of the Department. The Department may return the letter of credit to the issuing institution for termination when the Department is persuaded that the owner or operator has substituted alternate financial assurance as specified in 310 CMR 30.908(1), or when the Department certifies closure of the facility pursuant to 310 CMR 30.099(6) or 30.586(2).

30.908: continued

(e) Each contract between a Claims Administrator and an owner or operator shall conform to 310 CMR 30.908(1)(e).

1. Each contract between a Claims Administrator and an owner or operator shall assure that each party to the contract is obligated by the contract to comply with all the requirements applicable to each party respectively, as set forth in 310 CMR 30.908(1).
2. Prior to executing any contract with a Claims Administrator, the owner or operator shall furnish a copy of the contract to the Department. No contract between a Claims Administrator and an owner or operator shall be signed by either of them without the prior written approval of the Department. The Department may withhold such approval if the Department is not persuaded that (1) the Claims Administrator is a person who can and will properly carry out the responsibilities a Claims Administrator has pursuant to 310 CMR 30.000, or (2) the terms and wording of the contract between the Claims Administrator and the owner or operator are sufficient to protect the Department's interests. The Department shall not unreasonably withhold or delay such approval.
3. The Department shall not be a party to the contract between the Claims Administrator and the owner or operator.
4. Cancellation of any contract between a Claims Administrator and an owner or operator shall be effective only upon written notice and only after the expiration of at least 30 days after the date of receipt by the Department of such written notice, sent to the Department by certified mail.
5. Except as provided in Section 9 of the trust agreement, the wording of which is specified in 310 CMR 30.909(8)(a), the Claims Administrator shall not receive, and shall not be eligible to receive, directly or indirectly, any money in any letter of credit or standby trust fund established pursuant to 310 CMR 30.900 and for each he is Claims Administrator.
6. Nothing in 310 CMR 30.900 shall be construed to preclude the Trustee of any trust fund from also being the Contract Administrator for that trust fund.
7. The Department shall have the right to direct the Claims Administrator to refuse to give instructions to pay any claim, and the Department and the Claims Administrator shall each have the right to obtain reimbursement of any claim already paid in whole or in part, if, in the opinion of the Department, the claim is fraudulent, inflated, or otherwise unlawful or unjustified.

30.908: continued

(2) Coverage for nonsudden accidental occurrences. An owner or operator of a hazardous waste treatment, storage, or disposal facility which is either described in 310 CMR 30.901(1)(b) or so required by the Department pursuant to 310 CMR 30.908(4), or a group of such facilities in Massachusetts, shall demonstrate assurance of financial responsibility for bodily injury and property damage to third parties caused by each nonsudden accidental occurrence arising from operation of the facility(ies). The owner or operator of each facility shall have and continuously maintain such coverage using either the options specified in 310 CMR 30.908(2)(a) through (d) or the options specified in 310 CMR 30.910. The options specified in 310 CMR 30.908(2)(a) through (d) may be used by the owner or operator of a facility, or a group of such facilities in Massachusetts, provided that the use of such options shall be subject to the provisions of 310 CMR 30.908(5), (6), and (7). The options specified in 310 CMR 30.910 may be used by the owner or operator of each facility, provided that the use of such options shall be subject to the provisions of 310 CMR 30.910. If the owner or operator of a facility, or a group of such facilities in Massachusetts, uses the options specified in 310 CMR 30.908(2)(a) through (d), said owner or operator, subject to the provisions of 310 CMR 30.908(3), (4), and (5), shall have and continuously maintain coverage for nonsudden accidental occurrences in the amount of at least \$5-million per each nonsudden accidental occurrence with an annual aggregate of at least \$10-million, exclusive of legal defense costs. If the owner or operator of a facility uses the options specified in 310 CMR 30.910, said owner or operator shall have and continuously maintain coverage for nonsudden accidental occurrences in the amount set forth in 310 CMR 30.910. Unless such assurance of financial responsibility is demonstrated entirely by liability insurance in compliance with 310 CMR 30.908(2)(a), the owner or operator shall also obtain and maintain in effect a contract with a Claims Administrator in compliance with 310 CMR 30.908(2)(e). As used in 310 CMR 30.908(2), the term "Claims Administrator" shall mean a person who shall be responsible for the processing and administration of all requests to make payments from a trust fund, standby trust fund, surety bond, or letter of credit pursuant to 310 CMR 30.908(2). The owner or operator of each facility shall give notice to both the Department and the Claims Administrator of every claim for bodily injury and/or property damage caused by a nonsudden accidental occurrence or occurrences arising from the operation of the facility(ies). The owner or operator of each facility shall give such notice to both the Department and the Claims Administrator as soon as possible and in any event no later than 30 days after learning of such claim. The owner or operator of each facility shall give notice to both the Department and the Claims Administrator of every judgment against the owner or operator for bodily injury and/or property damage caused by a nonsudden accidental occurrence or occurrences arising from the operation of the facility. The owner or operator of each facility shall give such notice to both the Department and the Claims Administrator as soon as possible and in any event no later than 30 days after learning of said judgment. The owner or operator of each facility shall submit to the Department a copy of every judgment against the owner or operator for bodily injury and/or property damage caused by a nonsudden accidental occurrence or occurrences arising from the operation of the facility. The owner or operator of each facility shall submit a copy of such judgment to the Department as soon as possible and in any event no later than 30 days after receiving a copy thereof.

(a) An owner or operator may demonstrate the required coverage by having liability insurance, as specified in 310 CMR 30.901(2) or (6), which conforms to 310 CMR 30.908(2)(a).

1. Each liability insurance policy shall include a Hazardous Waste Facility Liability Endorsement (the "endorsement") and may be evidenced by a Certificate of Liability Insurance. The wording of the endorsement shall be identical to the wording specified in 310 CMR 30.909(6). The wording of the certificate of insurance shall be identical to the wording specified in 310 CMR 30.909(7). The owner or operator shall submit a signed duplicate original of the endorsement or the certificate of liability insurance to the Department. If requested by the Department, the owner or operator shall provide a signed duplicate original of the liability insurance policy. An owner or operator of a facility shall submit the signed duplicate original of the Hazardous Waste Facility Liability Endorsement or the Certificate of Liability Insurance to the Department within the applicable period prescribed in 310 CMR 30.901(2) or (6).

30.908: continued

2. At a minimum, the insurer shall be licensed to transact the business of insurance in Massachusetts, or authorized to provide insurance as an excess or surplus lines insurer in Massachusetts, or a risk retention group lawfully providing insurance to its members in Massachusetts.
- (b) An owner or operator may demonstrate the required coverage by establishing a nonsudden accidental occurrence liability trust fund, as specified in 310 CMR 30.901(2) or (6), which conforms to 310 CMR 30.908(2)(b), and by sending an originally signed duplicate of the trust agreement to the Department within the applicable time period prescribed in 310 CMR 30.901(2) or (6).
1. The trustee shall be a bank or other financial institution which has the authority to act as a trustee and whose trust operations are regulated and examined by the Massachusetts Commissioner of Banking, or the trustee shall be a national bank.
 2. The wording of the trust agreement shall be identical to the wording specified in 310 CMR 30.909(8)(a), and the trust agreement shall be accompanied by a formal certification of acknowledgement identical to the wording specified in 310 CMR 30.909(8)(b).
 3. On the date of the initial establishment of the nonsudden accidental occurrence liability trust fund, the value of the fund shall be at least \$10,000,000.00, or such other amount as required by the Department pursuant to 310 CMR 30.908(4) or (5).
 4. If an owner or operator substitutes other financial assurance as specified in 310 CMR 30.908(2) for all or part of the nonsudden accidental occurrence liability trust fund, he may submit a written request to the Department for release of the amount in excess of the amount to be covered by the nonsudden accidental occurrence liability trust fund.
 5. Any person who obtains final judgment against the owner or operator for bodily injury and/or property damage caused by a nonsudden accidental occurrence or occurrences arising from the operation of the facility may request payment from the nonsudden accidental occurrence liability trust fund in satisfaction of the judgment by submitting to the Claims Administrator a certified copy of the judgment and a statement, signed subject to 310 CMR 30.006 and 30.009, that the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator.
 6. After receiving the material described in 310 CMR 30.908(2)(b)5., the Claims Administrator shall determine whether the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator. If so, the Claims Administrator shall instruct the trustee to pay to the person who obtained the judgment such amounts, not to exceed the amount of the judgment or the amount of the limits set forth in 310 CMR 30.908(2), whichever amount is less, as the Claims Administrator may specify in writing.
 7. No trust shall be terminated without prior written consent of the Department. The Department may agree to termination of the trust when the Department is persuaded that the owner or operator has substituted alternate financial assurance as specified in 310 CMR 30.908(2), or when the Department certifies closure of the facility pursuant to 310 CMR 30.099(6) or 30.586(2).
- (c) An owner or operator may demonstrate the required coverage by obtaining a surety bond which conforms to 310 CMR 30.908(2)(c) and by submitting the surety bond to the Department within the applicable time period prescribed in 310 CMR 30.901(2) or (6).
1. The surety company(ies) issuing the bond shall, at a minimum, be among those lawfully selling surety bonds in Massachusetts.
 2. The wording of the surety bond shall be identical to the wording specified in 310 CMR 30.909(9).

30.908: continued

3. An owner or operator who uses a surety bond to satisfy the requirements of 310 CMR 30.908 shall also establish a standby trust fund. Under the terms of the surety bond, all payments made thereunder shall, in accordance with instructions from the Department, either be paid by the surety directly to a person described in 310 CMR 30.908(2)(c)5. or deposited by the surety directly into the standby trust fund. This standby trust fund shall meet the requirements in 310 CMR 30.908(2)(b), except that:
 - a. An originally signed duplicate of the trust agreement shall be submitted to the Department with the surety bond; and
 - b. Until the standby trust fund is funded pursuant to the requirements of 310 CMR 30.908, the following are not required:
 - (i) payment into the trust fund as specified in 310 CMR 30.908(2)(b);
 - (ii) annual valuations as required by the trust agreement (*See* 310 CMR 30.909(8)(a)10.); and
 - (iii) notices of nonpayment as required by the trust agreement (*See* 310 CMR 30.909(8)(a)15.).
4. Any person who obtains final judgment against the owner or operator for bodily injury and/or property damage caused by a nonsudden accidental occurrence or occurrences arising from the operation of the facility may request payment from the surety bond in satisfaction of the judgment by submitting to the Claims Administrator a certified copy of the judgment and a statement, signed subject to 310 CMR 30.006 and 30.009, that the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator.
5. After receiving the material described in 310 CMR 30.908(2)(c)4., the Claims Administrator shall determine whether the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator. If so, the Claims Administrator shall instruct the surety company(ies) issuing the bond to pay either to the person making the claim or into the standby trust fund, or the Claims Administrator shall instruct the trustee of the standby trust fund to pay to the person who obtained the judgment, such amounts, not to exceed the amount of the judgment or the amount of the limits set forth in 310 CMR 30.908(2), whichever amount is less, as the Claims Administrator may specify in writing.
6. The bond shall guarantee that the owner or operator shall:
 - a. Fund the standby trust fund in an amount equal to either the sum of the judgment described in 310 CMR 30.908(2)(c)5. and the costs of administering said fund, or the amount of the penal sum, whichever is less, within 15 days after the Department or a court of competent jurisdiction issues an order to that effect; or
 - b. Provide alternate financial assurance as specified in 310 CMR 30.908, and obtain the Department's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and by the Department of a notice of cancellation of the surety bond from the surety.
7. Under the terms of the bond (*See* 310 CMR 30.909(9)), the surety shall become liable on the bond obligation when the owner or operator does not perform as guaranteed by the bond (*See* 310 CMR 30.909(9)).
8. The penal sum of the bond shall be at least \$10,000,000.00, or such other amount as required by the Department pursuant to 310 CMR 30.908(4) or (5).
9. Under the terms of the bond, the surety may cancel the bond by sending written notice of cancellation by certified mail to the owner or operator, to the Claims Administrator, and to the Department. Cancellation may not take effect, however, until at least 120 days after the date of receipt of the notice of cancellation by the owner or operator, by the Claims Administrator, and by the Department, as shown by the latest return receipt.

30.908: continued

10. No bond shall be cancelled without prior written consent of the Department. The Department may agree to cancellation of the bond when the Department is persuaded that the owner or operator has substituted alternate financial assurance as specified in 310 CMR 30.908(2), or when the Department certifies closure of the facility pursuant to 310 CMR 30.099(6) or 30.586(2).
- (d) An owner or operator may demonstrate the required coverage by obtaining an irrevocable letter of credit which conforms to 310 CMR 30.908(2)(d) and by submitting the letter to the Department within the applicable time period prescribed in 310 CMR 30.901(2) or (6).
1. The institution issuing the letter of credit shall be an entity which has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by the Massachusetts Commissioner of Banking, or the institution shall be a national bank.
 2. The wording of the letter of credit shall be identical to the wording specified in 310 CMR 30.909(10).
 3. An owner or operator who uses a letter of credit to satisfy the requirements of 310 CMR 30.908(2) shall also establish a standby trust fund. Under the terms of the letter of credit, all payments made thereunder shall, in accordance with instructions from the Claims Administrator or the Department, either be paid by the issuing institution directly to a person described in 310 CMR 30.908(2)(d)8. or deposited by the issuing institution directly into the standby trust fund. This standby trust fund shall meet the requirements in 310 CMR 30.908(2)(b), except that:
 - a. An originally signed duplicate of the trust agreement shall be submitted to the Department with the letter of credit; and
 - b. Until the standby trust fund is funded pursuant to the requirements of 310 CMR 30.908, the following are not required:
 - (i) payment into the trust fund as specified in 310 CMR 30.908(2)(b);
 - (ii) annual valuations as required by the trust agreement (*See* 310 CMR 30.909(8)(a)10.); and
 - (iii) notices of nonpayment as required by the trust agreement (*See* 310 CMR 30.909(8)(a)15.).
 4. The letter of credit shall be accompanied by a letter from the owner or operator which shall state:
 - a. The letter of credit number;
 - b. The name of the issuing institution;
 - c. The date of issuance of the letter of credit;
 - d. The EPA identification number(s) of the facility(ies);
 - e. The name(s) and address(es) of the facility(ies); and
 - f. The amount of funds assured by the letter of credit.
 5. The letter of credit shall be irrevocable and shall be issued for a period of at least one year. The letter of credit shall provide that the expiration date will be automatically extended for a period of at least one year unless, no later than 120 days before the current expiration date pursuant to the terms of the letter of credit, the issuing institution notifies the owner or operator, the Claims Administrator, and the Department by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days shall not begin before the date when the owner or operator, the Claims Administrator, and the Department have received the notice, as shown by the latest return receipt.
 6. The letter of credit shall be issued in an amount at least \$10,000,000.00, or such other amount as required by the Department pursuant to 310 CMR 30.908(4) or (5).
 7. If an owner or operator substitutes other financial assurance as specified in 310 CMR 30.908(2) for all or part of the amount of the letter of credit, he may submit a written request to the Department for release of the amount in excess of the amount to be covered by the letter of credit.

30.908: continued

8. Any person who obtains final judgment against the owner or operator for bodily injury and/or property damage caused by a nonsudden accidental occurrence or occurrences arising from the operation of the facility may request payment from the letter of credit in satisfaction of the judgment by submitting to the Claims Administrator a certified copy of the judgment and a statement, signed subject to 310 CMR 30.006 and 30.009, that the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator.
 9. After receiving the material described in 310 CMR 30.908(2)(d)8., the Claims Administrator shall determine whether the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator. If so, the Claims Administrator shall instruct the institution issuing the letter of credit to pay either to the person making the claim or into the standby trust fund, or the Claims Administrator shall instruct the trustee of the standby trust fund to pay to the person who obtained the judgment, such amounts, not to exceed the amount of the judgment or the amount of the limits set forth in 310 CMR 30.908(2), whichever amount is less, as the Claims Administrator may specify in writing.
 10. If the owner or operator does not establish alternate financial assurance as required by 310 CMR 30.908(2) and does not obtain written approval from the Department of any such alternate financial assurance within 90 days of receipt by the owner or operator, by the Claims Administrator, and by the Department of a notice that the issuing institution will not extend the letter of credit beyond the current expiration date, the Department shall draw on the letter of credit. The Department may delay drawing on the letter of credit if the issuing institution grants an extension of the term of the letter of credit. During the last 30 days of any such extension, the Department shall draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in 310 CMR 30.908 or has failed to obtain written approval by the Department of such assurance.
 11. No letter of credit shall be terminated without prior written consent of the Department. The Department may return the letter of credit to the issuing institution for termination when the Department is persuaded that the owner or operator has substituted alternate financial assurance as specified in 310 CMR 30.908(2), or when the Department certifies closure of the facility pursuant to 310 CMR 30.099(6) or 30.586(2).
- (e) Each contract between a Claims Administrator and an owner or operator shall conform to 310 CMR 30.908(2)(e).
1. Each contract between a Claims Administrator and an owner or operator shall assure that each party to the contract is obligated by the contract to comply with all the requirements applicable to each party respectively, as set forth in 310 CMR 30.908(2).
 2. Prior to executing any contract with a Claims Administrator, the owner or operator shall furnish a copy of the contract to the Department. No contract between a Claims Administrator and an owner or operator shall be signed by either of them without the prior written approval of the Department. The Department may withhold such approval if the Department is not persuaded that (1) the Claims Administrator is a person who can and will properly carry out the responsibilities a Claims Administrator has pursuant to 310 CMR 30.000, or (2) the terms and wording of the contract between the Claims Administrator and the owner or operator are sufficient to protect the Department's interests. The Department shall not unreasonably withhold or delay such approval.
 3. The Department shall not be a party to the contract between the Claims Administrator and the owner or operator.

30.908: continued

4. Cancellation of any contract between a Claims Administrator and an owner or operator shall be effective only upon written notice and only after the expiration of at least 30 days after the date of receipt by the Department of such written notice, sent to the Department by certified mail.

5. Except as provided in Section 9 of the trust agreement, the wording of which is specified in 310 CMR 30.909(8)(a), the Claims Administrator shall not receive, and shall not be eligible to receive, directly or indirectly, any money in any letter of credit or standby trust fund established pursuant to 310 CMR 30.900 and for each he is Claims Administrator.

6. Nothing in 310 CMR 30.900 shall be construed to preclude the Trustee of any trust fund from also being the Contract Administrator for that trust fund.

7. The Department shall have the right to direct the Claims Administrator to refuse to give instructions to pay any claim, and the Department and the Claims Administrator shall each have the right to obtain reimbursement of any claim already paid in whole or in part, if, in the opinion of the Department, the claim is fraudulent, inflated, or otherwise unlawful or unjustified.

(3) Period of Coverage. Each owner or operator shall continuously provide all required liability coverage for each facility until the Department certifies closure of the facility pursuant to 310 CMR 30.099(6) or 30.586(2).

(4) Adjustments by the Department. If the Department determines that the amount of financial assurance required by 310 CMR 30.908(1) or (2) is not high enough to reflect the degree or duration of risk associated with treatment, storage, or disposal of hazardous waste at a particular facility, the Department may require that the amount of financial assurance be increased to reflect such risk. If the Department determines that there is a significant risk to human health or the environment from nonsudden accidental occurrences resulting from the operation of a facility that is not described in 310 CMR 30.901(1)(b), the Department may require that the owner or operator of such facility comply with 310 CMR 30.908(2). An owner or operator shall furnish to the Department, within a reasonable time, any information which the Department requests to determine whether cause exists for adjusting the amount or type of financial assurance. Any adjustment of the amount or type of financial assurance for a facility which has a license shall be treated as a license modification pursuant to 310 CMR 30.800. Any adjustment of the amount or type of financial assurance for a facility having interim status pursuant to RCRA which does not have a license shall be treated as if it were a license modification pursuant to 310 CMR 30.800.

(5) Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of 310 CMR 30.908(1) and (2) by establishing more than one financial mechanism per Massachusetts facility. These mechanisms shall be limited to liability insurance, trust funds, surety bonds guaranteeing payment, and letters of credit. These mechanisms shall be in compliance with 310 CMR 30.908(1) and (2), except that it shall be a combination of mechanisms, rather than a single mechanism, which shall provide financial assurance for the amounts required pursuant to 310 CMR 30.908. If an owner or operator uses a trust fund in combination with any other mechanism, he shall use the trust fund as a standby trust fund for those mechanisms for which the establishment of a standby trust fund is required. A single standby trust fund may be used for two or more mechanisms. The Department may use any or all of the mechanisms to provide for financial assurance as required by 310 CMR 30.908.

(6) Use of a financial mechanism for multiple facilities.

(a) An owner or operator may use a financial assurance mechanism specified in 310 CMR 30.908 to meet the requirements of 310 CMR 30.908 for more than one Massachusetts facility.

(b) Evidence of financial assurance submitted to the Department shall include a list showing, for each facility, the EPA identification number, name, address, and amount of funds assured by the mechanism.

30.908: continued

(7) Use of a mechanism for assurance of financial responsibility for both sudden accidental occurrences and nonsudden accidental occurrences. An owner or operator may satisfy the requirements for assurance of financial responsibility for both sudden accidental occurrences and nonsudden accidental occurrences and for more than one facility by using liability insurance, a trust fund, a surety bond guaranteeing payment, or a letter of credit, or a combination thereof, which meets the specifications set forth in 310 CMR 30.908. The amount of funds available through the mechanism(s) shall be no less than the sum of funds that would be available if separate mechanism(s) were to be established and required to be maintained.

(8) Payment of claims and judgments by other means. Nothing in 310 CMR 30.000 shall be construed to affect an owner's or operator's right or duty to use other financial mechanisms to satisfy or pay any claim or judgment for bodily injury and/or property damage caused by an accidental occurrence or occurrences arising from the operation of the facility.

30.909: Wording of the Instruments.

(1) Trust Instruments.

(a) A trust agreement for a trust fund established pursuant to 310 CMR 30.904(1), (2), (3), or (4), or pursuant to 310 CMR 30.906(1), (2), (3), or (4) shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

TRUST AGREEMENT

This Trust Agreement, hereafter referred to as the "Agreement", is entered into as of [date] by and between [name of the owner or operator], a [name of State] [insert "corporation", "partnership", "association", "trust", or "individual"], hereafter referred to as the "Grantor", and [name of corporate trustee], [insert "incorporated in the State of _____" or "a national bank"], hereafter referred to as the "Trustee".

Whereas the Department of Environmental Quality Engineering, hereafter referred to as the "Department", an agency of the Commonwealth of Massachusetts, has established certain regulations applicable to the Grantor, requiring that the Grantor shall provide assurance that funds will be available when needed for closure and/or post-closure care of the facility identified in Schedule A; and

Whereas, the Grantor has elected to establish a [insert either "trust fund" or "stand-by trust fund"] to provide all or part of such financial assurance for the facility identified in Schedule A; and

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee.

Now, Therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions.

- (a) The term "Grantor" means [name of the owner or operator].
- (b) The term "Trustee" means [name of corporate trustee], [insert "incorporated in the State of _____" or "a national bank"], and any successor thereof.
- (c) The terms "Department" and "Beneficiary" mean the Department of Environmental Quality Engineering, an agency of the Commonwealth of Massachusetts, and any successor of the said Department.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified on the attached Schedule A [on attached Schedule A list each facility, and for each facility list the EPA identification number, name, address, and the current closure and/or post-closure cost estimates, or portions thereof, for which financial assurance is demonstrated by this Agreement].

30.909: continued

Section 3. Establishment of Trust Fund. The Grantor and the Trustee hereby establish a trust fund (the "Fund") for the benefit of the Department. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in the attached Schedule B. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible, nor shall it undertake any responsibility, for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the Department.

Section 4. Payment for Closure and Post-Closure Care. The Trustee shall make payments from the Fund as directed by the Department in writing. Said payments shall provide for the costs of closure and/or post-closure care of the facility covered by this Agreement. For closure and post-closure expenses, the Trustee shall reimburse, from the Fund, the Grantor or other persons as specified in writing by the Department. Such reimbursement(s) shall be in such amount(s) as the Department directs in writing. In addition, the Trustee shall refund to the Grantor such amount(s) as the Department specifies in writing. Upon reimbursement or refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the Beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (a) Securities or other obligations of the Grantor, or any affiliates of the Grantor, as defined in the Investment Company Act of 1940, as amended, 14 U.S.C. §§ 80a-2(a), shall not be acquired or held unless they are securities or other obligations of the Federal or a State government;
- (b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and
- (c) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 14 U.S.C. §§ 80a-1 *et seq.*, including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

30.909: continued

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it by public or private sale;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other Fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;
- (d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and
- (e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the Department a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the Department shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may, from time to time, consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the interpretation of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

30.909: continued

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Department, and the present Trustee by certified mail at least ten days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Schedule C or such other designees as the Grantor may designate by amendment to Schedule C. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Department to the Trustee shall be in writing, signed by the Commissioner or his designee, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or Department hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or Department except as provided for herein.

Section 15. Notice of Nonpayment. The Trustee shall notify the Grantor and the Department, by certified mail, within ten days following the expiration of the 30 day period after the anniversary of the establishment of the Trust, if no payment into the Fund is received from the Grantor during that period. After the pay-in period is completed, the Trustee shall not be required to send a notice of nonpayment.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the Department, or by the Trustee and the Department if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated by the written agreement of the Grantor, the Trustee, and the Department, or by the Trustee and the Department if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of the Trust, or in carrying out any directions by the Grantor or by the Department issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the Commonwealth of Massachusetts.

30.909: continued

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in 310 CMR 30.909(1)(a) as in effect on the date first above written.

[Signature of Grantor]
[Title]

Attest:
[Title]
[Seal]

[Signature of Trustee]

Attest:
[Title]
[Seal]

(b) Each certification of acknowledgement which shall accompany a trust agreement for a trust fund as required by 310 CMR 30.900 shall be worded as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

State of _____ [Name of State] _____

County of _____ [Name of County] _____

On this [date], before me personally came [owner or operator] to me known, who being by me duly sworn, did depose and say that she/he [strike one] resides at [address], that she/he [strike one] is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he [strike one] knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he [strike one] signed her/his [strike one] name thereto by like order.

[Signature of Notary Public]

My Commission expires: ___[Date]___

(2) A surety bond guaranteeing payment into a standby trust fund, as specified in 310 CMR 30.904(2) and 30.906(2), shall be worded as follows, except that the instructions in brackets shall be replaced with the relevant information and the brackets deleted:

FINANCIAL GUARANTEE BOND

Date bond executed: _____ [Date] _____

Effective date: _____ [Date] _____

Principal: [legal name and business address of owner or operator]

Type of organization: [insert "individual", "trust", "partnership", "corporation", or "association"]

30.909: continued

State of incorporation: [Name of State]

Surety(ies): [name(s) and business address(es)]

[EPA Identification Number, name, address, and closure and/or post-closure amount(s) for each facility guaranteed by this bond (indicate closure and post-closure amounts separately)]:

Total penal sum of bond: \$ [Amount]

Surety's bond number: [Number]

Know All Persons By These Presents, That we, the Principal and Surety(ies) hereto, are firmly bound to the Department of Environmental Quality Engineering of the Commonwealth of Massachusetts, hereinafter called the Department, in the above penal sum, for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, pursuant to M.G.L. c. 21C and 310 CMR 30.000, to have a license or interim status in order to own or operate each facility identified above, and

Whereas said Principal is required to provide financial assurance for closure, or closure and post-closure care, as a condition of the license or interim status, and

Whereas, as a condition of the license or interim status, said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of this obligation are such that if the Principal shall faithfully, before the beginning of final closure of each facility identified above, establish and fund the standby trust fund in the amount(s) identified above for the facility,

Or, if the Principal shall establish and fund the standby trust fund in such amount(s) within 15 days after the Department or a court of competent jurisdiction issues an order to begin closure,

Or, if the Principal shall provide alternate financial assurance, as specified in 310 CMR 30.904 or 30.906 as applicable, and obtain the Department's written approval of such assurance, within 90 days after receipt of notice of cancellation by both the Principal and the Department from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the Department that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the Department.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the Department, provided, however, that cancellation shall not take effect until at least 120 days after the date of receipt of the notice of cancellation by both the Principal and the Department, as shown by the later return receipt.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization by the Department for termination of the bond.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.909: continued

[The following paragraph is an optional rider that may be included but is not required.]

The Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure and/or post-closure amount, provided that the penal sum does not increase by more than 20% in any one year, and no decrease in the penal sum takes place without the written approval of the Department.

In Witness Whereof, the Principal and Surety(ies) have executed this Financial Guarantee Bond and have affixed their seals on the date set forth above.

The individuals whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in 310 CMR 30.909(2) as in effect on the date this bond was executed.

Principal

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate seal]

Corporate Surety(ies)

[Name(s) and address(es)]

State of incorporation [Name of State]

Liability limit: \$ [Amount]

[Signature(s)] [Title(s)]

[Name(s)]

[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for the Surety above.]

Bond premium: \$ [Amount]

(3) A surety bond guaranteeing performance of closure and/or post-closure care, as specified in 310 CMR 30.904(3) and 30.906(3), shall be worded as follows, except that the instructions in brackets shall be replaced with the relevant information and the brackets deleted:

PERFORMANCE BOND

Date bond executed: [Date]

Effective date: [Date]

Principal: [legal name and business address of owner or operator]

Type of organization: [insert "individual", "trust", "partnership", "corporation", or "association"]

State of incorporation: [Name of State]

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.909: continued

Surety(ies): [name(s) and business address(es)] _____

[EPA Identification Number, name, address, and closure and/or post-closure amount(s) for each facility guaranteed by this bond (indicate closure and post-closure amounts separately)]:

Total penal sum of bond: \$ _____ [Amount]

Surety's bond number: _____ [Number]

Know All Persons By These Presents, That we, the Principal and Surety(ies) hereto, are firmly bound to the Department of Environmental Quality Engineering, hereinafter called the Department, in the above penal sum, for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, pursuant to M.G.L. c. 21C and 310 CMR 30.000, to have a license or interim status in order to own or operate each facility identified above, and

Whereas said Principal is required to provide financial assurance for closure, or closure and post-closure care, as a condition of the license or interim status, and

Whereas, as a condition of the license or interim status, said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, therefore, the conditions of this obligation are such that if the Principal shall faithfully perform closure, whenever required to do so, of each facility for which this bond guarantees closure, in accordance with the approved closure plan and all applicable requirements of the license or interim status, as such plan and license may be amended from time to time, and M.G.L. c. 21C and 310 CMR 30.000, as may be amended from time to time; and if the Principal shall faithfully perform post-closure care of each facility for which this bond guarantees post-closure care, in accordance with the approved post-closure plan and all applicable requirements of the license or interim status, as such plan and license may be amended, and pursuant to M.G.L. c. 21C and 310 CMR 30.000, as may be amended from time to time,

Or if the Principal shall provide alternate financial assurance, as specified in 310 CMR 30.904 or 30.906 as applicable, and obtain the Department's written approval of such assurance within 90 days after receipt of notice of cancellation by both the Principal and the Department from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the Department that the Principal has failed to perform final closure in accordance with 310 CMR 30.580 through 30.586, or has failed to conduct post-closure care in accordance with 310 CMR 30.590 through 30.596, the surety shall become liable on the bond obligation to:

1. Perform final closure as guaranteed by the bond, and if applicable, perform post-closure care as guaranteed by the bond; or
2. Deposit the total penal sum of the bond into the standby trust fund as directed by the Department.

Upon notification by the Department that the Principal has failed to provide alternate financial assurance as specified in 310 CMR 30.904 or 30.906 as applicable and has failed to obtain the Department's written approval of such assurance within 90 days after receipt of notice of cancellation by both the Principal and the Department from the Surety(ies), the Surety(ies) shall place the total penal sum of the bond guaranteed for the facility(ies) into the standby trust fund as directed by the Department.

The Surety(ies) hereby waive(s) notification of amendments to closure plans, permits, applicable laws, statutes, rules, and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this bond.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.909: continued

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the Department, provided, however, that cancellation shall not take effect until at least 120 days after the date of receipt of the notice of cancellation by both the Principal and the Department, as shown by the later return receipt.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization by the Department for termination of the bond.

[The following paragraph is an *optional* rider that may be included but is not required.]

The Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure and/or post-closure amount, provided that the penal sum does not increase by more than 20% in any one year, and no decrease in the penal sum takes place without the written approval of the Department.

In Witness Whereof, The Principal and Surety(ies) have executed this Performance Bond and have affixed their seals on the date set forth above.

The individuals whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in 310 CMR 30.909(3) as in effect on the date this bond was executed.

Principal

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate seal]

Corporate Surety(ies)

[Name(s) and address(es)]

State of incorporation: [Name of State]

Liability limit: \$ [Amount]

[Signature(s)]

[Name(s) and title(s)]

Corporate seal:

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for the Surety above.]

Bond premium: \$ [Amount]

(4) A letter of credit, as specified in 310 CMR 30.904(4) and 30.906(4), shall be worded as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted:

30.909: continued

IRREVOCABLE STANDBY LETTER OF CREDIT

Commissioner,
Department of Environmental Quality Engineering
Commonwealth of Massachusetts

Dear Sir or Madam:

We hereby establish our Irrevocable Standby Letter of Credit No. [Number] in your favor, at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] U.S. dollars \$ [Amount], available upon presentation, by you or your designee, of

(1) your or your designee's sight draft, bearing reference to this letter of credit No. [Number], and

(2) your or your designee's signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of Massachusetts General Laws, Chapter 21C."

This letter of credit is effective as of [date] and shall expire on [date at least one year later], but such expiration date shall be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify both you and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your or your designee's sight draft within 120 days after the date of receipt of notification by both you and [owner's or operator's name], as shown on the later of the signed return receipts.

Whenever this letter of credit is drawn on, under, and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner's or operator's name] in accordance with your or your designee's instructions.

We certify that the wording of this letter of credit is identical to the wording specified in 310 CMR 30.904(4) as in effect on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution] [Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce", or "the Uniform Commercial Code"].

(5) A certificate of insurance, as specified in 310 CMR 30.904(5) and 30.906(5), shall be worded as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted:

CERTIFICATE OF INSURANCE FOR CLOSURE OR POST-CLOSURE CARE

Name and Address of Insurer
(herein called the "Insurer"): [Name and Address]

Name and Address of Insured
(herein called the "Insured"): [Name and Address]

Facilities Covered: [List for each facility: The EPA Identification Number, name, address, and amount of insurance for closure and/ or for post-closure care (these amounts for all facilities covered must total the face amount shown below)].

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.909: continued

Face Amount: _____ [Dollar Amount]

Policy Number: _____ [Number]

Effective Date: _____ [Date]

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for [insert "closure" or "closure and post-closure care" or "post-closure care"] for the facilities identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of 310 CMR 30.904(5), and 30.906(5), as applicable and as such regulations were in effect on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the Department of Environmental Quality Engineering (hereinafter called the Department) of the Commonwealth of Massachusetts, the Insurer agrees to furnish to the Department a signed duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in 310 CMR 30.909(5) as in effect on the date shown immediately below.

[Authorized signature for Insurer]

[Name of person signing]

[Title of person signing]

Signature of witness or notary: _____

[Date]

(6) A hazardous waste facility liability endorsement, as specified in 310 CMR 30.908(1)(a), shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

HAZARDOUS WASTE FACILITY LIABILITY ENDORSEMENT

(1) This endorsement certifies that the policy to which this endorsement is attached provides liability insurance covering bodily injury and property damage in connection with the Insured's obligation to demonstrate financial responsibility pursuant to 310 CMR 30.908. The coverage applies at [list EPA Identification Number, name, and address for each facility] for [insert "sudden accidental occurrences", "nonsudden accidental occurrences", or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurers's liability]; exclusive of legal defense costs.

(2) The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions of the policy inconsistent with subsections (a) through (e) of this Paragraph 2 are hereby amended to conform with subsections (a) through (e):

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy to which this endorsement is attached.

(b) The Insurer is liable for the payment of the amounts within any deductible applicable to the policy, with a right of reimbursement by the Insured for any such payment made by the Insurer.

(c) Whenever requested by the Department of Environmental Quality Engineering (hereinafter called the Department) of the Commonwealth of Massachusetts, the Insurer agrees to furnish to the Department a signed duplicate original of the policy and all endorsements thereon.

30.909: continued

(d) Cancellation of this endorsement, whether by the Insurer or the Insured, shall not take effect until at least 60 days after the date of receipt by the Department of written notice, sent to the Department by certified mail, of cancellation of this endorsement.

(e) Any other termination of this endorsement shall be effective only upon written notice and only after the expiration of at least 30 days after the date of receipt by the Department of such written notice, sent to the Department by certified mail.

Attached to and forming part of policy no. [Number] issued by [name of Insurer], herein called the Insurer, of [address of Insurer] to [name of Insured] of [address], herein called the Insured, this [Day] day of [Month] 19 [Year]. The effective date of said policy is the [Day] day of [Month] 19 [Year].

I hereby certify that the wording of this Hazardous Waste Facility Liability Endorsement is identical to the wording specified in 310 CMR 30.909(6) as in effect on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in the Commonwealth of Massachusetts.

[Authorized signature for Insurer]

[Name of individual signing]

[Title of individual signing]

[Signature of witness or notary: _____]

[Date]

[Authorized signature for Insured]

[Name of individual signing]

[Title of individual signing]

[Signature of witness or notary: _____]

[Date]

(7) A hazardous waste facility certificate of liability insurance, as specified in 310 CMR 30.908, shall be worded as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted:

HAZARDOUS WASTE FACILITY CERTIFICATE OF LIABILITY INSURANCE

(1) [Name of Insurer], hereinafter called the Insurer, of [address of Insurer], hereby certifies that it has issued to [name of Insured], hereinafter called the Insured, of [address of Insured], liability insurance covering bodily injury and property damage in connection with the Insured's obligation to demonstrate financial responsibility pursuant to 310 CMR 30.908. The coverage applies at [list EPA Identification Number, name, and address for each facility] for [insert "sudden accidental occurrences", "nonsudden accidental occurrences", or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's liability], exclusive of legal defense costs. The coverage is provided under policy number [Number], issued on [date]. The effective date of said policy is [date].

30.909: continued

(2) The Insurer further certifies the following with respect to the insurance described in Paragraph 1:

(a) Bankruptcy or insolvency of the Insured shall not relieve the Insurer of its obligations under the policy.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the Insured for any such payment made by the Insurer.

(c) Whenever requested by the Department, the Insurer agrees to furnish to the Department a signed duplicate original of the policy and all endorsements.

(d) Cancellation of the insurance, whether by the Insurer or the Insured, will be effective only upon written notice by certified mail and only after the expiration of 60 days after a copy of such written notice is received by the Department, as shown by the return receipt.

(e) Any other termination of the insurance will be effective only upon written notice by certified mail and only after the expiration of 30 days after a copy of such written notice is received by the Department, as shown by the return receipt.

I hereby certify that the wording of this instrument is identical to the wording specified in 310 CMR 30.909(7) as in effect on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in the Commonwealth of Massachusetts.

[Signature of authorized representative of Insurer]

[Type name]

[Title, Authorized Representative of (name of Insurer)]

[Address of authorized representative of Insurer]

(8) Trust Instruments for Financial Assurance for Accidental Occurrences.

(a) A trust agreement for a trust fund established pursuant to 310 CMR 30.908(1)(b), (c), or (d), or pursuant to 310 CMR 30.908(2)(b), (c), or (d), shall be worded as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

TRUST AGREEMENT

This Trust Agreement, hereafter referred to as the "Agreement", is entered into as of [date] by and between [name of the owner of operator], a [name of State] [insert "corporation", "partnership", "association", "trust", or "individual"], hereafter referred to as the "Grantor", and [name of corporate trustee], [insert "incorporated in the State of _____" or "a national bank"], hereafter referred to as the "Trustee".

Whereas the Department of Environmental Quality Engineering, hereafter referred to as the "Department", an agency of the Commonwealth of Massachusetts, has established certain regulations applicable to the Grantor, requiring that the Grantor shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by each sudden accidental occurrence and/or each nonsudden accidental occurrence arising from operation of the facility identified in Schedule A; and

Whereas, the Grantor has elected to establish a [insert either "trust fund" or "stand-by trust fund"] to demonstrate all or part of such financial responsibility for the facility identified in Schedule A; and

30.909: continued

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee.

Now, Therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions.

- (a) The term "Grantor" means [name of the owner or operator].
- (b) The term "Trustee" means [name of corporate trustee], [insert "incorporated in the State of _____" or "a national bank"], and any successor thereof.
- (c) The terms "Department" and "Beneficiary" mean the Department of Environmental Quality Engineering, an agency of the Commonwealth of Massachusetts, and any successor of the said Department.
- (d) The term "Claim Administrator" means [name of the Claim Administrator], and any successor thereof, who is carrying out the responsibilities of the "Claim Administrator" as set forth in 310 CMR 30.900, as in effect as of the date first written above.

Section 2. Identification of Facilities. This Agreement pertains to the facilities identified on the attached Schedule A [on attached Schedule A list each facility, and for each facility list the EPA identification number, name, and address for which financial responsibility is demonstrated by this Agreement].

Section 3. Establishment of Trust Fund. The Grantor and the Trustee hereby establish a trust fund (the "Fund") for the benefit of the Department. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in the attached Schedule B. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible, nor shall it undertake any responsibility, for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the Department.

Section 4. Payment for Bodily Injury and Property Damage to Third Parties. The Trustee shall make payments from the Fund as directed by the Claims Administrator or by the Department in writing. Said payments shall provide for payments from the Fund to the Department or to other persons, as specified in writing by the Claims Administrator or by the Department, for bodily injury and property damage caused by each sudden accidental occurrence and/or each nonsudden accidental occurrence arising from operation of the facility covered by this Agreement. Such payment(s) shall be in such amount(s) as the Claims Administrator or the Department directs in writing. In addition, the Trustee shall refund to the Grantor such amount(s) as the Claims Administrator or the Department specifies in writing. Upon payment or refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other assets acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the principle and income of the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the Beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

30.909: continued

- (a) Securities or other obligations of the Grantor, or any affiliates of the Grantor, as defined in the Investment Company Act of 1940, as amended, 14 U.S.C. §80a-2(a), shall not be acquired or held unless they are securities or other obligations of the Federal or a State government;
- (b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and
- (c) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 14 U.S.C. §§80a-1 *et seq.*, including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it by public or private sale;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other Fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund.
- (d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and
- (e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. The Trustee shall annually, no later than June 1, furnish to the Grantor, to the Claims Administrator, and to the Department a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no later than May 1. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor, the Claims Administrator, and the Department shall constitute a conclusively binding assent by the Grantor barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

30.909: continued

Section 11. Advice of Counsel. The Trustee may, from time to time, consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the interpretation of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Department, the Claims Administrator, and the present Trustee by certified mail at least ten days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Schedule C or such other designees as the Grantor may designate by amendment to Schedule C. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Claims Administrator to the Trustee shall be in writing, signed by the Claims Administrator, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. All orders, requests, and instructions by the Department to the Trustee shall be in writing, signed by the Commissioner or his designee, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor, the Claims Administrator, or the Department hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Claims Administrator and/or the Department except as provided for herein.

Section 15. Notice of Nonpayment. The Trustee shall notify the Grantor, the Claims Administrator, and the Department by certified mail by no later than August 10 if no payment into the Fund is received from the Grantor during the month of July.

Section 16. Amendment of Agreement. This Agreement may be amended by an instruction in writing executed by the Grantor, the Trustee, and the Department, or by the Trustee and the Department if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated by the written agreement of the Grantor, the Trustee, and the Department, or by the Trustee and the Department if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.909: continued

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of the Trust, or in carrying out any directions by the Grantor, by the Claims Administrator, or by the Department issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the Commonwealth of Massachusetts.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not effect the interpretation or the legal efficacy of this Agreement.

In Witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first written above. The parties below certify that the wording of this Agreement is identical to the wording specified in 310 CMR 30.909(8)(a) as in effect on the date first written above.

[Signature of Grantor]
[Title]

Attest:
[Title]
[Seal]

[Signature of Trustee]

Attest:
[Title]
[Seal]

Each certification of acknowledgement which shall accompany a trust agreement for a trust fund as required by 310 CMR 30.908 and 30.909(8)(a) shall be worded as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

State of [Name of State] _____

County of [Name of County] _____

On this [date], before me personally came [owner or operator] to me known, who being by me duly sworn, did depose and say that she/he [strike one] resides at [address], that she/he [strike one] is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he [strike one] knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he [strike one] signed her/his [strike one] name thereto by like order.

[Signature of Notary Public]

My Commission expires: [Date] _____

(9) Surety Bonds for Financial Assurance for Accidental Occurrences. A surety bond guaranteeing payment as specified in 310 CMR 30.908(1)(c) and 310 CMR 30.908(2)(c) shall be worded as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

30.909: continued

FINANCIAL GUARANTEE BOND

Date bond executed: [Date] _____

Effective date: [Date] _____

Principal: [legal name and business address of owner or operator]

Type of organization: [insert "individual", "trust", "partnership" "corporation", or "association"]

State of incorporation: [Name of State] _____

Surety(ies): [name(s) and business address(es) (EPA Identification Number, name, address, and sudden accidental occurrence and/or nonsudden accidental occurrence amount(s) for each facility guaranteed by this bond (indicate sudden accidental occurrence and nonsudden accidental occurrence amounts separately)]:

Total penal sum of bond: \$ [Amount] _____

Surety's bond number: \$ [Number] _____

Know All Persons By These Presents, That we, the Principal and Surety(ies) hereto are firmly bound to the Department of Environmental Quality Engineering of the Commonwealth of Massachusetts, hereinafter called the Department, in the above penal sum, for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, pursuant to M.G.L. c. 21C and 310 CMR 30.000, to have a license or interim status in order to own or operate each facility identified above, and

Whereas said Principal is required, pursuant to 310 CMR 30.908, to demonstrate financial responsibility for bodily injury and property damage to third parties caused by each sudden accidental occurrence, or each sudden accidental occurrence and each nonsudden accidental occurrence, as a condition of the license or interim status, and

Whereas the amount of such financial responsibility that must be demonstrated is \$3-million per each sudden accidental occurrence with an annual aggregate of at least \$6-million, exclusive of legal defense costs, and \$5-million per each nonsudden accidental occurrence with an annual aggregate of at least \$10-million, exclusive of legal defense costs.

Whereas said Principal is required, pursuant to 310 CMR 30.908, to retain a Claims Administrator to carry out the responsibilities of the "Claim Administrator" as set forth in 310 CMR 30.900, as in effect as of the date first written above.

NOW, THEREFORE, the condition of this obligation is such that if, while this bond is in effect, the Principal shall pay, up to the limits set forth above, for bodily injury and property damage caused by accidental occurrences arising from operation of any facility identified above, as set forth in 310 CMR 30.908, then this bond shall be null and void; otherwise it is to remain in full force and effect,

Or, if the Principal shall establish and fund the standby trust fund in such amount(s) within 15 days after the Department or a court of competent jurisdiction issues an order to do so,

Or, if the Principal shall provide alternate financial assurance, as specified in 310 CMR 30.908(1) or (2) as applicable, and obtain the Department's written approval of such assurance, within 90 days after receipt of notice of cancellation by both the Principal, the Claims Administrator, and the Department from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

30.909: continued

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the Claims Administrator or the Department that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall fulfill this obligation. However, no liability shall attach to the Surety(ies) hereunder until the Principal, the Claims Administrator, or the Department notifies the Surety(ies) of a possible claim for bodily injury and/or property damage caused by accidental occurrences arising from operation of the facility(ies) identified above. Such notice shall automatically extend, for a period of six years, the obligation of the Surety(ies) to pay for bodily injury and property damage caused by such accidental occurrences prior to the date upon which this Surety Bond would otherwise have been terminated.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the Claims Administrator or by the Department that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the Claims Administrator or the Department.

The Surety(ies) shall become liable on this bond obligation only for amounts for which it (they) has (have) been presented a final judgment against the Principal for bodily injury and/or property damage caused by an accidental occurrence or occurrences arising from the operation of the facility(ies) identified above. Said judgment shall have been either (1) rendered by the highest court in the jurisdiction where the action was brought and the Principal exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the Principal to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the Principal.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal, to the Claims Administrator, and to the Department, provided, however, that cancellation shall not take effect until at least 120 days after the date of receipt of the notice of cancellation by the Principal, the Claims Administrator, and the Department, as shown by the later return receipt, and provided further that such notice shall not discharge any obligations of the Surety(ies) hereunder which may have arisen prior to the receipt of such notice.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization by the Department for termination of the bond.

[The following paragraph is an *optional* rider that may be included but is not required].

The Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new amount of financial responsibility for bodily injury and property damage to third parties caused by accidental occurrences, provided that the penal sum does not increase by more than 20% in any one year, and no decrease in the penal sum takes place without the written approval of the Department.

In witness Whereof, the Principal and Surety(ies) have executed this Financial Guarantee Bond and have affixed their seals on the date set forth above.

The individuals whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in 310 CMR 30.909(9) as in effect on the date this bond was executed.

Principal

[Signature(s)]

[Name(s)]

[Title(s)]

[Corporate seal]

30.909: continued

Corporate Surety(ies)

[Name(s) and address(es)]

State of incorporation [Name of State] _____

Liability limit: \$ [Amount] _____

[Signature(s)]

[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for the Surety above.]

Bond premium: \$ [Amount] _____

(10) Letters of Credit for Financial Assurance for Accidental Occurrences. A letter of credit as specified in 310 CMR 30.908(1)(d) and 310 CMR 30.908(2)(d) shall be worded as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

IRREVOCABLE STANDBY LETTER OF CREDIT

Commissioner,
Department of Environmental Quality Engineering
Commonwealth of Massachusetts

[Insert here the name and address of the Claims Administrator]

Dear Sir or Madam:

We hereby establish our Irrevocable Standby Letter of Credit No. [Number] in favor of the Department of Environmental Quality Engineering, at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] U.S. dollars (\$ [Amount]), available upon presentation, by the Commissioner, the Commissioner's designee, or [insert here the name of the Claims Administrator], of

(1) A sight draft, signed by either the Commissioner, the Commissioner's designee, or [insert here the name of the Claims Administrator], bearing reference to this letter of credit No. [Number], and

(2) A statement, signed by either the Commissioner, the Commissioner's designee, or [insert here the name of the Claims Administrator], and reading as follows: "I certify that the amount of the draft is payable pursuant to 310 CMR 30.908 and 30.909, regulations issued under authority of M.G.L. c. 21C."

This letter of credit is effective as of [date] and shall expire on [date at least one year later], but such expiration date shall be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify the Commissioner, [insert here the name of the Claims Administrator], and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event such notice has been received, any unused portion of the credit shall be available upon presentation of a sight draft, signed by either the Commissioner, the Commissioner's designee, or [insert here the name of the Claims Administrator], within 120 days after the date of receipt of notification by the Commissioner, [insert here the name of the Claims Administrator], and [owner's or operator's name], as shown on the latest signed return receipt.

30.909: continued

Whenever this letter of credit is drawn on, under, and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall pay the amount of the draft in accordance with the instructions given us by the Commissioner, the Commissioner's designee, or [insert here the name of the Claims Administrator].

We certify that the wording of this letter of credit is identical to the wording specified in 310 CMR 30.909(10) as in effect on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution]

[Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce", or "the Uniform Commercial Code"]

30.910: Special Options for Facilities Relying on the Hazardous Waste Licensees Insolvency Fund

(1) Coverage for sudden accidental occurrences. The owner or operator of a hazardous waste treatment, storage, or disposal facility may demonstrate assurance of financial responsibility for bodily injury and property damage to third parties caused by each sudden accidental occurrence arising from operation of the facility by using one of the options specified in 310 CMR 30.910 in lieu of the options specified in 310 CMR 30.908(1)(a) through (d), but only if the Hazardous Waste Licensees Insolvency Fund actually exists, and the owner or operator meets the eligibility requirements set forth in 310 CMR 30.910(1)(a), the amount of coverage for sudden accidental occurrences is in compliance with 310 CMR 30.910(1)(b), the form of coverage is in compliance with 310 CMR 30.910, and the owner or operator obtains and maintains in effect a contract with a Claims Administrator in compliance with 310 CMR 30.910(1)(e); otherwise, the owner or operator shall use the options set forth in 310 CMR 30.908(1)(a) through (d). In all events, the provisions of the introductory paragraph of 310 CMR 30.908(1), and the provisions of 310 CMR 30.908(3) through (8), shall apply to 310 CMR 30.910. As used in 310 CMR 30.910(1), the term "Claims Administrator" shall mean a person who shall be responsible for the processing and administration of all requests to make payments from a trust fund, standby trust fund, or letter of credit pursuant to 310 CMR 30.910(1). The owner or operator of each facility shall give notice to both the Department and the Claims Administrator of every claim for bodily injury and/or property damage caused by a sudden accidental occurrence or occurrences arising from the operation of the facility(ies). The owner or operator of each facility shall give such notice to both the Department and the Claims Administrator as soon as possible and in any event no later than 30 days after learning of such claim. The owner or operator of each facility shall give notice to both the Department and the Claims Administrator of every judgment against the owner or operator for bodily injury and/or property damage caused by a sudden accidental occurrence or occurrences arising from the operation of the facility. The owner or operator of each facility shall give such notice to both the Department and the Claims Administrator as soon as possible and in any event no later than 30 days after learning of said judgment.

(a) Eligibility. An owner or operator may use the options set forth in 310 CMR 30.910 only if the owner or operator persuades the Department that, despite reasonable efforts, he could not obtain at all, or could not obtain at an annual cost equal to or less than the applicable amount set forth in 310 CMR 30.910(1)(b), liability coverage in compliance with 310 CMR 30.908(1)(a) for sudden accidental occurrences in the amount of at least \$3-million per each sudden accidental occurrence with an annual aggregate of at least \$6-million, exclusive of legal defense costs.

30.910: continued

(b) Required Amount. If the owner or operator is eligible to, and does, use the options set forth in 310 CMR 30.910, the minimum amount of coverage for sudden accidental occurrences shall be as set forth below, or such other amount as required by the Department pursuant to 310 CMR 30.908(4) or (5). The required amount shall be in the funding mechanism when the funding mechanism is first established, and an amount equal to said required amount shall be placed in either the same funding mechanism or a new funding mechanism on or before April 1 of each year thereafter for as long as 310 CMR 30.910 remains in effect. Except for payment of claims or any other payments made in compliance with 310 CMR 30.910 from a funding mechanism established pursuant to 310 CMR 30.910, and except as may be otherwise provided by law, these amounts shall accumulate and aggregate for at least as long as the Hazardous Waste Licensees Insolvency Fund exists. However, the Department may release all funds dedicated to a funding mechanism upon the showing by an owner or operator that the owner or operator no longer meets the eligibility requirements set forth in 310 CMR 30.910(1)(a), and has a valid claims-made policy which satisfies the requirements of 310 CMR 30.908(1)(a) through (d), and if applicable, 310 CMR 30.908(2)(a) through (d), provided that the policy retroactively covers any claim made on or after February 13, 1984, for as long as the facility remains subject to 310 CMR 30.900.

1. If the facility is licensed only to store only waste oil, and does no more than this; or if the facility is a facility having interim status pursuant to RCRA and said facility is authorized only to store only waste oil, and does no more than this; the required amount shall be \$15,000 per year.
2. If the facility is licensed only to store less than 50,000 gallons of any hazardous waste, other than waste oil, at any one time, and does no more than this; or if the facility is a facility having interim status pursuant to RCRA and said facility is authorized only to store less than 50,000 gallons of any hazardous waste, other than waste oil, at any one time, and does no more than this; the required amount shall be \$25,000 per year.
3. If the facility is licensed only to store 50,000 gallons or more of any hazardous waste, other than waste oil, at any one time, and does no more than this; or if the facility is a facility having interim status pursuant to RCRA and said facility is authorized only to store 50,000 gallons or more of any hazardous waste, other than waste oil, at any one time, and does no more than this; the required amount shall be \$60,000 per year.
4. For all other facilities, the required amount shall be \$75,000 per year.

(c) Trust Fund Requirements. An owner or operator may demonstrate the required coverage by establishing a sudden accidental occurrence special trust fund, which shall be established and maintained in compliance with the following requirements:

1. The owner or operator shall establish the trust fund, and shall send an originally signed duplicate of the trust agreement to the Department, within the applicable time period prescribed in 310 CMR 30.901(2) or (6).
2. The trustee shall be a bank or other financial institution which has the authority to act as a trustee and whose trust operations are regulated and examined by the Massachusetts Commissioner of Banking, or the trustee shall be a national bank.
3. The wording of the trust agreement shall be identical to the wording specified in 310 CMR 30.910(3)(a), and the trust agreement shall be accompanied by a formal certification of acknowledgement identical to the wording specified in 310 CMR 30.910(3)(b).
4. On the date of the initial establishment of the sudden accidental occurrence special trust fund, the value of the trust fund shall be at least the amount required pursuant to 310 CMR 30.910(1)(b), or such other amount as required by the Department pursuant to 310 CMR 30.908(4) or (5).
5. If an owner or operator substitutes other financial assurance, as specified in 310 CMR 30.908(1) or 30.910, for the sudden accidental occurrence special trust fund, he may submit a written request to the Department for release of the amount in the trust fund.
6. Any person who obtains final judgment against the owner or operator for bodily injury and/or property damage caused by a sudden accidental occurrence or occurrences arising from the operation of the facility may request payment from the sudden accidental occurrence liability trust fund in satisfaction of the judgment by

30.910: continued

submitting to the Claims Administrator a certified copy of the judgment and a statement, signed subject to 310 CMR 30.006 and 30.009, that the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator.

7. After receiving the material described in 310 CMR 30.910(1)(c)6., the Claims Administrator shall determine whether the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator. If so, the Claims Administrator shall instruct the trustee to pay to the person who obtained the judgment such amounts, not to exceed the amount of the judgment or the amount then in the sudden accidental occurrence special trust fund, whichever amount is less, as the Claims Administrator may specify in writing.

8. To the extent such action is authorized or required by law, the Claims Administrator or the Department may instruct the trustee to pay to the Hazardous Waste Licensees Insolvency Fund or to the Commonwealth of Massachusetts such amounts, not to exceed the amount then in the trust fund, as may be authorized or required by law.

9. No trust shall be terminated without prior written consent of the Department. The Department may agree to termination of the trust when the Department is persuaded that such action is consistent with 310 CMR 30.910(1)(c)5. and

a. the Department is persuaded that the owner or operator has substituted alternate financial assurance as specified in 310 CMR 30.908(1) or 30.910, or

b. when the Department certifies closure of the facility pursuant to 310 CMR 30.099(6) or 30.586(2); provided, however, that amounts may be paid to the facility only to the extent sufficient funds are available to pay outstanding claims and other obligations that are unpaid or unresolved, and that no amounts whatever shall be paid to the facility for as long as the Hazardous Waste Licensees Insolvency Fund exists except as may be otherwise provided by law. However, the Department may release all funds dedicated to the trust fund upon the showing by an owner or operator that the owner or operator no longer meets the eligibility requirements set forth in 310 CMR 30.910(1)(a), and has a valid claims-made policy which satisfies the requirements of 310 CMR 30.908(1)(a) through (d), and if applicable, 310 CMR 30.908(2)(a) through (d), provided that the policy retroactively covers any claim made on or after February 13, 1984, for as long as the facility remains subject to 310 CMR 30.900.

(d) Letter of Credit Requirements. An owner or operator may demonstrate the required coverage by obtaining an irrevocable letter of credit which shall be obtained and maintained in compliance with the following requirements:

1. The owner or operator shall obtain the letter of credit and submit it to the Department within the applicable time period prescribed in 310 CMR 30.901(2) or (6).

2. The institution issuing the letter of credit shall be an entity which has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by the Massachusetts Commissioner of Banking, or the institution shall be a national bank.

3. The wording of the letter of credit shall be identical to the wording specified in 310 CMR 30.910(3)(c).

4. The letter of credit shall be accompanied by a letter from the owner or operator which shall state:

a. The letter of credit number;

b. The name of the issuing institution;

c. The date of issuance of the letter of credit;

d. The EPA identification number(s) of the facility;

e. The name and address of the facility; and

f. The amount of funds assured by the letter of credit.

30.910: continued

5. The letter of credit shall be irrevocable and shall be issued for a period of at least one year. The letter of credit shall provide that the expiration date will be automatically extended for a period of at least one year unless, no later than 120 days before the current expiration date pursuant to the terms of the letter of credit, the issuing institution notifies the owner or operator, the Claims Administrator, and the Department by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days shall not begin before the date when the owner or operator, the Claims Administrator, and the Department have received the notice, as shown by the latest return receipt.
6. If the owner or operator does not establish alternate financial assurance as required by 310 CMR 30.908(1) and does not obtain written approval from the Department of any such alternate financial assurance within 90 days of receipt by the owner or operator, by the Claims Administrator, and by the Department of a notice that the issuing institution will not extend the letter of credit beyond the current expiration date, the Department shall draw on the letter of credit. The Department may delay drawing on the letter of credit if the issuing institution grants an extension of the term of the letter of credit. During the last 30 days of any such extension, the Department shall draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in 310 CMR 30.910 or has failed to obtain written approval by the Department of such assurance.
7. An owner or operator who uses a letter of credit to satisfy the requirements of 310 CMR 30.910 shall also establish a standby trust fund. Under the terms of the letter of credit, all payments made thereunder shall, in accordance with instructions from the Claims Administrator or the Department, either be paid by the issuing institution directly to a person described in 310 CMR 30.910(1)(d)9., or paid by the issuing institution directly to the Hazardous Waste Licensees Insolvency Fund or to the Commonwealth of Massachusetts in accordance with 310 CMR 30.910(1)(d)11., or deposited by the issuing institution directly into the standby trust fund. This standby trust fund shall meet the requirements in 310 CMR 30.910(1)(c), except that:
 - a. An originally signed duplicate of the trust agreement shall be submitted to the Department with the letter of credit; and
 - b. Until the standby trust fund is funded pursuant to the requirements of 310 CMR 30.910, the following are not required:
 - (i) payment into the trust fund as specified in 310 CMR 30.910(1)(c);
 - (ii) annual valuations as required by the trust agreement (*See* 310 CMR 30.910(3)(a)10.); and
 - (iii) notices of nonpayment as required by the trust agreement (*See* 310 CMR 30.910(3)(a)15.).
8. If an owner or operator substitutes other financial assurance as specified in 310 CMR 30.908(1) for all or part of the amount of the letter of credit, he may submit a written request to the Department for release of the amount in excess of the amount to be covered by the letter of credit.
9. Any person who obtains final judgment against the owner or operator for bodily injury and/or property damage caused by a sudden accidental occurrence or occurrences arising from the operation of the facility may request payment from the letter of credit in satisfaction of the judgment by submitting to the Claims Administrator a certified copy of the judgment and a statement, signed subject to 310 CMR 30.006 and 30.009, that the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator.

30.910: continued

10. After receiving the material described in 310 CMR 30.910(1)(d)9., the Claims Administrator shall determine whether the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator. If so, the Claims Administrator shall instruct the institution issuing the letter of credit to pay either to the person making the claim or into the standby trust fund, or the Claims Administrator shall instruct the trustee of the standby trust fund to pay to the person who obtained the judgment, such amounts, not to exceed the amount of the judgment or the amount in the letter of credit, whichever amount is less, as the Claims Administrator may specify in writing.
 11. To the extent such action is authorized or required by law, the Claims Administrator or the Department may instruct the institution issuing the letter of credit to pay to the Hazardous Waste Licensees Insolvency Fund or to the Commonwealth of Massachusetts such amounts, not to exceed the amount then in the letter of credit, as may be authorized or required by law.
 12. No letter of credit shall be terminated without prior written consent of the Department. The Department may return the letter of credit to the issuing institution for termination when the Department is persuaded that such action is consistent with 310 CMR 30.910(1)(c)8. and
 - a. the Department is persuaded that the owner or operator has substituted alternate financial assurance as specified in 310 CMR 30.908(1) or 30.910, or
 - b. when the Department certifies closure of the facility pursuant to 310 CMR 30.099(6) or 30.586(2); provided, however, that amounts may be paid to the facility only to the extent sufficient funds are available to pay outstanding claims and other obligations that are unpaid or unresolved, and that no amounts whatever shall be paid to the facility for as long as the Hazardous Waste Licensees Insolvency Fund exists except as may be otherwise provided by law. However, the Department may release all funds dedicated to a letter of credit upon the showing by an owner or operator that the owner or operator no longer meets the eligibility requirements set forth in 310 CMR 30.910(1)(a), and has a valid claims-made policy which satisfies the requirements of 310 CMR 30.908(1)(a) through (d), and if applicable, 310 CMR 30.908(2)(a) through (d), provided that the policy retroactively covers any claim made on or after February 13, 1984, for as long as the facility remains subject to 310 CMR 30.900.
- (e) Requirements for a Contract with a Claims Administrator. Each contract between a Claims Administrator and an owner or operator shall conform to 310 CMR 30.910(1)(e).
1. Each contract between a Claims Administrator and an owner or operator shall assure that each party to the contract is obligated by the contract to comply with all the requirements applicable to each party respectively, as set forth in 310 CMR 30.910(1).
 2. Prior to executing any contract with a Claims Administrator, the owner or operator shall furnish a copy of the contract to the Department. No contract between a Claims Administrator and an owner or operator shall be signed by either of them without the prior written approval of the Department. The Department may withhold such approval if the Department is not persuaded that (1) the Claims Administrator is a person who can and will properly carry out the responsibilities a Claims Administrator has pursuant to 310 CMR 30.000, or (2) the terms and wording of the contract between the Claims Administrator and the owner or operator are sufficient to protect the Department's interests. The Department shall not unreasonably withhold or delay such approval.
 3. The Department shall not be a party to the contract between the Claims Administrator and the owner or operator.
 4. Cancellation of any contract between a Claims Administrator and an owner or operator shall be effective only upon written notice and only after the expiration of a least 30 days after the date of receipt by the Department of such written notice, sent to the Department by certified mail.

30.910: continued

5. Except as provided in Section 9 of the trust agreement, the wording of which is specified in 310 CMR 30.910(3)(a), the Claims Administrator shall not receive, and shall not be eligible to receive, directly or indirectly, any money in any letter of credit or standby trust fund established pursuant to 310 CMR 30.900 and for each he is Claims Administrator.

6. Nothing in 310 CMR 30.900 shall be construed to preclude the Trustee of any trust fund from also being the Contract Administrator for that trust fund.

7. The Department shall have the right to direct the Claims Administrator to refuse to give instructions to pay any claim, and the Department and the Claims Administrator shall each have the right to obtain reimbursement of any claim already paid in whole or in part, if, in the opinion of the Department the claim is fraudulent, inflated, or otherwise unlawful or unjustified.

(2) Coverage for nonsudden accidental occurrences. An owner or operator of a hazardous waste treatment, storage, or disposal facility which is subject to 310 CMR 30.908(2) may demonstrate assurance of financial responsibility for bodily injury and property damage to third parties caused by each nonsudden accidental occurrence arising from operation of the facility by using one of the options specified in 310 CMR 30.910 in lieu of the options specified in 310 CMR 30.908(2)(a) through (d), but only if the owner or operator meets the eligibility requirements set forth in 310 CMR 30.910(2)(a), the amount of coverage for nonsudden accidental occurrences is in compliance with 310 CMR 30.910(2)(b), the form of coverage is in compliance with 310 CMR 30.910, and the owner or operator obtains and maintains in effect a contract with a Claims Administrator in compliance with 310 CMR 30.910(2)(e); otherwise, the owner or operator shall use the options set forth in 310 CMR 30.908(2)(a) through (d). In all events, the provisions of the introductory paragraph of 310 CMR 30.908(2), and the provisions of 310 CMR 30.908(3) through (8), shall apply to 310 CMR 30.910. As used in 310 CMR 30.910(2), the term "Claims Administrator" shall mean a person who shall be responsible for the processing and administration of all requests to make payments from a trust fund, standby trust fund, or letter of credit pursuant to 310 CMR 30.910(2). The owner or operator of each facility shall give notice to both the Department and the Claims Administrator of every claim for bodily injury and/or property damage caused by a nonsudden accidental occurrence or occurrences arising from the operation of the facility(ies). The owner or operator of each facility shall give such notice to both the Department and the Claims Administrator as soon as possible and in any event no later than 30 days after learning of such claim. The owner or operator of each facility shall give notice to both the Department and the Claims Administrator of every judgment against the owner or operator for bodily injury and/or property damage caused by a nonsudden accidental occurrence or occurrences arising from the operation of the facility. The owner or operator of each facility shall give such notice to both the Department and the Claims Administrator as soon as possible and in any event no later than 30 days after learning of said judgment.

(a) Eligibility. An owner or operator may use the options set forth in 310 CMR 30.910 only if the owner or operator persuades the Department that, despite reasonable efforts, he could not obtain at all, or could not obtain at an annual cost equal to or less than the applicable amount set forth in 310 CMR 30.910(2)(b), liability coverage in compliance with 310 CMR 30.908(2)(a) for nonsudden accidental occurrences in the amount of at least \$5-million per each nonsudden accidental occurrence with an annual aggregate of at least \$10-million, exclusive of legal defense costs.

(b) Required Amount. If the owner or operator is eligible to, and does, use the options set forth in 310 CMR 30.910, the minimum amount of coverage for nonsudden accidental occurrences shall be as set forth below, or such other amount as required by the Department pursuant to 310 CMR 30.908(4) or (5). The required amount shall be in the funding mechanism when the funding mechanism is first established, and an amount equal to said required amount shall be placed in either the same funding mechanism or a new funding mechanism on or before April 1 of each year thereafter for as long as 310 CMR 30.910 remains in effect. Except for payment of claims or any other payments made in compliance with 310 CMR 30.910 from a funding mechanism established pursuant to 310 CMR 30.910, and except as may be otherwise provided by law, these amounts shall accumulate and aggregate for at least as long as the Hazardous Waste Licensees Insolven-

30.910: continued

cy Fund exists. However, the Department may release all funds dedicated to a funding mechanism upon the showing by an owner or operator that the owner or operator no longer meets the eligibility requirements set forth in 310 CMR 30.910(1)(a), and has a valid claims-made policy which satisfies the requirements of 310 CMR 30.908(1)(a) through (d), and if applicable, 310 CMR 30.908(2)(a) through (d), provided that the policy retroactively covers any claim made on or after February 13, 1984, for as long as the facility remains subject to 310 CMR 30.900.

1. If the facility is licensed only to store only waste oil, and does no more than this; or if the facility is a facility having interim status pursuant to RCRA and said facility is authorized only to store only waste oil, and does no more than this; the required amount shall be \$15,000 per year.
 2. If the facility is licensed only to store less than 50,000 gallons of any hazardous waste, other than waste oil, at any one time, and does no more than this; or if the facility is a facility having interim status pursuant to RCRA and said facility is authorized only to store less than 50,000 gallons of any hazardous waste, other than waste oil, at any one time, and does no more than this; the required amount shall be \$25,000 per year.
 3. If the facility is licensed only to store 50,000 gallons or more of any hazardous waste, other than waste oil, at any one time, and does no more than this; or if the facility is a facility having interim status pursuant to RCRA and said facility is authorized only to store 50,000 gallons or more of any hazardous waste, other than waste oil, at any one time, and does no more than this; the required amount shall be \$60,000 per year.
 4. For all other facilities, the required amount shall be \$75,000 per year.
- (c) Trust Fund Requirements. An owner or operator may demonstrate the required coverage by establishing a nonsudden accidental occurrence special trust fund, which shall be established and maintained in compliance with the following requirements:
1. The owner or operator shall establish the trust fund, and shall send an originally signed duplicate of the trust agreement to the Department, within the applicable time period prescribed in 310 CMR 30.901(2) or (6).
 2. The trustee shall be a bank or other financial institution which has the authority to act as a trustee and whose trust operations are regulated and examined by the Massachusetts Commissioner of Banking, or the trustee shall be a national bank.
 3. The wording of the trust agreement shall be identical to the wording specified in 310 CMR 30.910(3)(a), and the trust agreement shall be accompanied by a formal certification of acknowledgement identical to the wording specified in 310 CMR 30.910(3)(b).
 4. On the date of the initial establishment of the nonsudden accidental occurrence special trust fund, the value of the trust fund shall be at least the amount required pursuant to 310 CMR 30.910(2)(b), or such other amount as required by the Department pursuant to 310 CMR 30.908(4) or (5).
 5. If an owner or operator substitutes other financial assurance, as specified in 310 CMR 30.908(2) or 30.910, for the nonsudden accidental occurrence special trust fund, he may submit a written request to the Department for release of the amount in the trust fund.
 6. Any person who obtains final judgment against the owner or operator for bodily injury and/or property damage caused by a nonsudden accidental occurrence or occurrences arising from the operation of the facility may request payment from the nonsudden accidental occurrence liability trust fund in satisfaction of the judgment by submitting to the Claims Administrator a certified copy of the judgment and a statement, signed subject to 310 CMR 30.006 and 30.009, that the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator.

30.910: continued

7. After receiving the material described in 310 CMR 30.910(2)(c)6., the Claims Administrator shall determine whether the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator. If so, the Claims Administrator shall instruct the trustee to pay to the person who obtained the judgment such amounts, not to exceed the amount of the judgment or the amount then in the nonsudden accidental occurrence special trust fund, whichever amount is less, as the Claims Administrator may specify in writing.
 8. To the extent such action is authorized or required by law, the Claims Administrator or the Department may instruct the trustee to pay to the Hazardous Waste Licensees Insolvency Fund or to the Commonwealth of Massachusetts such amounts, not to exceed the amount then in the trust fund, as may be authorized or required by law.
 9. No trust shall be terminated without prior written consent of the Department. The Department may agree to termination of the trust when the Department is persuaded that such action is consistent with 310 CMR 30.910(2)(c)5. and
 - a. the Department is persuaded that the owner or operator has substituted alternate financial assurance as specified in 310 CMR 30.908(2) or 30.910, or
 - b. when the Department certifies closure of the facility pursuant to 310 CMR 30.099(6) or 30.586(2); provided, however, that amounts may be paid to the facility only to the extent sufficient funds are available to pay outstanding claims and other obligations that are unpaid or unresolved, and that no amounts whatever shall be paid to the facility for as long as the Hazardous Waste Licensees Insolvency Fund exists except as may be otherwise provided by law. However, the Department may release all funds dedicated to the trust fund upon the showing by an owner or operator that the owner or operator no longer meets the eligibility requirements set forth in 310 CMR 30.910(1)(a), and has a valid claims-made policy which satisfies the requirements of 310 CMR 30.908(1)(a) through (d), and if applicable, 310 CMR 30.908(2)(a) through (d), provided that the policy retroactively covers any claim made on or after February 13, 1984, for as long as the facility remains subject to 310 CMR 30.900.
- (d) Letter of Credit Requirements. An owner or operator may demonstrate the required coverage by obtaining an irrevocable letter of credit which shall be obtained and maintained in compliance with the following requirements:
1. The owner or operator shall obtain the letter of credit and submit it to the Department within the applicable time period prescribed in 310 CMR 30.901(2) or (6).
 2. The institution issuing the letter of credit shall be an entity which has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by the Massachusetts Commissioner of Banking, or the institution shall be a national bank.
 3. The wording of the letter of credit shall be identical to the wording specified in 310 CMR 30.910(3)(c).
 4. The letter of credit shall be accompanied by a letter from the owner or operator which shall state:
 - a. The letter of credit number;
 - b. The name of the issuing institution;
 - c. The date of issuance of the letter of credit;
 - d. The EPA identification number(s) of the facility;
 - e. The name and address of the facility; and
 - f. The amount of funds assured by the letter of credit.
 5. The letter of credit shall be irrevocable and shall be issued for a period of at least one year. The letter of credit shall provide that the expiration date will be automatically extended for a period of at least one year unless, no later than 120 days before the current expiration date pursuant to the terms of the letter of credit, the issuing institution notifies the owner or operator, the Claims Administrator, and the Department by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days shall not begin before the date when the owner or operator, the Claims Administrator, and the Department have received the notice, as shown by the latest return receipt.

30.910: continued

6. If the owner or operator does not establish alternate financial assurance as required by 310 CMR 30.908(2) and does not obtain written approval from the Department of any such alternate financial assurance within 90 days of receipt by the owner or operator, by the Claims Administrator, and by the Department of a notice that the issuing institution will not extend the letter of credit beyond the current expiration date, the Department shall draw on the letter of credit. The Department may delay drawing on the letter of credit if the issuing institution grants an extension of the term of the letter of credit. During the last 30 days of any such extension, the Department shall draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in 310 CMR 30.910 or has failed to obtain written approval by the Department of such assurance.

7. An owner or operator who uses a letter of credit to satisfy the requirements of 310 CMR 30.910 shall also establish a standby trust fund. Under the terms of the letter of credit, all payments made thereunder shall, in accordance with instructions from the Claims Administrator or the Department, either be paid by the issuing institution directly to a person described in 310 CMR 30.910(2)(d)9., or paid by the issuing institution directly to the Hazardous Waste Licensees Insolvency Fund or to the Commonwealth of Massachusetts in accordance with 310 CMR 30.910(2)(d)11., or deposited by the issuing institution directly into the standby trust fund. This standby trust fund shall meet the requirements in 310 CMR 30.910(2)(c), except that:

- a. An originally signed duplicate of the trust agreement shall be submitted to the Department with the letter of credit; and
- b. Until the standby trust fund is funded pursuant to the requirements of 310 CMR 30.910, the following are not required:
 - (i) payment into the trust fund as specified in 310 CMR 30.910(2)(c);
 - (ii) annual valuations as required by the trust agreement (*See* 310 CMR 30.910(3)(a)10.); and
 - (iii) notices of nonpayment as required by the trust agreement (*See* 310 CMR 30.910(3)(a)15.).

30.910: continued

8. If an owner or operator substitutes other financial assurance as specified in 310 CMR 30.908(2) for all or part of the amount of the letter of credit, he may submit a written request to the Department for release of the amount in excess of the amount to be covered by the letter of credit.

9. Any person who obtains final judgment against the owner or operator for bodily injury and/or property damage caused by a nonsudden accidental occurrence or occurrences arising from the operation of the facility may request payment from the letter of credit in satisfaction of the judgment by submitting to the Claims Administrator a certified copy of the judgment and a statement, signed subject to 310 CMR 30.006 and 30.009, that the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator.

10. After receiving the material described in 310 CMR 30.910(2)(d)9, the Claims Administrator shall determine whether the judgment was either (1) rendered by the highest court in the jurisdiction where the action was brought and the owner or operator exhausted all rights of appeal, or (2) rendered by the highest court which rendered a judgment and no appeal was made by the owner or operator to a higher court within the time allowed by applicable statute or rule, or (3) agreed to by the owner or operator. If so, the Claims Administrator shall instruct the institution issuing the letter of credit to pay either to the person making the claim or into the standby trust fund, or the Claims Administrator shall instruct the trustee of the standby trust fund to pay to the person who obtained the judgment, such amounts, not to exceed the amount of the judgment or the amount in the letter of credit, whichever amount is less, as the Claims Administrator may specify in writing.

11. To the extent such action is authorized or required by law, the Claims Administrator or the Department may instruct the institution issuing the letter of credit to pay to the Hazardous Waste Licensees Insolvency Fund or to the Commonwealth of Massachusetts such amounts, not to exceed the amount then in the letter of credit, as may be authorized or required by law.

12. No letter of credit shall be terminated without prior written consent of the Department. The Department may return the letter of credit to the issuing institution for termination when the Department is persuaded that such action is consistent with 310 CMR 30.910(2)(c)8. and

a. the Department is persuaded that the owner or operator has substituted alternate financial assurance as specified in 310 CMR 30.908(2) or 30.910, or

b. when the Department certifies closure of the facility pursuant to 310 CMR 30.099(6) or 30.586(2); provided, however, that amounts may be paid to the facility only to the extent sufficient funds are available to pay outstanding claims and other obligations that are unpaid or unresolved, and that no amounts whatever shall be paid to the facility for as long as the Hazardous Waste Licensees Insolvency Fund exists except as may be otherwise provided by law. However, the Department may release all funds dedicated to a letter of credit upon the showing by an owner or operator that the owner or operator no longer meets the eligibility requirements set forth in 310 CMR 30.910(1)(a), and has a valid claims-made policy which satisfies the requirements of 310 CMR 30.908(1)(a) through (d), and if applicable, 310 CMR 30.908(2)(a) through (d), provided that the policy retroactively covers any claim made on or after February 13, 1984, for as long as the facility remains subject to 310 CMR 30.900.

(e) Requirements for a Contract with a Claims Administrator. Each contract between a Claims Administrator and an owner or operator shall conform to 310 CMR 30.910(2)(e).

1. Each contract between a Claims Administrator and an owner or operator shall assure that each party to the contract is obligated by the contract to comply with all the requirements applicable to each party respectively, as set forth in 310 CMR 30.910(2).

30.910: continued

2. Prior to executing any contract with a Claims Administrator, the owner or operator shall furnish a copy of the contract to the Department. No contract between a Claims Administrator and an owner or operator shall be signed by either of them without the prior written approval of the Department. The Department may withhold such approval if the Department is not persuaded that (1) the Claims Administrator is a person who can and will properly carry out the responsibilities a Claims Administrator has pursuant to 310 CMR 30.000, or (2) the terms and wording of the contract between the Claims Administrator and the owner or operator are sufficient to protect the Department's interests. The Department shall not unreasonably withhold or delay such approval.
3. The Department shall not be a party to the contract between the Claims Administrator and the owner or operator.
4. Cancellation of any contract between a Claims Administrator and an owner or operator shall be effective only upon written notice and only after the expiration of at least 30 days after the date of receipt by the Department of such written notice, sent to the Department by certified mail.
5. Except as provided in Section 9 of the trust agreement, the wording of which is specified in 310 CMR 30.910(3)(a), the Claims Administrator shall not receive, and shall not be eligible to receive, directly or indirectly, any money in any letter of credit or standby trust fund established pursuant to 310 CMR 30.900 and for each he is Claims Administrator.
6. Nothing in 310 CMR 30.900 shall be construed to preclude the Trustee of any trust fund from also being the Contract Administrator for that trust fund.
7. The Department shall have the right to direct the Claims Administrator to refuse to give instructions to pay any claim, and the Department and the Claims Administrator shall each have the right to obtain reimbursement of any claim already paid in whole or in part, if, in the opinion of the Department the claim is fraudulent, inflated, or otherwise unlawful or unjustified.

(3) Wording of Financial Instruments Used By Facilities Relying on the Hazardous Waste Licensees Insolvency Fund.

- (a) A trust agreement for a trust fund established pursuant to 310 CMR 30.910(1)(c) or (d), or pursuant to 310 CMR 30.908(2)(c) or (d), shall be worded as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

TRUST AGREEMENT

This Trust Agreement, hereafter referred to as the "Agreement", is entered into as of [date] by and between [name of the owner or operator], a [name of State] [insert "corporation", "partnership", "association", "trust", or "individual"], hereafter referred to as the "Grantor", and [name of corporate trustee], [insert "incorporated in the State of _____" or "a national bank"], hereafter referred to as the "Trustee".

Whereas the Department of Environmental Quality Engineering, hereafter referred to as the "Department", an agency of the Commonwealth of Massachusetts, has established certain regulations applicable to the Grantor, requiring that the Grantor shall demonstrate financial responsibility for bodily injury and property damage to third parties caused by each sudden accidental occurrence and/or each nonsudden accidental occurrence arising from operation of the facility identified in Schedule A; and

Whereas, the Grantor has elected to establish a [insert either "trust fund" or "stand-by trust fund"] to demonstrate all or part of such financial responsibility for the facility identified in Schedule A; and

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee.

Now, Therefore, the Grantor and the Trustee agree as follows:

30.910: continued

Section 1. Definitions.

- (a) The term "Grantor" means [name of the owner or operator].
- (b) The term "Trustee" means [name of corporate trustee], [insert "incorporated in the State of _____" or "a national bank"], and any successor thereof.
- (c) The terms "Department" and "Beneficiary" mean the Department of Environmental Quality Engineering, an agency of the Commonwealth of Massachusetts, and any successor of the said Department.
- (d) The term "Claim Administrator" means [name of the Claim Administrator], and any successor thereof, who is carrying out the responsibilities of the "Claim Administrator" as set forth in 310 CMR 30.900, as in effect as of the date first written above.

Section 2. Identification of Facilities. This Agreement pertains to the facilities identified on the attached Schedule A [on attached Schedule A list each facility, and for each facility list the EPA identification number, name, and address for which financial responsibility is demonstrated by this Agreement].

Section 3. Establishment of Trust Fund. The Grantor and the Trustee hereby establish a trust fund (the "Fund") for the benefit of the Department. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in the attached Schedule B. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible, nor shall it undertake any responsibility, for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the Department.

Section 4. Payment for Bodily Injury and Property Damage to Third Parties. The Trustee shall make payments from the Fund as directed by the Claims Administrator or by the Department in writing. Said payments shall provide for payments from the Fund to the Department or to other persons, as specified in writing by the Claims Administrator or by the Department, for bodily injury and property damage caused by each sudden accidental occurrence and/or each nonsudden accidental occurrence arising from operation of the facility covered by this Agreement. Such payment(s) shall be in such amount(s) as the Claims Administrator or the Department directs in writing. In addition, the Trustee shall refund to the Grantor such amount(s) as the Claims Administrator or the Department specifies in writing. Upon payment or refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other assets acceptable to the Trustee.

Section 6. Trustee Management. The Trustee shall invest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the principle and income of the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the Beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (a) Securities or other obligations of the Grantor, or any affiliates of the Grantor, as defined in the Investment Company Act of 1940, an amended, 14 U.S.C. §80a-2(a), shall not be acquired or held unless they are securities or other obligations of the Federal or a State government;

30.910: continued

- (b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and
- (c) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 14 U.S.C. §§80a-1 *et seq.*, including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it by public or private sale;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other Fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund.
- (d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and
- (e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation. The Trustee shall annually, no later than December 1, furnish to the Grantor, to the Claims Administrator, and to the Department a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no later than November 1. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor, the Claims Administrator, and the Department shall constitute a conclusively binding assent by the Grantor barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

30.910: continued

Section 11. Advice of Counsel. The Trustee may, from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the interpretation of this Agreement of any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the Department, the Claims Administrator, and the present Trustee by certified mail at least ten days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Schedule C or such other designees as the Grantor may designate by amendment to Schedule C. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Claims Administrator to the Trustee shall be in writing, signed by the Claims Administrator, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. All orders, requests, and instructions by the Department to the Trustee shall be in writing, signed by the Commissioner or his designee, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor, the Claims Administrator, or the Department hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Claims Administrator and/or the Department except as provided for herein.

Section 15. Notice of Nonpayment. The Trustee shall notify the Grantor, the Claims Administrator, and the Department by certified mail by no later than August 10 if no payment into the Fund is received from the Grantor during the month of July.

Section 16. Amendment of Agreement. This Agreement may be amended by an instruction in writing executed by the Grantor, the Trustee, and the Department, or by the Trustee and the Department if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated by the written agreement of the Grantor, the Trustee, and the Department, or by the Trustee and the Department if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.910: continued

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of the Trust, or in carrying out any directions by the Grantor, by the Claims Administrator, or by the Department issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the Commonwealth of Massachusetts.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not effect the interpretation or the legal efficacy of this Agreement.

In Witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first written above. The parties below certify that the wording of this Agreement is identical to the wording specified in 310 CMR 30.910(3)(a) as in effect on the date first written above.

[Signature of Grantor]
[Title]

Attest:

[Title]
[Seal]

[Signature of Trustee]

Attest:

[Title]
[Seal]

(a) Each certification of acknowledgement which shall accompany a trust agreement for a trust fund as required by 310 CMR 30.910 shall be worded as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

State of [Name of State]

County of [Name of County]

On this [date], before me personally came [owner or operator] to me known, who being by me duly sworn, did depose and say that she/he [strike one] resides at [address], that she/he [strike one] is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he [strike one] knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he [strike one] signed her/his [strike one] name thereto by like order.

[Signature of Notary Public]

My Commission expires: [Date]

(b) Letters of Credit for Financial Assurance for Accidental Occurrences. A letter of credit as specified in 310 CMR 30.910(1)(d) and 310 CMR 30.910(2)(d) shall be worded as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.910: continued

IRREVOCABLE STANDBY LETTER OF CREDIT

Commissioner,
Department of Environmental Quality Engineering
Commonwealth of Massachusetts

[Insert here the name and address of the Claims Administrator]

Dear Sir or Madam:

We hereby establish our Irrevocable Standby Letter of Credit No. [Number] in favor of the Department of Environmental Quality Engineering, at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] U.S. dollars (\$ [Amount]), available upon presentation, by the Commissioner, the Commissioner's designee, or [insert here the name of the Claims Administrator], of

- (a) A sight draft, signed by either the Commissioner, the Commissioner's designee, or [insert here the name of the Claims Administrator], bearing reference to this letter of credit No. [Number], and
- (b) A statement, signed by either the Commissioner, the Commissioner's designee, or [insert here the name of the Claims Administrator], and reading as follows: "I certify that the amount of the draft is payable pursuant to 310 CMR 30.910, regulations issued under authority of M.G.L., c. 21C."

This letter of credit is effective as of [date] and shall expire on [date at least one year later], but such expiration date shall be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify the Commissioner, [insert here the name of the Claims Administrator], and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event such notice has been received, any unused portion of the credit shall be available upon presentation of a sight draft, signed by either the Commissioner, the Commissioner's designee, or [insert here the name of the Claims Administrator], within 120 days after the date of receipt of notification by the Commissioner, [insert here the name of the Claims Administrator], and [owner's or operator's name], as shown on the latest signed return receipt.

Whenever this letter of credit is drawn on, under, and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall pay the amount of the draft in accordance with the instructions given us by the Commissioner, the Commissioner's designee, or [insert here the name of the Claims Administrator].

We certify that the wording of this letter of credit is identical to the wording specified in 310 CMR 30.910(3)(c) as in effect on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution]

[Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce", or "the Uniform Commercial Code"]

30.1000: STANDARDS FOR UNIVERSAL WASTE MANAGEMENT

30.1001: Scope

(1) The provisions of 310 CMR 30.1001 through 30.1099, cited collectively as 310 CMR 30.1000, establish requirements for managing universal wastes. 310 CMR 30.1000 establishes requirements for managing the following wastes as further described in 310 CMR 30.1020:

- (a) Batteries;
- (b) Pesticides;
- (c) Thermostats;
- (d) Mercury-containing devices; and
- (e) Mercury-containing lamps.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

30.1001: continued

(2) The requirements of 310 CMR 30.1000 provide an alternative set of management standards in lieu of regulation under 310 CMR 30.200 through 30.900.

(3) Universal wastes that are not handled in compliance with 310 CMR 30.1000 are hazardous wastes, and shall be accumulated, collected, transported, stored, treated, and disposed of in compliance with all the requirements of 310 CMR 30.000 other than 310 CMR 30.1000.

30.1010: Definitions

Battery means a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact unbroken battery from which the electrolyte has been removed.

Destination facility means a facility that is authorized to receive and recycle, treat, or dispose of a particular category of universal waste, except those management activities described in 310 CMR 30.1034(1), (3), (4) and (5), as well as 30.1044(1), (3), (4) and (5). A facility at which a particular category of universal waste is only accumulated, is not a destination facility for purposes of managing that category of universal waste. If located in Massachusetts, these facilities shall be properly licensed in compliance with 310 CMR 30.800, or be properly permitted in compliance with 310 CMR 30.290.

FIFRA means the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136-136y).

Large quantity handler of universal waste means a universal waste handler who accumulates 5,000 kilograms or more total of universal waste at any time. This designation as a large quantity handler of universal waste is retained until such time as a change of status request is received by the Department in compliance with 310 CMR 30.1043, and through the end of the calendar year in which the change of status request was received.

Mercury-containing device means any electrical product or component (excluding batteries, lamps and thermostats) which contains elemental mercury that is necessary for its operation and is housed within an outer metal, glass or plastic casing. Mercury-containing devices include, but are not limited to, thermocouples, thermometers, manometers, barometers, sphygmomanometers, electrical switches and relays, as well as certain gas flow regulators and water meters.

Mercury-containing lamp means any bulb or tube portion of an electric lighting device specifically designed to produce radiant energy, including, but not limited to incandescent, fluorescent, high intensity discharge, and neon lamps in which mercury is purposely introduced by the manufacturer for the operation of the lamp.

Pesticide means a substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant; provided that the term "Pesticide" shall not include any article that is a "new animal drug" within the meaning of section 201(w) of the Federal Food, Drug and Cosmetic Act, or that has been determined by the Secretary of the United States Department of Health, Education and Welfare not to be a new animal drug by a regulation establishing conditions of use for the article, or that is an animal feed within the meaning of section 201(x) of such act.

Small quantity handler of universal waste means a universal waste handler who accumulates less than 5,000 kilograms total of universal waste at any time.

Thermostat means a temperature control device that contains metallic mercury in an ampoule attached to a bimetal sensing element.

Universal waste means any of the following hazardous wastes, as further described in 310 CMR 30.1020, that are managed under the universal waste requirements of 310 CMR 30.1000:

30.1010: continued

- (a) Batteries;
- (b) Pesticides;
- (c) Thermostats;
- (d) Mercury-containing devices; and
- (e) Mercury-containing lamps.

[Note: Not all batteries, pesticides and lamps are hazardous wastes, and therefore, they do not all qualify as universal wastes; such wastes may instead be managed as non-hazardous solid wastes.]

Universal waste handler:

- (a) Means:
 - 1. A generator of universal waste; or
 - 2. The owner or operator of a facility that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination.
- (b) Does not mean:
 - 1. A person who treats (except under the provisions of 310 CMR 30.1034(1), (3), (4) or (5), or 30.1044(1), (3), (4) or (5)), disposes of, or recycles universal waste; or
 - 2. A person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

Universal waste transfer facility means any transportation-related facility including loading docks, parking areas, storage areas and other similar areas where shipments of universal waste batteries are held during the normal course of transportation for ten days or less.

Universal waste transporter means a person engaged in the off-site transportation of universal waste by air, rail, highway, or water.

Waste pesticide collection program means a program for the collection of unused pesticide products that has been authorized by the Department of Food and Agriculture that sets forth standards regarding the scope of the materials to be collected as well accumulation, storage, packaging, labeling, training, notification and transport.

[NOTE: The collection of pesticides at a Household Hazardous Waste Collection Center or Event does not constitute a Waste Pesticide Collection Program unless such collection is operated in compliance with Department of Food and Agriculture collection program requirements, as well as 310 CMR 30.390.]

30.1020: Applicability -- Wastes covered

(1) Batteries.

(a) Batteries covered under 310 CMR 30.1000. The requirements of 310 CMR 30.1000 apply to batteries, except those listed in 310 CMR 30.1020(1)(b).

(b) Batteries not covered under 310 CMR 30.1000. The requirements of 310 CMR 30.1000 do not apply to the following batteries:

- 1. Spent lead-acid batteries that are managed under 310 CMR 30.280.
- 2. Batteries that are not subject to hazardous waste regulation. A battery is not subject to hazardous waste regulation if it meets any of the following:
 - a. It has been used but has not yet been discarded or sent for recycling.
 - b. It has not been used and the handler has not decided to discard or recycle it.
 - c. It does not exhibit one or more of the characteristics identified in 310 CMR 30.120.

(2) Pesticides.

(a) Pesticides covered under 310 CMR 30.1000. The requirements of 310 CMR 30.1000 apply to the following pesticides, except for those described in 310 CMR 30.1020(2)(b):

30.1020: continued

1. Recalled pesticides that are:
 - a. Stocks of a suspended and cancelled pesticide that are part of a voluntary or mandatory recall under FIFRA Section 19(b) or the Massachusetts Pesticide Control Act and their implementing regulations, including, but not limited to, those owned by the registrant responsible for conducting the recall; or
 - b. Stocks of a suspended or cancelled pesticide, or a pesticide that is not in compliance with FIFRA or the Massachusetts Pesticide Control Act and their implementing regulations, that are part of a voluntary recall by the registrant.
 2. Stocks of other unused pesticide products that are collected and managed as part of a Waste Pesticide Collection Program.
- (b) Pesticides not covered under 310 CMR 30.1000. The requirements of 310 CMR 30.1000 do not apply to pesticides that are not subject to hazardous waste regulation.
1. A recalled pesticide described in 310 CMR 30.1020(2)(a)1. is not subject to hazardous waste regulation if either:
 - a. it has not been used and:
 - i. the handler has not decided to discard or recycle it; and
 - ii. the handler has not discarded or recycled it; or
 - b. the pesticide is not listed and does not exhibit one or more of the characteristics identified in 310 CMR 30.120.
 2. An unused pesticide product described in 310 CMR 30.1020(2)(a)2. is not subject to hazardous waste regulation if either:
 - a. the handler has not decided to discard or recycle it; or
 - b. the pesticide is not listed and does not exhibit one or more of the characteristics identified in 310 CMR 30.120.
- (3) Mercury thermostats.
- (a) Thermostats covered under 310 CMR 30.1000. The requirements of 310 CMR 30.1000 apply to thermostats except those listed in 310 CMR 30.1020(3)(b).
 - (b) Thermostats not covered under 310 CMR 30.1000. The requirements of 310 CMR 30.1000 do not apply to thermostats that are not subject to hazardous waste regulation. A thermostat is not subject to hazardous waste regulation if it meets any of the criteria at 310 CMR 30.1020(1)(b)2.a. through c.
- (4) Mercury-containing devices.
- (a) Mercury-containing devices covered under 310 CMR 30.1000. The requirements of 310 CMR 30.1000 apply to mercury-containing devices except those listed in 310 CMR 30.1020(4)(b).
 - (b) Mercury-containing devices not covered under 310 CMR 30.1000. The requirements of 310 CMR 30.1000 do not apply to mercury-containing devices that are not subject to hazardous waste regulation. A mercury-containing device is not subject to hazardous waste regulation if it meets any of the criteria listed in 310 CMR 30.1020(1)(b)2.a. through c.
- (5) Mercury-containing lamps.
- (a) Mercury-containing lamps covered under 310 CMR 30.1000. The requirements of 310 CMR 30.1000 apply to mercury-containing lamps except those listed in 310 CMR 30.1020(5)(b).
 - (b) Mercury-containing lamps not covered under 310 CMR 30.1000. The requirements of 310 CMR 30.1000 do not apply to mercury-containing lamps that are not subject to hazardous waste regulation. A mercury-containing lamp is not subject to hazardous waste regulation if it meets any of the criteria listed in 310 CMR 30.1020(1)(b)2.a. through c.

30.1030: Standards for Small Quantity Handlers of Universal Waste

30.1031: Applicability

The provisions of 310 CMR 30.1031 through 30.1039, cited collectively as 310 CMR 30.1030, apply to small quantity handlers of universal waste.

30.1032: Prohibitions

- (1) A small quantity handler of universal waste is:
 - (a) Prohibited from disposing of universal waste; and
 - (b) Prohibited from diluting, treating or recycling universal waste, except by responding to releases as provided in 310 CMR 30.1036; or by managing specific wastes as provided in 310 CMR 30.1034.

30.1033: Notification, Change of Status, and Closure

- (1) A small quantity handler of universal waste is not required to notify the Department of universal waste handling activities.
- (2) A small quantity handler who has not already notified the Department of its hazardous waste activities and anticipates accumulating 5,000 kilograms or more total of universal waste shall send written notification of universal waste management to the Department, and receive an EPA Identification Number, before meeting or exceeding the 5,000 kilogram limit. If the Department prescribes a form for such a notification, the handler submitting the notification shall use such form when making the notification. Such a notification, at a minimum, shall specify that the handler has become a large quantity handler and shall also specify that the handler is in compliance with 310 CMR 30.1040. Each notification shall be signed, certified and submitted in compliance with 310 CMR 30.006 and 30.009. The handler shall not thereafter change status except as provided in 30.1043.
- (3) A small quantity handler of all universal wastes except batteries, who has already notified the Department of its hazardous waste activities and anticipates accumulating 5,000 kilograms or more total of universal waste, excluding batteries, shall submit to the Department, in writing, a change of status request. If the Department prescribes a form for such change of status requests, the handler submitting the change of status request shall use such form. Such a request, at a minimum, shall specify that the handler has become a large quantity handler and shall also specify that the handler is in compliance with 310 CMR 30.1040. Each change of status request shall be signed, certified and submitted in compliance with 310 CMR 30.006 and 30.009. The handler shall not thereafter change status except as provided in 30.1043. A small quantity handler of universal wastes batteries, who has already notified the Department of its hazardous waste activities and anticipates accumulating 5,000 kilograms or more of universal waste batteries, is not required to submit a change of status request.
- (4) A small quantity handler of universal waste who ceases operations shall comply with 310 CMR 30.689.

30.1034: Waste management

- (1) Universal waste batteries. A small quantity handler of universal waste shall manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:
 - (a) A small quantity handler of universal waste shall contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container shall be closed, structurally sound, compatible with the contents of the battery, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
 - (b) A small quantity handler of universal waste may conduct any of the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):
 1. Sorting batteries by type;
 2. Mixing battery types in one container;
 3. Discharging batteries so as to remove the electric charge;
 4. Regenerating used batteries
 5. Disassembling batteries or battery packs into individual batteries or cells;
 6. Removing batteries from consumer products; or
 7. Removing electrolyte from batteries.

30.1034: continued

(c) A small quantity handler of universal waste who removes electrolyte from batteries or who generates other waste (e.g., battery pack materials, discarded consumer products) as a result of the activities listed above, shall determine whether the other waste exhibits a characteristic of hazardous waste identified in 310 CMR 30.120.

1. If the electrolyte or other waste exhibits a characteristic of hazardous waste, it is subject to all applicable requirements of 310 CMR 30.001 through 30.900. The handler is considered the generator of the hazardous waste and is subject to 310 CMR 30.300.

2. If the electrolyte or other waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state and local solid waste laws and regulations.

(d) Labeling/Marking of Batteries. Universal waste batteries (*i.e.*, each battery), or a container in which the batteries are contained, shall be labeled or marked clearly with any one of the following phrases: "Universal Waste--Battery(ies), or "Waste Battery(ies)," or "Used Battery(ies)".

(e) Accumulation Standards. A small quantity handler of universal waste shall accumulate universal waste batteries in compliance with 310 CMR 30.1034(6).

(2) Universal Waste pesticides. A small quantity handler of universal waste shall manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment and in compliance with all provisions of any applicable recall plan or Waste Pesticide Collection Program standards.

(a) The universal waste pesticides shall be contained in one or more of the following:

1. A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or

2. A container that does not meet the requirements of 310 CMR 30.1034(2)(a)1., provided that the unacceptable container is overpacked in a container that does meet the requirements of 310 CMR 30.1034(2)(a)1.; or

3. An above ground tank that meets the requirements of 310 CMR 30.340(1)(a)2. and 30.340(1)(f),(g), (i), (j) and (k); or

4. A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(b) Labeling/marketing of recalled pesticides. A container, (or multiple container package unit), tank, transport vehicle or vessel in which recalled universal waste pesticides as described in 310 CMR 30.1020(2)(a)1. are contained shall be labeled or marked clearly with:

1. The label that was on or accompanied the product as sold or distributed; and

2. The words "Universal Waste-Pesticide(s)" or "Waste Pesticide(s)";

(c) Labeling/marketing of pesticides managed under a Waste Pesticide Collection Program. A container, tank, or transport vehicle or vessel in which unused pesticide products as described in 310 CMR 30.1020(2)(a)2. are contained shall be labeled or marked clearly with:

1. The label that was on the product when purchased, if still legible; or if the use of such label is not feasible, the appropriate label as required under the Department of Transportation regulation 49 CFR part 172; or

2. If using the labels described in 310 CMR 30.1034(2)(c)1. is not feasible, another label prescribed or designated by the Waste Pesticide Collection Program; and

3. The words "Universal Waste- Pesticide(s)" or "Waste Pesticide(s)."

(d) Accumulation standards. A small quantity handler of universal waste shall accumulate universal waste pesticides in compliance with 310 CMR 30.1034(6).

(3) Universal Waste Thermostats. A small quantity handler of universal waste shall manage universal waste thermostats in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(a) A small quantity handler of universal waste shall contain any universal waste thermostat that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container shall be closed, vapor tight, structurally sound, compatible with the contents of the thermostat, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

30.1034: continued

(b) A small quantity handler of universal waste may remove mercury-containing ampoules from universal waste thermostats provided the handler:

1. Removes the ampoules in a manner designed to prevent breakage of the ampoules;
2. Removes ampoules only over or in a containment device (*e.g.*, tray or pan sufficient to collect and contain any mercury released from an ampoule in case of breakage);
3. Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampoules, from the containment device to a container that meets the requirements of 310 CMR 30.340(1)(a)1.a. through f.;
4. Immediately transfers any mercury resulting from spills or leaks from broken ampoules from the containment device to a container that meets the requirements of 310 CMR 30.340(1)(a)1.a through -f.;
5. Ensures that the area in which ampoules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury, as in effect on July 1, 1996;
6. Ensures that employees removing ampoules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;
7. Manages removed ampoules as a hazardous waste or regulated recyclable material in compliance with all applicable provisions of 310 CMR 30.001 through 30.900.

(c) A small quantity handler of universal waste who removes mercury-containing ampoules from thermostats shall:

1. Determine whether the following exhibit a characteristic of hazardous waste identified in 310 CMR 30.120:
 - a. Mercury or clean-up residues resulting from spills or leaks; and/or
 - b. Other waste generated as a result of the removal of mercury-containing ampoules (*e.g.*, remaining thermostat components).
2. If the mercury, residues, and/or other waste exhibit a characteristic of hazardous waste, it shall be managed in compliance with all applicable requirements of 310 CMR 30.001 through 30.900. The handler is considered the generator of the mercury, residues, and/or other waste and shall manage it in compliance with 310 CMR 30.300.
3. If the mercury, residues, and/or other waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

(d) Labeling/marketing of thermostats. Universal waste thermostats (*i.e.*, each thermostat), or a container in which the thermostats are contained, shall be labeled or marked clearly with any one of the following phrases: "Universal Waste--Mercury Thermostat(s)," or "Waste Mercury Thermostat(s)," or "Used Mercury Thermostat(s)". If universal waste thermostats and universal waste mercury-containing devices are placed within the same container, then the labeling/marketing provisions of 310 CMR 30.1034(4) shall apply.

(e) Accumulation standards. A small quantity handler of universal waste shall accumulate universal waste thermostats in compliance with 310 CMR 30.1034(6).

(4) Mercury-containing devices. A small quantity handler of universal waste shall manage universal waste mercury-containing devices in a way that prevents releases of any universal waste or component of a universal waste to the environment as follows:

(a) A small quantity handler shall hold any broken mercury-containing device in a container. The container shall be closed, vapor tight, structurally sound, compatible with the contents of the mercury-containing device, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(b) A small quantity handler of universal waste may:

1. Mix different types of universal waste mercury-containing devices, or universal waste mercury-containing devices and universal waste thermostats, in one container; or
2. Remove mercury-containing ampoules from universal waste mercury-containing devices provided the handler complies with 310 CMR 30.1034(3)(b)1. through 7. and 30.1034(4)(c).

(c) Management of mercury and mercury containing residues.

1. A small quantity handler of universal waste who removes mercury-containing ampoules from mercury-containing devices shall determine whether the following exhibit a characteristic of hazardous waste identified in 310 CMR 30.120:

30.1034: continued

- a. Mercury or clean-up residues resulting from spills or leaks; and/or
 - b. Other waste generated as a result of the removal of mercury-containing ampoules (*e.g.*, remaining mercury-containing device units).
2. If the mercury, residues, and/or other waste exhibit a characteristic of hazardous waste, such wastes shall be managed in compliance with all applicable requirements of 310 CMR 30.001 through 30.900. The handler is considered the generator of the mercury, residues, and/or other waste and shall manage such wastes in compliance with 310 CMR 30.300.
 3. If the mercury, residues, and/or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste laws and regulations.
- (d) Labeling/Marking of Mercury-containing Devices. Universal waste mercury-containing devices (*i.e.*, each mercury-containing device), or a container in which the mercury-containing devices are contained, shall be labeled or marked clearly with any one of the following phrases: "Universal Waste--Mercury-containing Device(s)," or "Waste Mercury-containing Device(s)," or "Used Mercury-containing Device(s)."
- (e) Accumulation Standards. A small quantity handler of universal waste shall accumulate universal waste mercury-containing devices in compliance with 310 CMR 30.1034(6).
- (5) Mercury-containing Lamps. A small quantity handler of universal waste shall manage universal waste mercury-containing lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment as follows:
- (a) A small quantity handler shall hold any broken mercury-containing lamps in a container. The container shall be closed, vapor tight, structurally sound, compatible with the contents of the mercury-containing lamp, and shall lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. Incidental numbers of broken mercury-containing lamps, resulting from unintentional breakage during routine handling and transportation, and managed in accordance with 310 CMR 30.1034(5)(a), may be shipped off-site as a universal waste.
 - (b) A small quantity handler of universal waste may:
 1. Remove mercury-containing ampoules from universal waste mercury-containing lamps (*i.e.*, High Intensity Discharge lamps) provided the handler complies with 310 CMR 30.1034(3)(b)1. through 7. and 30.1034(5)(d); or
 2. Dismantle or crush lamps provided the handler complies with 310 CMR 30.1034(5)(c) and (d).
 - (c) Dismantling or crushing of mercury-containing lamps.
 1. A small quantity handler which intends to dismantle or crush mercury-containing lamps generated on-site may do so only if the following conditions are met:
 - a. The dismantling and/or crushing is done in such a manner that, after processing, components are separated into individual wastestreams (*i.e.* endcaps, glass, mercury/phosphor powder);
 - b. The separated components are recycled/reused, and the handler retains proof of their recycling/reuse, such as contractual agreements or other documentation showing that the materials are fully recycled and that there are known markets for the materials;
 - c. A Class A recycling permit is obtained pursuant to 310 CMR 30.212(10) for the crushing of the lamps and 310 CMR 30.212(6) for the off-site reclamation of the mercury/phosphor powder; and
 - d. If a small quantity handler intending to dismantle and/or crush mercury-containing lamps does not comply with 30.1034(5)(c)1. or 2., as applicable, then such activity will be subject to licensing standards of 310 CMR 30.800.
 2. A small quantity handler that intends to dismantle and/or crush mercury-containing lamps received from off the site of generation shall do so in compliance with 310 CMR 30.1034(5)(c)(1)a. and b., and in addition shall have in its possession a Class C recycling permit issued pursuant to 310 CMR 30.290.
 3. A small quantity handler that crushes or dismantles mercury-containing lamps shall also:

30.1034: continued

- a. Ensure that a mercury clean-up system is available;
 - b. Immediately transfer any mercury resulting from spills or leaks from the containment device, as described in 310 CMR 30.1034(5)(a) to a container that meets the requirements of 310 CMR 30.340(1)(a)1.;
 - c. Ensure that the area in which the lamp crushing or dismantling occurs is monitored to ensure compliance with applicable OSHA exposure levels for mercury, as in effect on July 1, 1996;
 - d. Ensure that employees removing the mercury contaminated material are thoroughly familiar with the proper handling and emergency procedures, including equipment operation, transfer of mercury from containment devices to appropriate containers, filter replacement, and equipment decontamination; and
 - e. Comply with either 310 CMR 30.200, if the mercury contaminated material is a regulated recyclable material, or, the applicable provisions of 310 CMR 30.001 through 30.900, if the mercury contaminated material is a hazardous waste.
- (d) Management of mercury and mercury containing residues.
1. A small quantity handler of universal waste who conducts activities in compliance with 310 CMR 30.1034(5)(b)1. or 30.1034(5)(b)2. shall determine whether the following exhibit a characteristic of hazardous waste identified in 310 CMR 30.120:
 - a. Mercury or clean-up residues resulting from spills or leaks; and/or
 - b. Other waste generated as a result of the removal of mercury-containing ampoules (*e.g.*, remaining mercury-containing lamp), crushing or dismantling of mercury containing lamps.
 2. Mercury ampoules, residues, and/or other wastes exhibiting a characteristic of hazardous waste, shall be managed in compliance with all applicable requirements of 310 CMR 30.001 through 30.900. The handler is considered the generator of the mercury ampoules, residues, and/or other waste and shall manage it in compliance with 310 CMR 30.300.
 3. If the mercury ampoules, residues, and/or other solid waste are not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste laws and regulations.
- (e) Labeling/marketing of mercury-containing lamps. Universal waste mercury-containing lamps (*i.e.*, each mercury-containing lamp), or a container in which the mercury-containing lamps are contained, shall be labeled or marked clearly with any one of the following phrases: "Universal Waste--Mercury-containing Lamp(s)," or "Waste Mercury-containing Lamp(s)," or "Used Mercury-containing Lamp(s)".
- (f) Accumulation standards. A small quantity handler of universal waste shall accumulate universal waste mercury-containing lamps in compliance with 310 CMR 30.1034(6).
- (6) Accumulation time limits.
- (a) Provided the small quantity handler of universal waste is not the sponsor of a household hazardous waste collection event, a small quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of 310 CMR 30.1034(6)(b) are met. A small quantity handler of universal waste who is a sponsor of a household hazardous waste collection event shall comply with the accumulation limits of 310 CMR 30.392(2).
 - (b) Provided the small quantity handler of universal waste is not a sponsor of a household hazardous waste collection event, a small quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.
 - (c) A small quantity handler of universal waste who accumulates universal waste shall be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler shall make this demonstration by:
 1. Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;

30.1034: continued

2. Marking or labeling each individual item of universal waste (e.g., each battery, thermostat, mercury-containing device, or mercury-containing lamp), which is not in a container described in 30.1034(6)(c)1., with the date it became a waste or was received;
3. Maintaining an inventory system on-site that identifies the date each universal waste became a waste or was received;
4. Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;
5. Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or
6. Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

30.1035: Employee Training

A small quantity handler of universal waste shall inform all employees who handle or have responsibility for managing universal waste of proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility. For examples of topics that can be addressed in employee training see 310 CMR 30.516(2).

30.1036: Response to Releases

- (1) A small quantity handler of universal waste shall immediately contain all releases of universal wastes and other residues from universal wastes.
- (2) A small quantity handler of universal waste shall determine whether any material resulting from the release is hazardous waste, and if so, shall manage the hazardous waste in compliance with all applicable requirements of 310 CMR 30.001 through 30.900. The handler is considered the generator of the material resulting from the release, and shall manage it in compliance with 310 CMR 30.300.

30.1037: Off-site Shipments

- (1) A small quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.
- (2) If a small quantity handler of universal waste self-transportes universal waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and shall comply with the transporter requirements of 310 CMR 30.1050 while transporting the universal waste.
- (3) If a universal waste being offered for off-site transportation meets the definition of hazardous materials under 49 CFR parts 171 through 180, a small quantity handler of universal waste shall package, label, mark and placard the shipment, and prepare the proper shipping papers in compliance with the applicable Department of Transportation regulations under 49 CFR parts 172 through 180.
- (4) Prior to sending a shipment of universal waste to another universal waste handler, the originating handler shall ensure that the receiving handler agrees to receive the shipment.
- (5) If a small quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler shall either:
 - (a) Receive the waste back when notified that the shipment has been rejected, or
 - (b) Agree with the receiving handler on a destination facility to which the shipment will be sent.

30.1037: continued

(6) A small quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste received from another handler. If a handler rejects a shipment or a portion of a shipment, that handler shall contact the originating handler to notify him of the rejection and to discuss reshipment of the load. The handler shall:

- (a) Send the shipment back to the originating handler, or
- (b) If agreed to by both the originating and receiving handler, send the shipment to a destination facility.

(7) If a small quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler shall immediately notify the Department of the shipment, and provide the name, address and phone number of the originating shipper, and the type and amount of waste shipped. The Department will provide instructions for managing the hazardous waste.

30.1038: Tracking universal waste shipments

A small quantity handler of universal waste is not required to keep records of shipments of universal waste.

30.1039: Exports

A small quantity handler of universal waste who sends universal waste to a foreign destination shall:

- (1) Comply with the requirements applicable to a primary exporter in 40 CFR 262.53, 262.56(a)(1) through (4), 262.56(a)(6), 262.56(b), and 262.57, as incorporated by reference at 310 CMR 30.361(2)(a), and 30.361(2)(b);
- (2) Export such universal waste only upon consent of the receiving country and in conformance with the EPA Acknowledgment of Consent; and
- (3) Provide a copy of the EPA Acknowledgment of Consent for the shipment to the transporter transporting the shipment for export.

30.1040: Standards for Large Quantity Handlers of Universal Waste

30.1041: Applicability

The provisions of 310 CMR 30.1041 through 30.1049, cited collectively as 310 CMR 30.1040, apply to large quantity handlers of universal waste.

30.1042: Prohibitions

A large quantity handler of universal waste is required to comply with the prohibitions stated at 310 CMR 30.1032.

30.1043: Notification

- (1) EPA Identification number.
 - (a) Except as provided in 310 CMR 30.1043(1)(b), a large quantity handler of universal waste shall have sent written notification of universal waste management to the Department, and received an EPA Identification Number, before meeting or exceeding the 5,000 kilogram accumulation limit.
 - (b) A large quantity handler of any universal waste, except batteries, that has already notified the Department of its hazardous waste management activities and has received an EPA Identification Number is not required to obtain another EPA Identification Number, but shall notify the Department of its universal waste activity, excluding batteries. A large quantity handler of universal waste batteries that has already received an EPA Identification Number is not required to notify the Department of its universal waste battery activity.

30.1043: continued

- (2) This notification shall include:
 - (a) The universal waste handler's name and mailing address;
 - (b) The name and business telephone number of the person at the universal waste handler's site who should be contacted regarding universal waste management activities;
 - (c) The address or physical location of the universal waste management activities;
 - (d) A list of all of the types of universal waste managed by the handler; and
 - (e) A statement indicating that the handler is accumulating 5,000 kilograms or more of universal waste at one time and the types of universal waste the handler is accumulating above this quantity.
- (3) A large quantity handler of any universal waste, except batteries, who ceases to be a large quantity handler and seeks to become a small quantity handler of any universal waste, except batteries, may submit to the Department, in writing, a change of status request. If the Department prescribes a form for such a notification, the handler submitting the notification shall use such form when making the notification. Such a notification shall, at a minimum, specify that the handler has become a small quantity handler and shall also specify that the handler is in compliance with 310 CMR 30.1030. Each change of status notification shall be signed, certified and submitted in compliance with 310 CMR 30.006 and 30.009. No change of status shall take effect unless and until a change of status request is submitted to the Department in compliance with this paragraph and the time limit imposed by 310 CMR 30.1043(4) has passed. A large quantity handler of universal waste batteries, who ceases to be a large quantity handler and seeks to become a small quantity handler of batteries, is not required to submit a change of status request.
- (4) Where a notification has been received by the Department in compliance with 310 CMR 30.1033(1) and (2) or a change of status request has been received by the Department in compliance with 310 CMR 30.1033(3), the designation of large quantity handler of universal waste shall be retained through the end of the calendar year in which the change of status request was received.
- (5) A large quantity handler of universal waste who ceases operations shall comply with 310 CMR 30.689. If such a handler wishes to cease having the status of a handler at that site, the handler may submit to the Department, in writing, a change of status request on a form prescribed by the Department, signed, certified and submitted in compliance with 310 CMR 30.006 and 30.009.

30.1044: Waste management

- (1) Universal waste batteries. A large quantity handler of universal waste shall manage universal waste batteries in compliance with 310 CMR 30.1034(1)(a) through (e).
- (2) Universal waste pesticides. A large quantity handler of universal waste shall manage universal waste pesticides in compliance with 310 CMR 30.1034(2)(a) through (d).
- (3) Universal waste thermostats. A large quantity handler of universal waste shall manage universal waste thermostats in compliance with 310 CMR 30.1034(3)(a) through (e).
- (4) Mercury-containing devices. A large quantity handler of universal waste shall manage universal waste mercury-containing devices in compliance with 310 CMR 30.1034(4)(a) through (e).
- (5) Mercury-containing lamps. A large quantity handler of universal waste shall manage universal waste mercury-containing lamps in compliance with 310 CMR 30.1034(5)(a) through (f).

30.1045: Employee training

A large quantity handler of universal waste shall ensure that all employees are thoroughly familiar with proper universal waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies. For examples of topics that can be addressed in employee training, see 310 CMR 30.516(2).

30.1046: Response to releases

A large quantity handler of universal waste shall comply with 310 CMR 30.1036.

30.1047: Off-site shipments

A large quantity handler of universal waste shall comply with 310 CMR 30.1037.

30.1048: Tracking universal waste shipments

(1) Receipt of shipments. A large quantity handler of universal waste shall keep a record of each shipment of universal waste received. The record shall take the form of a log, invoice, manifest, bill of lading, or other shipping document. All record-keeping shall be in compliance with 310 CMR 30.007. The record for each shipment of universal waste received shall include the following information:

- (a) The name and address of the originating universal waste handler or foreign shipper from whom the universal waste was sent;
- (b) The quantity of each type of universal waste received;
- (c) The date of receipt of the shipment of universal waste.

(2) Shipments off-site. A large quantity handler of universal waste shall keep a record of each shipment of universal waste it sends off-site. The record shall take the form of a log, invoice, manifest, bill of lading or any other shipping document. The record for each shipment of universal waste sent shall include the following information:

- (a) The name and address of the universal waste handler, destination facility, or foreign destination to whom the universal waste was sent;
- (b) The quantity of each type of universal waste sent; and
- (c) The date the shipment of universal waste left the site.

(3) Record retention.

- (a) A large quantity handler of universal waste shall retain the records described in 310 CMR 30.1048(1) for at least three years from the date of receipt of a shipment of universal waste. This period shall be automatically extended for the duration of any enforcement action.
- (b) A large quantity handler of universal waste shall retain the records described in 310 CMR 30.1048(2) for at least three years from the date a shipment of universal waste left the facility. This period shall be automatically extended for the duration of any enforcement action.

30.1049: Exports

A large quantity handler of universal waste who sends universal waste to a foreign destination shall comply with 310 CMR 30.1039.

30.1050: Standards for Universal Waste Transporters

30.1051: Applicability

The provisions of 310 CMR 30.1051 through 30.1059, cited collectively as 310 CMR 30.1050, apply to universal waste transporters.

30.1052: Prohibitions

- (1) A universal waste transporter is prohibited from:
 - (a) disposing of or recycling universal waste; and
 - (b) diluting or treating universal waste, except by responding to releases as provided in 310 CMR 30.1054.

30.1053: Waste Management

- (1) A universal waste transporter shall comply with all applicable U.S. Department of Transportation regulations in 49 CFR part 171 through 180 for transport of any universal waste¹ that meets the definition of hazardous material in 49 CFR 171.8.
- (2) Transporters shall comply with the following requirements regarding universal wastes in transit:
 - (a) A universal waste transporter may hold universal waste batteries at a universal waste transfer facility for ten days or less.
 - (b) If a universal waste transporter holds universal waste batteries for more than ten days, the transporter becomes a universal waste handler and must comply with the applicable requirements of 310 CMR 30.1030 or 30.1040 while holding the universal waste.
 - (c) For all universal wastes other than batteries managed in compliance with 310 CMR 30.1053(2)(a) or (b), a universal waste transporter shall comply with 310 CMR 30.408 regarding wastes in transit. [Note: five day limit and other restrictions apply under 310 CMR 30.408.]

30.1054: Response to Releases

- (1) A universal waste transporter shall immediately contain all releases of universal wastes and other residues from universal wastes.
- (2) A universal waste transporter shall determine whether any material resulting from the release is hazardous waste, and if so, it is subject to all applicable requirements of 310 CMR 30.001 through 30.900. If the waste is determined to be a hazardous waste, the transporter is subject to 310 CMR 30.300.

30.1055: Off-site Shipments

- (1) A universal waste transporter is prohibited from transporting the universal waste to a place other than a universal waste handler, a destination facility or a foreign destination.
- (2) If the universal waste being shipped off-site meets the Department of Transportation's definition of hazardous materials under 49 CFR 171.8, the shipment shall be properly described on a shipping paper in compliance with the applicable Department of Transportation regulations under 49 CFR part 172.

30.1056: Exports

A universal waste transporter transporting a shipment of universal waste to a foreign destination may not accept a shipment if the transporter knows the shipment does not conform to the EPA Acknowledgment of Consent. In addition the transporter shall ensure that:

- (1) A copy of the EPA Acknowledgment of Consent accompanies the shipment; and
- (2) The shipment is delivered to the facility designated by the person initiating the shipment.

30.1060: Standards for Destination Facilities

The provisions of 310 CMR 30.1061 through 30.1069, cited collectively as 310 CMR 30.1060, apply to destination facilities.

¹ For purposes of the Department of Transportation regulations, a material is considered a hazardous waste if it is subject to the hazardous waste manifest requirements specified in 310 CMR 30.300. Because universal waste does not require a hazardous waste manifest, it is not considered hazardous waste under the Department of Transportation regulations.

30.1061: Applicability

The owner or operator of a destination facility is subject to all applicable requirements of 310 CMR 30.001 through 30.200 and 310 CMR 30.500 through 30.900.

30.1062: Shipments

(1) The owner or operator of a destination facility is prohibited from sending or taking universal waste to a place other than another destination facility, or a foreign destination, except as provided in 310 CMR 30.1062(2)(a).

(2) The owner or operator of a destination facility may reject a shipment containing universal waste, or a portion of a shipment containing universal waste. If the owner or operator of the destination facility rejects a shipment or a portion of a shipment, it shall contact the shipper to notify him of the rejection and to discuss reshipment of the load. The owner or operator of the destination facility shall:

- (a) Send the shipment back to the original shipper, or
- (b) If agreed to by both the shipper and the owner or operator of the destination facility, send the shipment to another destination facility.

(3) If the owner or operator of a destination facility receives a shipment containing hazardous waste that is not a universal waste, the owner or operator of the destination facility shall immediately notify the Department in writing of the shipment, and provide the name, address, and phone number of the shipper and the type and amount of waste shipped. The facility owner or operator must manage the hazardous waste in compliance with 310 CMR 30.000.

30.1063: Tracking Universal Waste Shipments

(1) The owner or operator of a destination facility shall keep a record of each shipment of universal waste received at the facility. The record shall take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received shall include the following information:

- (a) The name and address of the universal waste handler, destination facility, or foreign shipper from whom the universal waste was received;
- (b) The quantity of each type of universal waste received;
- (c) The date of receipt of the shipment of universal waste.

(2) The owner or operator of a destination facility shall retain the records described in 310 CMR 30.1063(1) for at least three years from the date of receipt of a shipment of universal waste. This period shall be automatically extended for the duration of any enforcement action. All record-keeping shall be in compliance with 310 CMR 30.007.

30.1070: Import Requirements

The provisions of 310 CMR 30.1071 through 30.1079, cited collectively as 310 CMR 30.1070, apply to universal wastes that are imported from a foreign country.

30.1071: Imports

Persons managing universal waste that is imported from a foreign country into Massachusetts are subject to the applicable requirements of 310 CMR 30.1000, immediately after the waste enters Massachusetts.

30.1080: Addition of Other Wastes Under 310 CMR 30.1000

30.1081: General

(1) The Department may add a hazardous waste or a category of hazardous waste to the universal waste regulations of 310 CMR 30.1000 either on its own initiative or in response to a written request.

30.1081: continued

- (2) Each request to add a hazardous waste or a category of hazardous waste shall be submitted to the Department and include:
 - (a) The requester's name and address;
 - (b) A statement of the requester's interest in the addition of the waste to the universal waste rule;
 - (c) A description of the waste requested to be added to the universal waste rule and a description of the methods by which the waste is requested to be managed; and
 - (d) A statement of the need and justification for adding the new waste to the universal waste rule based upon the criteria contained within 310 CMR 30.1082, including any supporting tests, studies, or other information.

- (3) The Department will include additional wastestreams in the Universal Waste Rule only if it finds that regulation under 310 CMR 30.1000:
 - (a) is appropriate for the waste or category of waste;
 - (b) will improve management practices for the waste or category of waste; and
 - (c) will improve implementation of the hazardous waste program.

- (4) In making decisions to add hazardous waste or a category of hazardous waste to the Universal Waste Rule, the Department will consider the factors listed in 310 CMR 30.1082. The decision will be based on the weight of evidence showing that the standard established in 310 CMR 30.1081(3) has been satisfied.

- (5) During any stage of the evaluation, the Department may solicit additional information needed to evaluate the merits of adding a new waste to the universal waste rule.

30.1082: Factors for adding other wastes under 310 CMR 30.1000

- (1) The waste or category of waste, as generated by a wide variety of generators, is listed in 310 CMR 30.130, or (if not listed) a proportion of the waste stream exhibits one or more characteristics of hazardous waste identified in 310 CMR 30.120. (When a characteristic waste is added to the universal waste regulations of 310 CMR 30.1000 by using a generic name to identify the waste category (*e.g.*, batteries), the definition of universal waste in 310 CMR 30.1020 will be amended to include only the hazardous waste portion of the waste category (*e.g.*, hazardous waste batteries). Thus, only the portion of the waste stream that does exhibit one or more characteristics (*i.e.*, is hazardous waste) is subject to the universal waste regulations of 310 CMR 30.1000;

- (2) The waste or category of waste is not exclusive to a specific industry or group of industries, is commonly generated by a wide variety of types of establishments (including, for example, households, retail and commercial businesses, office complexes, very small quantity generators, small businesses, government organizations, as well as large industrial facilities);

- (3) The waste or category of waste is generated by a large number of generators (*e.g.*, more than 1,000 nationally) and is frequently generated in relatively small quantities by each generator;

- (4) Systems to be used for collecting the waste or category of waste (including packaging, marking, and labeling practices) would ensure close stewardship (*i.e.*, proper care and control) of the waste;

- (5) The risk posed by the waste or category of waste during accumulation and transport is relatively low compared to other hazardous wastes. Any specific management standards proposed (*e.g.*, waste management requirements appropriate to be added to 310 CMR 30.1034, 30.1044, and 30.1053; and/or applicable Department of Transportation requirements) shall be protective of public health, safety, welfare and the environment during accumulation and transport;

30.1082: continued

- (6) Regulation of the waste or category of waste under 310 CMR 30.1000 will increase the likelihood that the waste will be diverted from non-hazardous waste management systems (*e.g.*, the municipal waste stream, non-hazardous industrial or commercial waste stream, municipal sewer or stormwater systems) to recycling, treatment, or disposal in compliance with M.G.L. c. 21C and 310 CMR 30.000.
- (7) Regulation of the waste or category of waste under 310 CMR 30.1000 will improve implementation of and compliance with the hazardous waste regulatory program; and/or
- (8) Such other factors as may be deemed appropriate by the Department.

30.1100: Wastes and Activities Subject to Waiver

310 CMR 30.1100 through 30.1103, cited collectively as 310 CMR 30.1100, is promulgated pursuant to the authority set forth in M.G.L. c. 21C, § 4 and 310 CMR 30.001, and sets forth requirements for wastes and activities determined by the Department to be insignificant as a potential hazard to public health, safety, welfare or the environment, or the handling, treating, storing, use, processing, or disposal of which is adequately regulated by another governmental agency, consistent with regulations promulgated under the federal Resource Conservation and Recovery Act as administered by U.S. EPA.

30.1101: General Requirements for Wastes and Activities Subject to Waiver

- (1) Any person who engages in any activity subject to 310 CMR 30.1100 may do so without complying with the specific requirements expressly waived by 310 CMR 30.1100 or by any waiver determination from the Department, provided that such person complies with the applicable terms and conditions set forth in 310 CMR 30.1100 and in any waiver determination, and all other applicable requirements in 310 CMR 30.0000 that are not expressly waived. All provisions of 310 CMR 30.0000 that are not expressly waived in 310 CMR 30.1100 shall remain in effect for that activity.
- (2) If a person fails to comply with any term or condition of a waiver determination or any requirement set forth or referenced in 310 CMR 30.1100, or if the Department determines that a waste or activity is no longer insignificant as a potential hazard to public health, safety, welfare or the environment or is no longer adequately regulated by another governmental agency, when managed or conducted in compliance with the conditions of the waiver and the requirements set forth in 310 CMR 30.1100, the Department may:
 - (a) order the person to cease any further activity otherwise allowed under 310 CMR 30.1100 and to comply with all provisions of 310 CMR 30.0000 that apply in the absence of any waiver (including but not limited to obtaining a valid license from the Department),
 - (b) modify, suspend, or revoke any waiver determination, at the Department's discretion, and
 - (c) take any other action authorized by law.

30.1102: Case-by-case Waiver Determinations for Specific Hazardous Wastes and Activities

- (1) For wastes and activities that the Department determines are insignificant as a potential hazard to public health, safety, welfare or the environment or are adequately regulated by another government agency, consistent with regulations promulgated under the Resource Conservation and Recovery Act, the Department may grant a person a waiver from any or all of the requirements of 310 CMR 30.0000 that are more stringent than the minimum federal requirements promulgated under the Resource Conservation and Recovery Act.
- (2) All generators shall manage hazardous waste in accordance with all applicable provisions of 310 CMR 30.0000, provided however, if the Department issues a written positive waiver determination to a generator, such generator shall comply with all terms and conditions of such determination and all applicable requirements of 310 CMR 30.0000 not expressly waived in such determination.

30.1102: continued

(3) Any person seeking a waiver of any requirement in 310 CMR 30.0000, not expressly waived by other provisions in 310 CMR 30.0000, shall submit a request for waiver on a form acceptable to the Department and shall include:

- (a) The applicant's name, address, and EPA Identification Number or Massachusetts Identification Number;
- (b) The name and telephone number of an individual responsible for supervising the waste and/or management activities addressed in the application;
- (c) A detailed description of the waste and activity, and the basis for the person's assertion that it is insignificant as a potential hazard to public health, safety, welfare, or the environment, or that it is adequately regulated by another governmental agency consistent with regulations promulgated under the Resource Conservation and Recovery Act;
- (d) A description of the proposed method of management, including a description of required equipment;
- (e) A statement of each requirement for which a waiver is sought;
- (f) A statement of the need and justification for a waiver of hazardous waste requirements, including any supporting tests, studies, or other information; including but not limited to information on the volume, quantity, toxicity, frequency and rate of generation of the waste;
- (g) A demonstration that the waiver sought is from a requirement or requirements that are more stringent than the minimum federal requirements promulgated under the Resource Conservation and Recovery Act;
- (h) Such other information as the Department may require to determine that the proposed waste management activity will be in compliance with 310 CMR 30.1100 and either will be insignificant as a potential hazard to public health, safety, welfare or the environment or is adequately regulated by another government agency, and that any waiver will not result in the Department's requirements applicable to the person becoming less stringent than the minimum federal requirements promulgated under the Resource Conservation and Recovery Act;
- (i) A signature certified pursuant to 310 CMR 30.009; and
- (j) If applicable, compliance with, and remittance of any fee established pursuant to, any applicable provision of 310 CMR 4.00.

(4) The burden shall be on the applicant to persuade the Department that the waste or activity is insignificant as a potential hazard to public health, safety, welfare, or the environment or is adequately regulated by another governmental agency, and that the waiver being sought is from a requirement or requirements that are more stringent than and that the post-waiver requirements would not be less stringent than the minimum federal requirements promulgated under the Resource Conservation and Recovery Act.

(5) The Department will notify the applicant of the Department's determination in writing. The Department will consider factors such as the volume, quantity, toxicity, or frequency and rate of generation, and such other criteria, as it deems appropriate for the waste or activity.

(6) A determination pursuant to 310 CMR 30.1102 is only applicable to a person that has requested and obtained a positive waiver determination from the Department. No waiver may be assigned or transferred without the written approval of the Department.

(7) A determination pursuant to 310 CMR 30.1102 shall apply only to the waste or activity specified in the determination.

(8) The Department may grant a waiver, and may allow a waiver to remain in effect, but only to the extent, and only while, the Department is persuaded that such waste or activity is insignificant as a potential hazard to public health, safety, welfare, or the environment or is adequately regulated by another governmental agency and only if the waiver is from a requirement or requirements that are more stringent than the minimum federal requirements promulgated under the Resource Conservation and Recovery Act.

30.1103: Treatment of Corrosive Hazardous Waste in an Elementary Neutralization Unit

(1) A generator of aqueous corrosive hazardous waste may conduct elementary neutralization of such waste in an elementary neutralization unit at the site of generation in *lieu* of the licensing requirements of 310 CMR 30.500 through 30.900 for treatment of corrosive hazardous waste, provided that the generator complies with all provisions in 310 CMR 30.1103 and all applicable generator provisions in 310 CMR 30.0000.

(2) No person shall conduct elementary neutralization of any hazardous waste in an elementary neutralization unit without a license, except for corrosive hazardous waste that:

- (a) prior to treatment is aqueous;
- (b) is hazardous solely because it exhibits the corrosivity characteristic defined in 310 CMR 30.123(1)(a); and
- (c) if the waste is listed in 310 CMR 30.131, is listed solely because it exhibits the corrosivity characteristic.

(3) Any large or small quantity generator that conducts elementary neutralization of aqueous corrosive hazardous waste in an elementary neutralization unit pursuant to 310 CMR 30.1103 in *lieu* of obtaining a valid treatment license from the Department shall not neutralize corrosive waste in a manner that:

- (a) presents a danger to public health, safety, welfare or the environment, including but not limited to generation of toxic vapors or fumes;
- (b) generates extreme heat or pressure; or
- (c) damages the structural integrity of the container or tank containing the waste.

REGULATORY AUTHORITY

310 CMR 30.000: M.G.L. c. 21C, §§ 4 and 6; c. 21E, § 6.

310 CMR 32.00: LAND APPLICATION OF SLUDGE AND SEPTAGE

Section

- 32.01: Authority
- 32.02: Purpose
- 32.03: Severability
- 32.05: Definitions
- 32.06: Computation of Time
- 32.07: Accurate and Timely Submittals
- 32.08: Accurate and Complete Record Keeping
- 32.09: General Restrictions on Land Application and Storage of Sludge and Septage
- 32.10: Classification of Sludge and Septage
- 32.11: Department Approval of Sludge or Septage for Beneficial Purposes
- 32.12: Criteria for Approval of Suitability
- 32.13: Obtaining and Keeping an Approval of Suitability
- 32.14: Additional Requirements for Approval of Suitability for Type I Sludge
- 32.20: General Requirements for Land Application
- 32.21: Site Requirements for Land Application of Type II or Type III Sludge or Septage
- 32.22: Water Pollution Prevention Requirements for Land Application of Type II or Type III Sludge or Septage
- 32.23: Application Management Requirements for Type II or Type III Sludge or Septage
- 32.24: Soil Sampling Requirements for Land Application of Type II or Type III Sludge or Septage
- 32.25: Approval of Site for Land Application of Type II or Type III Sludge or Septage
- 32.26: Recording Notice of Land Application of Type III Sludge or Septage
- 32.30: Requirements for any Storage of Sludge or Septage
- 32.31: Additional Requirements for Long-Term Storage of Sludge or Septage
- 32.40: Requirements for Transportation of Sludge or Septage
- 32.50: Requirements for the Sale or Distribution of Sludge and Septage
- 32.51: Requirements for the Sale or Distribution of Type I Sludge
- 32.52: Requirements for the Sale or Distribution of Type II or Type III Sludge or Septage
- 32.60: Record Generating, Record Keeping, and Reporting Requirements
- 32.70: Sampling and Analysis Requirements
- 32.80: Appendix A: Acceptable Process for Pathogen Reduction
- 32.81: Appendix B: Acceptable Process for Additional Pathogen Reduction

32.01: Authority

310 CMR 32.00 is promulgated pursuant to the authority granted by M.G.L. c. 21, §§ 27(9), 27(12) and 43; M.G.L. c. 21A, § 2(28); and M.G.L. c. 111, § 160. Pursuant to M.G.L. c. 30A, §§ 1(5), 2, and 3, 310 CMR 32.00 is promulgated to set forth standards and requirements of general application and future effect which shall be used to implement, interpret, and enforce M.G.L. c. 21, §§ 33D and 34; M.G.L. c. 83, §§ 6 and 7; and M.G.L. c. 111, §§ 5G, 17, 31D, and 150A.

32.02: Purpose

310 CMR 32.00 is intended to allow the land application of sludge and septage for beneficial purposes in a manner that will protect public health and the environment from possible contamination which could occur from pathogens, metals, or toxic chemical compounds.

32.03: Severability

It is hereby declared that the provisions of 310 CMR 32.00 are severable, and if any provision hereof or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions which can be given effect without the invalid provisions or application.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

32.05: Definitions

As used throughout 310 CMR 32.00, the following terms shall have the following meanings, unless the context clearly indicates otherwise.

Aquifer means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water from wells or springs.

Beneficial purpose means to provide nutrients to growing vegetation or to improve the quality of soil for the purpose of growing vegetation.

Cation exchange capacity means the sum of the exchangeable cations which a soil can adsorb, as determined by sampling the soil to the depth of cultivation or of sludge or septage land application, whichever depth is greater.

Chroma means the relative purity or strength of the spectral color, which increases with decreasing grayness.

Class A Water means inland surface water which is classified from time to time as Class A pursuant to 314 CMR 4.00.

Coarse Sand means sand of which less than 15% passes sieve no. 270 (0.05 mm) and more than 25% is retained on sieve no. 35 (0.5 mm), and which contains less than 50% of any other one grade of sand. *See Soil Survey Manual, U.S. Department of Agriculture Handbook No. 18*, dated 1951, written by the "Soil Survey Staff", published by the U.S. Government Printing Office, Washington, D.C.

Department means the Massachusetts Department of Environmental Protection.

Digestion means the biological process by which microorganisms break down and use organic matter. There are three types of digestive organisms: aerobic microorganisms, which function only in the presence of free oxygen; anaerobic microorganisms, which function only in the absence of free oxygen; and facultative microorganisms, which can function with or without free oxygen.

Dry weight means the weight of a substance not including its moisture content.

EPA means the United States Environmental Protection Agency.

Facility means a site or works for the treatment or storage of water, wastewater, septage or sludge.

Food-chain crop means tobacco, any crop grown for human consumption, or any crop grown for consumption by animals which are to be consumed by humans.

Groundwater means water below the land surface in a zone of saturation.

Groundwater table means the top of the saturated zone in the soil, as indicated by the level at which water stands in an open borehole after adequate time is allowed for the establishment of a stable water level.

Industrial discharge means discharge of wastewater consisting in whole or in part of industrial process waste.

32.05: continued

Land application means fertilizing or amending soil by:

- (a) applying to the surface of soil by spreading, spraying, or other similar means, and/or
- (b) mixing or working into the soil or beneath the surface of the soil within the root zone of the crop by harrowing, plowing, rototilling, injecting, or other similar means.

Land Apply means to engage in land application.

Matrix means the interior portion of soil aggregate.

Maximum high groundwater table means the height of the ground water table when it is at its maximum annual level or elevation. This level is usually reached sometime during the months of December through April.

Mottle means contrasting color patches that vary in number and size and are usually associated with excess moisture in soil during parts of the year.

Munsell color notation means the standardized system of color charts produced by Munsell Color Co., Inc., Baltimore, Maryland.

Operator means the person responsible for the overall operation of:

- (a) in the case of sludge, any drinking water treatment facility or any wastewater treatment facility, including, without limitation, any sewage treatment plant or industrial pretreatment plant that generates sludge, and
- (b) in the case of septage, any facility for the receipt, storage, or disposal of the contents of privies, cesspools, or septic tanks.

Owner means any person who has effective control or legal ownership of:

- (a) in the case of sludge, any drinking water treatment facility or any wastewater treatment facility, including, without limitation, any sewage treatment plant or industrial pretreatment plant that generates sludge, and
- (b) in the case of septage, any facility for the receipt, storage, or disposal of the contents of privies, cesspools, or septic tanks.

The term owner does not include persons who hold bare legal title for the purpose of providing security for a financial agreement.

Pasture land means land which is or is intended to be grazed by animals intended for human consumption, or whose milk is intended for human consumption, or land on which one or more forage crops are or are intended to be grown.

PCBs means polychlorinated biphenyls.

Person means any agency or political subdivision of the Commonwealth, public or private corporation or authority, individual, trust, firm, joint stock company, partnership, association, or other entity, and any officer, employee or agent of said person, and any group of said persons.

pH means the measure of acidity or alkalinity as the logarithm of the reciprocal of the molar hydrogen ion concentration of a solution.

Potential groundwater public water supply means:

- (a) a groundwater source which has capability of sustaining a yield of 100 gallons or more per minute of drinking water, as designated by the United States Geological Survey Hydrological Atlas, and which has less than 10,000 ppm total dissolved solids, or
- (b) groundwater within land procured by a body politic for the purpose of supplying drinking water.

The term potential groundwater public water supply does not include an aquifer which is not an underground source of drinking water pursuant to 310 CMR 27.00: *Underground Water Source Protection*.

32.05: continued

Private drinking water supply well means a well used as a source of drinking water, supplying a non-public water system with any volume of groundwater from any source.

Public water supply means a source of drinking water supplying a public water system.

Public water system means a public water system as defined in 310 CMR 22.02, as may be amended from time to time.

Putrescible means decaying and foul-smelling.

Septage means the liquid, solid, and semi-solid contents of privies, chemical toilets, cesspools, holding tanks, or other sewage waste receptacles. For purposes of 310 CMR 32.00, the term septage does not include any material which is hazardous waste pursuant to 310 CMR 30.000. (The land application of hazardous waste is not authorized by 310 CMR 32.00 and is subject to 310 CMR 30.000.)

Sludge means the solid, semi-solid, and liquid residue that results from a process of wastewater treatment or drinking water treatment. This residue does not include grit, screening, or grease and oil which are removed at the headworks of a facility. For the purpose of 310 CMR 32.00, the term "sewage" as used in M.G.L. c. 111, § 150A and 310 CMR 19.00 includes wastewater treatment plant sludge which is not hazardous waste pursuant to 310 CMR 30.000.

Storage means containment or stockpiling prior to or during selling or distributing or reuse, or offering for sale, distribution, or use.

Surface soil means the soil ordinarily moved in tillage or its equivalent in uncultivated soil, ranging in depth from four to ten inches below the surface, and frequently designated as the "plow layer" or the "Ap horizon".

Surface water means water that is visible on the ground surface, including, without limitation, streams, brooks, rivers, lakes, ponds, and wetlands.

USDA means the United States Department of Agriculture.

Use means land application or to land apply.

32.06: Computation of Time

Unless otherwise specifically provided by law, 310 CMR 32.00, or any determination issued pursuant to 310 CMR 32.00, any time period prescribed or referred to in 310 CMR 32.00 or in any determination issued pursuant to 310 CMR 32.00 shall begin with the first day following the act which initiates the running of the time period, and shall include every calendar day, including the last day of the time period so computed. If the last day is a Saturday, Sunday, legal holiday, or any other day in which the offices of the Department are closed, the deadline shall run until the end of the next business day. If the time period prescribed or referred to is less than seven days, only days when the offices of the Department are open shall be included in the computation.

32.07: Accurate and Timely Submittals

(1) No person shall make any false, inaccurate, or misleading statement in any application, record, report, plan, or statement which that person submits, or is required to submit, to the Department or to a board of health pursuant to 310 CMR 32.00 or any order issued by the Department.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

32.07: continued

(2) Any application, record, report, plan, or statement which any person is required to submit to the Department or to a board of health shall be submitted within the time period prescribed in 310 CMR 32.00 or any order issued by the Department, unless otherwise specified by the Department.

(3) Failure to comply with any requirement of 310 CMR 32.07 shall be grounds for appropriate legal action including, without limitation, suspension or revocation of any approval granted by the Department pursuant to 310 CMR 32.00.

32.08: Accurate and Complete Record Keeping

(1) No person shall make any false, inaccurate, or misleading statement in any record, report, plan, file, log, or register which that person keeps, or is required to keep, pursuant to 310 CMR 32.00. Any record, report, plan, file, log, or register which any person is required to keep shall be filled out completely and otherwise kept in compliance with 310 CMR 32.00, or any order issued by the Department.

(2) Failure to comply with any requirement of 310 CMR 32.08 shall be grounds for appropriate legal action including, without limitation, suspension or revocation of any approval granted by the Department pursuant to 310 CMR 32.00.

32.09: General Restrictions on Land Application and Storage of Sludge and Septage

(1) Any person who uses, sells, or distributes or offers for use, sale or distribution sludge or septage for land application in Massachusetts shall do so only in compliance with 310 CMR 32.00.

(2) 310 CMR 32.00 shall authorize only the placement of sludge or septage on or in the ground for:

- (a) land application for beneficial purposes, or
- (b) storage pending use, sale, or distribution for land application for beneficial purposes.

(3) No person shall land apply sludge or septage in such a manner that it results in violation of 310 CMR 7.00: *Air Pollution Control* or 314 CMR: *Division of Water Pollution Control*.

(4) The land application or the collection, transportation, storage, treatment and disposal of hazardous waste is not authorized by 310 CMR 32.00 and is subject to regulation pursuant to 310 CMR 30.000: *Hazardous Waste*.

(5) Any project for land application of sludge or septage as provided in 310 CMR 32.09(2) in existence on November 15, 1983 shall be brought into compliance with 310 CMR 32.00, as soon as is feasible but not later than November 15, 1984. The Department may establish a compliance schedule on a case-by-case basis for any such project.

32.10: Classification of Sludge and Septage

The Department shall classify sludge and septage in accordance with the criteria in 310 CMR 32.12(2) as follows:

(1) Type I - Sludge approved by the Department pursuant to 310 CMR 32.00 which may be used, sold, or distributed or offered for use, sale, or distribution on any site without further approval of the Department, and which may be used for growing any vegetation. Septage shall not be eligible for Type I classification.

(2) Type II - Sludge and septage approved by the Department pursuant to 310 CMR 32.00 which may be used, sold, or distributed or offered for use, sale, or distribution on a site only with prior approval of the Department, and which may be used for growing any vegetation.

32.10: continued

(3) Type III - Sludge and septage approved by the Department pursuant to 310 CMR 32.00 which may be used, sold, or distributed or offered for use, sale, or distribution for land application on a site only with prior approval of the Department, which may be used for growing any vegetation not including direct food chain crops, and whose land application to a site must be recorded in the registry of deeds in the chain of title for such site.

32.11: Department Approval of Sludge or Septage for Beneficial Purposes

(1) In order to be used, sold, or distributed or offered for use, sale, or distribution for beneficial purposes, sludge and septage shall have to meet the criteria of suitability set forth in 310 CMR 32.12, and shall be the subject of an Approval of Suitability then in effect pursuant to 310 CMR 32.00.

(2) No person shall use, sell, or distribute or offer for use, sale, or distribution in Massachusetts sludge or septage unless such sludge or septage is the subject of an Approval of Suitability then in effect pursuant to 310 CMR 32.00.

(3) Each Approval of Suitability issued by the Department shall be subject to 310 CMR 32.00 and such terms and conditions as the Department may reasonably impose. Each Approval of Suitability shall specify the type classification for the sludge or septage under consideration as determined by the Department pursuant to 310 CMR 32.12. Every person using, selling, or distributing or offering for use, sale, or distribution sludge or septage shall do so only in accordance with the classification and the terms and conditions specified in the Approval of Suitability issued for such sludge or septage.

(4) Each Approval of Suitability shall be valid for no more than five years from the date of issuance.

(5) The Department may prescribe an application form or forms which shall be used by any person applying for an Approval of Suitability.

(6) No person shall use, sell, or distribute or offer for use, sale or distribution sludge or septage as a commercial fertilizer or as a soil conditioner, as those terms are defined in M.G.L. c. 128, § 64, except in compliance with M.G.L. c. 128, §§ 64 through 83.

32.12: Criteria for Approval of Suitability

In order to receive an Approval of Suitability, an owner or operator shall demonstrate that the sludge or septage shall meet the following criteria:

(1) Stabilization.

(a) Minimum Requirement. All sludge and all septage shall be stabilized by a process which will significantly reduce pathogens. Acceptable processes which will significantly reduce pathogens are listed or described in Appendix A, 310 CMR 32.80.

(b) Additional Stabilization Requirements. Sludge or septage shall be further stabilized by a process listed or described in Appendix B, 310 CMR 32.81, if:

1. the sludge is or is intended to be classified as Type I;
2. the sludge or septage is or is intended to be land applied to a site where a crop for direct human consumption is or is intended to be planted within 24 months after the land application of such sludge or septage, and where such sludge or septage will be in direct contact with the edible portion of the crop; or
3. the sludge or septage is not mixed into the soil within 48 hours after land application.

(c) Variance. An owner or operator who produces Type II or Type III sludge which, before any stabilization, contains insignificant levels of pathogens, may apply for a variance from the stabilization requirements in 310 CMR 32.12(1)(a);

32.12: continued

(d) The Department may grant a variance from 310 CMR 32.12(1)(a) and (b) after consultation with the board of health of the city or town in which the sludge is or is intended to be land applied or, if unknown, the board of health of the city or town in which the owner's or operator's facility is located. The Department shall make note of any such variance in the Approval of Suitability. The Department shall grant no such variance for Type I sludge or for any septage.

(2) Classification.

(a) Type I Sludge.

1. Septage shall not be eligible for classification as Type I.
2. Sludge shall be classified as Type I if:
 - a. it is stabilized by a process deemed acceptable to the Department pursuant to 310 CMR 32.12(1)(b) and 32.81;
 - b. it is not putrescible; and
 - c. the concentration of substances it contains does not exceed the limits set forth in the following table:

TABLE 32.12(2)(a)

<u>Heavy Metals or Chemicals</u>	<u>Maximum Allowable Concentration in Parts Per Million Dry Weight</u>
Cadmium	14
Lead	300
Nickel	200
Zinc	2500
Copper	1000
Chromium (Total)	1000
Mercury	10
Boron (water soluble)	300
 Molybdenum	 40
 PCBs in Type I sludge which is a commercial fertilizer pursuant to 310 CMR 32.11(6)	 2
 PCBs in Type I sludge which is soil conditioner pursuant to 310 CMR 32.11(6)	 1

- (b) Type II Sludge or Septage. Sludge or septage shall be classified as Type II if:
1. it is stabilized by a process deemed acceptable to the Department pursuant to 310 CMR 32.12(1)(a), (b), or (c); and
 2. it contains substances in concentrations which do not exceed the limits set forth in the following table:

32.12: continued

TABLE 32.12(2)(b)

<u>Heavy Metals or Chemicals</u>	<u>Maximum Allowable Concentration in Parts Per Million Dry Weight</u>
Cadmium	25
Lead	1000
Nickel	200
Zinc	2500
Copper	1000
Chromium (Total)	1000
Mercury	10
Boron (Water soluble)	300
PCBs	10
Molybdenum	40

- (c) Type III Sludge or Septage. Sludge or septage shall be classified as Type III if:
1. it is stabilized by a process deemed acceptable to the Department pursuant to 310 CMR 32.12(1)(a), (b), or (c); and
 2. the concentration of any substance it contains exceeds any limit set forth in Table 32.12(2)(b).

32.13: Obtaining and Renewing an Approval of Suitability

In order to obtain and keep a Department Approval of Suitability, the owner or operator shall comply with the following requirements:

- (1) For sludge, the owner or operator shall submit to the Department an application which shall include at least the following:
- (a) a listing of industrial discharges to the owner's or operator's facility including, whenever known, a description, by quantity and quality, of the content of all industrial discharges to such facility; and
 - (b) the quantity of septage discharged into the owner's or operator's facility, expressed in gallons of septage per day; and
 - (c) the daily wastewater flow through the owner's or operator's facility, expressed in gallons per day; and
 - (d) the quantity of sludge generated by the owner's or operator's facility, expressed in dry tons of sludge per day; and
 - (e) a description of the stabilization process the owner or operator proposes to utilize to comply with 310 CMR 32.12; and
 - (f) a sampling and analysis plan which describes
 1. the proposed sampling methods and sampling frequency;
 2. the proposed sampling locations;
 3. the proposed procedure for handling samples;
 4. the name and address of the laboratory to which the samples will be sent for analysis; and
 5. the procedure the laboratory proposes to utilize to check and analyze the samples.
- (2) For septage, the owner or operator shall submit to the Department an application which shall include at least the following:

32.13: continued

- (a) a description, by quantity and quality, of all materials contributed to the septage by industrial and commercial establishments and institutions; and
- (b) the estimated quantity of septage received, stored, or disposed of by the owner or operator, each expressed in gallons per day; and
- (c) a description of the stabilization process the owner or operator proposes to utilize to comply with 310 CMR 32.12; and
- (d) a sampling and analysis plan which describes
 - 1. the proposed sampling methods and frequency;
 - 2. the proposed sampling locations;
 - 3. the proposed procedure for handling samples;
 - 4. the name and address of the laboratory to which the samples will be sent for analysis; and
 - 5. the procedure the laboratory proposes to utilize to check and analyze the samples.

(3) All samples taken in accordance with the sampling and analysis plan shall be representative samples of the sludge or septage to be used, sold, or distributed, or offered for use, sale, or distribution. For sludge, this shall mean that such samples shall be taken at the last point in the stabilization process before the sludge is used, sold, or distributed, or offered for use, sale, or distribution.

(4) The Department shall only accept data that has been obtained in accordance with an approved sampling and analysis plan. All sampling and analysis shall be in compliance with 310 CMR 32.13 and 32.70.

(5) Sampling and analysis shall be for the following substances:

- (a) in all cases for each the following, except for pH and percent solids, expressed in terms of dry weight:
 - 1. pH,
 - 2. percent solids,
 - 3. percent Nitrogen (N),
 - 4. percent Ammonium Nitrogen (NH₄-N),
 - 5. percent Nitrogen Nitrate (NO₃-N),
 - 6. percent Phosphorus (P),
 - 7. percent Potassium (K),
 - 8. parts per million Cadmium (Cd),
 - 9. parts per million Total Chromium (Cr),
 - 10. parts per million Copper (Cu),
 - 11. parts per million Lead (Pb),
 - 12. parts per million Mercury (Hg),
 - 13. parts per million Nickel (Ni),
 - 14. parts per million Zinc (Zn),
 - 15. parts per million Molybdenum (Mo),
 - 16. parts per million Boron (B), and
 - 17. parts per million PCBs.
- (b) those organic chemicals for which drinking water standards or guidelines exist either in Federal or Massachusetts regulations or in any guidance document approved by the Department. 310 CMR 32.12(2) may be waived if an owner or operator persuades the Department that during the period for which the Approval of Suitability is to be issued, the sludge or septage is not and will not be applied or stored over an existing, planned, or potential groundwater public water supply or within 2,500 feet of a well used as a source of drinking water supply by a public water system, or within 2,500 feet of the high water mark of any Class A water.
- (c) any additional substance for which sampling and analysis is required by the Department, before or after the sludge or septage is approved by the Department pursuant to 310 CMR 32.11. Such a requirement may be either at the request of the board of health of a city or town in which sludge or septage is to be land applied or on the Department's own initiative upon review of information submitted in compliance with 310 CMR 32.13(1) and (2) or any other information.

32.13: continued

(6) For at least six months before the application for an Approval of Suitability is filed pursuant to 310 CMR 32.11, while the application is pending, and for so long as such Approval of Suitability remains in effect, the owner or operator shall analyze the sludge or septage at least as often as is specified in the following table:

TABLE 32.13

I. Sludge

<u>Flow of Wastewater (Million Gallons per Day)</u>	<u>Minimum Frequency of Sampling Period and Analysis</u>
Less than one and no industrial discharge into the water or wastewater treatment system	One sampling period every six months
Less than one and any industrial discharge into the water or wastewater treatment system	One sampling period every three months
one - five	One sampling period every three months
More than five	One sampling period every month

II. Septage

<u>Gallons of Septage per Day</u>	<u>Minimum Frequency of Sampling and Analysis</u>
Less than 5,000	One sampling period every six months
5,000 - 15,000	One sampling period every three months
More than 15,000	One sampling period every month

(7) On its own initiative or at the request of the board of health of a city or town in which the owner's or operator's facility or the land application site is located, the Department may take the following action both before and after the sludge or septage is approved by the Department pursuant to 310 CMR 32.11:

- (a) increase the required sampling frequency;
- (b) require a change in the sampling method or location(s) if what was previously approved did not result in obtaining samples which were representative of the sludge or septage;
- (c) reduce the required sampling frequency and/or substances for which sampling and analysis are required if the sludge or septage quality consistently meets the limitations set forth in 310 CMR 32.12(2)(a), (b), or (c), as the case may be. Reduction shall be in accordance with the following schedule:

<u>Required Sampling Frequency</u>	<u>Number of Consecutive Result Reports</u>	<u>Frequency Reduction to</u>	<u>Substance Reduction</u>
One sampling period every six months	Two consecutive	One sampling period every 12 months	As determined by the Department
One sampling period every three months	Four consecutive	One sampling period every six months	As determined by the Department
One sampling period every month	Eight consecutive	One sampling period every three months	As determined by the Department

32.13: continued

(8) If the Department, pursuant to 310 CMR 32.13(5)(c) or 32.13(7), makes any change in sludge or septage monitoring requirements, the Department shall give written notice of such change to the owner or operator, to the board of health of the city or town in which the owner's or operator's facility is located, and to any board of health which makes a request for such change pursuant to 310 CMR 32.13(5)(c) or 32.13(7).

(9) Immediately after receiving the results of each analysis, the owner or operator shall send a copy of said results to the Department, to the board of health of the city or town in which the owner's or operator's facility is located, and to the board(s) of health which requested a change in sampling pursuant to 310 CMR 32.13(5)(c) or 32.13(7).

(10) Whenever the Department grants an Approval of Suitability pursuant to 310 CMR 32.11, the Department shall send a copy of such Approval of Suitability to the owner or operator, to the board of health of the city or town in which the owner's or operator's facility is located, and to the board(s) of health which requested a change in the sampling pursuant to 310 CMR 32.13(5)(c) or 32.13(7).

(11)(a) To renew an Approval of Suitability of a Type I sludge, the owner or operator shall submit a request for renewal six months before the expiration of the existing Approval. The request shall include the information required in 310 CMR 32.13(1), 32.14(1), and written concurrence from the board of health as described in 310 CMR 32.14(2).

(b) Renewal requests for Type I Approvals shall be presumptively approved unless within 45 days from submission of a complete application and payment of the required fee, the Department, in writing:

1. requests additional information from the applicant;
2. grants a written Approval of Suitability, which may include any conditions the Department deems appropriate to protect public health, safety welfare or the environment; or
3. denies approval of the renewal request.

In the event the Department requests additional information from the applicant, a new 45 day presumptive renewal period shall commence upon the Department's receipt of the additional information.

(c) The Department shall notify the owner or operator of the renewal decision along with the board(s) of health required to be notified under 310 CMR 32.14(2).

32.14: Additional Requirements for Approval of Suitability for Type I Sludge

(1) In order to obtain an Approval of Suitability for Type I sludge, an owner or operator, in addition to complying with 310 CMR 32.13, shall:

(a) state in the application submitted to the Department that an Approval of Suitability is being sought for Type I sludge;

(b) include in the application to the Department for Approval of Suitability the following information about marketing and distribution:

1. a statement of whether the Type I sludge is to be used by, sold to, or distributed to, or offered for use, sale or distribution to the general public or to specific persons and whether the sludge is to be sold or given away to each such intended recipient;
2. identification by name, if known, of each person who will use or to whom will be sold, distributed, or offered for use, sale, or distribution sludge in lots greater than five cubic yards;
3. a description of the estimated amount of sludge to be used by, sold to, or distributed to, or offered for use, sale, or distribution to the general public and/or to persons in lots greater than five cubic yards;

(c) send to the board of health of the city or town in which the owner's or operator's facility is located a copy of the application submitted to the Department pursuant to 310 CMR 32.13(1) and 32.14(1)(a) and (b).

32.14: continued

(2) When the Department has determined that it has received a fully completed application for Approval of Suitability for Type I sludge, it shall so notify in writing the board of health of the city or town in which the owner's or operator's facility is located. The Department shall not approve the use, sale, or distribution or offering for use, sale, or distribution of Type I sludge without the written concurrence of the board of health of the city or town in which the owner's or operator's facility is located, provided that such concurrence is not unreasonably withheld. Said board of health shall be deemed to have given such concurrence unless it gives written notice to the contrary to the Department not later than 35 days after the date of notice given the board of health pursuant to the first sentence of 310 CMR 32.14(2).

32.20: General Requirements for Land Application

(1) No person shall land apply any Type II or Type III sludge or septage on any land within Massachusetts unless such land application is in compliance with 310 CMR 32.20 and 310 CMR 32.21 through 32.29.

(2) The land application of sludge or septage shall be in accordance with good agricultural practices as recommended by the Cooperative Extension Service or the Soil Conservation Service.

32.21: Site Requirements for Land Application of Type II or Type III Sludge or Septage

(1) Soil Texture.

(a) Except as provided in 310 CMR 32.21(1)(b), Type II or Type III sludge or septage may be land applied only on land where the surface soil meets the criteria for the following soil textural classes as designated by the USDA:

1. sandy loam.
2. sandy clay loam.
3. fine sandy loam.
4. loam.
5. loamy sand.
6. very fine sandy loam.
7. fine silt.
8. silt.
9. silt loam.
10. clay loam.
11. silty clay loam.
12. sandy clay.
13. silty clay.

(b) If the Department determines that there is minimal risk of contamination of existing, planned, or potential groundwater public water supply, the Department may grant approval for land application on land whose soil has coarse sand, as defined in 310 CMR 32.05. Such approval shall be valid only if given by the Department expressly and in writing.

(2) Soil Drainage.

(a) Land application of Type II or Type III sludge or septage shall not be permitted on any site where the soil, when moist, has within three feet of the ground surface:

1. mottles with a Munsell color notation chroma of 2 or less over 5% or more of the observed soil horizon surface, or
2. dominant colors in the matrix with a Munsell color notation chroma of one or less if any mottles present in the observed soil horizon surface do not cover more than 5% of the observed soil horizon surface, or if there are no mottles present in the observed soil horizon surface.

(b) The Department may require a greater distance between the ground surface and the maximum high groundwater table than the distance provided for pursuant to 310 CMR 32.21(2)(a) if sludge or septage is, or is intended to be, land applied over an existing, planned, or potential groundwater public water supply.

32.21: continued

(3) Depth to Groundwater. There shall be a minimum of three feet between the lowest point of land application of Type II or Type III sludge or septage and the maximum high groundwater table. The Department may require a greater distance between the lowest point of land application and the maximum high groundwater table than the distance provided for in the preceding sentence if sludge or septage is, or is intended to be, land applied over an existing, planned, or potential groundwater public water supply.

(4) Depth to Bedrock. There shall be a minimum distance of three feet between bedrock and the lowest point of land application of Type II or Type III sludge or septage. The Department may require a greater distance between the lowest point of land application and bedrock if the location in question is over an aquifer whose groundwater supplies a bedrock well.

(5) Soil pH. No Type II or Type III sludge or septage shall be land applied at a site where the pH of the surface soil is below 6.5 at the time of land application or would go below 6.5 as a result of mixing the soil with the sludge or septage.

32.21: continued

(6) Site Control Measures. Type II or Type III sludge or septage shall at all times be confined to the site of land application. Land application of such sludge or septage shall be in accordance with soil conservation practices which minimize run-off and soil loss through erosion. The Department may require that measures such as run-off prevention or erosion control methods be instituted at a land application site in order to prevent the contamination of ground water or surface water by pollutants originating from the land applied sludge or septage. Specific measures for run-off prevention or erosion control shall be submitted to the Department for its approval prior to their implementation. Among measures that may be approved are those recommended by the Cooperative Extension Service, USDA Soil Conservation Service, or other qualified persons.

(7) Slope. Type II or Type III sludge or septage shall not, without the prior express written approval of the Department, be land applied on any land whose slope exceeds 8% from the horizontal plane.

32.22: Water Pollution Prevention Requirements for Land Application of Type II or Type III Sludge or Septage

(1) Protecting Public Water Supplies.

(a) Except as provided in 310 CMR 32.22(1)(b), no Type II or Type III sludge or septage shall be land applied anywhere within a radius of 2,500 feet of a well used as a source of drinking water supply by a public water system. Except as provided in 310 CMR 32.22(1)(b), no sludge or septage shall be land applied within 2,500 feet of the high water mark of any Class A water.

(b) Land application of Type II or Type III sludge or septage within a radius of 2,500 feet of a well used as a source of drinking water supply by a public water system, or within 2,500 feet of the high water mark of any Class A water, may be approved only if the following requirements are met:

1. a person wishing to land apply such sludge or septage in such a location applies in writing to the Department for approval to do so; and
2. the applicant persuades the Department that the sludge or septage contains no significant concentration of organic chemicals; and
3. the applicant persuades the Department, based upon a hydrogeologic study, that there is and will be no significant risk of pollution of any water mentioned in 310 CMR 32.22(1)(a); and
4. the Department expressly and in writing approves such land application, subject to a determination by the Department that the applicant has made the showings required by 310 CMR 32.22(1)(b)2 and 3; and
5. no land application of such sludge or septage shall be allowed anywhere within a radius of 400 feet of a well used as a source of drinking water supply by a public water system; and
6. such land application is otherwise in compliance with 310 CMR 32.00 and with the terms and conditions of the approval granted by the Department.

(2) Protecting Private Drinking Water Supply Wells. No Type II or Type III sludge or septage shall be land applied anywhere within a radius of 300 feet of a private drinking water supply well.

(3) Protecting Other Surface Waters. The Department may on a case-by-case basis establish a distance between the location of the land application site and surface water to which 310 CMR 32.22(1) does not apply for the purpose of preventing adverse impacts on the use or quality of that surface water.

(4) Protecting Drainage Channels. No Type II or Type III sludge or septage shall be land applied within the high water mark of field depressions or ditches through which water flows during snow melts or heavy rainfall.

32.22: continued

(5) Groundwater Monitoring. The Department may, on a case-by-case basis, require groundwater monitoring when the Department deems such action necessary or appropriate to assure or verify compliance with 310 CMR 32.00.

32.23: Application Management Requirements for Type II or Type III Sludge or Septage

(1) Application Rate.

(a) Type II or Type III sludge or septage shall be land applied at a rate which shall not exceed the nitrogen requirements of the crop grown or intended to be grown at the site of such land application.

(b) Type II or Type III sludge or septage shall be land applied at a rate which does not exceed the maximum annual allowable concentration specified in the following table:

TABLE 32.23(1)(b)

<u>Substance</u>	<u>Maximum Annual Allowable Application Pounds/Acre</u>
Cadmium	0.45

(c) Type II or Type III sludge or septage shall be land applied at a rate which does not allow the maximum cumulative application, excluding the soil background level, to exceed the maximum cumulative allowable levels specified in the following table:

TABLE 32.23(1)(c)

<u>Substance</u>	<u>Maximum Cumulative Application Pounds/Acre</u>	
	<u>Cation Exchange Capacity in meq/100g</u>	
	<u>Less than 5</u>	<u>5 or More</u>
Cadmium	4.5	4.5
Zinc	250.0	500.0
Copper	125.0	250.0
Nickel	50.0	100.0

(d) Type II or Type III sludge or septage shall be land applied at a rate which does not allow the cumulative level, including the background level, to exceed the maximum cumulative allowable concentration specified in the following table:

TABLE 32.23(1)(d)

<u>Substance</u>	<u>Maximum Annual Allowable Soil Concentration Including Background Level Pounds/Acre</u>	
	<u>Cation Exchange Capacity in meq/100g</u>	
	<u>Less than 5</u>	<u>5 or More</u>
Lead	445.0	600.0
PCBs	2.0	2.0

(e) No Type II or Type III sludge or septage shall be land applied on pasture land if the concentration of PCBs in the sludge or septage exceeds two parts per million.

(f) Land application of Type II or Type III sludge or septage at a rate which allows cumulative level of lead to exceed the amount specified in Table 32.23(1)(d) may be allowed only if all the following requirements are met:

32.23: continued

1. a person wishing to land apply such sludge or septage at such a rate applies in writing to the Department for approval to do so, and
2. the applicant persuades the Department that allowing additional lead in the soil will not create a significant risk to public health or the environment, and
3. the applicant persuades the Department that, when the cation exchange capacity of the soil is five or more milliequivalents per 100 grams, the maximum cumulative application of lead to the soil shall not exceed 715 pounds per acre, and
4. the Department expressly and in writing approves such land application, after a determination by the Department that the applicant has made the showings required by 310 CMR 32.23(1)(f)2. and 3., and
5. such land application is otherwise in compliance with 310 CMR 32.00 and with the terms and conditions of the approval granted by the Department.

(2) Incorporation into Soil. No person who land applies Type II or Type III sludge or septage shall allow more than 48 hours to elapse between the time such sludge or septage is first land applied to the surface of the soil and the time the sludge or septage is mixed into the soil or beneath the surface of the soil. The requirement in the preceding sentence shall not apply to the land application of sludge or septage which has been stabilized by a process deemed acceptable to the Department pursuant to 310 CMR 32.12(1)(b) and which is not putrescible.

(3) Public Access. A person who land applies Type II or Type III sludge or septage shall control public access to the site of such land application during and for the 12 months after such application unless the sludge or septage was stabilized by a process deemed acceptable to the Department pursuant to 310 CMR 32.12(1)(b). If the site is likely to be frequented by the general public, or if inadvertent public contact with the sludge or septage is likely, such control of public access shall be by fencing or posting of appropriate signs.

(4) Grazing Animals. For at least 30 days after Type II or Type III sludge or septage is land applied at a site, animals shall not be permitted to graze on that site.

(5) Crops

(a) No Type II or Type III sludge or septage shall be land applied at a site if, at the time of land application, there are growing on the site crops which may be consumed by humans or grazing animals.

(b) Type II or Type III sludge or septage may be land applied to the surface of land on which hay is grown or is intended to be grown, or to the surface of pasture land, only if 310 CMR 32.23(2) is complied with and such land application occurs prior to the growth or regrowth of a crop on that land.

(c) Only Type I sludge, or Type II or Type III sludge or septage which has been stabilized by a process deemed acceptable to the Department pursuant to 310 CMR 32.12(1)(b), may be land applied at a site if:

1. crops for direct human consumption are, or are intended to be, planted on that site within 24 months of land application, and
2. there will be direct contact between the edible portion of such crops and the sludge or septage.

(6) Seasonal Restrictions. No person shall land apply Type II or Type III sludge or septage:

- (a) during periods of rain, or
- (b) when the soil is frozen, or
- (c) when the soil is covered with snow or ice, or
- (d) when the soil is saturated with water.

32.24: Soil Sampling Requirements for Land Application of Type II or Type III Sludge or Septage

(1) Frequency. A representative soil sample shall be taken and analyzed from a site prior to:

32.24: continued

- (a) the first application of Type II or Type III sludge or septage to that site, and
- (b) the filing of an application to the Department for a fifth Land Application Certificate after four Land Application Certificates have been issued without representative soil samples having been analyzed.

All soil samples shall be taken and analyzed in compliance with 310 CMR 32.24, in order to be deemed in compliance with this requirement.

(2) Parameters. Soil samples shall be sampled and analyzed for the following, each, except for pH and cation exchange capacity, expressed in terms of total (and not extractable) pounds per acre:

- (a) pH;
- (b) cation exchange capacity (CEC), expressed in milliequivalents per 100 grams of soil,
- (c) Total Nitrogen (N);
- (d) Ammonium Nitrogen (NH₄-N);
- (e) Nitrate Nitrogen (NO₃-N);
- (f) Phosphorus (P);
- (g) Potassium (K);
- (h) Cadmium (Cd);
- (i) Total Chromium (Cr);
- (j) Copper (Cu);
- (k) Lead (Pb);
- (l) Mercury (Hg);
- (m) Nickel (Ni);
- (n) Zinc (Zn);
- (o) Molybdenum (Mo);
- (p) PCBs, if sludge or septage contains concentrations of PCBs equal to or greater than two parts per million; and
- (q) any additional substance for which sampling and analysis is required by the Department at the request of the board of health of a city or town in which Type II or Type III sludge or septage is or is intended to be land applied or on the Department's own initiative upon review of information submitted in compliance with 310 CMR 32.00 or of any other information which the Department has.

(3) Alternative Monitoring Requirements. On its own initiative or at the request of the board of health of a city or town in which Type II or Type III sludge or septage is being land applied, the Department may either increase sampling frequency if analysis results are inadequate or inconsistent, or reduce sampling frequency and/or the materials for which sampling and analysis are required if the soil quality consistently meets the requirements set forth in 310 CMR 32.23. The Department shall give written notice of approved changes in monitoring, including the duration of such permitted changes, to the applicant and the Board of Health of the city or town in which the sludge or septage is to be land applied.

(4) Methods. All sampling and analysis shall be in compliance with 310 CMR 32.70.

32.25: Approval of Site for Land Application of Type II or Type III Sludge or Septage

(1) No person shall land apply Type II or Type III sludge or septage on any site without the prior written approval of the Department, issued in the form of a Land Application Certificate. Each Land Application Certificate shall be valid only for the site specified therein. Each Land Application Certificate shall be valid for no more than one year.

(2) Each person who intends to or does land apply Type II or Type III sludge or septage on any site shall submit to the Department for its approval an application for a Land Application Certificate. At the time it submits the application to the Department, the applicant shall submit a copy of the application to the board of health of the city or town in which the land application site is located. If the person who intends to or does land apply Type II or Type III sludge or septage on a site is different from the person who owns the site, both persons shall be considered applicants and both shall sign, and be responsible for the contents of, the application. The Department may prescribe an application form which shall be used by each person applying for a Land Application Certificate.

32.24: continued

(3) Each application for a Land Application Certificate shall contain all information necessary to persuade the Department that sludge or septage will be land applied at the site in question only in compliance with 310 CMR 32.00. Without limiting the generality of the previous sentence, each application for a Land Application Certificate shall include at a minimum the following information, noting the source of the information where applicable:

- (a) A scaled topographic map, preferably of the United States Geological Survey, showing:
 - 1. the location of the land application site,
 - 2. the location of the sludge or septage storage site, and
 - 3. all sources of water supply which are used by public or non-public water systems and which are on or abutting the site.
- (b) A scaled plot plan showing:
 - 1. the site where sludge or septage is to be land applied;
 - 2. the site where sludge or septage is to be stored;
 - 3. the location of every well which is known by the applicant and which is:
 - a. used as a source of drinking water supply by a public water system or as a private drinking water supply well, and
 - b. is located within 2,500 feet of the land application site or of the site where sludge or septage is to be stored;
 - 4. the location of every surface water which is used as a source of drinking water supply by a public water system and which is located within 2,500 feet of either the land application site or the site where sludge or septage is to be stored;
 - 5. the location of all surface water within 2,500 feet of the land application site or of the site where sludge or septage is to be stored; and
 - 6. the location of the 100-year flood plain, if applicable, as mapped by the Federal Emergency Management Agency.
- (c) The number of acres available for, or intended to be used for, land application.
- (d) Information about the soil at the site, including:
 - 1. the slope of the site, as measured from the horizontal plane;
 - 2. a Soil Conservation Service soil survey map or a comparable soil map, prepared by a scientist who has expertise in soil and experience in mapping, which delineates the area(s) in which sludge or septage is to be land applied or stored or both;
 - 3. a USDA description of the soil, including such information as the soil name, soil texture, physical and chemical properties, and other information appropriate to determine whether the soil is suitable for land application of Type II or Type III sludge or septage.
- (e) The depth to maximum high groundwater table.
- (f) Erosion control and run-off prevention practices which are needed and/or used or intended to be used.
- (g) Drainage practices which are needed and/or used or intended to be used.
- (h) The results of soil analysis done in compliance with 310 CMR 32.24.
- (i) Any other information as required by the Department concerning the site.
- (j) Information about what is to be grown on the land application site, including:
 - 1. the type of crop or vegetation being grown or to be grown,
 - 2. the anticipated planting time,
 - 3. the anticipated harvest time, and
 - 4. the anticipated use of the crop or vegetation.
- (k) Information about what animals are to be grazed on the land application site, including:
 - 1. what kinds of animals are being grazed or to be grazed, and the number of each type of animal,
 - 2. the length of the grazing periods,
 - 3. the amount of time between the completion of land application and the beginning of grazing on the land application site, and
 - 4. The supplemental feeding practices being used or to be used.

32.25: continued

- (l) The name and address of every facility from which sludge or septage is or will be obtained.
- (m) Information about how land application is to be done, including:
 - 1. the proposed land application rate,
 - 2. the proposed land application method, and
 - 3. the proposed date(s) of land application.
- (n) Information about how the sludge or septage is to be transported to the land application site, including:
 - 1. the proposed method of transportation,
 - 2. the proposed route of transportation,
 - 3. the proposed frequency and date(s) of transportation, and
 - 4. the name and address of the transporter.
- (o) Information about the sludge or septage to be land applied, including:
 - 1. the type of sludge or septage to be land applied and, for each type, the amount to be land applied, and
 - 2. the amount and type of each sludge and septage previously land applied at the site, to the extent known, and
 - 3. whether or not the applicant proposes to use any Type II or Type III sludge or septage for which the Department has granted a variance from a stabilization requirement pursuant to 310 CMR 32.12(1)(c).
- (p) A general statement describing the measures to be taken to otherwise comply with 310 CMR 32.00.

(4) Each Land Application Certificate shall be subject to such terms and conditions as the Department may reasonably impose. Each person receiving a Land Application Certificate shall comply with such terms and conditions.

(5) When the Department has determined that it has received a fully completed application for a Land Application Certificate, it shall so notify the applicant and the board of health of the city or town in which the land application site is located. The Department shall seek the concurrence of the board of health of the city or town in which the land application site is located prior to granting a Land Application Certificate. Said board of health shall be deemed to have given concurrence without terms or conditions unless it notifies the Department to the contrary not later than 35 days after the notice given by the Department to the board of health pursuant to the first sentence of 310 CMR 32.25(5). The Department shall grant a Land Application Certificate without the concurrence of said board of health only if the Department determines, after evaluating relevant evidence, that the board of health has acted unreasonably in refusing or conditioning its concurrence.

32.26: Recording Notice of Land Application of Type III Sludge or Septage

- (1) Every person who land applies any Type III sludge or septage, or who owns land on which any Type III sludge or septage is land applied, shall record in the registry of deeds, or if the land in question is registered land, in the registry section of the land court for the district wherein the land lies, a notice which shall contain, at a minimum, the following:
 - (a) the book and page number or other appropriate cross-reference for the land in the registry of deeds or land court registry section,
 - (b) the date on which the Department issued the Land Application Certificate pursuant to which the Type III sludge or septage was land applied, and the expiration date of said Land Application Certificate,
 - (c) the name and address of each facility from which the Type III sludge or septage land applied on the land was obtained, and
 - (d) for each such facility, the content of the Type III sludge or septage, as stated on the results of the most recent analysis thereof, and the dates on which each such analysis was taken and analyzed.

32.26: continued

- (2) The deadline for compliance with 310 CMR 32.26(1) shall be when the earliest of the following events occurs:
- (a) before the conveyance or lease of the land in question, or any part thereof,
 - (b) 30 days after the expiration of the Land Application Certificate, or
 - (c) immediately after the Type III sludge or septage was land applied if it was land applied without a Land Application Certificate in violation of 310 CMR 32.00.

32.30: Requirements for Any Storage of Sludge or Septage

No person shall store sludge or septage except in compliance with the following requirements:

- (1) Protecting All Groundwater. Sludge or septage shall not be stored at any location where there is less than four feet of unsaturated soil between the lowest point of such storage and the maximum high groundwater table.
- (2) Protecting Groundwater Sources of Public Water Supply. Sludge or septage shall not be stored anywhere within a radius of 2,500 feet of any location under which there is an existing, planned, or potential groundwater public water supply unless either
 - (a) a hydrogeologic study persuades the Department that such storage will not result in contamination of such groundwater, or
 - (b) the sludge or septage is stored in watertight containers or by another comparable method which prevents leakage.
- (3) Protecting Private Water Supply Wells. Sludge or septage shall not be stored anywhere within a radius of 500 feet of any well used as a private drinking water supply well unless such sludge or septage is stored in watertight containers or by another comparable method which prevents leakage.
- (4) Protecting Surface Waters.
 - (a) Unless it is stored in a watertight container or by another comparable method which prevents leakage, sludge or septage shall not be stored
 1. within the watershed of any Class A surface water,
 2. within any 100-year flood plain, as then most recently mapped by the Federal Emergency Management Agency,
 3. between the high water line of any pond or lake and a line 500 feet landward of the high water line of that pond or lake.
 - (b) Sludge or septage shall not be stored below the high water mark of any surface water.
- (5) Control Measures. Sludge or septage shall be stored in a manner that does not create or threaten to create:
 1. a nuisance, or
 2. a threat to public health, or
 3. a threat to the environment.

32.31: Additional Requirements for Long-Term Storage of Sludge or Septage

No person shall store sludge or septage for more than 42 days within any six month period except in compliance with 310 CMR 32.30 and the following additional requirements:

- (1) Such storage of sludge or septage shall not occur at a site without the prior express written approval of the board of health of the city or town in which that site is located. The previous sentence shall not apply to such storage of sludge at the site of a wastewater treatment facility which generated all of such sludge if such facility has a permit from the Department pursuant to M.G.L. c. 21, § 43.

32.31: continued

(2) Storage of sludge or septage shall not occur without the Department's prior written approval of the plans for such storage. All such plans shall provide measures for controlling odors. If a storage facility receives or is intended to receive an average of 2,000 gallons or more of septage per day, the plans for such storage facility shall be prepared by a Massachusetts registered professional engineer.

32.40: Requirements for Transportation of Sludge or Septage

(1) No person shall transport sludge or septage for land application purposes in a manner which creates, or threatens to create, a nuisance or a hazard to public health or the environment.

(2) Every person who transports sludge or septage for land application purposes shall transport sludge or septage only:

- (a) in a tank, or
- (b) in a watertight container, or
- (c) by some other means acceptable to the Department.

(3) Every person who transports septage shall do so in compliance with 310 CMR: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage.*

(4) Sludge containing molybdenum shall be accompanied by a written label or bill of lading that states the following: "This product contains molybdenum. While the regulatory standard is generally protective, under certain site conditions, if used on soils growing crops that will be used to feed ruminant animals (*e.g.*, cattle, sheep and goats) there is a small risk that molybdenosis could occur. This risk is greater for alkaline stabilized biosolids. Animal managers are advised to refer to additional information on the site conditions of concern and management options at <http://www.mass.gov/eea/docs/dep/water/wastewater/a-thru-n/mobiosolids.pdf>." A statement indicating whether the biosolids have been alkaline stabilized shall also be included.

32.50: Requirements for the Sale or Distribution of Sludge and Septage

32.51: Requirements for the Sale or Distribution of Type I Sludge

(1) No person shall sell or distribute, or offer for use, sale, or distribution any Type I sludge unless, pursuant to 310 CMR 32.00, the Department has approved such sludge as Type I sludge and that approval is valid at the time the Type I sludge is sold or distributed, or offered for use, sale, or distribution.

(2) No person shall use or obtain Type I sludge unless such sludge has a valid Approval of Suitability.

(3) Labelling of Type I sludge. Each container in which Type I sludge is sold, distributed, or transported or offered for use, sale, or distribution shall itself prominently display or, if such display is not practicable, shall be accompanied by a shipping paper which shall prominently display the following:

- (a) identification of the material as Type I sludge,
- (b) the date of issuance of the Department Approval of Suitability for the Type I sludge and the expiration date thereof,
- (c) instructions for land applying the material in accordance with proper agricultural practice, including but not limited to, identification of proper agronomic application rates which shall not cause exceedance of the nitrogen requirements of the crop to be grown or intended to be grown, and

32.51: continued

(d) type I sludge containing molybdenum shall be accompanied by a written label or bill of lading that states the following: "This product contains molybdenum. Under certain site conditions, if used on soils growing crops that will be used to feed ruminant animals (*e.g.*, cattle, sheep and goats) there is a small risk that molybdenosis could occur. This risk is greater for alkaline stabilized biosolids. Animal managers are advised to refer to additional information on the site conditions of concern and management options at (<http://www.mass.gov/eea/docs/dep/water/wastewater/a-thru-n/mobiosolids.pdf>)." A statement indicating whether the biosolids have been alkaline stabilized shall also be included.

(e) all other instructions and information required by law.

32.52: Requirements for the Sale or Distribution of Type II or Type III Sludge or Septage

(1) No person shall sell or distribute, or offer for use, sale, or distribution any Type II or Type III sludge or septage unless:

(a) the Department has issued an Approval of Suitability for such sludge or septage and that Approval of Suitability for such sludge or septage is valid at the time such sludge or septage is sold or distributed or offered for sale, distribution, or use;

(b) the Department has granted a Land Application Certificate authorizing the person purchasing or obtaining the sludge or septage to use that specific type sludge or septage which is being sold or distributed or offered for use, sale, or distribution.

32.52: continued

(2) Each person who sells or distributes or offers for sale or distribution Type II or Type III sludge or septage shall be responsible for ascertaining before selling or distributing such sludge or septage that the person obtaining or purchasing such sludge or septage has been granted a Land Application Certificate by the Department which:

- (a) permits the use of that type sludge or septage being sold or distributed, and
- (b) authorizes the amount of that type sludge or septage being obtained.

(3) Each person who sells or distributes or offers for sale or distribution Type II or Type III sludge or septage shall provide the person purchasing or obtaining such sludge or septage with the following information:

- (a) the name and address appearing on the Approval of Suitability;
- (b) the dates of issuance and expiration of the Approval of Suitability for the sludge or septage being sold or distributed;
- (c) the results of the most recent analysis of the sludge or septage being sold or distributed and the dates on which said analysis was taken and analyzed;
- (d) the amount of sludge or septage being sold or distributed.

(4) Each person who uses Type II or Type III sludge or septage shall be responsible for ascertaining, before purchasing or obtaining such sludge or septage, that such sludge or septage is the subject of a Approval of Suitability then in effect.

(5) Each container in which Type II or Type III sludge or septage is sold, distributed, or transported, or offered for use, sale, or distribution shall itself prominently display or, if such display is not practicable, shall be accompanied by a shipping paper which shall prominently display the following:

- (a) the type classification of the sludge or septage (*i.e.* Type II or Type III);
- (b) the date of issuance of the Department Approval of Suitability for such sludge or septage and the expiration date thereof;
- (c) notice that the material may only be used in compliance with Massachusetts land application regulations and only with prior express written approval of the Department.

Such a label shall read substantially as follows:

NOTICE: Contains Type (II or III) (sludge or septage). May be used only in compliance with Massachusetts land application regulations and only with the prior express written approval of the Department of Environmental Protection.

(6) Type II or Type III sludge or septage containing greater than ten parts per million of molybdenum shall be accompanied by a written warning that use of such sludge or septage may result in forage crops containing levels of molybdenum which are toxic to ruminants. Sludge or septage subject to this requirement may be approved by the Department only on the condition that this requirement is complied with.

(7) Type III sludge or septage containing greater than 300 parts per million of water soluble boron shall be accompanied by a written list of the crops for which use of such sludge or septage is recommended. Such list shall bear the words "Warning" or "Caution" and a warning that misuse of such sludge or septage can result in crop injury. Sludge or septage subject to these requirements may be approved by the Department only on the condition that these requirements are complied with.

(8) Type II and III sludge containing molybdenum shall be accompanied by a written label or bill of lading that states the following: "This product contains molybdenum. Under certain site conditions, if used on soils growing crops that will be used to feed ruminant animals (*e.g.*, cattle, sheep and goats) there is a small risk that molybdenosis could occur. This risk is greater for alkaline stabilized biosolids. Animal managers are advised to refer to additional information on the site conditions of concern and management options at <http://www.mass.gov/eea/docs/dep/water/wastewater/a-thru-n/mobiosolids.pdf>." A statement indicating whether the biosolids have been alkaline stabilized shall also be included.

32.60: Record Generating, Record Keeping, and Reporting Requirements

- (1) General. All records required to be kept pursuant to 310 CMR 32.00 shall be kept for at least three years. All records required to be kept pursuant to 310 CMR 32.60(4)(a)4. and 32.60(5)(a)1. through 5. shall be kept permanently. All records shall be readily available for inspection by personnel of the Department or of the board of health of the city or town in which the facility or the land application site is located, as the case may be.
- (2) Owner or Operator.
 - (a) Each owner or operator shall enter into its records the information required pursuant to 310 CMR 32.60(2)(b) and if a seller or distributor, shall enter into its records the information required pursuant to 310 CMR 32.60(3).
 - (b) Each owner or operator shall keep the following records:
 1. the approval given by the Department pursuant to 310 CMR 32.11;
 2. a description of the stabilization method used to comply with 310 CMR 32.12(1), including the address where that stabilization occurred and a detailed description of the conditions under which that stabilization actually occurred;
 3. the results of analyses of all samples of the sludge or septage, including when and by whom they were taken and analyzed;
 4. copies of all information and material submitted to the Department in compliance with 310 CMR 32.13 and 32.14;
 5. all studies and technical data on which such information and material were based; and
 6. the address of each place where sludge or septage was stored and for each such place, how long sludge or septage was stored there.
 - (c) Each owner or operator shall submit to the Department an annual report which shall include the information of which the owner or operator is required to keep records pursuant to 310 CMR 32.60(2)(a) and (b). For each owner or operator, such annual report shall be due on February 1 of the calendar year following the date the Department issued the Approval of Suitability pursuant to 310 CMR 32.11.
- (3) Seller or Distributor of Type I Sludge.
 - (a) Before transferring ownership, custody, or possession of Type I sludge, the person selling or distributing such sludge shall enter into its records the following information:
 1. the amount of Type I sludge distributed or sold in lots equal to or less than five cubic yards;
 2. the name and addresses of each person to whom Type I sludge in lots greater than five cubic yards was sold or distributed, specifying for each such person the amount sold or distributed.
 - (b) Each person selling or distributing Type I sludge shall submit to the Department an annual report which shall include the information required pursuant to 310 CMR 32.60(3)(a).
- (4) Seller or Distributor of Type II or Type III Sludge or Septage
 - (a) Before transferring ownership, custody, or possession of Type II or Type III sludge or septage, the person selling or distributing such sludge or septage shall enter into its records the following information, maintaining a separate file for each land application site:
 1. the name and address, as appearing on the Land Application Certificate, of the person to whom the sludge or septage is being sold or distributed;
 2. the location, as appearing on the Land Application Certificate, where the sludge or septage is being land applied;
 3. the dates, as appearing on the Land Application Certificate, on which the Land Application Certificate was granted, and the Land Application Certificate expires;
 4. the method and rate of land application, as appearing on the Land Application Certificate;
 5. the crop to be grown, or animals to be grazed, or both, on the land in question, as appearing on the Land Application Certificate;

32.60: continued

6. the name of the transporter who transported the sludge from the premises of the seller or distributor, and the type of vehicle used;
 7. the name of the individual who actually took custody or possession of the sludge or septage, and the date on which he/she did so;
 8. the amount of sludge or septage authorized by the Land Application Certificate and the amount obtained for that site; and
 9. the content of the sludge or septage, based on the most recent analysis done in compliance with 310 CMR 32.13 and the dates on which the analysis was taken and analyzed.
- (b) Each person who sells or distributes Type II or Type III sludge or septage shall submit to the Department a report which shall include the information for which he or she is required to keep records pursuant to 310 CMR 32.60(4)(a).
- (5) Users of Type II or Type III Sludge or Septage.
- (a) Each person who uses Type II or Type III sludge or septage shall enter into its records the following information, keeping a separate file for each Land Application Certificate:
1. the Land Application Certificate issued by the Department pursuant to 310 CMR 32.25;
 2. the results of all soil samples taken pursuant to 310 CMR 32.24, including when and by whom they were taken and analyzed;
 3. the location of each land application site;
 4. the amount of sludge or septage spread per acre annually per site and the total cumulative addition of sludge or septage per site;
 5. date and method of application for each site;
 6. the crop grown on the land application site, and the use of the crop;
 7. what kinds of animals were grazed on the land application site;
 8. the address of each location where sludge or septage was stored and, for each such location, how long the sludge or septage was stored there;
 9. the information listed in 310 CMR 32.52(3)(a), (b), and (d).
- (b) Each person who uses sludge or septage shall submit to the Department an annual report which shall include all the information of which that person is required to keep records pursuant 310 CMR 32.60(5)(a). For each such person, such annual report shall be due on February 1 of the calendar year following the date on which the Department issued the Land Application Certificate to that person pursuant to 310 CMR 32.25.

32.70: Sampling and Analysis Requirements

- (1) General. Each sample of sludge, septage, or soil shall be sampled, handled and analyzed in accordance with best technical judgment, with guidance most recently published by the Department and the EPA, and with 310 CMR 32.70.
- (2) Sampling. Each sample shall be sampled in compliance with all of the following requirements:
 - (a) The sample shall be collected in a proper manner to ensure that it is representative of the material being sampled.
 - (b) The sample shall be properly preserved immediately upon collection.
 - (c) The sample shall be properly handled and packaged in a manner that will maintain the integrity of the sample and minimize the potential for contamination.
 - (d) The sample shall be labelled to show when, from what, from where, and by whom it was taken.
 - (e) As soon as possible after it is collected, and in any event no later than its maximum holding time for reliable analysis, the sample shall be delivered to the laboratory for analysis.

32.70: continued

- (3) Laboratories.
- (a) Each sample analyzed for the purpose of complying with 310 CMR 32.00 shall be analyzed only by a laboratory deemed acceptable by the Department for that purpose.
- (b) Each laboratory wishing to be deemed acceptable, or to continue being deemed acceptable, to the Department pursuant to 310 CMR 32.70(3)(a) shall provide to the Department a description of the quality control procedures which the laboratory uses to verify the validity of analysis results.
- (c) No laboratory shall analyze any sample by using an analysis method not previously accepted by the Department, or by deviating from an analysis method previously accepted by the Department unless the deviation has previously been accepted by the Department.
- (4) Analysis. The following analysis methods may be used:
- (a) Generally.
1. Manual of Methods for Chemical Analysis of Water and Wastes, EPA, 1983 (or the most recent edition at the time the sample is analyzed).
 2. Standard Methods for Examination of Water and Wastewater, American Public Health Assoc. (Whatever edition is most recent at the time the sample is analyzed.)
 3. Test Methods for Evaluation Solid Waste, Physical/Chemical Methods, EPA S.W.-846, 1980 (or most recent edition at time the sample is analyzed).
 4. "Soil Survey Laboratory Methods and Procedures for Collecting Soil Samples", Soil Survey Report, No. 1, Soil Conservation Service USDA, 1972.
 5. Handbook for Sampling and Sampling Preservation of Water and Wastewater EPA-600/4-82-029, September, 1982 (or the most recent edition at the time the sample is analyzed).
 6. Interim Methods for the Analysis of Elemental Priority Pollutants in Sludge, EPA/EMSL, 1978 (or most recent edition at the time the sample is analyzed).
- (b) For cation exchange capacity and pH, *Methods of Soil Analysis*, Part 2, 2nd Edition, "Agronomy Monograph No. 9", A. L. Page *et al*, American Society of Agronomy, Madison, Wisconsin, 1982. Specifically,
- 1.1. If the pH of the soil is below 7.0, the cation exchange capacity shall be determined by using the summation of exchangeable basis and exchangeable acidity methods, paragraphs nos. 58-2 and 59-3, respectively, of said monograph.
 - 2.2. If the soil is neutral, calcareous, or saline, the cation exchange capacity shall be determined by the sodium acetate method, paragraph no. 57-3 of said monograph.
- (c) For cadmium, *Sampling and Analysis of Soils, Plants, Wastewater, and Sludge. Suggested Standardization and Methodology*. North Central Region Publication 230, Research Publication 170.
- (d) For PCBs,
1. In waste material, milk, and animal feed, the method recommended from time to time by the Association of Official Analytical Chemists.
 2. In milk and animal feed, any method recommended from time to time by the U.S. Food and Drug Administration.
- (5) Reporting Analysis Results. The results of each analysis submitted to the Department pursuant to 310 CMR 32.00 shall include, to the extent applicable, the reference citation of the method used for the analysis, including all deviations from such method.

32.80: Appendix A: Acceptable Processes for Pathogen Reduction

Acceptable processes which will significantly reduce pathogens are:

- (1) Aerobic Digestion: A process during which sludge or septage is broken down by bacteria by agitating the sludge or septage, mixing it with air or oxygen, and maintaining residence times ranging from 60 days at 15°C to 40 days at 20°C, with a volatile solids reduction of at least 38%.

32.80: continued

- (2) Air Drying: A process in which sludge or septage is allowed to drain and/or dry on under-drained sand beds, or paved or unpaved basins in either of which the sludge or septage is at a maximum depth of nine inches. This process is acceptable only if it occurs for at least three months during which temperatures must average, on a daily basis, above 0°C for two months.
- (3) Anaerobic Digestion: A process during which sludge or septage is broken down by bacteria in the absence of oxygen at residence times ranging from 60 days at 20°C to 15 days at 35°C through 55°C, with a volatile solids reduction of at least 38%.
- (4) Low Temperature Composting: A composting process using the within-vessel, static aerated pile, or windrow methods. For all three methods, the composting temperature shall be not less than 40°C for five consecutive days, and not less than 55°C during four hours of this five day period.
- (5) Lime Stabilization: A process in which lime is added to sludge or septage to produce a pH of 12 after two hours of contact with the sludge or septage.
- (6) Other methods: Other methods or operating conditions may be deemed acceptable by the Department if the owner or operator can provide data showing that the pathogen and vector attraction of the volatile solids are reduced to an extent equivalent to the reductions achieved by any of the other methods listed above in 310 CMR 32.80. Written approval of equivalency by the Department shall be required.

32.81: Appendix B: Acceptable Processes for Additional Pathogen Reduction

Additional processes which will further reduce pathogens are listed below. The processes listed in 310 CMR 32.81(5), (6), and (7) are in addition to processes listed or described in 310 CMR 32.80.

- (1) High Temperature Composting: A composting process using either the windrow, within-vessel, or static-aerated pile method; provided that whenever the windrow method is used, a composting temperature of not less than 55°C shall be continuously maintained for at least 15 days during the composting period, and that the windrow shall be turned at least five times during this 15-day period; and provided that whenever the static-aerated pile method or the within-vessel method is used, a composting temperature of not less than 55°C shall be continuously maintained for at least three consecutive days.
- (2) Heat Drying: A process in which a dewatered sludge cake is dried by direct or indirect contact with hot gases, and the moisture content is reduced to 10% or lower. Sludge particles shall reach temperatures well in excess of 80°C, or the wet bulb temperature of the gas stream in contact with the sludge at the point where it leaves the dryer shall be in excess of 80°C.
- (3) Heat Treatment: A process in which liquid sludge or septage is maintained at temperature of at least 180°C for at least 30 consecutive minutes.
- (4) Thermophilic Aerobic Digestion: The process by which liquid sludge or septage is agitated with air or oxygen to maintain aerobic conditions at a residence time of ten days at 55°C through 60°C, and has a volatile solids reduction of at least 38%.
- (5) Electron Radiation: A process in which sludge or septage is irradiated with electrons from an accelerator at dosages of at least 1.0 megarad at room temperature, *i.e.*, approximately 20°C.
- (6) Gamma Ray Irradiation: A process in which sludge or septage is irradiated with gamma rays from certain isotopes, such as Cobalt-60 or Cesium-137, at dosages of a least 1.0 megarad at room temperature, *i.e.*, approximately 20°C.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

32.81: continued

(7) Pasteurization: A process in which sludge or septage is maintained for at least 30 continuous minutes at a temperature of not less than 70°C.

(8) Other Methods: Other methods or operating conditions may be deemed acceptable by the Department if the owner or operator can provide data showing that the pathogen and vector attraction of the volatile solids are reduced to an extent equivalent to the reductions achieved by any of the other methods listed in 310 CMR 32.81. Written approval of equivalency by the Department shall be required.

REGULATORY AUTHORITY

310 CMR 32.00: M.G.L. c. 21, §§ 27(9), 27(12) and 43; c. 21A, § 2(28); c. 111, § 160.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 33.00: IMPLEMENTATION OF M.G.L. c. 111F, EMPLOYEE AND COMMUNITY
"RIGHT TO KNOW"

Section

- 33.01: Purpose and Authority
- 33.02: Definitions
- 33.03: Municipal Coordinators
- 33.04: Filing of MSDS
- 33.05: Release of MSDS to Government Officials
- 33.06: Community Petition Process
- 33.07: Enforcement Procedures
- 33.08: Exceptions
- 33.09: Miscellaneous Provisions

33.01: Purpose and Authority

310 CMR 33.00 is promulgated under authority of M.G.L. c. 111F. The purpose of 310 CMR 33.00 is to implement effectively the provisions of M.G.L. c. 111F, thereby ensuring an orderly dissemination of information related to toxic and hazardous substances and further protecting the public health and safety.

33.02: Definitions

The following terms as used in 310 CMR 33.00 shall have the following meanings, unless otherwise specified:

Community resident shall mean any resident of a municipality in which an employer manufactures, processes, uses or stores toxic or hazardous substances as defined in 310 CMR 33.02.

Critical shall mean vital or indispensable for the adequate solution, overcoming, or managing of a crisis.

The Department shall mean the Commissioner of the Department of Environmental Protection or his designee.

Essential shall mean necessary or indispensable to.

Frivolous shall mean lacking in substance or serious intent.

Immediate access shall mean access within 24 hours or access during the period of an on-going emergency or crisis situation.

Imminent threat to public health or safety shall mean a situation which poses a risk of endangering the health or safety of the public or portion thereof, and which calls for prompt response to eliminate, reduce, or counter such risk.

Material safety data sheet or MSDS shall mean the written document which sets forth the following for a toxic or hazardous substance:

- (a) The chemical name, any common names, and the CAS number of the toxic or hazardous substance.
- (b) The hazards or other risks in the use of the toxic or hazardous substance, including:
 - 1. the potential for fire, explosion, corrosivity, and reactivity;
 - 2. the acute and chronic health effects of risks from exposure; including the medical conditions that might be aggravated by exposure; and
 - 3. the potential routes of exposure and symptoms of overexposure.
- (c) The proper precautions, handling practices, necessary personal protective equipment, and other safety precautions in the use of or exposure to the toxic or hazardous substances, including appropriate emergency treatment in case of overexposure at hazardous levels.

33.02: continued

- (d) The emergency procedures for spills, fire, disposal and first aid.
- (e) A description in lay terms, of the specific potential health risks posed by the toxic or hazardous substance intended to alert any person reading this information, including but not limited to carcinogenic, mutagenic, teratogenic, or neurotoxic effects, for substances so designated on the Massachusetts substance list, pursuant to M.G.L. c. 111F, § 4(c).
- (f) The month and year that the information was compiled and the name, address, and emergency telephone number of the manufacturer responsible for preparing the information.

Municipal coordinator shall mean the fire chief, fire commissioner, public health commissioner or public health officer, or member of the suant to M.G.L. c. 111F, § 1 and 310 CMR 33.03, or an acting municipal coordinator so designated.

Performance of a duty to protect public health and safety shall mean any action, including monitoring or investigation to determine whether other action is necessary, taken by a duly-constituted agency of the Commonwealth or political subdivision thereof; with the purpose of fulfilling (in whole or in part) any responsibility assigned by statue, regulation, ordinance, or by-law to provide, maintain, preserve, or safeguard safe or healthful conditions for the public, or to eliminate, reduce, or prevent threats to the health and safety of the public or portion thereof.

Public health officer shall mean a paid health agent or a member of the board of health.

Reason to believe shall mean an intelligible and articulated grounds for holding an opinion.

State agency shall mean an agency, authority, board, commission, department, or office of the Commonwealth or any county or district thereof.

Toxic or hazardous substance shall mean any chemical substance or mixture of substances in a gaseous, liquid or solid state which is listed in the Massachusetts substance list compiled in compliance with the provisions of M.G.L. c. 111F, § 4, and which is manufactured, processed, used or stored in the workplace, but which shall not include alcoholic beverages as defined in M.G.L. c. 138, § 1, or articles intended for personal consumption by employees in the workplace, or consumer articles packaged for distribution to, and used by, the general public, or articles sold or used in retail food establishments and all other retail trade establishments, exclusive of articles used in processing and repair areas, or substances being transported in interstate commerce.

Willful or intentional violation shall mean any deliberate, intentional, or purposeful violation of M.G.L. c. 111F or regulations promulgated thereunder.

Wrongful violation shall mean any violation of M.G.L. c. 111F or of regulations promulgated thereunder, other than a willful or intentional violation.

33.03: Municipal Coordinators

(1) Method of Appointment. A municipal coordinator shall be designated by a written document signed by the chief executive officer of a city or town. The designation document shall be a public record. The chief executive officer shall also designate in the same manner an acting municipal coordinator, who shall be authorized to exercise and perform all rights and duties of the municipal coordinator when the municipal coordinator is absent or incapacitated. The acting municipal coordinator shall be either the fire chief, fire commissioner, public health commissioner or public health officer, or that official who ordinarily assumes the other duties of the municipal coordinator during absence or incapacity, or a member of the board of selectmen in a town which lacks all of the aforesaid officials. The appropriate regional office of the Department shall be informed of the identity, business address, and telephone number of the municipal coordinator and acting municipal coordinator within 15 days of the appointment.

33.03: continued

(2) Requests for filing of MSDS. An employer may at any time be directed to file a copy of any or all MSDS(s) with the municipal coordinator of a community in which a workplace is located by a written request from the municipal coordinator addressed to the employer at that workplace, or other known business address of that employer. An employer must file all requested MSDSs with the municipal coordinator within four working days of receipt of a written request. If an employer fails to provide requested MSDS(s), the Department may provide them to the municipal coordinator upon request.

(3) A municipal coordinator may allow staff and clerical employees acting under his or her direct supervision access to MSDS information for the purpose of performing clerical duties, without notice to employers. A municipal coordinator may allow employees under his or her supervision access to MSDS information for purposes related to the performance of their duties, where the information is directly related to imminent threats to public health or safety such employees may encounter in the course of their duties; upon allowing such access the municipal coordinator shall notify the relevant employer. The supervisor of a municipal coordinator shall have access to MSDS information for purposes related to the supervision of the municipal coordinator, without notice to employers.

(4) Security. Any municipal coordinator who receives copies of any MSDS shall take reasonable measures to segregate all MSDSs from all public records and to safeguard said MSDSs from unauthorized disclosure, and shall provide notice of the consequences of unauthorized disclosure when allowing access to such information. The municipal coordinator shall retain all MSDSs received for a period of at least five years from the date of receipt.

33.04: Filing of MSDS

(1) Any employer who manufactures, uses, processes or stores any hazardous or toxic substance in any workplace (other than a research laboratory exempted under M.G.L. c. 111F and 105 CMR 670.015) shall file a completed copy of each material safety data sheet (MSDS) for each such substance with the Department's regional office for the region in which each such workplace is located. Each MSDS shall contain the information required by M.G.L. c. 111F, § 1 and by 454 CMR 21.06, and shall be identical to the copy maintained by the employer in a central location in the workplace, as required by M.G.L. c. 111F, § 11(a). Where a trade secret claim is made pursuant to M.G.L. c. 111F, § 5, the MSDS shall be identical to the MSDS filed with the Department of Public Health, including the identifying code required by 105 CMR 670.020(C)(9). Each such employer shall attach to each collection of MSDSs an employer identification sheet, which shall contain the following information in the following order:

- (a) the employer's name.
- (b) the workplace address.
- (c) the four digit Standard Industrial Classification (SIC) number for that workplace.
- (d) the employer's mailing address (if different),
- (e) the position title and, when possible, the name of an individual to contact for further information,
- (f) the business and emergency telephone number of the person identified in 310 CMR 33.04(1)(e),
- (g) an estimate of the number of employees at the workplace listed in 310 CMR 33.04(1)(b).

(2) Any employer who receives, compiles, or prepares new or revised information related to a MSDS on file with the Department shall provide an updated MSDS to the Department within six months of obtaining such information. Any employer who receives, compiles, or prepares an MSDS for a substance or mixture that has not been the subject of a previous filing with the Department shall file such MSDS within 30 days of such receipt, compilation, or preparation. An updated employer identification sheet, as described in 310 CMR 33.04(1), shall accompany each filing of new or updated MSDS.

33.04: continued

- (3) The Department at any time may reject as incomplete or inadequate any MSDS which fails to provide all information required under M.G.L. c. 111F, § 1, provided that:
- (a) Where the chemical name, common name, and CAS identification number have been omitted from a MSDS on the basis of a trade secret claim made to or recognized by the Department of Public Health, such MSDS shall be deemed complete with respect to those items, if the words "trade secret" and the identifying code appear on the form, unless and until the trade secret claim is denied by the Department of Public Health and any appeal period has lapsed.
 - (b) Where an employer who does not manufacture the substance has made diligent efforts to obtain complete information, as defined in M.G.L. c. 111F, § 9(b), no action shall be taken against that employer with respect to that information.
- (4) The regional office may keep on file a "master list" copy of MSDSs for toxic or hazardous substances or regulated mixtures, consisting of one completed MSDS for each such substance or mixture prepared by a particular manufacturer, together with an index of all employers who manufacture, use, process, or store regulated substances or mixtures obtained from that manufacturer. The master list may be used as the source of relevant MSDSs released to state or municipal officials or petitioning community residents.

33.05: Release of MSDS to Government Officials

- (1) Departments of Public Health and Labor and Industries. All employers are hereby notified that the Departments of Public Health and Labor and Industries shall have continual access to all MSDSs filed with the Department via interlocking filing systems; thus, copies of all MSDSs filed with the Department have been provided to these agencies upon entry in the system.
- (2) Other Agencies of the Commonwealth. Any other state agency may file a written request for MSDS information.
- (a) Such request shall identify to the extent possible the name and location of each employer to whom the request pertains, and each substance about which information is sought. Where specific identification is not possible, the request should identify categories of employers or substances.
 - (b) The request shall contain a written justification explaining why the information is essential to the performance of a duty to protect public health or safety, including:
 - 1. a reference to the authority to be exercised, and
 - 2. a statement of the actions proposed as performance of such a duty. A statement that the information is essential to determine whether any additional actions are necessary shall be sufficient, if accompanied by a summary of some or all contemplated actions the requesting agency is authorized to take.
 - 3. the specific reasons access to MSDS information is essential.
 - (c) The request shall be filed with the appropriate regional office of the Department.
 - (d) The Department shall make a written determination whether to release any MSDS information. Copies of the determination shall be mailed to the requesting agency and to the relevant employer(s). When an MSDS is released, it shall be accompanied by a statement advising the recipient of the restrictions on disclosure of said MSDS.
- (3) Imminent Threat.
- (a) Where the Department determines that an imminent threat to public health or safety exists, it may release a copy of any relevant MSDS information to any state agency with authority and responsibility to act to respond to such threat, or to the municipal coordinator of the affected municipality. Within five working days of such release, the Department shall prepare a written statement outlining the basis for the determination that an imminent threat existed and notifying the employer of the release of MSDS information.

33.05: continued

(b) Where a municipal coordinator determines that an imminent threat to public health or safety exists, the municipal coordinator may release a copy of any relevant MSDS to any official of the same municipality if the municipal coordinator also determines that immediate access to the MSDS information is critical to the other official's performance of a duty to protect public health or safety (under existing statute, regulation, ordinance or by-law). Within five working days of such release, the municipal coordinator shall prepare a written statement outlining the basis for the determinations that an imminent threat existed and that such immediate access was critical, and notifying the relevant employer(s) of the release. A copy of this statement shall be provided to the Department. The municipal coordinator shall advise the recipient of the restrictions on disclosure of said MSDS at the time of the release.

33.06: Community Petition Process

(1) Filing of Petition. On or after April 1, 1985, a community resident in a city or town in which an employer manufactures, uses, processes, or stores toxic or hazardous substances, who has reason to believe that the utilization of such substances is or may be endangering public health or safety, may file a petition with the municipal coordinator of that community requesting an investigation. The municipal coordinator may establish reasonable procedural rules for the filing of such petitions. Such a petition must include the following:

- (a) The signature, name and residential address of the petitioner;
- (b) A statement that the petition is filed under the provisions of M.G.L. c. Chapter 111F (or the "Right to Know" Law);
- (c) A statement of the petitioner's grounds for belief that the use or presence of toxic or hazardous substances is or may be endangering public health or safety; and
- (d) Any other information or data known to the petitioner which would assist the municipal coordinator in conducting an investigation, including:
 1. the name of the employer(s) who are believed to manufacture, use, process or store the toxic or hazardous substance(s),
 2. the name or names of the toxic or hazardous substance(s), if known to the petitioner;
 3. any information concerning the effects of such substance(s);
 4. any other relevant information or data.

(2) Multiple Signature Petitions.

- (a) A single petition may be submitted by more than one resident, provided that the signature, name and address of each petitioner is included. Such a petition may include a designation of one resident as the representative of all petitioners. Absent such a designation, the community resident whose name appears first on the petition shall be deemed the representative petitioner. Responses to such a petition may be provided to only the representative petitioner. Disclosure of information between and among community residents whose names appear on such a petition is disclosure to persons specifically authorized to receive such information; however, a person whose name is stricken from the petition pursuant to 310 CMR 33.06(3)(a) is not specifically authorized to receive such information.
- (b) A municipal coordinator may consolidate petitions received from more than one resident concerning the same substance(s) and employer(s), provided that:
 1. notification of each petition is provided to the employer(s) within five working days of receipt, and
 2. the response to the consolidated petition is made within the appropriate period of time, measured from receipt of the first such petition, and
 3. each petitioner receives a copy of the response.

33.04: continued

(3) Response by Municipal Coordinator.

(a) Initial review. Upon receipt of a petition the municipal coordinator may within five working days review such petition for compliance with the requirements of 310 CMR 33.06(1)(a),(b), (c) and (d). A petition that fails to meet such requirements may be returned to the petitioner, along with a specification of which requirements are not met. In the case of a multiple signature petition, the municipal coordinator may return the petition to the representative petitioner. Where any names on a multiple signature petition are stricken for failure to provide a signature, name, or address within the community, the municipal coordinator may process the petition on behalf of the remaining petitioners, but must notify the representative petitioner. It shall be the obligation of the representative petitioner receiving such notice to inform those whose names were stricken.

(b) Notice to employer. Within five working days of receipt of a petition not returned under 310 CMR 33.06(1)(a), the municipal coordinator shall notify the relevant employer(s). Such notification must include either a copy of the petition or a brief summary of the petition, identifying the petitioner, the stated grounds of the petition, and any other information provided in the petition. The notice must afford the employer an opportunity to respond to the petition. This opportunity may be limited to material received by the municipal coordinator within a period of time specified in the notice, which shall be no less than four working days.

(c) Investigation. The municipal coordinator may, within 15 working days of receipt of a petition, determine to conduct an investigation of the alleged danger to public health and safety. Such investigation may, but need not, include any of the following measures for which the municipal coordinator has authority under existing statutes, ordinances, or by-laws;

1. requests for further information from the employer or petitioner;
2. inspection of the employer's workplace;
3. collection and analysis of air, water, soil, or discharge samples, including samples of material in the workplace;
4. any other investigatory measure.

Such investigation may also include review of MSDS information, literature research, inquiries to the Department of Public Health or other government agencies concerning the nature and effects of hazardous and toxic substances, and similar investigatory techniques. The investigation, if undertaken, must be completed within ten working days.

(d) Response to petition. At the conclusion of an investigation, if one is conducted, or within 15 working days of receipt of a petition [that is not rejected under 310 CMR 33.06(3)(a)] if no investigation is conducted, the municipal coordinator shall prepare a written response to the petition. The response shall contain the municipal coordinator's determination of whether public health or safety is or may be endangered, and the recommendation of whatever measures, if any, the municipal coordinator believes are needed to protect public health and safety. The response shall include:

1. a summary of the information contained in the petition;
2. a summary of the response, if any, made by the employer(s);
3. a recommendation to the Department on the release of MSDS(s) to the petitioner, according to the standards set forth in 310 CMR 33.06(4)(b);
4. the reasons for the municipal coordinator's determination;
5. a statement of what specific actions (by local or state officials), if any, the municipal coordinator proposes to take or recommend to protect public health or safety; and
6. any other information deemed relevant by the municipal coordinator.
7. the procedure for requesting review of the response by the Department.

(e) Factors in making determination. The municipal coordinator may, but need not, consider any or all of the following factors in making a determination under 310 CMR 33.06(3)(d), based on information then known to the municipal coordinator:

1. the nature and quantity of the hazardous or toxic substance(s) present;
2. the number of people who are being or may be exposed to the substance(s);
3. the proximity of the substances to sensitive populations, public or private drinking water supplies, or other significant potential receptors;

33.06: continued

4. the employer's compliance or non-compliance with existing statutes, regulations, ordinances, or by-laws regulating the public health or safety;
 5. authority vested in the municipal coordinator and in other public officials;
 6. the degree of risk posed by the substance(s), relative to other known public health or safety concerns in the community; and
 7. any other factor deemed relevant by the municipal coordinator.
- (f) Distribution of municipal coordinator's response. Within 15 working days of receipt of a petition [that is not rejected under 310 CMR 33.06(3)(a)], or within ten additional working days if an investigation is conducted, the municipal coordinator shall forward copies of the report to the Department's regional office (for the region in which the community is located) and to the petitioner (or representative petitioner). If an employer requests a copy of the report when making a response to a petition, the municipal coordinator shall also supply a copy of the report to the employer. The municipal coordinator may also provide a copy of the report to any official who has authority to take any action recommended in the report; the petitioner (or representative petitioner) and the employer shall be informed if any such official receives the report.
- (g) Whenever the municipal coordinator determines that public health or safety is endangered, he or she may take whatever action is authorized by existing statute, ordinance, or by-law, to protect to public health or safety.
- (h) Review by the Department. Any petitioning community resident who believes that the municipal coordinator's written response to the petition does not adequately address the matters contained in the petition may, within 15 working days of the date of response, file a written request that the Department review the response. Such a request shall be addressed to the appropriate regional office and shall include:
1. the signature, name and residential address of the resident;
 2. a copy of the petition and any material filed therewith;
 3. a copy of the municipal coordinator's written response; and
 4. a written statement specifying the deficiencies of the municipal coordinator's response.
- A copy of the request shall be filed simultaneously with the municipal coordinator. A single request for review may be filed by more than one resident, if the signature, name, and address of each was included in the original petition. The Department may consolidate requests for review received from more than one resident, provided that notification of each such petition is provided to the relevant employer(s) within five working days of receipt, and that the response to the consolidated petition is made within the appropriate period of time, measured from receipt of the first such petition.
- (4) Action by the Department.
- (a) Release of MSDS(s).
1. Within five working days of receipt of a municipal coordinator's recommendation that an MSDS be released, the regional office of the Department shall notify the relevant employer(s) and afford the employer(s) an opportunity to respond to the recommendation within four working days. If the employer makes a response, the employer shall simultaneously serve a copy of the response upon the petitioning resident or the representative petitioner of a group of petitioners.
 2. If the employer indicates that there is no objection to the release of MSDS information, the Department shall release such information promptly. If the employer makes no response or indicates any objection, the Department within 15 working days of receipt of the municipal coordinator's recommendation shall determine whether release of MSDS information is appropriate as set forth in 310 CMR 33.06(4)(a)3. When the Department also receives a request to review the municipal coordinator's response, the determination may be delayed until the response required by 301 CMR 33.06(4)(b) is issued.
 3. The Department shall not release MSDS information when, based on particular facts, it finds that:
 - a. the request is frivolous, or
 - b. the request is intended to harass the employer(s), or

33.06: continued

- c. the relevant employer(s) or substance(s) cannot reasonably be identified, or
- d. the circumstances on which the petition is based are not rationally related to the release of MSDS information.

A written finding stating the Department's determination shall be provided to the petitioner (or representative petitioner) and the employer. A statement advising the petitioner (or representative petitioner) of the restrictions on disclosure of the information shall accompany any MSDS released. The Department may assess charges for copying MSDSs on the same basis as charges for copying public records.

(b) Review of response of municipal coordinator.

1. Within five working days of receipt of a request for review of a municipal coordinator's response to a petition, the regional office of the Department shall notify the relevant employer(s) of such request and afford the employer(s) an opportunity to respond to the request within four working days.

2. Within 15 working days of receipt of such a request for review, the Department shall review such request, MSDS information, the municipal coordinator's written response, any additional information provided by the municipal coordinator or the employer, and any other relevant information. The Department shall prepare a written response summarizing the information considered, the Department's determination of what actions, if any, it will take to alleviate any danger to public health or safety and the reasons for such determination. In making its determination, the Department may, but need not, consider any or all of the following factors:

- a. the nature and quantity of the hazardous or toxic substances;
- b. the number of people who are being or may be exposed to the substance(s);
- c. the proximity of the substance to sensitive populations, public or private drinking water supplies, or other significant potential receptors;
- d. the employer's compliance or non-compliance with existing statutes, regulations, ordinances, or by-laws regulating the public health or safety;
- e. the Department's authority under existing law;
- f. the degree of risk posed by the substance(s), relative to other known public health or safety concerns in the region; and
- g. any other relevant factor.

3. The Department's written response shall be mailed to the community resident (or representative petitioner) who requested the review, the municipal coordinator, and the employer. A copy of the response may be provided to any official who is requested to take action to protect the public health and safety, provided that no MSDS shall be distributed to any such official absent compliance with the requirements of 310 CMR 33.05.

4. The Department may provide public record information as a part of its response. Such information may be disclosed by the recipient without regard to the provisions of M.G.L. c. 111F, § 21(b). In any transmittal of M.G.L. c. 111F information together with public record information, the information subject to the provisions of M.G.L. c. 111F, § 21(b) shall be clearly segregated from such public record information, and accompanied by a summary of the restrictions on disclosure of such information provided by said § 21(b).

5. The Department may take any action authorized by law to protect the public health or safety in response to a request for review. The Department's authority to act under any law shall not be impaired by any failure in making a written response under 310 CMR 33.06 to identify such an action as a measure to be taken to alleviate any risk to public health and safety. A determination that no action is to be taken shall not operate as a bar to any enforcement action under any statute, nor as a release of any claim or right of action based on conditions existing at the time such determination is made.

33.07: Enforcement Procedures

- (1) Willful violations. Whenever the Department has cause to believe that any employer or manufacturer has willfully and intentionally violated any provision of M.G.L. c. 111F, §§ 16, 17 or 18, or any provision of 310 CMR 33.00, the Department may report such willful and intentional violation to the Attorney General and request that the Attorney General bring an action in the appropriate court of the Commonwealth to restrain such violation and seek available penalties.
- (2) Wrongful violations.
 - (a) Whenever the Department has cause to believe that an employer or manufacturer has wrongfully failed to comply with any provision of M.G.L. c. 111F, §§ 16, 17 or 18, or any provision of 310 CMR 33.00, the Department may within 120 days of such violation, or within 120 days of the date on which knowledge of the violation is obtained, undertake an investigation.
 - (b) Investigations. The Department shall notify the relevant employer or manufacturer of the investigation by certified mail, return receipt requested. The notice shall include a statement detailing the nature of the violation and the date(s) on which it is alleged to have occurred. The notice shall inform the employer or manufacturer that he or she has 20 calendar days in which to respond to the notice, should he or she wish to do so. In conducting an investigation, the Department may consider any relevant information, and may request such information from the employer or manufacturer. The Department shall consider all information received that provides mitigation or extenuation of the violation, including the employer's efforts to obtain information or otherwise comply with the relevant requirements, but shall have no affirmative obligation to develop such information.
 - (c) Determination of good cause. Upon completion of an investigation, the Department shall determine whether good cause exists to believe that a wrongful violation has occurred.
 1. if the Department determines that good cause does not exist to believe that a wrongful violation has occurred, the Department shall notify the employer of such determination in writing within ten days.
 2. if the Department determines that good cause does exist to believe that a wrongful violation has occurred, the Department shall so notify the employer or manufacturer in writing and shall schedule a conference with the employer or manufacturer to attempt to eliminate the violation.
 - (d) Conference, conciliation and persuasion. At the conference the Department and the employer or manufacturer shall agree upon a reasonable schedule of measures to be taken by the employer or manufacturer to eliminate the violation by a specified date. Failure of an employer or manufacturer to attend a conference, to reach an agreement with the Department, or to meet the schedule established, may be a basis for concluding that conference, conciliation, and persuasion have failed to eliminate the violation. A compliance schedule may be amended, by agreement of the parties, for good cause shown.
 - (e) When the Department concludes that conference, conciliation, and persuasion have failed to eliminate a violation, the Department may order such remedial action as may be appropriate. The Department may also request the Attorney General to enforce any such order.
- (3) The failure of an employer or manufacturer to eliminate a violation through conference, conciliation, and persuasion shall not in itself constitute prima facie proof that the violation is or was willful or intentional; however, such a failure may together with other evidence be grounds for concluding that the violation is or was willful or intentional. The Department's decision to pursue elimination of a violation by conference, conciliation or persuasion shall not be a bar to a determination that a violation is or was willful or intentional.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

33.08: Exceptions

- (1) The Commissioner may, by regulation, establish exceptions from specific requirements of 310 CMR 33.00 for classes of substances or mixtures. Any such exception shall not relieve any employer from the obligation to comply with other provisions of 310 CMR 33.00 or the regulations of any other agency under M.G.L. c. 111F.
- (2) Exception from filing requirements. The filing requirement set forth in 310 CMR 33.04 shall not apply to toxic or hazardous substances present in a workplace in the following forms and circumstances:
 - (a) consumer goods (goods primarily used or bought for use by individuals for personal, family or household purposes) when used in the workplace, where,
 1. the toxic or hazardous substances contained therein are not listed as carcinogens, mutagens, teratogens, neurotoxins, or extraordinarily hazardous substances as defined by the Department of Public Health, and
 2. they are not required to be labelled under M.G.L. c. 111F, § 7(b), and
 3. the substance is used in the workplace in such a manner that employee exposure is substantially equivalent to exposures resulting from consumer usage.
 - (b) office supplies, including those materials to be found at an employee's desk or similar work station in an office environment (for example, typewriter correction fluid, ink in pens, and glue), and toner used in photographic or other types of office copying machines, where
 1. the substance is present only in amounts and forms substantially equivalent to the amount and forms generally available to consumers, and
 2. the substance is used in the workplace in such a manner that employee exposure is substantially equivalent to exposures resulting from consumer usage.
 - (c) food stuffs.
 - (d) gasoline, oils and other additives in fuel tanks, engines, and other operating systems of passenger vehicles or light duty trucks, where
 1. the substances are present only in amounts and forms substantially equivalent to the amounts and forms generally available to consumers, and
 2. the substances are used in such a manner that employee exposure is substantially equivalent to exposures resulting from consumer usage.
 - (e) fuel oils number 1, 2, 4, 5, and 6, natural gas, kerosene, petroleum, or propane, where used for space heating or power generation purposes, such that employees are not exposed to fumes or combustion by-products, and all required emission control equipment is used.

33.09: Miscellaneous Provisions

- (1) Authority to act in the name of the Commissioner under M.G.L. c. 111F is hereby delegated to the regional environmental engineer for each regional office of the Department with respect to the following matters arising in that region:
 - (a) initiation of investigation of alleged violation,
 - (b) conference, conciliation and persuasion,
 - (c) administrative orders following the failure of conference, conciliation and persuasion,
 - (d) determinations pertaining to the release of MSDS in response to citizen petitions or requests by government agencies.A person aggrieved by an administrative order or a determination pertaining to release of MSDS information made by a regional environmental engineer may request a review by the Commissioner.
- (2) MSDS information filed with the Department may be reviewed by appropriate personnel of the Department of Environmental Quality Engineering for purposes specifically related to their duties.
- (3) Severability. If any provision of 310 CMR 33.00 shall be held invalid for any reason, either on its face or as applied, such invalidity shall not affect the remaining provisions of 310 CMR 33.00.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

33.09: continued

(4) Effective date. 310 CMR 33.00 shall take effect 90 days after publication in the Massachusetts Register.

REGULATORY AUTHORITY

310 CMR 33.00: M.G.L. c. 111F.

NON-TEXT PAGE

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 36.00: MASSACHUSETTS WATER RESOURCES MANAGEMENT PROGRAM

Section

- 36.01: Authority
- 36.02: Purpose
- 36.03: Definitions
- 36.04: Withdrawals Requiring a Registration Statement
- 36.05: Exemptions
- 36.06: Filing a Registration Statement
- 36.07: Registration Conditions
- 36.08: Modification of a Registration
- 36.09: Transfer of a Registration Statement
- 36.10: Registration Renewal Requests
- 36.11: Annual Statement of Withdrawal for Registrations
- 36.13: Safe Yield
- 36.14: Streamflow Criteria
- 36.16: Withdrawals Requiring a Permit
- 36.17: Effective Dates and Expiration Dates for Permitting by Water Source
- 36.18: Applying for a New or Renewed Permit
- 36.19: Determining Permit Tier for an Application
- 36.20: Site-specific Evaluation
- 36.21: Contents of a Permit Application
- 36.22: Coldwater Fish Resource, Minimization, and Mitigation Planning Requirements
- 36.23: Public Notice Requirements
- 36.24: MEPA Requirements
- 36.25: Incomplete Applications
- 36.26: Application Review
- 36.27: Issuance of Permits
- 36.28: Permit Provisions and Conditions
- 36.29: Permit Amendments, Suspensions, and Terminations
- 36.30: Permit Application Denials
- 36.31: Reporting and Review Requirements for Permits
- 36.33: Transfer of a Permit
- 36.34: Fee Schedule
- 36.35: Nonconsumptive Use Statements
- 36.36: Recognition of Normal Variation for Existing Withdrawals
- 36.37: Appeals
- 36.38: Signatures
- 36.39: Right of Entry
- 36.40: Declaration of Water Supply Emergency
- 36.41: Actions to Resolve a Water Supply Emergency
- 36.42: Duration of a Water Supply Emergency
- 36.43: Orders, Violations and Penalties
- 36.44: Severability

36.01: Authority

310 CMR 36.00 is promulgated by the Department pursuant to the authority granted by M.G.L. c. 21G, § 3 and by M.G.L. c. 30A, §§ 2 and 3. 310 CMR 36.00 should be read together with the Massachusetts Water Management Act, M.G.L. c. 21G, which has many important provisions not repeated in 310 CMR 36.00.

36.02: Purpose

The Commonwealth's water resources are public resources that require sustainable management practices for the well-being and safety of its citizens, protection of the natural environment and for economic growth. 310 CMR 36.00 is intended to establish enforceable standards, criteria and procedures that will enable the Department to comprehensively manage withdrawals above the threshold volume throughout the Commonwealth to ensure an appropriate balance among competing water withdrawals and uses and the preservation of the water resource.

36.02: continued

The Department's current understanding of the impacts of water withdrawals and other human influences on the sustainability of water resources has been informed by technical studies and the MA Executive Office of Energy and Environmental Affairs (EOEEA) Sustainable Water Management Initiative (SWMI). SWMI was convened by EOEEA and involved its environmental agencies, the Department of Environmental Protection, the Department of Fish and Game and the Department of Conservation and Recreation, and public water suppliers, environmental organizations, scientists, policy-makers and planners. SWMI's goal was to develop an approach to sustainable management of the Commonwealth's water resources that balances human and ecological water needs based on the best available science. In November 2012, EOEEA and the environmental agencies issued the *Final Framework Summary for the Massachusetts Sustainable Water Management Initiative*, which provides recommendations for the permitting of water withdrawals under 310 CMR 36.00, including safe yield, streamflow criteria, and permit tiers. These SWMI recommendations informed the 2014 amendments to 310 CMR 36.00.

36.03: Definitions

As used in 310 CMR 36.00, the following terms shall have the following meanings:

Abutter means an owner of land that shares a common boundary or corner with the parcel of land on which a proposed withdrawal is located, including land located directly across a street, road or way. Determination of ownership and common boundary shall be made with reference to the current local tax assessors' records and maps. A street, road or way is not an abutter.

Abutter of Abutter means the owner of a parcel of land that shares a common boundary or corner with land owned by an abutter, including land located directly across a street, road or way. Determination of ownership and common boundary shall be made with reference to the current local tax assessors' records and maps. A street, road or way is not an abutter of abutter. Railroad rights-of-way shall receive notice as abutters or abutters of abutters, but are not abutters for the purpose of determining abutters of abutters.

Act means the Massachusetts Water Management Act, M.G.L. c. 21G.

Annual Statement of Withdrawal means a report filed on a form provided by the Department in accordance with 310 CMR 36.00 stating the volume of raw water withdrawn during the prior year and any other information required by the Department pursuant to a registration statement or permit.

Aquifer means a geologic formation, group of formations or part of a formation that is capable of yielding a significant amount of water, as determined by the Department.

August Median Flow means the median of the August median flows for the period of record described by the U.S. Geological Survey in *Indicators of Streamflow Alteration, Habitat Fragmentation, Impervious Cover, and Water Quality for Massachusetts Stream Basins* (Weiskel *et al.*, 2010, USGS SIR 2009-5272).

August Net Groundwater Depletion means the unimpacted median monthly flow for August minus 2000-2004 groundwater withdrawals plus 2000-2004 groundwater returns described by the U.S. Geological Survey in *Indicators of Streamflow Alteration, Habitat Fragmentation, Impervious Cover, and Water Quality for Massachusetts Stream Basins* (Weiskel *et al.*, 2010, USGS SIR 2009-5272).

Authorized Withdrawal means:

- (a) that volume of water that is registered, permitted or both; or
- (b) that volume of water for which a nonconsumptive use statement has been accepted by the Department.
- (c) The volume of an authorized withdrawal in a registration statement or permit is expressed as an annual average daily volume calculated by dividing the total annual withdrawal by the number of days of operation during the year.

36.03: continued

Baseline means the volume of water withdrawn during calendar year 2005 plus 5%, or the average annual volume withdrawn from 2003 through 2005 plus 5%, whichever is greater, provided that:

- (a) baseline cannot be less than a permittee's registered volume;
- (b) baseline cannot be greater than the permittee's authorized volume for 2005; and
- (c) if, during the period from 2003 to 2005, the permittee's withdrawals from the water source were interrupted due to contamination of the source or construction of a treatment plant, the Department will use best available data to establish a baseline volume from the water source.

For permittees with withdrawals in only one water source, baseline will be calculated for the withdrawals in that water source. For permittees with withdrawals in more than one water source, the Department will calculate a separate baseline for withdrawals from each water source, and a system-wide baseline based on the volume of water withdrawn from all water sources, using the methodology outlined above.

Biological Category is defined at 310 CMR 36.14(1)(a).

Bioperiod means specified periods during the year that correspond to fish life stages or critical biological processes (e.g., spawning, incubation, rearing, growth, migration, overwintering) based on *Characteristics and Classifications of Least Altered Streamflows in Massachusetts* (Armstrong *et al.*, 2008, USGS SIR 2007-5291).

Coldwater Fish Resources means waters that the MA Division of Fisheries and Wildlife has identified support cold water fish.

Commission means the Water Resources Commission of the Executive Office of Energy and Environmental Affairs.

Commissioner means the Commissioner of the Department of Environmental Protection.

Department means the Department of Environmental Protection.

EOEEA Agencies means the MA Executive Office of Energy and Environmental Affairs (EOEEA), the Department of Fish and Game and the Department of Conservation and Recreation.

Existing Withdrawal means the average volume of water withdrawn from a particular water source between January 1, 1981 and December 31, 1985 provided:

- (a) That if, during such period of five years, withdrawals were interrupted due to contamination of the water source, the periods of such interruptions were excluded *pro rata* from the computation of existing withdrawal;
- (b) That a registration statement was filed with the Department in accordance with M.G.L. c. 21G, §§ 5 and 6, and 310 CMR 36.04 and 36.06, and has been renewed and maintained in accordance with 310 CMR 36.07 through 36.10; and
- (c) That an annual statement of withdrawal has been filed with the Department in accordance with 310 CMR 36.11.

Feasible means capable of implementation taking into consideration the anticipated environmental improvement, cost, available technology and the permittee's legal authority to implement the alternative or action.

Firm Yield means a simulated estimate of the water volume available in a reservoir or reservoir system during drought conditions, as approved by the Department. Firm yield is determined using the response of the reservoir to the drought of record. If the applicant has a drought management plan that details specific steps to be taken in response to droughts and the means to measure results, the Department will consider the response of the source(s) to the best approximation of a one-in-20 year drought. The reservoir system's firm yield derived from this analysis will then become the basis for permitting maximum annual withdrawals from the reservoir(s).

36.03: continued

Fluvial Fish means fish living in a stream or river that are dependent upon flow during one or more stages in their life cycle.

Groundwater Withdrawal Category is defined at 310 CMR 36.14(1)(b).

MEPA means the Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61 through 62H, implemented by 301 CMR 11.00: *MEPA Regulations*.

Minimization means measures that reduce withdrawals from, or return groundwater to, the subbasin or river basin from which a withdrawal is made, or other management measures intended to improve streamflow.

Mitigation means activities undertaken that offset the impacts of ground or surface water withdrawals by improving streamflow or aquatic habitat.

Multi-Year Drought Storage means a registrant's reservoir capacity, as determined by the Department, of not less than two times the sum of a registrant's authorized withdrawal and any required reservoir release established by statute, regulation, permit or other approval issued by a state or federal agency. Multi-Year Drought Storage does not include the volume of water below intake elevations.

New Withdrawal means any withdrawal of water that is not authorized by a registration.

Nonconsumptive Use means any use of water which results in its being discharged back into the same water source at or near the withdrawal point in substantially unimpaired quality and quantity.

Nonconsumptive Use Notification Statement means a report filed with and approved in writing by the Department, describing the volume of water withdrawn and demonstrating that the use is nonconsumptive.

Nonessential Outdoor Water Use means a use that is not required:

- (a) for health or safety reasons, including public facilities used for cooling such as splash pads and swimming pools, and for washing of boats, engines, or marine equipment to prevent negative saltwater impacts or the transfer of invasive aquatic species;
- (b) by permit, license, statute or regulation;
- (c) for the production of food, including vegetable gardens, and fiber;
- (d) for the maintenance of livestock;
- (e) to meet the core functions (those functions essential to the commercial operations) of a business, including but not limited to:
 - 1. plant nurseries as necessary to maintain stock;
 - 2. golf courses as necessary to maintain greens and tees, and limited fairway watering per 310 CMR 36.07(2)(c)2.a. through c.;
 - 3. venues used for weddings or similar special events that limit watering to hand-held hose or drip irrigation as necessary to maintain gardens, flowers and ornamental plants;
 - 4. professional washing of exterior building surfaces, parking lots, driveways and/or sidewalks as necessary to apply surface treatments such as paint, preservatives, stucco, pavement, or cement in the course of construction, reconstruction or renovation work;
- (f) for irrigation of public parks before 9:00 A.M. and after 5:00 P.M.,
- (g) for irrigation of public and private recreation fields, including those operated by schools, colleges, universities and athletic associations, before 9:00 A.M. and after 5:00 P.M.,
- (h) for irrigation of publicly-funded shade trees and trees in the public right-of-way; or
- (i) to establish a new lawn as necessary to stabilize soil in response to new construction or following the repair or replacement of a Title 5 system.

Permit means a permit issued by the Department under M.G.L. c. 21G, § 7, authorizing a new withdrawal.

36.03: continued

Permit Tier means a tier to which a permit application is assigned based on the size of the requested withdrawal volume relative to the applicant's baseline, and the potential for any increase in withdrawal above the applicant's baseline to contribute to a change in the biological category or groundwater withdrawal category of the subbasin(s) from which the withdrawal is made.

Person means any agency, district, or political subdivision of the federal government or the Commonwealth, any state, public or private corporation or authority, individual, trust, firm, joint stock company, partnership, association, or other entity, and any officer, employee or agent of said person, and any group of said persons.

Public Water Supplier means a person that operates a public water system.

Public Water System means a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year.

Q_{90} means a statistical flow value that is exceeded 90% of the time over the period of record. The annualized Q_{90} flow is the mean of the monthly Q_{90} flows.

Raw Water means water that is withdrawn from a source prior to treatment or distribution.

Redundant Well means a well/wellfield constructed after November 7, 2014, and used only to withdraw groundwater pursuant to a registration, provided:

- (a) that is constructed to address a public health and safety concern or provide a net environmental benefit;
- (b) that is located within the same Natural Resources Conservation Service Hydrologic Unit Code 12-digit Scale Watershed (HUC-12) as the original source in the registration; and
- (c) that withdrawals from which, in combination with withdrawals from the withdrawer's registered wells/wellfields within the HUC-12, shall not exceed the annual average withdrawals for the three years prior to filing a permit application for the redundant well.

Registrant means any person who holds a registration statement accepted by the Department and maintains the registration statement in accordance with 310 CMR 36.07 through 36.11, including a voluntary registration statement.

Registration Statement means a renewable statement of an existing withdrawal filed on or before January 1, 1988 with the Department in accordance with M.G.L. c. 21G, § 5, and 310 CMR 36.06, and renewed and maintained in accordance with 310 CMR 36.07 through 36.11.

Replacement Well means a new well(s)/wellfield installed to replace or supplement an approved well(s)/wellfield where the proposed new well(s)/wellfield will be situated within 250 feet of the original well(s)/wellfield and have a pumping rate equal to or less than that of the original well(s)/wellfield. Replacement wells must be installed in the same unconsolidated geologic formation as the original approved well(s)/wellfield. Criteria used to determine the location of replacement wells shall include but not be limited to the following: the extent to which negative environmental impacts caused by the existing well can be minimized; the degree to which replacement wells alter the existing groundwater hydraulics or Zone II boundaries; and the degree to which significant potential contamination threats can be lessened. Replacement wells shall not significantly alter the existing groundwater hydraulics or Zone II boundaries. Replacement wells are subject to the new source approval requirements as set forth in 310 CMR 22.00: *Drinking Water*.

For the purposes of M.G.L. c. 21G and 310 CMR 36.00, a well will only be considered to be a replacement well if the total water produced by the original source and all its replacement sources does not exceed the approved pumping rate of the original source.

Safe Yield means the maximum dependable withdrawals that can be made continuously from a water source including ground or surface water during a period of years in which the probable driest period or period of greatest water deficiency is likely to occur; provided, however, that such dependability is relative and is a function of storage and drought probability. The Department's method for calculating and applying safe yield is described at 310 CMR 36.13.

36.03: continued

Seasonal Groundwater Withdrawal Category is defined at 310 CMR 36.14(1)(c).

Secretary means the Secretary of the Executive Office of Energy and Environmental Affairs.

Streamflow Criteria are defined at 310 CMR 36.14.

Subbasin means the 1,395 subbasins delineated by the U.S. Geological Survey in *Indicators of Streamflow Alteration, Habitat Fragmentation, Impervious Cover, and Water Quality for Massachusetts Stream Basins* (Weiskel *et al.*, 2010, USGS SIR 2009-5272), unless otherwise specifically provided.

Threshold Volume means an average daily withdrawal volume of 100,000 gallons for any period of three consecutive months, from a total withdrawal of not less than 9,000,000 gallons.

Unimpacted Median Monthly Flow means the estimated near natural median monthly streamflow over a simulated 44-year period generated by *The Massachusetts Sustainable Yield Estimator: A decision support tool to assess water availability at ungaged stream locations in Massachusetts* (Archfield *et al.*, 2009, USGS SIR 2009-5227).

Voluntary Registration Statement means a renewable statement of an existing withdrawal below the threshold volume, but in excess of 10,000 gallons per day, from a single water source, filed on or before July 1, 1991 with the Department in accordance with M.G.L. c. 21G, § 5, and 310 CMR 36.06, and renewed and maintained in accordance with 310 CMR 36.07 through 36.11.

Water means all water beneath or on the surface of the ground whether wholly or partly within the Commonwealth.

Water Resources Management Official means the local official, designated by the chief elected official within a city or town, or the chief elected official in that city or town if no water resources management official has been designated, responsible for submitting and administering the water resources management plan in that city or town.

Water Resources Management Plan means:

- (a) a local plan to meet water needs within a city or town, developed pursuant to planning guidance issued by the Commission, submitted by the water resources management official to the Commission, and approved by the Commission; or
- (b) absent planning guidance from the Commission, a local plan to meet water needs within a city or town deemed complete by the Commission.

Water Source means any natural or artificial aquifer or body of surface water, including its watershed where ground and surface water are interconnected in a single hydrological system. For the purposes of 310 CMR 36.00, water sources are the river basins delineated by the Commission at 313 CMR 4.03: *Delineation of River Basins*.

Water Supply Emergency Plan means a plan prepared by a public water supplier in accordance with 310 CMR 36.40(5).

Well means a bored, drilled, or driven shaft, or a dug hole, whose depth is greater than its largest surface diameter.

Withdrawal Point means any well or intake structure used to withdraw water from a water source.

Withdrawal or Withdrawal of Water means the removal or taking of water for any purpose from a water source.

36.04: Withdrawals Requiring a Registration Statement

- (1) Except as provided in 310 CMR 36.05, any person with an existing withdrawal in excess of the threshold volume from a single water source was required to file a registration statement with the Department on or before January 1, 1988.

36.04: continued

- (2) Any person with an existing withdrawal below the threshold volume, but in excess of 10,000 gallons per day, from a single water source was allowed to file a voluntary registration statement with the Department on or before July 1, 1991.
- (3) Where two or more withdrawal points were controlled by the same person, a single registration statement per water source containing documentation on each withdrawal point was to be filed with the Department.
- (4) For the purposes of calculating the total existing withdrawal volume from each water source, the specific withdrawal volumes of all withdrawal points controlled by that person shall be combined, to obtain the total consumptive withdrawal volume.
- (5) For purposes of calculating the total existing withdrawal volume from a water source, transfers of water from a different water source shall not be included.

36.05: Exemptions

The following withdrawals are exempt from the registration and permit requirements of M.G.L. c. 21G and 310 CMR 36.00, but may otherwise be regulated by 310 CMR 36.00.

- (1) Nonconsumptive Use. A withdrawal or any portion of a withdrawal that constitutes a nonconsumptive use, as approved in writing by the Department in accordance with 310 CMR 36.35.
- (2) Withdrawals in Compliance with Federal Superfund and/or Massachusetts Contingency Plan Requirements. A withdrawal that is in compliance with written instructions of an On-scene Coordinator pursuant to 33 CFR Part 153: *Control of Pollution by Oil and Hazardous Substances, Discharge Removal* and 40 CFR Part 300, Subchapter J: *Superfund, Emergency Planning, and Community Right-to-know Programs*, Subparts B and C, or a withdrawal conducted as an Immediate Response Action in compliance with M.G.L. c. 21E and the regulations promulgated thereunder at 310 CMR 40.0000: *Massachusetts Contingency Plan*.
- (3) Withdrawals of Brackish or Saline Water. A withdrawal where the water to be withdrawn is brackish or saline due to the influence of the ocean, as defined by the following ranges of specific conductivity, shall be exempt from the need to obtain a permit pursuant to M.G.L. c. 21G and 310 CMR 36.00.
 - (a) Fresh water: less than 1,000 umhos/cm;
 - (b) Brackish water: at least 1,000 but less than 10,000 umhos/cm;
 - (c) Saline water: at least 10,000 but less than 100,000 umhos/cm.

Where there is the potential for the withdrawal to be of fresh water in excess of the threshold volume, the person making or planning to make the withdrawal shall submit a written request to the Department for a determination of applicability of M.G.L. c. 21G to the withdrawal. Such request shall be accompanied by a proposed sampling plan, for written approval by the Department, that will provide data representative of the withdrawal the person is making or plans to make.

36.06: Filing a Registration Statement

- (1) Registration statements must be submitted on forms established by the Department and filed in accordance with the requirements of 310 CMR 4.00: *Timely Action Schedule and Fee Provisions* and 310 CMR 36.00.
- (2) Every registration statement must contain, at a minimum:
 - (a) documentation of the actual or estimated amounts of water withdrawn;
 - (b) the use for which the water is being withdrawn;
 - (c) an identification of the water source and specific part of a water source from which the withdrawal is being made, in sufficient detail to describe the water source adequately;
 - (d) the locations of all withdrawal points;

36.06: continued

- (e) the volume of the withdrawal; provided however, that persons whose volume of withdrawals varies seasonally according to an established pattern shall describe that variation;
- (f) conservation measures instituted, or to be instituted, by the registrant;
- (g) the point or points at which the water is discharged after use; and
- (h) any other information requested by the Department relative to the withdrawal, use and discharge.

(3) Any registrant who must estimate the amount of its withdrawal shall do so in accordance with guidelines established by the Department.

36.07: Registration Conditions

(1) The registrant shall comply at all times with the requirements and conditions imposed by the Department, M.G.L. c. 21G, and 310 CMR 36.00, and all other applicable state and federal statutes and regulations.

(2) The registrant shall comply with the following conditions on a registered withdrawal when imposed by the Department in a registration statement:

- (a) the installation of flow meters within a specified time;
- (b) the accurate recording and reporting annually of the quantity of the water that is being withdrawn; and
- (c) restrictions on Nonessential Outdoor Water Use as follows:
 - 1. For withdrawals not described in 310 CMR 36.07(2)(c)2. or 3., as soon as possible but no later than 24 months after issuance of the registration statement, the registrant shall establish enforceable restrictions limiting nonessential outdoor water use. Such restrictions shall be in place during a drought declaration by the Secretary for the drought region, county or watershed where the registrant's withdrawals are located, and nonessential outdoor water use shall be restricted as follows:
 - a. Level 1 (Mild Drought). All nonessential outdoor water uses restricted to no more than one day per week, before 9:00 A.M. and after 5:00 P.M., except that watering of ornamentals and flower gardens with drip irrigation, hand-held hose or watering cans may be permitted.
 - b. Level 2 (Significant Drought). All nonessential outdoor water uses banned, except that watering of ornamentals and flower gardens with drip irrigation, hand-held hose or watering cans may be permitted.
 - c. Level 3 (Critical Drought) or Level 4 (Drought Emergency). All nonessential outdoor water uses are banned.
 - 2. For withdrawals for the maintenance of golf course greens, tees, fairways, and roughs during a drought declaration by the Secretary for the drought region, county or watershed where the registrant's withdrawals are located, registrants shall comply with the following restrictions on nonessential outdoor water use:
 - a. Level 1 (Mild Drought). Irrigation of fairways shall be reduced to 80% of normal, irrigation of roughs shall be reduced to 50% of normal, and there shall be no irrigation of landscaping and ornamentals.
 - b. Level 2 (Significant Drought). Irrigation of fairways shall be reduced to 60% of normal, and there shall be no irrigation of roughs, landscaping and ornamentals.
 - c. Level 3 (Critical Drought) or Level 4 (Drought Emergency). Irrigation of fairways shall be reduced to 40% of normal, and there shall be no irrigation of roughs, landscaping and ornamentals.
 - 3. A registrant that only withdraws from surface water supplies with Multi-Year Drought Storage, as determined by the Department, may implement nonessential outdoor water use restrictions in accordance with an accepted drought management plan instead of the restrictions described in 310 CMR 36.07(2)(c)1. Such registrants shall submit a plan for acceptance within two years of their first registration renewal after January 20, 2023 and shall submit an updated plan with each renewal registration request thereafter. The Department will accept plans that establish nonessential outdoor use restrictions that are sufficiently protective of public health and safety, reservoir capacity, and any required releases, and that meet the following criteria:

36.07: continued

- a. drought stages determined by:
 - i. actual or modeled historical reservoir levels used to trigger drought stages using a time series that includes the system drought of record; or
 - ii. days of supply remaining based on reservoir volume and days of supply remaining at seasonal levels of demand with low inflow and precipitation; or
 - iii. predicted reservoir drawdown and refill probabilities determined using software and/or appropriate models; or
 - iv. a functionally equivalent method to 310 CMR 36.07(2)(c)3.a.i., ii. or iii.;
 - b. response actions triggered at each drought stage including, but not limited to, enforceable restrictions limiting nonessential outdoor water use;
 - c. protocols for communicating drought stages and enforceable restrictions to the public, the Department, and other state and local officials;
 - d. a strategy for establishing local enforcement authority and penalties for violations of the restrictions;
 - e. a system to monitor and document water use reductions; and
 - f. details of any required reservoir release established by statute, regulation, permit or other approval issued by a state or federal agency.
4. For withdrawals described in 310 CMR 36.07(2)(c)1. and 2., restrictions at least as restrictive as those in 310 CMR 36.07(2)(c)1. and 2., respectively, shall remain in place for the declared drought level until the drought level is changed by the Secretary.
 5. Nothing in the registration shall prevent the registrant from implementing nonessential outdoor water use restrictions that are more stringent than those set forth in 310 CMR 36.07(2)(c)1. through 4.
 6. If the registrant holds both a registration and a permit that include seasonal restriction on nonessential outdoor water use, then the nonessential outdoor water use restrictions in the permit shall be controlling.
- (3) All registrants shall file the annual statement of withdrawal as specified in 310 CMR 36.11.
 - (4) All registrants wishing to renew registration statements shall file a renewal registration request as specified in 310 CMR 36.10.
 - (5) The Department may impose planning, recording, and reporting requirements necessary to implement the conditions described in 310 CMR 36.07(2).

36.08: Modification of a Registration

- (1) The Department may modify a registration statement in its sole discretion or at the request of the registrant to:
 - (a) add a replacement well or replacement surface water intake on a registered surface water withdrawal point;
 - (b) remove a withdrawal point that has been abandoned in accordance with 310 CMR 22.25: *Abandonment of Water Supply Sources*; or
 - (c) for a cranberry cultivation registration, add or change conditions, when appropriate, that reflect the implementation of best management practices, including the use of tailwater recovery, water control structures, sprinkler irrigation systems, land smoothing, and construction of dikes.
- (2) Any request by a registrant to modify a registration statement shall be made on forms provided by the Department and shall include the applicable fee established in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

36.09: Transfer of Registration Statement

- (1) Any person who has an unexpired registration statement may request a transfer of the Registration Statement, in whole or in part, to another person by submitting a request to the Department at least 30 days before the date of transfer. The request shall include a copy of a written agreement between the registrant and the transferee that transfers responsibility for the registration, and a certification by the transferee that there will be no significant change in use,

36.09: continued

source, location of the withdrawal, or discharge of the registered volumes. The transferee must agree to accept all the provisions and conditions of the registration statement and the agreement must state a specific date for transfer of responsibility between them.

(2) The Department may deny a requested transfer and require a permit if the Department determines that the proposed transfer will result in a significant change in the use, source, location of the withdrawal, discharge of the registered volumes, or otherwise result in a significant modification of the registration.

(3) Registrations for cranberry cultivation verified using the results of the Cranberry Water Use Study may be transferred as provided in 310 CMR 36.09 only if the transfer is for continued cranberry cultivation. Cranberry registrations may not be transferred for any other uses unless the registered volume has been verified based on actual water use at the bog(s) to be transferred.

(4) Each request for a transfer of a registration shall include the applicable fee established in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

(5) If the registrant transfers an operation that is dependent on the registered withdrawal and does not transfer the registration, the transferee of the operation shall not make any withdrawal in excess of the threshold volume unless and until the transferee obtains a permit.

36.10: Registration Renewal Requests

(1) No person shall continue a registered withdrawal after the registration expires unless that person has filed a timely registration renewal request with the Department.

36.10: continued

(2) Registration Statements initially became effective on January 1, 1988. All Registration Statements have a ten-year term. Requests to renew a registration statement must be submitted on forms provided by the Department and be received by the Department six months prior to the expiration date. Each request for a renewal must include the applicable fee established in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

(3) The Department shall accept any request to renew a registration statement that complies with the provisions of 310 CMR 36.06, 36.07, 36.10 and 36.11 and is timely filed. Upon the filing of a request for renewal by the date established in 310 CMR 36.10(2), and demonstration of compliance with the requirements of the expiring registration statement, such person shall be entitled to continue the existing withdrawal for a period of ten additional years.

(4) No person who fails to file a request to renew a registration statement or is notified that the Department has denied a request for renewal shall continue to withdraw water in an amount over the threshold volume after the registration statement expires unless and until that person obtains a permit from the Department.

36.11: Annual Statement of Withdrawal for Registrations

Each registrant shall complete and submit to the Department an annual statement of withdrawal on a form provided by the Department by the date specified on the form. The Department may terminate a registration if a registrant fails to file a complete and accurate annual statement of withdrawal in a timely manner.

36.13: Safe Yield

(1) Safe yield of a water source is calculated as 55% of the drought basin yield plus the reservoir storage volume, if any, for that water source. For the purposes of calculating safe yield:

- (a) drought basin yield is the annualized Q_{90} streamflows in a water source based on averaging estimated near natural monthly Q_{90} streamflows. It is an estimation of the water that would be available in an unimpacted river basin during the probable driest period that is likely to occur; and
- (b) reservoir storage volume is the modeled volume of water remaining in reservoir storage at the end of a simulated one-year drought comprised of annualized monthly Q_{90} flows, calculated as available storage minus any registered or permitted withdrawals and any required release volume; and
- (c) reservoir storage volume is capped at the firm yield of the reservoir.

(2) Should registered volumes for a water source, taking into account any determinations made by the Department pursuant to 310 CMR 36.27(4), exceed safe yield, no additional volumes of water will be available through permitting. Where such registered volumes do not exceed safe yield there is no presumption that withdrawals will be permitted. The allocation of water available for permitting within the safe yield will be determined, and may be limited by, application of streamflow criteria, statutory and regulatory requirements, and site-specific considerations pursuant to M.G.L. c. 21G and 310 CMR 36.00.

(3) Safe yield, reservoir storage volume(s), total registered volumes and currently permitted volumes for each water source will be published on the Department's website.

(4) In a water source where reservoir storage volume is a factor in determining safe yield, reservoir storage volumes are available only to those permittees with legal access to the reservoir(s).

(5) For water sources where an estimate of near natural annualized Q_{90} streamflow is not applicable because the water source is groundwater-driven (the southern portion of South Coastal, Cape Cod, Islands, and portions of Buzzards Bay), safe yield is determined through analysis of water available during the probable driest period through groundwater recharge for each water source.

36.14: Streamflow Criteria

(1) Streamflow criteria are established by the categories described at 310 CMR 36.14(1)(a) through (c), which describe the modeled 2000-2004 existing conditions at the subbasin scale across a gradient of alteration from least to most altered for five bioperiods: early summer (May-June), late summer (July through September), fall (October and November), winter (December through February) and spring (March and April). The streamflow criterion for each category is the upper limit of the ranges shown at 310 CMR 36.14(1)(a) through (c). Withdrawals that contribute to a subbasin changing to a more altered category do not meet streamflow criteria and will only be permitted if the permittee demonstrates that there is no feasible alternative available to meet demonstrated water needs, and the permittee undertakes mitigation commensurate with the impacts of the withdrawal to the greatest extent feasible.

(a) Biological Category for each subbasin is based on the simulated 2000-2004 existing condition of aquatic habitat using fluvial fish community characteristics as the surrogate indicator variable. Each biological category represents the percent alteration within the range of these fluvial fish community characteristics as a function of the following subbasin parameters:

1. impervious cover;
2. cumulative groundwater withdrawal as a portion of the unimpacted August median flow;
3. stream channel slope; and
4. percent wetland within the stream buffer area.

Simulated Alteration of Fluvial Fish Community Characteristics.

- Biological Category 1: 0% to 5%
- Biological Category 2: >5% to 15%
- Biological Category 3: >15% to 35%
- Biological Category 4: >35% to 65%
- Biological Category 5: >65%

(b) Groundwater Withdrawal Category for each subbasin is based on the ratio of the 2000-2004 groundwater withdrawal volume to the unimpacted median monthly flow for August and represents conditions during the late summer bioperiod (July through September). Each groundwater withdrawal category represents the range of this ratio that would result in the biological category of the same number under conditions of low (1%) impervious cover.

Simulated Groundwater Withdrawal Ratio for the Late Summer Bioperiod.

- Groundwater Withdrawal Category 1: 0% to 3%
- Groundwater Withdrawal Category 2: >3% to 10%
- Groundwater Withdrawal Category 3: >10% to 25%
- Groundwater Withdrawal Category 4: >25% to 55%
- Groundwater Withdrawal Category 5: >55%

(c) Seasonal Groundwater Withdrawal Categories for each subbasin are based on the ratio of the 2000-2004 groundwater withdrawal volume to the unimpacted median monthly flow for the four other bioperiods below.

Seasonal Groundwater Withdrawal Ratios for Additional Bioperiods

	Fall (Oct-Nov)	Winter (Dec-Feb)	Spring (March-April)	Early Summer (May-June)
Seasonal Category 1:	0% to 3%	0% to 3%	0% to 3%	0% to 3%
Seasonal Category 2:	>3% to 5%	0% to 3%	0% to 3%	>3% to 5%
Seasonal Category 3:	>5% to 15%	>3% to 10%	>3% to 10%	>5% to 15%
Seasonal Category 4:	feasible mitigation and improvement/no numeric criteria			
Seasonal Category 5:	feasible mitigation and improvement/no numeric criteria			

(2) Streamflow criteria have not been established for groundwater-driven water sources (the southern portion of South Coastal, Cape Cod, Islands, and portions of Buzzards Bay).

36.16: Withdrawals Requiring a Permit

- (1) Unless exempted by 310 CMR 36.05, the following withdrawals require a permit:
- (a) for persons with no registration or permit for withdrawals within the water source, a withdrawal that exceeds the threshold volume;

36.16: continued

- (b) for persons with a registration for withdrawals within the water source, a withdrawal of more than the threshold volume in excess of a registered volume;
- (c) for persons with a permit for withdrawals within the water source, any unregistered withdrawal in excess of the volume authorized in the permit; and
- (d) redundant wells.

(2) No person may commence construction of any building or structure or commence any other activity that may require that person to make a withdrawal described in 310 CMR 36.16(1) without first applying for and obtaining a permit for that withdrawal from the Department.

(3) Water withdrawals used for the following activities are presumed to withdraw less than the threshold volume and do not require a permit, unless the Department determines otherwise.

(a) Cranberry Cultivation.

1. Each person not certified by the Natural Resource Conservation Service as using best management practices and who irrigates less than or equal to 4.66 acres of bogs in excess of any registered acreage within one water source;
2. Each person certified by the Natural Resource Conservation Service as employing best management practices and who irrigates less than or equal to 9.3 acres of bogs in excess of any registered acreage within one water source;

(b) Golf Courses.

1. Irrigation of less than 23 acres for a golf course during the period of initial vegetation grow-in or 36 months from planting, whichever period is longer;
2. Irrigation of less than 35 acres of golf course with mature established turf.

36.17: Effective Dates and Expiration Dates for Permitting by Water Source

(1) For each water source, the date on which these regulations took effect (effective date), the date on which the first set of permits did or will expire (first expiration date), and the expiration date for the second set of permits (second expiration date) are as follows:

<u>Water Source</u>	<u>Effective Date</u>	<u>First Expiration Date</u>	<u>Second Expiration Date</u>
Hudson Basin	August 31, 1988	August 31, 2008	December 6, 2033 ^{1,2}
Blackstone Basin	February 28, 1989	February 28, 2009	June 5, 2034 ^{1,2}
Charles Basin	February 28, 1989	February 28, 2009	June, 5, 2034 ^{1,2}
Ipswich Basin	August 31, 1989	January-March 2015 ¹	August 31, 2029
North Coastal Basin	August 31, 1989	August 31, 2009	December 6, 2034 ^{1,2}
Boston Harbor Basin	February 28, 1990	February 28, 2015 ¹	June 5, 2031 ²
Taunton Basin	February 28, 1990	February 28, 2015 ¹	June 5, 2031 ²
South Coastal Basin	August 31, 1990	August 31, 2015 ¹	December 6, 2031 ²
Cape Cod Basin	November 30, 1990	November 30, 2014 ¹	March 6, 2032 ²
Islands Basin	February 28, 1991	February 28, 2015 ¹	June 4, 2032 ²
Buzzards Bay Basin	May 31, 1991	May 31, 2015 ¹	September 4, 2032 ²
Concord Basin	August 31, 1991	August 31, 2015 ¹	December 6, 2032 ²
Ten Mile Basin	November 30, 1991	November 30, 2015 ¹	November 30, 2031
Deerfield Basin	February 29, 1992	February 29, 2016 ¹	June 4, 2033 ²
Housatonic Basin	May 31, 1992	May 31, 2016 ¹	May 31, 2032
Farmington Basin	August 31, 1992	August 31, 2016 ¹	August 31, 2032
Westfield Basin	November 30, 1992	November 30, 2016 ¹	November 30, 2032

¹ Expiration dates extended by four years by St. 2010, c. 240, as amended by St. 2012, c. 238, collectively known as the Permit Extension Act.

² Permit expiration dates extended by 462 days by the Governor's COVID-19 Order No. 42, "Order Resuming State Permitting Deadlines and Continuing to Extend the Validity of Certain State Permits," July 2, 2020.

36.17: continued

<u>Water Source</u>	<u>Effective Date</u>	<u>First Expiration Date</u>	<u>Second Expiration Date</u>
Millers Basin	February 28, 1993	February 28, 2017 ¹	February 28, 2033
Chicopee Basin	May 31, 1993	May 31, 2017 ¹	May 31, 2033
Quinnebaug Basin	August 31, 1993	August 31, 2017 ¹	August 31, 2033
Connecticut Basin	November 30, 1993	November 30 2017 ¹	November 30, 2033
Nashua Basin	February 28, 1994	February 28, 2018 ¹	February 28, 2034
French Basin	May 31, 1994	May 31, 2018 ¹	May 31, 2034
Shawsheen Basin	August, 31, 1994	August 31, 2018 ¹	August 31, 2034
Merrimack Basin	November 30, 1994	November 30, 2018 ¹	November 30, 2034
Parker Basin	February 28, 1995	February 28, 2019 ¹	February 28, 2035
Narragansett Basin	May 31, 1995	May 31, 2019 ¹	May 31, 2035

¹Expiration dates extended by four years by St. 2010, c. 240, as amended by St. 2012, c. 238,

² Permit expiration dates extended by 462 days by the Governor's COVID-19 Order No. 42, "Order Resuming State Permitting Deadlines and Continuing to Extend the Validity of Certain State Permits," July 2, 2020.

(2) Except for the Hudson, Blackstone, Charles and North Coastal basins, subsequent expiration dates for each water source will automatically reset in 20-year increments calculated from the second expiration date listed at 310 CMR 36.17(1). For the Hudson, Blackstone, Charles and North Coastal basins, the third expiration date will be August 31, 2048, February 28, 2049, February 28, 2049 and August 31, 2049 respectively, and subsequent expiration dates for those water sources will automatically reset in 20-year increments calculated from their third expiration date.

(3) The Department may establish a new expiration date for a water source by amending 310 CMR 36.00 at any time. Any such amendment shall provide six months notice of the new expiration date for the water source.

36.18: Applying for a New or Renewed Permit

(1) Each person required to obtain or renew a permit shall file a permit application on forms and in a manner prescribed by the Department. Each application shall be filed according to the procedures outlined in 310 CMR 36.00. Each application shall contain the information required by 310 CMR 36.18 through 36.24 that is applicable to the requested withdrawal.

(a) For new permits, applications may be submitted to the Department at any time.

(b) For permit renewals, at least 12 months, but no sooner than 14 months, prior to the permit expiration date, a permit holder who wishes to renew a permit shall submit an application for renewal.

(c) An application is filed when it is received by the Department.

(2) Where two or more withdrawal points within one water source are controlled by the same person, the permit applicant shall file a single application containing information on each withdrawal point.

(3) For the purposes of calculating the total requested permit volume from each water source, the applicant shall combine the proposed withdrawal from each withdrawal point in that water source so as to arrive at a total proposed water withdrawal from that particular water source. The applicant's requested permit volume shall not include any volumes registered or determined by the Department to be nonconsumptive.

(4) For new permits, prior to or on the same date that the applicant submits a permit application to the Department, the applicant shall submit a copy of the application to the water resources management official in the city or town where the withdrawal point is located.

36.18: continued

- (5) For new permits, applicants shall submit an Environmental Notification Form to the EOEEA, pursuant to 301 CMR 11.00: *MEPA Regulations*, no later than ten days after filing an application with the Department, or shall provide evidence of compliance with the requirements of 301 CMR 11.00: *MEPA Regulations* as described in 310 CMR 36.24.
- (6) Applicants shall provide all additional information requested by the Department subsequent to filing a permit application, within the time specified in the Department's request.
- (7) The terms and conditions of a permit will continue in force and effect beyond the expiration date pursuant to M.G.L. c. 30A, § 13, if:
 - (a) the permittee has made a timely application for a permit renewal in accordance with 310 CMR 36.18 through 36.24; and
 - (b) the Department does not renew the permit or issue a new permit or interim permit on or before the expiration date of the expiring permit, and does not issue a decision denying the renewal application.
- (8) Permits administratively continued under 310 CMR 36.18(7) shall remain fully effective and enforceable until the effective date of a permit renewal, interim permit or new permit, or until the renewal application is denied.

36.19: Determining Permit Tier for an Application

- (1) Groundwater Withdrawals – The Department will determine the permit tier for each application that includes groundwater withdrawals based on:
 - (a) the applicant's baseline withdrawal volume(s);
 - (b) any requested withdrawal volume above the baseline(s); and
 - (c) an evaluation of the potential change in the biological category or groundwater withdrawal category during the late summer bioperiod (July through September) in the subbasin(s) from which the withdrawal is made; and
 - (d) for proposed withdrawals determined by the Department not to follow an annual demand curve with highest average daily withdrawals occurring during the late summer bioperiod (July through September), an evaluation of the potential change in seasonal groundwater withdrawal category during the bioperiod when the withdrawal will have the maximum impact on streamflow in the subbasin(s).

Each application that includes a groundwater withdrawal or a withdrawal from both ground and surface water will be assigned as follows:

Permit Tier 1

The applicant requests no withdrawal greater than baseline.

Permit Tier 2

The applicant requests a withdrawal greater than baseline, but the requested withdrawal will not result in a change in the biological category, groundwater withdrawal category or seasonal groundwater withdrawal category of the subbasin(s) from which it is made.

Permit Tier 3

The applicant requests a withdrawal greater than baseline, and the requested withdrawal will result in a change in the biological category, groundwater withdrawal category or seasonal groundwater withdrawal category of the subbasin(s) from which it is made.

- (2) Surface Water Withdrawals – Applications for permits that include only a surface water withdrawal will be assigned as follows:

Permit Tier 1

The applicant requests no withdrawal greater than baseline.

Permit Tier 2

The applicant requests a withdrawal greater than baseline.

- (3) Applications for permits for water withdrawals in the groundwater-driven water sources (the southern portion of South Coastal, Cape Cod, Islands, and portions of Buzzards Bay) will be assigned as follows:

Permit Tier 1

The applicant requests no withdrawal greater than baseline.

Permit Tier 2

The applicant requests a withdrawal greater than baseline.

36.20: Site-specific Evaluation

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

(1) Data Refinements: Any person may submit, for review and approval by the Department, refinements to the following data used in determining the biological category and groundwater withdrawal category for any subbasin within a water source:

- (a) Calculation of the August groundwater pumping volume during the 2000-2004 study period:
 - 1. wells that were assumed to be in use, but were not;
 - 2. wells that were pumping at significantly different rates than assumed; or
 - 3. significant reductions in groundwater withdrawals since the 2000-2004 study period due to:
 - a. wells that have been abandoned; or
 - b. a public water supply that has transferred withdrawals from its own withdrawal points to a different source(s).
- (b) Adjustments to the delineated subbasin boundaries:
 - 1. subbasin drainage boundaries that do not coincide with documented groundwater boundaries; or
 - 2. subbasin boundaries occurring within water bodies rather than at outlet points.
- (c) Hydrologic/Geologic Considerations:
 - 1. confined aquifers; or
 - 2. pumping that causes documented groundwater impacts across subbasin boundaries.
- (d) Refinements, demonstrated through groundwater modeling, to the assumed 1:1 August pumping to August stream depletion ratio.

(2) Schedule for Submitting Data Refinements:

(a) For the Hudson, Blackstone, Charles, Ipswich, North Coastal, Boston Harbor, Taunton, South Coastal, Cape Cod, Islands, Buzzards Bay, Concord, Ten Mile, Deerfield, Housatonic and Farmington Basins, proposed data refinements must be submitted to the Department by November 7, 2015. Data submitted will be reviewed by the Department for inclusion in the next scheduled five-year review for permits in these water sources.

(b) For water sources not listed in 310 CMR 36.20(2)(a), proposed data refinements must be submitted to the Department at least 12 months prior to the First Expiration Date for the water source listed in 310 CMR 36.17(1). Permit renewal applicants may submit proposed data refinements with the permit renewal application or as a separate submission.

<u>Water Source</u>	<u>Data Refinement Submission Date</u>
Westfield Basin	November 30, 2015
Millers Basin	February 28, 2016
Chicopee Basin	May 31, 2016
Quinnebaug Basin	August 31, 2016
Connecticut Basin	November 30, 2016
Nashua Basin	February 28, 2017
French Basin	May 31, 2017
Shawsheen Basin	August 31, 2017
Merrimack Basin	November 30, 2017
Parker Basin	February 28, 2018
Narragansett Basin	May 31, 2018

36.20: continued

(c) Applicants for new permits whose applications are filed subsequent to the first expiration date in a water source may submit proposed data refinements for the subbasin(s) in which the proposed withdrawals are located with the permit application.

(3) Data refinements, reviewed and approved by the Department, will be incorporated into the determination of biological category and groundwater withdrawal category for the affected subbasin(s) prior to determining the permit tier for applications with withdrawal point(s) in the affected subbasin(s), or prior to the five-year review of permits with withdrawal point(s) in the affected subbasin(s), as applicable.

(4) Site-specific Fish Community Assessment:

(a) A tier 1 applicant with a withdrawal point(s) located in a subbasin(s) having more than 25% August net groundwater depletion may conduct a site-specific fish community assessment for the purpose of demonstrating that the fluvial fish relative abundance in such subbasin(s) exceeds the expected number of fish for that groundwater withdrawal category as determined by the measurement standard in 310 CMR 36.20(4)(d).

(b) An applicant that conducts a site-specific fish community assessment will not be required to implement the otherwise required minimization activities prior to the Department's determination in 310 CMR 36.20(4)(d).

(c) A site-specific fish community assessment shall be subject to the following procedure and requirements:

1. the applicant shall propose for the Department's approval, in consultation with the EOEEA agencies, a geographically referenced point within the subbasin at which the withdrawal will have its maximum impact on streamflow for the duration of the assessment;
2. the applicant shall propose for the Department's approval, in consultation with the EOEEA agencies, a calculation of the upstream impervious cover, simulated flow alteration, percent wetland in the buffer, and channel slope in accordance with the methods used in USGS SIR 2011-5193 and based on the approved geographically referenced point;
3. the applicant shall conduct the site-specific fish community assessment in accordance with a fish sampling and collection protocol approved by the MA Division of Fisheries and Wildlife (Division);
4. the fish sampling and collection protocol shall, at a minimum, require that fish community sampling be conducted by the applicant once per year for five years at three locations and include the methods, times of year, and effort requirements for such sampling;
5. the sampling and collection shall be conducted in accordance with the protocol; and
6. the applicant shall obtain a separate fish collection permit from the Division as described at 321 CMR 2.02(4): *Categories of Permits*, which will include the fish sampling and collection protocol approved by the Division and will require the applicant to submit annual monitoring reports to the Division and the Department.

(d) At the conclusion of the five-year monitoring period, the Department, in consultation with the EOEEA agencies, will determine whether the applicant has demonstrated that the average fluvial fish relative abundance for that location over the five-year monitoring period is greater than the average fluvial fish relative abundance in the 75th percentile for the fish sampling locations within the same groundwater withdrawal category as derived from the fish community sampling information found in USGS SIR 2011-5193.

(e) If the Department, in consultation with the EOEEA agencies, determines that the applicant has met the measurement standard in 310 CMR 36.20(4)(d), the applicant will not be required to implement the otherwise required minimization measures for the remainder of the term of the permit.

36.21: Contents of a Permit Application

(1) All permit applications shall include, at a minimum:

(a) the reason(s) for the withdrawal, and the proposed water use (*e.g.*, residential, industrial, agricultural), including a detailed projection of the applicant's water needs during the proposed permit term;

36.21: continued

- (b) identification of the water source in which the withdrawal is located;
 - (c) the specific location of each of the applicant's withdrawal point(s) within the water source;
 - (d) for new withdrawal points, any required pumping test results and analysis;
 - (e) the volume, frequency and rate of water to be withdrawn from each withdrawal point, the anticipated times of year of the withdrawals, and any projected changes in volume, frequency, rate or time of year over the proposed term of the permit;
 - (f) the maximum daily rate at which water can be withdrawn from each withdrawal point;
 - (g) the length of time for which the permit is sought, which may not extend beyond the next expiration date for the water source from which the water will be withdrawn;
 - (h) the amount and location of any water discharged by the applicant, and any permit number(s) issued for such discharge by the Department or the U.S. Environmental Protection Agency; and
 - (i) the applicable fee as specified in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.
- (2) All permit applications shall also include:
- (a) a copy of any Environmental Notification Form filed, if applicable;
 - (b) a detailed evaluation of the potential effect of the withdrawal on:
 1. public drinking water supplies;
 2. water quality;
 3. wastewater treatment;
 4. waste assimilation;
 5. groundwater recharge areas;
 6. navigation;
 7. hydropower resources;
 8. water-based recreation;
 9. wetland resource areas;
 10. fish and wildlife;
 11. agriculture;
 12. floodplains; and
 13. other withdrawal points;
 - (c) a detailed water conservation program and implementation timetable based on water conservation standards established by the Commission, or where the Commission has not established such standards, other industry-specific best management practices appropriate to the permitted water use.
- (3) Groundwater Withdrawals. All permit applications for groundwater withdrawals shall also include the following information required according to the applicable permit tier as specified in 310 CMR 36.21(3)(a) through (c):
- (a) Permit Tiers 1, 2 and 3.
 1. If a withdrawal point is located in a subbasin where a coldwater fish resource is located, the applicant shall consult with the Department and EOEEA agencies on ways to minimize impacts of the withdrawal on the coldwater fish resource by optimizing the pumping regime of the applicant's withdrawal points and shall submit an implementation plan as described in 310 CMR 36.22(4).
 2. All groundwater applicants with withdrawal point(s) in a subbasin(s) having August net groundwater depletion of 25% or greater shall submit a minimization plan as described in 310 CMR 36.22(5).
 - (b) Permit Tiers 2 and 3. In addition to the requirements of 310 CMR 36.21(3)(a), the applicant shall:
 1. determine the withdrawal volume above baseline that must be offset through mitigation taking into account adjustments for water conservation, groundwater discharge and certain NPDES surcharges, on forms prescribed by the Department;
 2. in consultation with the Department and EOEEA agencies,
 - a. identify measures commensurate with impacts of the volume to be offset that the applicant will evaluate in its mitigation plan; and
 - b. if a withdrawal point is located in a subbasin where a coldwater fish resource is located, identify measures that will offset impacts to coldwater fish resources that the applicant will evaluate in its mitigation plan; and

36.21: continued

3. submit a mitigation plan as described in 310 CMR 36.22(6).
 - (c) Permit Tier 3. In addition to the requirements in 310 CMR 36.21(3)(a) and (b), the applicant shall demonstrate that there is no feasible alternative source that is less environmentally harmful as described in 310 CMR 36.22(7).
- (4) Surface Water Withdrawals. All permit applications for surface water withdrawals shall also include the following information required according to their permit tier as specified in 310 CMR 36.21(4)(a) and (b):
- (a) Permit Tier 1 and 2.
 1. If a withdrawal point is located in a subbasin where a coldwater fish resource is located, the applicant shall consult with the Department and EOEEA agencies on ways to minimize impacts of the withdrawal on the coldwater fish resource by optimizing use of the applicant's source(s) and shall submit an implementation plan as described in 310 CMR 36.22(4) and (8).
 2. An applicant proposing an alternative to the Department's seasonal limits on nonessential outdoor water use described at 310 CMR 36.28(4)(c)4. shall provide, for the Department's review and written approval, a summer management plan that includes proposed nonessential outdoor water use restrictions and corresponding environmental triggers or offsets that can include, but are not limited to:
 - a. reservoir elevations;
 - b. streamflow triggers;
 - c. fisheries management plan implementation;
 - d. reservoir releases.
 - (b) Permit Tier 2. In addition to requirements of 310 CMR 36.21(4)(a), the applicant shall:
 1. determine the withdrawal volume above baseline that must be offset through mitigation taking into account adjustments for water conservation, groundwater discharge and certain NPDES surcharges, on forms prescribed by the Department;
 2. in consultation with the Department and EOEEA agencies,
 - a. identify measures commensurate with impacts of the volume to be offset that the applicant will evaluate in its mitigation plan; and
 - b. if a withdrawal point is located in a subbasin where a coldwater fish resource is located, identify measures that will offset impacts to coldwater fish resources that the applicant will evaluate in its mitigation plan; and
 3. submit a mitigation plan as described in 310 CMR 36.22(6).
- (5) The Department may specify additional or alternative requirements to address impacts of withdrawals in groundwater-driven water sources (the southern portion of South Coastal, Cape Cod, Islands, and portions of Buzzards Bay).
- (6) New permit applications shall also include identification of alternatives, if any, to the proposed withdrawal including a study of cost, feasibility and environmental effects of such alternatives.
- (7) Permit renewal applications shall also include:
- (a) any proposed changes to the expiring permit's provisions or conditions, with the reason for such proposed changes; and
 - (b) a demonstration that permit conditions have been met.
- (8) Applicants may include, or the Department may require, the following additional information:
- (a) any water resource protection measures affecting the withdrawal that have been implemented or that are planned by the applicant or by any other person;
 - (b) any agreements with an owner of property conveying an easement by deed which restricts the right of the owner of the property to make a withdrawal from the same water source from which the applicant proposes to withdraw;
 - (c) the impact of the withdrawal on economic development and the creation of jobs in the Commonwealth;

36.21: continued

- (d) the impact of the proposed withdrawal on other water uses, land values, investments and enterprises that are dependent on previously allowable withdrawals in the water source;
- (e) identification of the area of contribution for any groundwater withdrawal point;
- (f) any other information requested by the Department related to the withdrawal, its use, source protection, minimization and mitigation of the effects of the withdrawal, discharge, impacts, or information related to the factors the Department must consider in reviewing applications, as listed in 310 CMR 36.26.

36.22: Coldwater Fish Resource, Minimization, and Mitigation Planning Requirements

- (1) The plans described at 310 CMR 36.22(4) through (7), including a timetable for implementation, shall be submitted for review and written approval by the Department as part of an application for a new or renewed permit as required by 310 CMR 36.21. 310 CMR 36.22(4) through (7) specify the minimum requirements for each component.
- (2) The Department may, in consultation with the EOEEA agencies, specify additional or alternative requirements to address cumulative impacts of tier 2 and tier 3 withdrawals in a water source.
- (3) All required planning components may be combined in a single written plan.
- (4) Coldwater Fish Resource Optimization Review: An applicant with a withdrawal point(s) impacting a coldwater fish resource(s) shall, after consultation with the Department and EOEEA agencies, submit an evaluation of options for shifting withdrawals to the applicant's other withdrawal points, if any, to minimize impacts at the coldwater fish resource.
- (5) Minimization Plan: A groundwater applicant with a withdrawal point(s) in a subbasin(s) having August net groundwater depletion of 25% or greater shall submit a plan to minimize the impacts of the withdrawals to the greatest extent feasible, including but not limited to:
 - (a) minimizing depletion of groundwater during the late summer bioperiod (July-September) by optimizing use of the applicant's withdrawal points located in subbasins that are less groundwater depleted, if any, or by use of any feasible alternative source(s) or interconnection(s);
 - (b) releasing water from surface water supply impoundments and other measures that return water to the subbasin or water source to improve streamflow taking into consideration the ability of the applicant to meet demand;
 - (c) adopting restrictions on nonessential outdoor water use more stringent than those required by the permit conditions described at 310 CMR 36.28(4)(c)4.;
 - (d) adopting water conservation measures, consistent with health and safety, more stringent than those required by the permit conditions described at 310 CMR 36.28(4)(c)1., 2., and 3;
 - (e) adopting agricultural, horticultural or industry-specific best management practices as applicable.
- (6) Mitigation Plan for Tier 2: A tier 2 applicant shall submit a plan to mitigate the withdrawal above baseline that must be offset, as determined at 310 CMR 36.21(3)(b) or (4)(b), to the greatest extent feasible, as follows:
 - (a) First, the applicant shall evaluate direct mitigation activities that can be volumetrically quantified and compared to the applicant's mitigation volume including, but not limited to:
 - 1. releases from any surface water impoundments that enhance downstream flows;
 - 2. activities that return stormwater to groundwater, including but not limited to, physically disconnecting or removing impervious areas directly connected to surface water;
 - 3. activities that physically return wastewater to groundwater;
 - 4. improvements to wastewater conveyance systems that reduce infiltration and inflow; and
 - 5. activities or releases that will offset impacts to coldwater fish resources as applicable.
 - (b) If the applicant cannot achieve all the mitigation required through direct mitigation, then the applicant must evaluate indirect mitigation activities that will improve fluvial habitat, but which cannot be volumetrically quantified including, but not limited to:

36.22: continued

1. culvert repair/replacement to meet stream crossing standards;
 2. removal of a dam or flow barrier;
 3. fish passage improvement;
 4. streambank restoration;
 5. stream channel restoration;
 6. streamside buffer restoration;
 7. habitat restoration;
 8. development and implementation of stormwater bylaw with recharge requirements;
 9. development and implementation of a stormwater utility;
 10. implementation of MS4 requirements; and
 11. development and implementation of low impact development bylaws.
- (c) The proximity of the proposed mitigation to the withdrawal point(s) and the net groundwater depletion of the receiving subbasin(s) will be considered by the Department in determining the equivalence of mitigation measures to withdrawal impacts.
- (d) Mitigation measures implemented since 2005 that the applicant demonstrates will mitigate the impact of the proposed withdrawal may be credited toward an applicant's mitigation obligation.
- (7) Alternative Demonstration and Mitigation Plan for Tier 3.
- (a) A tier 3 groundwater applicant shall demonstrate that there is no feasible alternative source that is less environmentally harmful than the withdrawal point(s) identified in the application. In order to make this demonstration, the applicant must show that:
1. all alternative groundwater sources are in subbasins in groundwater withdrawal category 4 or 5; or
 2. taking additional withdrawals from an alternative groundwater source would result in an adverse change to that source's subbasin's biological category, groundwater withdrawal category or seasonal groundwater withdrawal category; and
 3. taking additional withdrawals from an alternative surface water supply source would result in unacceptable streamflow impacts or affect the permittee's ability to meet demonstrated water needs. In determining whether an alternative surface water supply source is a feasible alternative, the Department may consider reservoir release plans, downstream flow impacts and other operational considerations on a case-by-case basis.
- (b) If a tier 3 groundwater applicant demonstrates there is no feasible alternative source that is less environmentally harmful, then the applicant shall submit a plan for mitigation commensurate with the impact of their additional withdrawal as described in 310 CMR 36.22(6). The Department shall consider the adverse change in the subbasin's biological category, groundwater withdrawal category or seasonal groundwater withdrawal category in determining the scope of commensurate mitigation. If the applicant is unable to provide commensurate mitigation through direct mitigation and demand management, the Department shall require the applicant to provide a higher ratio of indirect mitigation when feasible.
- (c) The proximity of the proposed mitigation to the withdrawal point(s) and the net groundwater depletion of the receiving subbasin(s) will be considered by the Department in determining the equivalence of mitigation measures to withdrawal impacts.
- (d) Mitigation measures implemented since 2005 that the applicant demonstrates will mitigate the impact of the proposed withdrawal may be credited toward an applicant's mitigation obligation.
- (8) Implementation Timetable: An implementation timetable shall be submitted as part of any coldwater fish resource, minimization, and mitigation plan.
- (a) An applicant may phase the implementation of the mitigation plan, provided that the measures associated with specific increases in withdrawals are implemented prior to those increases.
- (b) If demonstrated water needs exceed the baseline prior to issuance of the permit, an applicant may request additional time during the first five years of a permit to implement the mitigation plans.

36.22: continued

(9) The fact that an activity fulfills one or more of the permittee's obligations under another regulatory program shall not preclude such activity from receiving mitigation credit in water management permitting, provided such activities meet the objectives of 310 CMR 36.22.

(10) The final plan(s) as approved by the Department will be included as a condition of any permit issued by the Department authorizing the requested withdrawal.

36.23: Public Notice Requirements

(1) All applicants for a new permit shall comply with the following public notice requirements:

(a) The applicant shall prepare a public notice of the proposed withdrawal, which includes:

1. the location of the water source from which the withdrawal is to be made;
2. the volume of water to be withdrawn;
3. the name and address of the water resources management official of each city or town in which the withdrawal is proposed, who will have a copy of the application available for inspection, and the times when it will be available;
4. a statement that written comments on the granting of a permit may be filed with the water resources management official(s) and the Department within 30 days of the notice's publication date; and
5. the name and address of the permit applicant.

(b) Within ten business days after an application is filed with the Department, the applicant shall publish the notice in a newspaper which carries legal notices, and which is of general circulation in the town or city where each proposed withdrawal is to be located, and in each town and city within the same water source as the proposed withdrawal.

(c) Within five business days after the above publication, the applicant shall send a copy of the public notice (return receipt requested), noting the date of publication from which the comment period began to run, to each abutter of the property(ies) where the proposed withdrawal point(s) is located and to each abutter of abutters of the property(ies).

(d) Within ten business days of completing the requirements in 310 CMR 36.23(1)(a) through (c), the applicant shall submit a copy of the published notice and an affidavit to the Department attesting to the fact that the requirements of 310 CMR 36.23(1)(a) through (c) were met.

(2) No earlier than 30 days after publication of the notice described in 310 CMR 36.23(1)(a), the applicant may submit to the Department a certificate from each water resources management official in each city or town in which the withdrawal point(s) is located, which states that:

- (a) the proposed withdrawal is not inconsistent with the local water resources management plan; and
- (b) no statement of opposition has been received by the water resources management official(s) during the 30 day comment period.

(3) Within five business days of the close of the public comment period the applicant shall submit to the Department any comments received by the applicant or by the water resources management official in each city or town in which the proposed withdrawal point(s) is located.

(4) Following the Department's receipt of the affidavit described in 310 CMR 36.23(1)(d), the Department will send a copy of the notice described in 310 CMR 36.23(1)(a) and may include a summary of the application to:

- (a) all registrants, permittees and those who have approved nonconsumptive use statements for water withdrawn from the same water source as the proposed withdrawal;
- (b) the water resources management official(s) for the community(ies) in which the proposed withdrawal(s) is located, and other persons who have made a written request for notice of the permit.

Such notice will include a statement that the Department will receive comments for a period of time set by the Department, not less than 30 days and not to exceed 45 days.

36.23: continued

- (5) For permit renewals, the Department will publish notice of all renewal applications received in a water source in the Environmental Monitor within 30 days after the renewal application deadline in the water source. The notice will state that written comments on the granting of a permit renewal(s) may be filed with the Department within 30 days of the notice's publication date.
- (6) The applicant for a new or renewed permit shall provide a written response, if requested by the Department, to any comments submitted to the Department.
- (7) The Department shall not deem an application complete until the applicant has responded to all written comments as requested by the Department following the comment period.

36.24: MEPA Requirements

- (1) An applicant for a new permit is deemed to have completed MEPA requirements for purposes of M.G.L. c. 21G and 310 CMR 36.00 when the Department receives:
 - (a) a certificate issued by the Secretary stating that no Environmental Impact Report is required;
 - (b) a determination by the Secretary that the project does not meet MEPA review thresholds;
 - or
 - (c) a certificate issued by the Secretary finding that any required Final Environmental Impact Report is adequate.
- (2) The MEPA public notice required in 301 CMR 11.15: *Public Notice and the Environmental Monitor* may be combined with the public notice required in 310 CMR 36.23 if the filing deadlines under both 310 CMR 36.23(1) and 301 CMR 11.15(1): *Public Notice of Environmental Review* can be met.

36.25: Incomplete Applications

- (1) An application for a permit shall not be deemed complete if the Department determines that the permit application:
 - (a) fails to provide all the information required by 310 CMR 36.21 and 36.22 by the date established by the Department for completion of the application, including any additional information requested by the Department in accordance with 310 CMR 36.21(7)(f);
 - (b) fails to demonstrate compliance with MEPA requirements as applicable;
 - (c) fails to demonstrate completion of applicable public notice requirements, as described in M.G.L. c. 21G and 310 CMR 36.23, or fails to respond to comments as requested by the Department in accordance with 310 CMR 36.23(6);
 - (d) fails to demonstrate compliance with a water resources management plan for any town or city in which the water is to be used; or
 - (e) fails to demonstrate compliance with M.G.L. c. 21, §§ 8B through 8D (the Interbasin Transfer Act) where applicable.
- (2) An application for a new permit, or a permit renewal, amendment or transfer shall not be complete if the Department determines that the permit application:
 - (a) fails to provide all information required by 310 CMR 36.00 and all information requested by the Department;
 - (b) fails to include the applicable fee established in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*;
 - (c) fails to provide evidence of compliance with any relevant permit conditions;
 - (d) is not completed by the applicable date; or
 - (e) otherwise fails to comply with M.G.L. c. 21G or 310 CMR 36.00.
- (3) The date for completing an application shall be extended by the Department if it determines that, for reasons beyond the control of the applicant:
 - (a) any applicable MEPA requirement cannot be completed by the date;
 - (b) public comment periods set forth 310 CMR 36.23 extend beyond the date; or

36.25: continued

- (c) any applicable M.G.L. c. 21, §§ 8B through 8D (Interbasin Transfer Act) requirement cannot be completed by the date.
- (4) The date for completing an application may be extended by the Department if it determines that:
 - (a) the applicant demonstrates that, despite reasonable efforts, additional information requested by the Department after the application is filed cannot be provided within the time specified in the Department's request; or
 - (b) any other conditions exist, which were not caused by the applicant, and which in the interest of the purposes to be served by M.G.L. c. 21G, require additional time.
- (5) The Department has no obligation to review an incomplete application.
- (6) Without limitation, if the Department determines that an application is not complete and that the applicant has not made a good faith effort to complete the application in a timely manner by the applicable date, it may do one or any combination of the following:
 - (a) terminate any interim permit issued to the applicant pursuant to 310 CMR 36.27(2);
 - (b) require compliance with a plan ordered or approved by the Department;
 - (c) where an application is required by M.G.L. 21G or 310 CMR 36.00, or ordered by the Department, assess an administrative penalty, in accordance with M.G.L. c. 21G, and M.G.L. c. 21A, § 16; or
 - (d) deny the permit application pursuant to 310 CMR 36.30(1)(d).

36.26: Application Review

- (1) In reviewing an application, the Department shall consider at least the following:
 - (a) the water available within the safe yield as determined by the Department in accordance with 310 CMR 36.13 and 36.27(4);
 - (b) the impact of the proposed withdrawal on other withdrawal points and on other water sources that are hydrologically interconnected with the water source from which the withdrawal is to be made;
 - (c) the impact of the withdrawal on the biological category, groundwater withdrawal category or seasonal groundwater withdrawal category of the subbasin(s) from which it will be made, in accordance with 310 CMR 36.19;
 - (d) the extent to which the applicant meets the applicable permit tier requirements in 310 CMR 36.21(3) and (4) and the coldwater fish resources, minimization, and mitigation planning requirements in 310 CMR 36.22;
 - (e) the anticipated times of year when the withdrawal is or will be made, and any projected changes in the withdrawal during the permit term;
 - (f) reasonable protection of water uses, land values, investments and enterprises that are dependent on previously registered, permitted or otherwise authorized withdrawals;
 - (g) the use to be made of the water proposed to be withdrawn and other existing, presently permitted, or projected uses of the water source from which the withdrawal is to be made;
 - (h) where available, the approved water resources management plan for any city or town in which the withdrawal is located and where different, for any city or town in which the withdrawal is to be used;
 - (i) any state water resources management plan adopted by the Commission;
 - (j) reasonable conservation practices and measures, including any water conservation and water use efficiency standards adopted by the Commission, or where the Commission has not established such standards, other industry-specific best management practices appropriate to the permitted water use;
 - (k) reasonable protection of public drinking water supplies, water quality, wastewater treatment capacity, groundwater recharge areas, navigation, hydropower resources, water-based recreation, wetland habitat, fish and wildlife, agriculture and floodplains;
 - (l) the impact of the proposed withdrawal on reasonable economic development and the creation of jobs in the Commonwealth;
 - (m) comments received during the public comment period; and
 - (n) other state and Federal statutes.

36.26: continued

(2) If the Department determines that an increase in withdrawals smaller than that requested by the applicant is appropriate to protect significant and valuable environmental resources or to protect the public health, safety or welfare, then the Department may impose limitations on the proposed withdrawal, including but not limited to denial or reduction of the requested volume, offsets, management plans and operational restrictions and other conditions it deems necessary to further the interests of M.G.L. c. 21G and 310 CMR 36.00.

36.27: Issuance of Permits

(1) The Department will issue a single permit for withdrawals from all withdrawal points in a water source by one person.

(2) For renewal applicants, the Department may, in its discretion, grant an interim permit that authorizes;

- (a) a withdrawal of the previously permitted volume; or
- (b) a withdrawal of a reduced volume if necessary to ensure that the safe yield of the water source is not exceeded.

(3) Interim permits issued under 310 CMR 36.27(2) shall remain fully effective and enforceable until the effective date of a permit renewal or until the renewal application is denied, but in no case shall an interim permit be valid for more than one year from the date of issuance. Interim permits may be renewed by the Department if a renewal application has not been approved or denied at the time of expiration of an initial interim permit.

(4) The Department may take restrictive agreements and orders into consideration when determining the volume of water available for allocation within the safe yield of a water source, including:

- (a) any agreement between a permit applicant and an owner of property conveying an easement by deed which restricts the right of the owner of property to make a withdrawal from the same water source from which the applicant proposes to withdraw; and
- (b) any agreement or order which sufficiently restricts or prohibits a registrant's right to withdraw from the water source pursuant to a registration statement so as to render all or a portion of the registered volume effectively unavailable for withdrawal by the registrant.

(5) The Department shall issue a draft permit within 30 days of the date on which the application is deemed complete.

(6) Following the Department's issuance of a draft permit, the Department will publish notice of the availability of the draft permit for review and comment in the Environmental Monitor.

(7) The Department will accept written comments on the draft permit for 30 days following publication of the notice of availability in the Environmental Monitor.

(8) Following the Department's issuance of a draft permit, the Department will send notice of the availability of the draft permit for review and comment to:

- (a) all registrants, permittees and those who have approved nonconsumptive use statements for water withdrawn from the same subbasin and, as the Department deems appropriate, other persons making withdrawals in the same water source; and
- (b) the water resources management official(s) for the community(ies) in which the withdrawal point(s) is located, and other persons who have made a written request for notice of the availability of the draft permit.

Such notice will include a statement that the Department will receive comment for a period of time set by the Department to coincide with the 30 day comment period established by publication of notice in the Environmental Monitor.

(9) The Department shall rule on a permit application:

- (a) within 90 days of the date on which the application is deemed complete; or

36.27: continued

(b) within one year of the date on which the application is deemed complete if the Department determines that additional time is necessary to give proper consideration to the application and sets a new deadline.

36.28: Permit Provisions and Conditions

- (1) Each permit shall provide at least the following:
 - (a) the term of the permit;
 - (b) the maximum allowable withdrawal volume expressed in terms of average daily withdrawal per year or per a shorter period of time, as applicable;
 - (c) the maximum allowable withdrawal volume expressed in terms of maximum daily withdrawal from each withdrawal point;
 - (d) the identification and any limitation of the use of the water withdrawn; and
 - (e) the maximum allowable peak withdrawal.

- (2) No permit shall authorize a withdrawal beyond the expiration date for a water source, and in no case shall a permit have a term greater than 20 years.

- (3) All permits shall be conditioned on at least the following:
 - (a) installation of flow meter(s) unless the Department determines that this condition is not applicable;
 - (b) accurate monthly recording and reporting of all future withdrawals unless the Department determines in writing that more frequent monitoring is required;
 - (c) operation and maintenance requirements;
 - (d) permission to the Department to enter the permit holder's facility or property at reasonable times to inspect and monitor the withdrawal and to inspect and copy any relevant records;
 - (e) implementation of water conservation measures appropriate to the permitted water use;
 - (f) implementation of coldwater fish resource, minimization, and mitigation plans as applicable;
 - (g) implementation of conditions that minimize any negative impacts of the withdrawal on factors the Department must consider in reviewing applications, as listed in 310 CMR 36.26;
 - (h) submission of an annual statement of withdrawal in accordance with 310 CMR 36.31;
 - (i) any other conditions necessary to further the purposes of M.G.L. c. 21G or to assure compliance with 310 CMR 36.00;
 - (j) documentation of the need for any change in withdrawal volume, or documentation of achievement of specified milestones relating to future increased withdrawals over the life of the permit; and
 - (k) authorization for the Department to amend, suspend or terminate the permit as described in M.G.L. c. 21G and 310 CMR 36.29.

- (4) All public water supply permits shall include at least the following conditions, as applicable:
 - (a) groundwater supply protection through delineation of the Zone II or Zone III as applicable, as defined in 310 CMR 22.21: *Groundwater Supply Protection*, for the public groundwater supply source(s) included in the permit within three years of the date of permit issuance, and the implementation, where appropriate, of land use control measures, consistent with those found in 310 CMR 22.21: *Groundwater Supply Protection*, intended to protect the quality and quantity of the water supply;
 - (b) surface water supply protection through a firm yield analysis for the public surface supply source(s) included in the permit within three years of the date of permit issuance, and the implementation, where appropriate, of a surface water supply protection plan, consistent with that found in 310 CMR 22.20B: *Surface Water Supply Protection* and 310 CMR 22.20C: *Surface Water Supply Protection for New and Expanding Class A Surface Water Sources* as applicable, intended to protect the quality and quantity of the water supply;
 - (c) excepting permits for a redundant well(s), water conservation requirements based on water conservation standards established by the Commission, including but not limited to:

36.28: continued

1. water audits and leak detection, metering, pricing, residential and public sector conservation, industrial/commercial conservation, lawn/landscape conservation, and education/outreach;
 2. performance standard for residential gallons per capita day water use as dictated by specific facts concerning population served;
 3. performance standard for unaccounted for water; and
 4. seasonal limits on nonessential outdoor water use from May 1st to September 30th.
- (5) The Department may impose additional requirements to address the cumulative impacts of tier 2 and tier 3 withdrawals in a water source.
- (6) The holder of a permit shall comply at all times with all conditions of the permit and with all applicable federal and state statutes and regulations.
- (7) The burden shall be on each permit holder to demonstrate compliance with all the provisions and conditions of the permit at all times.

36.29: Permit Amendments, Suspensions and Terminations

- (1) Without limitation, the Department may amend, suspend or terminate any permit, after notice and opportunity for hearing, if it determines that:
- (a) the permit holder has violated any provisions of M.G.L. c. 21G, the permit, these or other applicable regulations, or a Department Order;
 - (b) such action is necessary for the promotion of the purposes of M.G.L. c. 21G;
 - (c) the safe yield of, or other indications of stress on, the water source requires such action for the protection of public health, safety and welfare; or
 - (d) The permit holder no longer owns or has access to the property on which the withdrawal point(s) listed in the permit is located.
- (2) A permit holder, who seeks to amend a permit during the term of the permit to decrease permitted volume, change the location of a withdrawal point, add a withdrawal point, change the authorized withdrawal rate for an individual withdrawal point, change the location of a discharge point(s), or otherwise amend a permit shall submit an application to the Department on a form provided by the Department.
- (a) For requests to add a withdrawal point or increase the authorized withdrawal rate from an individual withdrawal point, the applicant shall provide public notice as required in 310 CMR 36.23.
 - (b) For all other amendments, the Department shall publish notice of the amendment application in the *Environmental Monitor* within 30 days of receipt of the application and accept written comment on the amendment application for 30 days from publication in the *Environmental Monitor*.
 - (c) The applicant shall provide a written response, if requested by the Department, to any comments submitted to the Department.
 - (d) An amendment application is not complete until the applicant has responded to all written comments as requested by the Department following the comment period.
- (3) A permittee that wants to request an increase in total permitted withdrawal volume shall submit a permit application as described in 310 CMR 36.18 through 36.24.
- (4) Each request by a permittee for a permit amendment shall be accompanied by the applicable fee established by 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

36.30: Permit Application Denials

- (1) Without limitation, the Department may deny a permit application or impose additional conditions on a permit if it determines that:
- (a) the withdrawal will not conform to the applicable standards for permitting established by 310 CMR 36.00;

36.30: continued

- (b) the withdrawal will negatively impact any of the factors listed in M.G.L. c. 21G or in 310 CMR 36.26;
 - (c) the applicant has submitted information in the permit application which the applicant knew or reasonably should have known was false or misleading; or
 - (d) the application is not complete by the applicable date.
- (2) The Department shall deny permit applications for withdrawals from a water source if it finds:
- (a) that the combined volume of existing, permitted and proposed withdrawals exceeds the safe yield of the water source; or
 - (b) that the existing, permitted or proposed withdrawals are otherwise in conflict.

36.31: Reporting and Review Requirements for Permits

- (1) Each permit holder shall file an annual statement of withdrawal that includes at least the following:
- (a) average daily volume of water withdrawn over the past 12 months;
 - (b) conservation measures instituted in the past 12 months;
 - (c) metering records;
 - (d) system updates; and
 - (e) the applicable fee as established in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.
- (2) Each permit holder shall retain a copy of all withdrawal records for at least ten years.
- (3) For each permit that has a term greater than five years, the Department may conduct a review of the permittee's compliance with the permit at the end of each five-year period during the term of the permit, as specified in the permit. The Department may request, and the permit holder shall submit, any information requested by the Department in order to conduct the review. The Department may review any additional information submitted by the applicant. The Department may amend the permit in accordance with 310 CMR 36.29, after notice and opportunity for hearing, as necessary to promote the purposes of M.G.L. c. 21G and 310 CMR 36.00.

36.33: Transfer of a Permit

- (1) Any person who has a permit and is in compliance with M.G.L. c. 21G and 310 CMR 36.00 and all conditions of its permit may request a transfer of the permit, in whole or in part, to another person by submitting a request to the Department at least 30 days before the date of the transfer.
- (2) The request shall include a copy of the written agreement between the permittee and the transferee that transfers responsibility for the permit, and a certification by the transferee that there will be no significant change in use, source, location of the withdrawal, or discharge of the permitted volumes. The transferee must agree to accept all the provisions and conditions of the permit and the agreement must state a specific date for transfer of responsibility between them.
- (3) Any transfer of a permit that meets the requirements of 310 CMR 36.33 will be granted by the Department, unless the Department determines in writing that the transfer would be contrary to the intent or purpose of M.G.L. c. 21G or 310 CMR 36.00. No permit shall be transferred until the Department has authorized the transfer in writing.
- (4) A request for transfer of a permit that requires an amendment of the permit must be submitted as a request for a permit amendment in accordance with 310 CMR 36.29.
- (5) Each application for transfer of a permit shall be accompanied by the applicable transfer fee as set forth in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

36.34: Fee Schedule

Permits issued pursuant to 310 CMR 36.00 are subject to the provisions of 310 CMR 4.00: *Timely Action Schedule and Fee Provisions* concerning fees and schedules for timely action, as set forth in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

36.35: Nonconsumptive Use Statements

(1) Any volume of water approved by the Department to be withdrawn for a nonconsumptive use shall not be counted in the volume of water withdrawn for purposes of calculating whether a withdrawal exceeds the threshold volume.

(2) Any person claiming a nonconsumptive use for all or part of a withdrawal over the threshold volume shall file a request for approval of the nonconsumptive use consistent with guidelines established by the Department.

(3) Any person asserting that the use of a volume of water is nonconsumptive must demonstrate to the satisfaction of the Department that the volume of water meets the definition of nonconsumptive use in 310 CMR 36.03, and that no other registered or permitted withdrawals are substantially affected.

(4) No volume of water withdrawn for nonconsumptive use shall require a permit unless the Department determines that such a permit is required to protect other registered or permitted withdrawals.

36.36: Recognition of Normal Variation for Existing Withdrawals

(1) At the time when initial permit applications were due to be filed for a water source, any person who had an accepted registration statement for an existing withdrawal was able to request that the registration statement be amended to include an amount of water which the Department determined to be within the normal variation of the average volume withdrawn between January 1, 1981 and December 31, 1985.

(2) For registrants with groundwater withdrawals, the Department did not recognize as an existing withdrawal any volume in excess of one standard deviation of the average existing withdrawal volume for which a registration statement was accepted by the Department.

(3) For registrants who withdraw surface water from more than one water source, the Department recognized as an existing withdrawal a volume not to exceed 2.5 times the standard deviation of the average existing withdrawal volume for each water source for which a registration statement was accepted by the Department, provided that no recognition of such normal variation authorized withdrawals in any year of a volume in excess of the sum of the existing withdrawal volumes from all of the registrant's water sources for which registration statements were accepted by the Department. For the purpose of 310 CMR 36.36, standard deviation of the average existing withdrawal volume is defined as the unbiased estimate derived from the sample of five annual volumes of the registered withdrawal.

36.37: Appeals

(1) Any person who is aggrieved by a decision of the Department with respect to any permit application, amendment, suspension or termination, or any registration statement, and any person who has been allowed pursuant to 310 CMR 1.01(7): *Intervention and Participation* to intervene in an adjudicatory proceeding that resulted in such decision, may request an adjudicatory hearing before the Department, under the provisions of M.G.L. c. 30A. With regard to a decision of the Department amending a permit, only the amended provisions or conditions of the permit shall be subject to a request for an adjudicatory hearing. Each request for a hearing must be sent by certified mail or hand delivered, and received by the Department within 21 days of the date of receipt of the decision being appealed. At the same time that the appeal is sent or hand delivered to the Department, a copy of the appeal must be sent by certified mail or hand delivered to the water resources management official in the city or town where the withdrawal point is located.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

36.37: continued

- (2) Any person who appeals a decision of the Department, who is neither the applicant, the registrant, nor the permittee authorized to make or continue a withdrawal, is required to notify the applicant, registrant or permittee of the appeal by certified mail or by hand within five days of filing the appeal.
- (3) Each request for a hearing under 310 CMR 36.37 shall state specifically, clearly and concisely the facts which are the grounds for the appeal, the relief sought, and any additional information required by 310 CMR 1.01(6)(b): *Form and Content* or other applicable law or regulation.
- (4) In every proceeding the burden shall be on the applicant for, or the holder of, a permit or registration statement to demonstrate compliance with 310 CMR 36.00 including the provisions of 310 CMR 36.37.
- (5) Any person aggrieved by a final decision of the Commissioner may seek judicial review of that decision in Superior Court, in accordance with M.G.L. c. 30A, § 14.

36.38: Signatures

- (1) All statements, permit applications and requests filed under 310 CMR 36.00 shall be signed as follows:
 - (a) For a corporation, by a corporate officer duly designated as a corporate representative for such purpose, or the manager of a manufacturing, production, or operating facility, if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - (b) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
 - (c) For a municipality, state, federal, or other public agency: by an executive officer or a ranking elected official duly authorized for such purpose.
- (2) All reports required and other information requested by the Department shall be signed by a person described in 310 CMR 36.38(1), or by a duly designated representative of that person. A person is a duly designated representative only if:
 - (a) the authorization is made in writing by a person described in 310 CMR 36.38(1);
 - (b) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility; and
 - (c) the written authorization is submitted to the Department.
- (3) Any person signing a document under 310 CMR 36.38(1) or (2) shall include the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete."

36.39: Right of Entry

Agents and employees of the Department may make such inspections of property, facilities or operations owned or controlled by persons subject to M.G.L. 21G and 310 CMR 36.00 as the Department may determine are necessary to carry out its responsibilities under M.G.L. c. 21G. Any person subject to 310 CMR 36.00 shall allow such agent(s) or employee(s) free and unrestricted access at reasonable times to examine any property, facility, operation, equipment or activity involving the withdrawal of water. Such agent(s) or employee(s) may also inspect, conduct tests, and review books, papers and records pertinent to any matter determined by the Department to be relevant to the administration or enforcement of 310 CMR 36.00.

36.40: Declaration of Water Supply Emergency

- (1) Any public water supplier may petition the Department for a declaration of a state of water supply emergency pursuant to M.G.L. c. 21G, §§ 15 through 17, and in accordance with 310 CMR 36.40 through 36.42.
- (2) Upon receiving a petition for a declaration of a state of water supply emergency, the Department may declare an emergency if it finds that there exists or impends a water supply shortage of a dimension which endangers the public health, safety or welfare, due to circumstances including, but not limited to:
 - (a) demand for water exceeds the availability of water;
 - (b) mechanical failure or similar type of emergency, including inability to maintain storage tanks, loss of power, loss of pumping capacity, loss of storage capabilities, or major breaks or leaks;
 - (c) contamination of the public water supply, the distribution system or storage tanks and inability to meet demand with remaining public water supplies;
 - (d) inadequate source of water, inadequate distribution system capacity, inadequate storage capacity or drought including seasonal water shortages which repeatedly affect the same public water system; or
 - (e) necessary repair or maintenance of the public water system.
- (3) Whenever the Department determines pursuant to a petition that the protection of the public health, safety or welfare requires an immediate declaration of a state of water supply emergency, it may make such declaration verbally. A verbal declaration shall expire by its terms or by operation of 310 CMR 36.00 ten business days from the date of the verbal declaration, whichever is earlier, unless the public water supplier submits a written petition to the Department within the ten business day period.
- (4) The Department in its discretion may not declare a state of water supply emergency if it finds that the water supply shortage has been primarily caused by closure of a local withdrawal point on local authority without prior approval by the Department.
- (5) In declaring a state of water supply emergency, the Department may require the public water supplier to submit a water supply emergency plan for review and approval. Such plan shall include provisions the Department deems appropriate and feasible to remedy the state of emergency, including, but not limited to:
 - (a) taking by eminent domain under M.G.L. c. 79 the right to use any land for the time necessary to use such water;
 - (b) purchasing water from another public water system;
 - (c) restricting the use of water on public or private premises by shutting off the water at the meter or at the curb cock or by other means;
 - (d) an approved water resources management plan;
 - (e) a leak detection program;
 - (f) a program for auditing water use;
 - (g) a program for overall system rehabilitation;
 - (h) conservation programs for public and private buildings;
 - (i) bans or restrictions on certain water uses;
 - (j) water banking;
 - (k) moratorium on the issuance of building permits;
 - (l) a plan for establishing priority for distribution of water among competing uses; and
 - (m) a drought management or contingency plan.
- (6) In declaring a state of water supply emergency, the Department shall limit the applicability of the state of water supply emergency to the city or town submitting the petition or the geographical area served by the public water supplier submitting the petition.

36.41: Actions to Resolve a Water Supply Emergency

(1) During a declared state of water supply emergency, to the extent not in conflict with applicable federal laws or regulations but notwithstanding any general or special law, local law or contractual agreement to the contrary, the Department may issue orders applicable within or outside the area in which any water emergency exists to:

- (a) establish priorities for the distribution of any water or quantity of water use;
- (b) permit any public water supplier to reduce or increase the distribution of water by a specified amount, to cease the distribution of water, to distribute a specified amount of water to certain users, or to share water with other water supply systems;
- (c) direct any person to reduce or cease, by a specified volume, the withdrawal or use of any water;
- (d) require the implementation of specific water conservation measures;
- (e) mandate the denial, for the duration of the state of water supply emergency, of all applications for withdrawal permits within the areas of the Commonwealth to which the state of water supply emergency applies; and
- (f) authorize a taking of land or purchase or sale of water in accordance with an approved water supply emergency plan provided that no taking, purchase or sale shall be made unless:
 1. in the case of cities, the city council has voted to authorize the taking, purchase or sale;
 2. in the case of towns, and water supply, fire and water districts, the taking, purchase or sale has been authorized by a vote at a town meeting or a district meeting;
 3. in the case of water companies, notice of such taking, purchase or sale, including a copy of plans and specifications, has been given to the city council or to the board of selectmen of the city or town in which the affected water source is located, by certified mail at least ten days prior thereto.

(2) No taking of land or purchase or sale of water shall be undertaken pursuant to an approved water supply emergency plan unless the Department has issued an order authorizing the taking, purchase or sale. The use of such land or purchase or sale of such water pursuant to the authority of M.G.L. c. 21G, §§ 15 through 17 and 310 CMR 36.40 through 36.42 shall not exceed the duration of the Department's declaration, but in no case shall it exceed six months cumulatively in any 12 month period.

(3) Temporary pipes and other works may be installed in order to convey water pursuant to a taking, purchase or sale authorized in accordance with 310 CMR 36.41(1)(f) provided that the installation or repair of such pipes or other works along any highway shall be accomplished with the least possible hindrance to public travel, and shall be subject to the direction and approval of the officers or departments in charge of the maintenance of said highway where applicable.

(4) During a declared state of water supply emergency, a public water supplier may be permitted to sell or otherwise distribute water to the public water supplier in the state of water supply emergency as provided in an approved water supply emergency plan and authorized by order of the Department. Withdrawals for any such sale or distribution of water may be made in addition to withdrawals authorized in any registration or permit held by the selling or distributing public water supplier.

36.42: Duration of a Water Supply Emergency

(1) Except as provided in 310 CMR 36.40(3), a declaration of a state of water supply emergency will remain in effect for six months following the date of issuance unless revoked by the Department.

(2) No state of water supply emergency will remain in effect for more than six months in the aggregate in any 12-month period unless the Department determines that a longer state of emergency is required to protect the public health, safety or welfare in all or in part of the area served by the public water supplier.

- (a) An extension may be granted on the Department's initiative or at the request of the public water supplier.

36.42: continued

(b) The public water supplier shall submit an update of any water supply emergency plan required by the Department prior to the extension of a water supply emergency.

(c) The Department shall consider efforts taken by the public water supplier to address the underlying causes of the water supply emergency in reviewing the need for an extension.

(3) The Department may amend or terminate a declaration upon a finding that the public health, safety or welfare is no longer endangered by a water supply shortage in part or all of the area to which the emergency had been made applicable.

36.43: Orders, Violations and Penalties

(1) The Department may issue orders or amend, suspend or terminate a permit as necessary to aid in the implementation and enforcement of M.G.L. c. 21G and 310 CMR 36.00. Such orders may include, but shall not be limited to, orders requiring persons to cease any activity which is in violation of M.G.L. c. 21G or 310 CMR 36.00 or to carry out activities necessary to bring such person into compliance. The Department may also require any person to submit such information as the Department may reasonably require to evaluate whether that person is subject to, or in violation of, M.G.L. c. 21G or 310 CMR 36.00.

(2) Violations. Without limitation, it shall be a violation of M.G.L. c. 21G and 310 CMR 36.00 to:

(a) fail to take an action required by M.G.L. c. 21G, 310 CMR 36.00, or the terms and conditions of any permit, registration statement or order issued pursuant to M.G.L. c. 21G or 310 CMR 36.00;

(b) make a water withdrawal or engage in any activity that is contrary to M.G.L. c. 21G, 310 CMR 36.00, or the terms and conditions of any permit, registration statement or order issued pursuant to M.G.L. c. 21G and 310 CMR 36.00;

(c) fail to submit a timely application for a permit or a permit renewal for an activity that requires a permit pursuant to 310 CMR 36.16;

(d) make any false, inaccurate, incomplete or misleading statement in any document submitted to the Department or required to be kept by M.G.L. c. 21G or 310 CMR 36.00;

(e) make any false, inaccurate, incomplete or misleading statement in any record, report, plan, file, log, register or other document which the person submits to the Department or is required to keep by the terms of a registration statement, permit or order issued pursuant to 310 CMR 36.00; or

(f) fail to provide any information requested by the Department pursuant to 310 CMR 36.00 or a permit, registration statement or order issued pursuant to 310 CMR 36.00.

(3) Penalties. Any person violating M.G.L. c. 21G or 310 CMR 36.00 shall be subject to the full range of legal actions authorized by M.G.L. c. 21A, § 16, c. 21G, 310 CMR 5.00: *Administrative Penalty*, and any other applicable law or regulation including, without limitation, criminal fines, imprisonment, and civil and administrative orders and penalties.

36.44: Severability

If any provision of 310 CMR 36.00 or its application is held invalid, such invalidity shall not affect other provisions or applications of 310 CMR 36.00 which can be given effect without the invalid provision or application, and the provisions of 310 CMR 36.00 are declared to be severable.

REGULATORY AUTHORITY

310 CMR 36.00: M.G.L. c. 21G.

310 CMR 40.0000: MASSACHUSETTS CONTINGENCY PLAN

Section

SUBPART A: GENERAL PROVISIONS

- 40.0001: Authority
- 40.0002: Purpose
- 40.0003: Applicability
- 40.0005: Effective Dates
- 40.0006: Terminology, Definitions, and Acronyms
- 40.0007: Rules of Construction
- 40.0008: Computation of Time Periods and Deadlines
- 40.0009: Certification of Submittals
- 40.0010: Effect of Orders and Appeals
- 40.0011: Confidentiality of Information
- 40.0013: Presumption of Irreparable Harm
- 40.0014: Document Retention
- 40.0015: Content of Waste Site Cleanup Activity Opinions
- (40.0016: Laboratory Certification: Reserved)
- 40.0017: Environmental Sample Collection and Analyses
- 40.0018: Health and Safety Procedures
- 40.0019: Violations of Environmental Restrictions
- 40.0020: Violations of a Permanent or Temporary Solution
- 40.0021: Unlawful Interference with Response Actions
- 40.0022: Accurate and Timely Submittal of Documents
- 40.0023: Accurate and Complete Record-keeping
- 40.0024: Timely Action and Anticipatory Noncompliance
- 40.0025: Extensions of Deadlines and Time Periods for *Force Majeure*
- 40.0027: Remedial Monitoring Report
- 40.0028: Well Maintenance and Security
- 40.0030: Management Procedures for Remediation Waste
- 40.0031: General Provisions for the Management of Remediation Waste
- 40.0032: Contaminated Media and Contaminated Debris
- 40.0033: Uncontainerized Waste
- 40.0034: Bill of Lading Process
- 40.0035: Bill of Lading Form
- 40.0036: Management Requirements for Storing Remediation Waste
- 40.0040: Management Procedures for Remedial Wastewater and Remedial Additives
- 40.0041: General Provisions for the management of Remedial Wastewater and/or Remedial Additives
- 40.0042: Remedial Wastewater Discharges to Surface Water
- 40.0043: Remedial Wastewater Discharges to Publicly Owned Treatment Works (POTW)
- 40.0044: Remedial Wastewater Discharges to Non-publicly Owned Treatment Works
- 40.0045: Remedial Wastewater Discharges to the Ground Surface or Subsurface and/or Groundwater
- 40.0046: Application of Remedial Additives
- 40.0047: Reporting Requirements for Discharges of Remedial Wastewater and Remedial Additives
- 40.0049: Remedial Air Emissions
- 40.0050: Appeals of Orders and Permits
- 40.0051: Appeals Relative to Administrative Penalties
- 40.0060: Special Project Designation Permits
- 40.0061: Purpose and Eligibility
- 40.0062: Procedures for Applying Special Project Designation
- 40.0063: Approval of Applications for Special Project Designation Permits, and Special Project Designation Permit Modifications, Transfers or Extensions
- 40.0064: Special Project Designation Conditions
- 40.0065: Modification of Special Project Designation Permit
- 40.0066: Transfer of Special Project Designation Permit
- 40.0067: Extension of Special Project Designation Permit
- 40.0068: Termination of Special Project Designation Permit
- 40.0069: Suspension and Revocation of Special Project Designation Permit
- 40.0070: Approval Process for Special Project Designation Permits

Section: continued

SUBPART B: ORGANIZATION AND RESPONSIBILITIES

- 40.0100: Overview of Roles and Responsibilities in Response Actions
- 40.0101: Role of the Department in Response Actions
- (40.0102 through 40.0104: Roles of Other State Agencies and Organizations: Reserved)
- (40.0105 through 40.0109: Role of Local Government: Reserved)
- 40.0110: Adequately Regulated Sites
- 40.0111: Federal Superfund Program
- 40.0112: Federal Corrective Action Pursuant to HSWA
- 40.0113: RCRA Authorized State Hazardous Waste Program (M.G.L. c. 21C and 310 CMR 30.000: *Hazardous Waste*)
- 40.0114: Solid Waste Management Facilities
- 40.0120: Coordination with Responses by the United States Coast Guard to Discharges of Oil
- 40.0150: Role of Other Persons
- 40.0160: Departmental Notice to Responsible Parties and Potentially Responsible Parties
- 40.0165: Departmental Requests for Information (RFI)
- 40.0166: Department Right of Entry
- 40.0167: Interim Deadlines
- 40.0168: List of Locations and Disposal Sites
- 40.0169: The Role of Licensed Site Professionals
- 40.0170: The Role of RPs, PRPs and Other Persons in Response Actions
- 40.0171: Failure to Perform a Response Action
- 40.0172: Technical, Financial, and Legal Inabilities
- 40.0173: Site Access Authorization
- 40.0180: Downgradient Property Status
- 40.0181: Purpose
- 40.0182: Applicability
- 40.0183: General Requirements and Procedures for Asserting Downgradient Property Status
- 40.0184: Effect of Providing Downgradient Property Status Submittal or Modification of a Downgradient Property Status Submittal
- 40.0185: Maintenance of Downgradient Property Status
- 40.0186: Termination of Downgradient Property Status
- 40.0187: Modification of Downgradient Property Status Submittal
- 40.0190: General Requirements for Conducting Response Actions
- 40.0191: Response Action Performance Standard (RAPS)
- 40.0193: Technical Justification

SUBPART C: NOTIFICATION OF RELEASES AND THREATS OF RELEASE OF OIL AND HAZARDOUS MATERIAL; IDENTIFICATION AND LISTING OF OIL AND HAZARDOUS MATERIALS

- 40.0300: Notification of Releases and Threats of Release of Oil and Hazardous Materials; Identification and Listing of Oil and Hazardous Material
- 40.0301: Purpose and Scope
- 40.0302: Applicability
- 40.0303: Role of Licensed Site Professional
- 40.0310: Releases and Threats of Release Which Require Notification
- 40.0311: Releases Which Require Notification Within Two Hours
- 40.0312: Threats of Releases Which Require Notification Within Two Hours
- 40.0313: Releases Which Require Notification Within 72 Hours
- 40.0314: Threats of Release Which Require Notification Within 72 Hours
- 40.0315: Releases that Require Notification Within 120 Days
- 40.0317: Releases and Threats of Release Which Do Not Require Notification
- 40.0318: Limited Removal Actions
- 40.0320: Releases and Threats of Release that Pose Imminent Hazards
- 40.0321: Reporting of Releases and Threats of Release that Pose or Could Pose an Imminent Hazard
- 40.0322: Response Actions to Prevent or Abate Imminent Hazards
- 40.0330: Notification Requirements and Procedures
- 40.0331: Who Shall Notify
- 40.0332: Timing of Notifications

Section: continued

- 40.0333: How to Notify
- 40.0334: Content of the Notification
- 40.0335: Retracting a Notification
- 40.0336: Notification Requirements for Persons that Receive a Notice of Responsibility
- 40.0340: Identification of Oil and Hazardous Material
- 40.0341: Purpose and Scope
- 40.0342: Methods of Identification of Oil and Hazardous Material
- 40.0343: Criteria for Listing Oil and Hazardous Material
- 40.0344: Adding and Deleting Substances to or from the Massachusetts Oil and Hazardous Materials List
- 40.0345: The Massachusetts Oil and Hazardous Materials List
- 40.0346: Criteria for Determining the Characteristics of Hazardous Material
- 40.0347: Characteristics of Hazardous Material
- 40.0350: Reportable Quantities for Oil and Hazardous Material
- 40.0351: Reportable Quantities for Oil
- 40.0352: Reportable Quantities for Hazardous Material
- 40.0360: Reportable Concentrations for Oil and Hazardous Material
- 40.0361: Reportable Concentrations of Oil and Hazardous Material in Soil
- 40.0362: Reportable Concentrations of Oil and Hazardous Material in Groundwater
- 40.0370: Requirements for Releases of Oil and/or Hazardous Material That Do Not Require Notification
- 40.0371: Release Notification Form

SUBPART D: PRELIMINARY RESPONSE ACTIONS AND RISK REDUCTION
MEASURES

- 40.0400: Preliminary Response Actions and Risk Reduction Measures
- 40.0401: Purpose and Scope
- 40.0402: Applicability
- 40.0403: Responses to Releases and Threats of Release
- 40.0404: Timing of Response Actions
- 40.0405: Overview of Preliminary Response Actions
- 40.0406: Possible Outcomes of Preliminary Response Actions
- 40.0410: Immediate Response Actions
- 40.0411: General Provisions for Immediate Response Actions
- 40.0412: Sites Where an Immediate Response Action is Required
- 40.0414: Scope and Types of Immediate Response Actions
- 40.0420: Requirements, Approvals, and Time Lines for Conducting Immediate Response Actions
- 40.0421: Immediate Response Actions That Do Not Require Prior Approval From the Department
- 40.0424: Immediate Response Action Plans
- 40.0425: Immediate Response Action Status and Remedial Monitoring Reports
- 40.0426: Imminent Hazard Evaluations
- 40.0427: Immediate Response Action Completion Reports
- 40.0428: Public Involvement
- 40.0429: Possible Outcomes of an Immediate Response Action
- 40.0440: Release Abatement Measures
- 40.0441: General Provisions for Release Abatement Measures
- 40.0442: Scope and Types of Release Abatement Measures
- 40.0443: Approvals Required to Conduct Release Abatement Measures
- 40.0444: Release Abatement Measure Plans
- 40.0445: Release Abatement Measure Status and Remedial Monitoring Reports
- 40.0446: Release Abatement Measure Completion Report
- 40.0447: Public Involvement
- 40.0448: Possible Outcomes of a Release Abatement Measure
- 40.0460: Utility-related Abatement Measures
- 40.0461: General Provisions for Utility-related Abatement Measures
- 40.0462: Conducting Utility-related Abatement Measures
- 40.0463: Approvals Required to Conduct Utility-related Abatement Measures
- 40.0464: Performance Standards for Utility-related Abatement Measures
- 40.0465: Utility-related Abatement Measures Status and Remedial Monitoring Reports
- 40.0466: Utility-related Abatement Measure Completion Reports

Section: continued

- 40.0467: Possible Outcomes of Utility-related Abatement Measures
- 40.0480: Phase I - Initial Site Investigation Report
- 40.0481: General Provisions for Phase I Initial Site Investigation Report
- 40.0482: Performance Standards
- 40.0483: Content of Phase I Report
- 40.0484: Phase I Report Completion Statement
- 40.0485: Public Involvement
- 40.0486: Possible Outcomes of a Phase I Report

SUBPART E: TIER CLASSIFICATION AND RESPONSE ACTION DEADLINES

- 40.0500: Tier Classification and Response Action Deadlines
- 40.0501: Scope and Applicability
- 40.0502: Tier ID Disposal Sites
- 40.0510: Tier Classification Process
- 40.0520: Basis for Tier Classification
- 40.0530: Reclassification by RPs, PRPs or Other Persons during Response Actions
- 40.0540: Demonstration of Ability and Willingness
- 40.0560: Response Action Deadlines and Requirements for Tier Classified Disposal Sites
- 40.0570: Requirements for Eligible Persons, Eligible Tenants or Other Persons Seeking to Re-establish Response Action Deadlines
- 40.0583: Department Reclassification of a Tier Classified Disposal Site
- 40.0584: Participation by the Public, RPs, PRPs, and Other Persons in Department Reclassification
- 40.0585: Right to Request an Adjudicatory Hearing
- 40.0590: Public Involvement

(SUBPART F: RESERVED)

(SUBPART G: RESERVED)

SUBPART H: COMPREHENSIVE RESPONSE ACTIONS

- 40.0800: Comprehensive Response Actions
- 40.0801: Applicability
- 40.0810: General Provisions for Comprehensive Response Action
- 40.0830: Phase II - Comprehensive Site Assessment
- 40.0832: General Provisions
- 40.0833: Performance Standards
- 40.0834: Conceptual Phase II Scope of Work
- 40.0835: Phase II Report
- 40.0836: Phase II Completion Statement
- 40.0839: Public Involvement
- 40.0840: Possible Outcomes
- 40.0850: Phase III - Identification, Evaluation and Selection of Comprehensive Remedial Action Alternatives
- 40.0852: General Provisions
- 40.0853: Performance Standards
- 40.0855: Identification and Evaluation of Remedial Action Alternatives
- 40.0856: Initial Screening of Likely Remedial Action Alternatives
- 40.0857: Detailed Evaluation of Remedial Action Alternatives
- 40.0858: Detailed Evaluation Criteria
- 40.0859: Selection of Remedial Action Alternative
- 40.0860: Feasibility Evaluations
- 40.0861: Remedial Action Plan
- 40.0862: Phase III Completion Statement
- 40.0863: Public Involvement
- 40.0864: Possible Outcome
- 40.0870: Phase IV - Implementation of the Selected Comprehensive Remedial Alternative
- 40.0871: General Provisions

Section: continued

- 40.0872: Performance Standards
- 40.0874: Remedy Implementation Plan (RIP)
- 40.0875: As-built Construction Report
- 40.0877: Phase IV Status Report and Remedial Monitoring Report
- 40.0878: Final Inspection Report
- 40.0879: Phase IV Completion Statement
- 40.0880: Public Involvement
- 40.0881: Possible Outcomes
- 40.0890: Operation, Maintenance, and/or Monitoring of Comprehensive Response Actions
- 40.0891: General Provisions
- 40.0892: Phase V Status and Remedial Monitoring Reports
- 40.0893: Remedy Operation Status
- 40.0894: Phase V Completion Statement
- 40.0895: Public Involvement
- 40.0896: Possible Outcomes
- 40.0897: Post-temporary Solution Operation, Maintenance and/or Monitoring
- 40.0898: Post-temporary Solution Status and Remedial Monitoring Reports

SUBPART I: RISK CHARACTERIZATION

- 40.0900: Procedures and Standards for the Characterization of the Risk of Harm to Health, Safety, Public Welfare, and the Environment
- 40.0901: Applicability and General Requirements
- 40.0902: Purpose of the Risk Characterization
- 40.0903: Scope of the Risk Characterization and Supporting Documentation
- 40.0904: Site Information Required for Risk Characterization
- 40.0920: Receptor Information Required for Risk Characterization
- 40.0921: Identification of Human Receptors
- 40.0922: Identification of Environmental Receptors
- 40.0923: Identification of Site Activities and Uses
- 40.0924: Identification of Exposure Points
- 40.0925: Identification of Exposure Pathways
- 40.0926: Identification of Exposure Point Concentrations and Other Data Criteria
- 40.0930: Identification of Site Groundwater and Soil Categories
- 40.0931: Purpose
- 40.0932: Identification of Applicable Groundwater Categories
- 40.0933: Identification of Applicable Soil Categories
- 40.0940: Methods for Characterizing Risk of Harm
- 40.0941: Approaches to Characterizing Risk of Harm
- 40.0942: Selection of Method to Characterize the Risk of Harm to Health, Public Welfare, and the Environment
- 40.0950: Imminent Hazard Evaluations and Substantial Hazard Evaluations
- 40.0951: Purpose and Scope of Imminent Hazard Evaluations
- 40.0953: Exposures to be Considered in Imminent Hazard Evaluations
- 40.0955: Imminent Hazard Risk Characterization and Outcome
- 40.0956: Substantial Hazard Evaluations
- 40.0960: Characterization of Risk to Safety
- 40.0970: Method 1 Risk Characterization
- 40.0971: Applicability of Method 1
- 40.0972: General Approach to Method 1
- 40.0973: Method 1 Risk Characterization
- 40.0974: Identification of Applicable Groundwater Standards in Method 1
- 40.0975: Identification of Applicable Soil Standards in Method 1
- 40.0980: Method 2 Risk Characterization
- 40.0981: Applicability of Method 2
- 40.0982: General Approach to Method 2
- 40.0983: Derivation of Additional Method 1 Groundwater Standards for Use in Method 2
- 40.0984: Derivation of Additional Method 1 Soil Standards for Use in Method 2
- 40.0985: Determination of Method 2 Soil Standards Considering Leaching Potential

Section: continued

- 40.0986: Determination of Method 2 GW-2 Standards
- 40.0987: Determination of MCP Method 2 GW-3 Standards
- 40.0988: Method 2 Risk Characterization
- 40.0990: Risk Characterization Method 3
- 40.0991: Applicability of Method 3
- 40.0992: General Approach to Method 3
- 40.0993: Method 3 Human Health Risk Characterization
- 40.0994: Method 3 Public Welfare Risk Characterization
- 40.0995: Method 3 Environmental Risk Characterization
- 40.0996: Method 3 Upper Concentration Limits

SUBPART J: PERMANENT AND TEMPORARY SOLUTIONS

- 40.1000: Permanent and Temporary Solutions
- 40.1001: Purpose
- 40.1002: Applicability
- 40.1003: General Provisions for Permanent and Temporary Solutions
- 40.1004: Performance Standards for Permanent and Temporary Solutions
- 40.1005: Defining the "Foreseeable Period of Time" for Purposes of a Permanent Solution
- 40.1012: Application of Activity and Use Limitations
- 40.1013: Limitations, Assumptions and Conditions on Site Activities and Uses That Do Not Require an AUL
- 40.1020: Background Levels of Oil and Hazardous Material
- 40.1025: Requirements for Active Exposure Pathway Mitigation Measures Implemented as a Permanent Solution with Conditions
- 40.1026: Requirements for Active Exposure Pathway Mitigation Measures Implemented as a Part of a Temporary Solution or Remedy Operation Status
- 40.1030: Categories of Permanent and Temporary Solutions
- 40.1040: Permanent Solutions
- 40.1041: Categories of Permanent Solutions
- 40.1050: Temporary Solutions
- 40.1055: Transition Provisions
- 40.1056: Content of Permanent Solution Statements
- 40.1057: Content of Temporary Solution Statements
- 40.1066: Effect of Permanent or Temporary Solutions on Fees
- 40.1067: Remedial Actions After a Permanent or Temporary Solution has been Submitted to the Department
- 40.1070: Implementation of Activity and Use Limitations
- 40.1071: Grants of Environmental Restrictions for Disposal Sites Where a RP, PRP or Other Person Conducts Response Actions
- 40.1072: Process for Applying for a Grant of Environmental Restriction
- 40.1073: Environmental Restrictions for Disposal Sites Where the Department Conducts Response Actions
- 40.1074: Notice of Activity and Use Limitation
- 40.1075: Form of Notice of Activity and Use Limitation
- 40.1080: Changes in Site Activities and/or Uses or Other Site Conditions After an Activity and Use Limitation Has Been Filed
- 40.1081: Amendment of Activity and Use Limitations
- 40.1082: Process for Amending Grant of Environmental Restriction
- 40.1083: Release or Termination of Activity and Use Limitations
- 40.1084: Process for Implementing a Release of Grant of Environmental Restriction or Partial Release of Grant of Environmental Restriction
- 40.1085: Correction of Notices of Activity and Use Limitations
- 40.1090: Public Involvement Requirements
- 40.1099: Forms for Activity and Use Limitations

Section: continued

SUBPART K: AUDITS AND COMPLIANCE ASSISTANCE

40.1101: Purpose, Scope and Applicability

40.1110: Selection of Persons, Response Action and Sites for Audit

40.1120: Audit Activities

NON-TEXT PAGE

Section: continued

- 40.1130: Initiation of Audit
- 40.1131: Response Actions During Audits
- 40.1140: Notice of Audit Findings
- 40.1160: Audit Follow-up Plans
- 40.1170: Post Audit Completion Statements
- 40.1190: Reservation of Rights

SUBPART L: COST RECOVERY, LIEN HEARINGS AND PETITIONS FOR REIMBURSEMENT OF INCURRED COSTS

- 40.1200: Cost Recovery
- 40.1201: Purpose, Scope, and Applicability
- 40.1202: General Provisions
- 40.1220: Recovery of Response Action Costs Incurred in Response Actions
- 40.1221: Calculation of Indirect Rate
- 40.1250: Procedures for Liens
- 40.1251: Notice of Intent to Perfect a Lien
- 40.1252: Content of Notice of Intent to Perfect a Lien
- 40.1253: Service of Notice of Intent to Perfect a Lien
- 40.1254: Right to Adjudicatory Hearing
- 40.1255: Waiver of Right to Adjudicatory Hearing
- 40.1256: Conducting the Adjudicatory Hearing
- 40.1257: Reservation of Rights
- 40.1260: Petitions for Reimbursement of Incurred Costs
- 40.1261: Right to Petition for Reimbursement
- 40.1262: Content of Petition
- 40.1263: Timing of Petition
- 40.1264: Grounds for Reimbursement
- 40.1265: Petitions not Subject to M.G.L. c. 30A

SUBPART M: ADMINISTRATIVE RECORD

- 40.1301: Purpose, Scope, and Applicability
- 40.1302: When the Department May Establish an Administrative Record
- 40.1303: Participation by the Public, RPs, and PRPs
- 40.1304: Administrative Record Requirements After Certification
- 40.1305: Content of the Administrative Record
- 40.1306: Location of the Administrative Record

SUBPART N: PUBLIC INVOLVEMENT AND TECHNICAL ASSISTANCE GRANTS

- 40.1400: Public Involvement - General Approach for Response Actions
- 40.1401: General Principles for Public Involvement in Response Actions
- 40.1402: Responsibility for Performing Public Involvement Activities in Response Actions
- 40.1403: Minimum Public Involvement Activities in Response Actions
- 40.1404: Public Involvement Plan Site Designation
- 40.1405: Additional Public Involvement Activities Required for Public Involvement Plan Sites
- 40.1406: Notification to Owners of Property within the Boundaries of a Disposal Site
- (40.1407: Community Site Inspection: Reserved)
- 40.1450: Technical Assistance Grants
- 40.1451: Purpose and Scope of Technical Assistance Grants
- 40.1452: Grant Availability
- 40.1453: Eligible Applicants
- 40.1454: Eligible Activities
- 40.1455: Notice Provisions
- 40.1456: Grant Application Process
- 40.1457: Grant Selection Process
- 40.1458: Payment Method
- 40.1459: Fiscal Management of Grants

Section: continued

- 40.1460: Records to be Maintained by Grantees
- 40.1461: Inspection of Projects
- 40.1462: Honest Practices

(SUBPART O: RESERVED)

SUBPART P: MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

- 40.1600: Massachusetts Oil and Hazardous Material List

SUBPART A: GENERAL PROVISIONS

40.0001: Authority

310 CMR 40.0001 through 40.9999, cited collectively as 310 CMR 40.0000, are promulgated by the Commissioner of the Department of Environmental Protection under M.G.L. c. 21E, §§ 3(c), 3(d), 3(e), 3A(d), 3A(f), 3A(g), 3A(m), 3B, 5A, 6, 7 and 14, and M.G.L. c. 21A, § 2(28), M.G.L. c. 21C and M.G.L. c. 111, § 160. 310 CMR 40.0000 collectively comprises the Massachusetts Contingency Plan (the "MCP").

40.0002: Purpose

- (1) The purposes of the Massachusetts Contingency Plan are, without limitation, to:
 - (a) provide for the protection of health, safety, public welfare and the environment by establishing requirements and procedures for the following:
 1. the prevention and control of activities which may cause, contribute to, or exacerbate a release or threat of release of oil and/or hazardous material;
 2. notification of the Department in the event of certain releases or threats of release of oil and/or hazardous material;
 3. assessment of the nature and extent of contamination and any threat to health, safety, public welfare or the environment caused by a release or threat of release of oil and/or hazardous material;
 4. the evaluation of alternatives for remedial actions to abate, prevent, remedy or otherwise respond to a release or threat of release of oil and/or hazardous material;
 5. the implementation of appropriate remedial actions to abate, prevent, remedy or otherwise respond to a release or threat of release of oil and/or hazardous material;
 6. public involvement in decisions regarding response actions at disposal sites; and
 7. the recovery of Costs incurred by the Commonwealth in responding to releases or threats of release of oil and/or hazardous material.
 - (b) encourage persons responsible for releases and threats of release of oil and/or hazardous material to undertake necessary and appropriate response actions in a timely way;
 - (c) focus government resources on those sites at which the person(s) responsible can not or will not undertake necessary response actions;
 - (d) focus government resources on those sites at which Department oversight is necessary to ensure that response actions are protective of health, safety, public welfare and the environment;
 - (e) establish a program for the Department to issue Tier I Permits to persons seeking to carry out response actions at Tier I disposal sites; and
 - (f) establish a program for the Department to audit a sufficient number of response actions not overseen or conducted by the Department to ensure that those response actions are performed in compliance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable laws.
- (2) The MCP identifies those oils and hazardous materials which are subject to the requirements and procedures set forth in 310 CMR 40.0000.
- (3) The MCP prescribes the respective roles and responsibilities of the Department, other governmental agencies, Responsible Parties, Potentially Responsible Parties, Licensed Site Professionals, Other Persons, and the public in response actions.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0002: continued

(4) The MCP is intended to comport with and complement the National Contingency Plan promulgated by the United States Environmental Protection Agency under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

(5) Except with respect to 310 CMR 40.1200, the MCP does not address the Commonwealth's recovery of damages associated with injury to, destruction of, or loss of use of natural resources or the costs of assessing those damages.

40.0003: Applicability

(1) The MCP applies to any person required by M.G.L. c. 21E to notify the Department of a release or threat of release of oil and/or hazardous material and/or to perform one or more response actions at any site in Massachusetts without regard to the level of Department oversight, if any, of response actions at the site.

(2) The MCP also applies to any other person who takes one or more response actions with respect to a site from or at which a release of oil and/or hazardous material has occurred or where a threat of release of oil and/or hazardous material exists.

40.0005: Effective Dates

(1) 310 CMR 40.0000, as published on January 13, 1995, shall take effect on February 1, 1995, except for 310 CMR 40.0180 which shall take effect on February 24, 1995. 310 CMR 40.0000, as effective prior to February 1, 1995, became effective on October 1, 1993, except for 310 CMR 40.0168 and 310 CMR 40.0600, which became effective on August 2, 1993.

(2) Except as provided by 310 CMR 40.0600, response actions which were approved by the Department:

(a) prior to July 20, 1992, and on or after October 3, 1988, shall be completed in a manner consistent with such approval and in accordance with 310 CMR 40.000, as effective prior to October 1, 1993, and M.G.L. c. 21E, as amended prior to July 20, 1992, and

(b) prior to October 1, 1993, and on or after July 20, 1992, shall be completed in a manner consistent with such approval and in accordance with 310 CMR 40.000, as effective prior to October 1, 1993, and M.G.L. c. 21E, as amended on July 20, 1992. 310 CMR 40.000 became effective on October 3, 1988, with the exception of 310 CMR 40.300 through 310 CMR 40.379 which became effective on August 31, 1988.

Copies of 310 CMR 40.000, as effective prior to October 1, 1993 (*i.e.* the 1988 Massachusetts Contingency Plan), may be obtained upon request from the Department for a nominal fee.

(3) Except as provided by 310 CMR 40.0600, response actions which were approved by the Department prior to October 3, 1988, shall be completed in a manner consistent with such approval and M.G.L. c. 21E, as amended prior to July 20, 1992.

(4) 310 CMR 40.0000 as published May 30, 1997, shall take effect May 30, 1997.

(5) 310 CMR 40.0000 as published March 24, 2006 shall take effect April 3, 2006, except as provided in 310 CMR 40.0027 regarding the electronic submittal of Remedial Monitoring Reports.

(6) 310 CMR 40.0000 as published December 14, 2007 shall take effect February 14, 2008, except for 310 CMR 40.0570 which shall take effect on December 14, 2007.

(7) Except as provided by 310 CMR 40.0005(8) through (10), 310 CMR 40.0000 as published April 25, 2014 shall take effect on June 20, 2014.

(8) The Reportable Concentrations for Oil and Hazardous Material in groundwater or soil listed in the Massachusetts Oil and Hazardous Material List at 310 CMR 40.1600 as published April 25, 2014, shall take effect on April 25, 2014.

40.0005: continued

(9) The elimination of the requirement to submit an initial Tier I Permit Application, formerly 310 CMR 40.0704, from 310 CMR 40.0000, as published on April 25, 2014, shall take effect on April 25, 2014.

(10) RPs, PRPs or Other Persons may conduct an initial Tier Classification of a disposal site in accordance with the Tier Classification Process and Basis for Tier Classification in 310 CMR 40.0510 and 40.0520, respectively, as published April 25, 2014.

40.0006: Terminology, Definitions and Acronyms

(1) The definitions of the terms "site," "disposal site," "vessel," "release" and "threat of release" contained in M.G.L. 21E and this Contingency Plan display subtle differences. These terms are used in this Contingency Plan as follows:

- (a) the terms "site" and "vessel" are used to refer to a place or area from or at which a release of oil and/or hazardous material has occurred or where a threat of release exists;
- (b) the term "disposal site" is used to refer to a place or area where an uncontrolled release of oil and/or hazardous material from or at a site or vessel has come to be located.

(2) The definitions of the terms "response action," "remedial action," "Comprehensive Response Action," "Comprehensive Remedial Action," and "Preliminary Response Action" contained in this Contingency Plan have specific meanings. These terms are used in this Contingency Plan as follows:

- (a) the term "response action" is a broad term used to refer to assessments, containments and/or removals;
- (b) the term "remedial action" is a subset of "response actions" and is used to refer to containments and/or removals only, and excludes assessments;
- (c) the term "Comprehensive Response Action" is a subset of "response actions" and is used to refer to response actions performed in accordance with 310 CMR 40.0800;
- (d) the term "Comprehensive Remedial Action" is a subset of "Comprehensive Response Actions" and is used to refer to only remedial actions performed in accordance with 310 CMR 40.0800, and excludes assessments; and
- (e) the term "Preliminary Response Action" is a subset of "response actions" and is used to refer to Initial Site Investigation Activities performed in accordance with 310 CMR 40.0405(1), and to Immediate Response Actions performed in accordance with 310 CMR 40.0410, and Release Abatement Measures performed in accordance with 310 CMR 40.0440 when such actions are performed prior to the initiation of Comprehensive Response Actions.

The terms "Comprehensive Response Action," "Comprehensive Remedial Action," and "Preliminary Response Action" are more specific terms than the terms "response action" and "remedial action," respectively, and shall not be construed to limit any application of the latter terms.

(3) For purposes of 310 CMR 40.0000, the terms "priority disposal site," "Location To Be Investigated," and "non-priority disposal site" shall have the meaning ascribed to them by 310 CMR 40.020, prior to October 1, 1993.

(4) For purposes of 310 CMR 40.0000, the terms "undertaking," "conducting" and "performing" are used to refer to the undertaking, conducting and performing of response actions by RPs, PRPs or Other Persons, as applicable. Such persons may be required to engage or employ an LSP to provide Professional Services with respect to such response actions.

(5) For purposes of 310 CMR 40.0000, the following words and phrases shall have the meaning ascribed to them by M.G.L. c. 21E, § 2, unless the context clearly indicates otherwise: fiduciary, owner, operator and secured lender.

(6) For purposes of 310 CMR 40.0000, the term "Solid Waste Management Facility" shall have the meaning ascribed to such term by 310 CMR 19.006: Solid Waste Management Facility.

40.0006: continued

(7) For purposes of 310 CMR 40.0000, the term "21C Facility" shall mean a hazardous waste management facility:

- (a) for which a currently valid license has been issued pursuant to 310 CMR 30.800: *Licensing Requirements and Procedures*; or
- (b) that is a "facility having interim status pursuant to RCRA," as defined in 310 CMR 30.010: *Definitions*, and is in compliance with 310 CMR 30.099(6).

(8) For purposes of 310 CMR 40.0000, the term "21C Corrective Action" shall mean the closure of a 21C Facility pursuant to 310 CMR 30.580: *Closure* through 310 CMR 30.589, the post-closure care of a RCRA Facility pursuant to 310 CMR 30.590: *Post-closure* through 310 CMR 30.599, and any other response action at a RCRA Facility required by M.G.L. c. 21C and/or 310 CMR 30.000: *Hazardous Waste*.

(9) For purposes of 310 CMR 40.0000, the term "HSWA Facility" shall mean:

- (a) a 21C Facility, and
- (b) a landfill, surface impoundment or waste pile unit, as such terms are defined in 40 Code of Federal Regulations § 260.10; provided such 21C Facility or landfill, surface impoundment or waste pile unit for which there exists a currently valid license, permit, approval or order issued pursuant to 42 U.S.C. §§ 6928(a), 6928(h), 6924(u) or 6924(v).

(10) For purposes of 310 CMR 40.0000 the term "HSWA Corrective Action" shall mean corrective actions for a HSWA Facility required by a license, permit, approval or order issued pursuant to 42 U.S.C. §§ 6928(a), 6928(h), 6924(u) or 6924(v).

(11) For purposes of 310 CMR 40.0000, the terms "sewer system", "NPDES", "Publicly Owned Treatment Works", "POTW", "outlet", and "effluent" shall have the meaning ascribed to such terms by 314 CMR 3.00, the Massachusetts Surface Water Discharge Permit Program.

(12) For purposes of 310 CMR 40.0000, the following words and phrases shall have the following meanings unless the context clearly indicates otherwise:

Active Exposure Pathway Mitigation Measure means a type of Exposure Pathway Mitigation Measure that relies upon the continual or periodic use of a mechanical or electro-mechanical device.

Active Operation and Maintenance means activities related to:

- (a) operating and maintaining an Active Remedial System;
- (b) operating and maintaining an Active Exposure Pathway Mitigation Measure; or
- (c) conducting an Active Remedial Monitoring Program.

Active Remedial Monitoring Program means a remedial action that employs a systematically designed and monitored program of sampling and analyzing environmental media (*e.g.*, application of Remedial Additives, Monitored Natural Attenuation, reactive walls); an Active Remedial Monitoring Program does not employ an Active Remedial System.

Active Remedial System means a type of Remedial System that relies upon the continual or periodic use of an on-site or in-situ mechanical or electro-mechanical device to contain, treat and/or remove oil or hazardous material in the environment. The term does not include Active Exposure Pathway Mitigation Measures.

Act of God means an unanticipated grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character, the effects of which could not have been prevented or avoided by the exercise of due care or foresight. A natural disaster is unanticipated when it is of a type unexpected given the area, the season, and the past history of conditions.

40.0006: continued

Activity and Use Limitation means a Grant of Environmental Restriction or Notice of Activity and Use Limitation recorded, registered or filed in accordance with 310 CMR 40.1070 through 310 CMR 40.1099.

Adjudicatory Hearing means a hearing conducted in accordance with M.G.L. c. 30A, § 10, and 310 CMR 1.00: *Adjudicatory Proceedings*.

Affected Individual means any individual who experiences or may experience significant health, safety, welfare or environmental impacts from a disposal site.

Affected Person means any group of two or more individuals, or any community or agency thereof, or a district or body politic which operates a public water system that might be affected by a disposal site.

Agency means any agency, authority, board, commission, department, office, or political subdivision of the federal, state or local government.

Aliphatic Hydrocarbon Fraction means C₅ through C₈ Aliphatic Hydrocarbons, C₉ through C₁₂ Aliphatic Hydrocarbons, C₉ through C₁₈ Aliphatic Hydrocarbons, and C₁₉ through C₃₆ Aliphatic Hydrocarbons.

Anthropogenic Background means those levels of oil and hazardous material that would exist in the absence of the disposal site of concern and which are:

- (a) attributable to atmospheric deposition of industrial process or engine emissions and are ubiquitous and consistently present in the environment at and in the vicinity of the disposal site of concern;
- (b) attributable to Historic Fill;
- (c) associated with sources specifically exempt from the definitions of disposal site or release as those terms are defined in MGL c. 21E and 310 CMR 40.0006;
- (d) releases to groundwater from a public water supply system; or
- (e) petroleum residues that are incidental to the normal operation of motor vehicles.

Applicant means any person who applies for, or who is required to apply for, a permit, or who applies for a TAG or on whose behalf an application for a permit or TAG is made.

Application means any application, filing, notification, or other submittal of documents in the required form to the Department to initiate a permit or TAG.

Aquifer means a geologic formation, group of formations or part of a formation that is capable of yielding a significant amount of groundwater to wells or springs.

Area of Critical Environmental Concern and ACEC each means an area which has been so designated by the Secretary of Environmental Affairs pursuant to 301 CMR 12.00: *Areas of Critical Environmental Concern*.

Aromatic Hydrocarbon Fraction means C₉ through C₁₀ Aromatic Hydrocarbons and C₁₁ through C₂₂ Aromatic Hydrocarbons.

As-built Construction Report means the document that is prepared in compliance with 310 CMR 40.0875.

Assess and Assessment each means investigations, monitoring, surveys, testing, and other information-gathering activities to identify:

- (a) the existence, source, nature and extent of a release or threat of release of oil and/or hazardous material;
- (b) the extent of risk or danger to the public health, safety, welfare and the environment; or
- (c) those persons liable under M.G.L. c. 21E, § 5. Assess and Assessment shall also include, without limitation, studies, services and investigations to plan, manage and direct assessments, containments and removals, to determine and recover the costs thereof and to otherwise accomplish the purposes of M.G.L. c. 21E and/or 310 CMR 40.0000. Assess and Assessment shall not include removals, containments or remedial actions.

40.0006: continued

Assessment Endpoint means a specific effect on a specific group of organisms that is evaluated in a quantitative environmental risk characterization.

Audit means any activity conducted by the Department pursuant to 310 CMR 40.1100 with respect to a site to determine whether response actions which the Department has not directly overseen or performed have been conducted in accordance with M.G.L. c. 21E, 310 CMR 40.000, 310 CMR 40.0000 and any other laws, regulations, orders, permits and approvals applicable to such response actions. An audit may be conducted for all or any portion of a response action or site.

Audit Follow-up Plan means a plan prepared by an LSP or the Consultant-of-Record pursuant to 310 CMR 40.1100 to confirm, demonstrate or achieve compliance with M.G.L. c. 21E and/or the MCP.

Background means those levels of oil and hazardous material that would exist in the absence of the disposal site of concern, including both Natural Background and Anthropogenic Background.

Best Management Practices for Non-commercial Gardening means current practices generally accepted by practitioners of safe gardening methods that limit potential human exposure to OHM during gardening activities and as the result of consumption of fruits and vegetables grown in a non-commercial garden. Such practices include, but are not limited to: locating garden beds outside of areas affected by releases of OHM; gardening in raised beds above a barrier layer; use of soil and soil amendments unaffected by releases of OHM in garden beds; and covering adjacent areas to limit the transfer of OHM from windborne material into garden beds.

Biota means plant or animal life.

C₅ through C₈ Aliphatic Hydrocarbons means the cumulative concentration of all aliphatic hydrocarbon compounds with boiling points greater than 36°C and less than 150°C, as measured by chromatographic methods approved by the Department or equivalent procedures, excluding the individual compounds listed at 310 CMR 40.0974(2).

C₉ through C₁₂ Aliphatic Hydrocarbons means the cumulative concentration of all aliphatic hydrocarbon compounds with boiling points equal to or greater than 150°C and less than 217°C, as measured by chromatographic methods approved by the Department or equivalent procedures, excluding the individual compounds listed at 310 CMR 40.0974(2).

C₉ through C₁₈ Aliphatic Hydrocarbons means the cumulative concentration of all aliphatic hydrocarbon compounds with boiling points equal to or greater than 150°C and less than 330°C, as measured by chromatographic methods approved by the Department or equivalent procedures, excluding the individual compounds listed at 310 CMR 40.0974(2).

C₁₉ through C₃₆ Aliphatic Hydrocarbons means the cumulative concentration of all aliphatic hydrocarbon compounds with boiling points equal to or greater than 330°C and less than 500°C, as measured by chromatographic methods approved by the Department or equivalent procedures, excluding the individual compounds listed at 310 CMR 40.0974(2).

C₉ through C₁₀ Aromatic Hydrocarbons means the cumulative concentration of all aromatic hydrocarbon compounds with boiling points greater than 169°C and equal to or less than 218°C, as measured by chromatographic methods approved by the Department or equivalent procedures, excluding the individual compounds listed at 310 CMR 40.0974(2).

C₁₁ through C₂₂ Aromatic Hydrocarbons means the cumulative concentration of all aromatic hydrocarbon compounds with boiling points greater than 218°C and equal to or less than 525°C, as measured by chromatographic methods approved by the Department or equivalent procedures, excluding the individual compounds listed at 310 CMR 40.0974(2).

CAS means Chemical Abstract Service.

Carcinogenic Slope Factor (CSF, also Cancer Slope Factor) means an estimate of the increased cancer risk from exposure to an oil or hazardous material (OHM), expressed as risk per unit dose of (mg OHM/kg-day).

40.0006: continued

CERCLA means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601 *et seq.*

Chief Municipal Officer means the city manager in any city having a city manager, or the mayor in any other city; the town manager in any town having a town manager, or the chairman of the board of selectmen in any other town.

Class A Surface Water Body means any segment of an inland or coastal surface water body so assigned "Class A" pursuant to 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*.

Coastal Waters means the Atlantic Ocean and all contiguous saline bays, inlets and harbors within the jurisdiction of the Commonwealth including areas where fresh and salt waters mix and tidal effects are evident or any partially enclosed coastal body of water where the tide meets the current of a stream or river.

Commissioner means the Commissioner of the Department of Environmental Protection.

Community means any city or town of the Commonwealth.

Completion Statement means the LSP Opinion, including, but not limited to, applicable scopes of work, plans and reports, required by:

- (a) 310 CMR 40.0427 upon completion of an Immediate Response Action;
- (b) 310 CMR 40.0446 upon completion of a Release Abatement Measure;
- (c) 310 CMR 40.0466 upon completion of a Utility-related Abatement Measure;
- (d) 310 CMR 40.1140 upon completion of response actions required by an Audit Follow-up Plan;
- (e) 310 CMR 40.0484 upon completion of Phase I;
- (f) 310 CMR 40.0836 upon completion of Phase II;
- (g) 310 CMR 40.0862 upon completion of Phase III;
- (h) 310 CMR 40.0879 upon completion of Phase IV;
- (i) 310 CMR 40.0893 upon completion of Phase V; and
- (j) any other permit, approval or order issued by the Department.

Compliance Assistance means any service rendered by the Department to assist any person performing a response action to confirm, demonstrate or achieve compliance with M.G.L. c. 21E, 310 CMR 40.0000 and other laws, regulations, orders, permits and approvals applicable to such response actions.

Comprehensive Remedial Action means any remedial action performed in accordance with 310 CMR 40.0800.

Comprehensive Remedial Alternative means a measure or combination of measures identified and evaluated in accordance with 310 CMR 40.0850 for its effectiveness in reducing, mitigating or eliminating risk posed by a disposal site.

Comprehensive Response Action means any response action performed in accordance with 310 CMR 40.0800.

Compressed gas means any material or mixture that is in a container and that, while in the container, has an absolute pressure exceeding 40 pounds per square inch at 70°F or, regardless of the pressure at 70°F, has an absolute pressure exceeding 104 pounds per square inch at 130°F.

Conceptual Site Model or CSM means a site-specific description of how contaminants entered the environment, how contaminants have been and may be transported within the environment, and routes of exposure to human and environmental receptors that provides a dynamic framework for assessing site characteristics and risk, identifying and addressing data gaps and managing uncertainty, eliminating or controlling contaminant sources, developing and conducting response action strategies, and evaluating whether those strategies have been effective in achieving desired endpoints. At sites at which NAPL is or may be present, this includes the body of fundamental scientific principles describing the behavior of fluid flow in porous media necessary to assess NAPL in subsurface strata.

40.0006: continued

Condition of Substantial Release Migration (SRM) means a 72-hour notification condition at a disposal site that is further defined at 310 CMR 40.0313(4) and includes any of the following:

- (a) releases that have resulted in the discharge of separate-phase oil and/or separate-phase hazardous material to surface waters, buildings, or underground utilities or conduits;
- (b) releases to the ground surface or to the vadose zone that, if not promptly removed or contained, are likely to significantly impact the underlying groundwater, or significantly exacerbate an existing condition of groundwater pollution;
- (c) releases to the groundwater that have migrated or are expected to migrate more than 200 feet per year;
- (d) releases to the groundwater that have been or are within one year likely to be detected in a public or private water supply well;
- (e) releases to the groundwater that have been or are within one year likely to be detected in a surface water body, wetland, or public water supply reservoir; or
- (f) releases to the groundwater or to the vadose zone that have resulted or have the potential to result in the discharge of vapors into a School, Daycare or Child Care Center or occupied Residential Dwelling.

Conditions means those requirements set forth in a written determination issued by the Department for the purpose of permitting, regulating or prohibiting any activity pursuant to M.G.L. c. 21E and/or 310 CMR 40.0000.

Construction Plans and Specifications means any document that is prepared in accordance with 310 CMR 40.0870.

Consultant-of-record means each consultant, other than a Licensed Site Professional, who provides professional services with respect to a specific site, unless and until such person notifies the Department in writing that he or she is no longer engaged or employed to provide such services with respect to such site.

Contain and Containment each means actions taken in response to a release or threat of release of oil or hazardous material to prevent or minimize such release so that it does not migrate or otherwise cause or threaten substantial danger to present or future health, safety, public welfare or the environment. The term shall also include security measures, including, without limitation, the building of fences for the purpose of limiting and restricting access to a site or vessel where there has been a release or there is a threat of a release of oil or hazardous material.

Containerized Waste means discarded oil and/or hazardous material at a site in drums, tanks, engineered impoundments, or other fabricated containers, including, without limitation,

- (a) discarded oil and/or hazardous material that was generated at a site as a result of manufacturing industrial, commercial, or other process-related activities, and
- (b) discarded oil and/or hazardous material discovered, managed, generated, or accumulated as part of a response action.

Contaminated Debris - means any debris that contains oil and/or hazardous material associated with a release for which notification is required by 310 CMR 40.0300 and 40.1600.

Contaminated Groundwater - means groundwater containing oil and/or hazardous material at concentrations equal to or greater than a release notification threshold established by 310 CMR 40.0300 and 40.1600.

Contaminated Media - means Contaminated Groundwater, Contaminated Sediment, Contaminated Soil, and/or Contaminated Surface Water.

Contaminated Sediments - means sediments containing oil and/or hazardous material associated with a release for which notification is required by 310 CMR 40.0300 and 40.1600.

Contaminated Soil - means soil containing oil and/or hazardous material at concentrations equal to or greater than a release notification threshold established by 310 CMR 40.0300 and 40.1600.

40.0006: continued

Contaminated Surface Water - means surface water containing oil and/or hazardous material associated with a release for which notification is required under 310 CMR 40.0300 and 40.1600.

Critical Exposure Pathways mean those routes by which oil and/or hazardous material(s) released at a disposal site are transported, or are likely to be transported, to human receptors via:

- (a) vapor-phase emissions of measurable concentrations of oil and/or hazardous materials into the living or working space of a pre-school, daycare, school or occupied residential dwelling; or
- (b) ingestion, dermal absorption or inhalation of measurable concentrations of oil and/or hazardous materials from drinking water supply wells located at and servicing a pre-school, daycare, school or occupied residential dwelling.

Cumulative Receptor Cancer Risk means the sum of the estimated excess lifetime cancer risks associated with exposure to all oil and/or hazardous material at or from a disposal site at all exposure points for a given receptor.

Cumulative Receptor Non-cancer Risk means a calculation of the possibility of non-cancer health effects associated with exposure to all oil and/or hazardous material at or from a disposal site at all exposure points identified for a given receptor. The Hazard Index is a measure of the Cumulative Receptor Non-cancer Risk.

Current Drinking Water Source Area means groundwater located:

- (a) within the Zone II for a public water supply;
- (b) within the Interim Wellhead Protection Area for a public water supply;
- (c) within the Zone A of a Class A surface water body used as a public water supply; or
- (d) within 500 feet of a private water supply well.

Daycare or Child Care Center means a facility operated on a regular basis whether known as a daycare, child nursery, nursery school, kindergarten, child play school, progressive school, child development center, pre-school, or known under any other name, which receives children under seven years of age, or under 16 years of age if these children have special needs, for non-residential custody and care during part or all of the day separate from the parents or other persons responsible for the children. Daycare or Child Care Center shall not include: any part of a public school system; any part of a private organized educational system, unless the services of such a system are primarily limited to kindergarten, nursery or related pre-school services; a facility operated by a religious organization where children are cared for during short periods of time while parents or other persons responsible for the children are attending religious services; a facility within or attached to a commercial facility where children are cared for during short periods of time while parents or other persons responsible for the children are engaged in work or other activities; an informal cooperative arrangement among neighbors or relatives; or the occasional care of children with or without compensation.

Debris means solid material that is a manufactured object, plant or animal matter that is intended for disposal or is otherwise no longer serving its intended use. The term shall include demolition and construction waste, hay, vegetation, and other organic and inorganic absorbent materials used to contain or absorb releases of oil and/or hazardous material. The term shall not include:

- (a) any material for which a specific treatment standard is provided in subpart D of part 268 of the Code of Federal Regulations; or
- (b) process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges or air emission residues.

Demolition and Construction Waste means any waste materials and rubble resulting from the construction, remodeling, repair or demolition of buildings, pavement, roads or other structures. Demolition and construction waste includes, but is not limited to, concrete, bricks, lumber, masonry, road paving materials, rebar and plaster.

Dense Nonaqueous Phase Liquid and DNAPL each means NAPL that has a specific gravity greater than one.

40.0006: continued

Department and DEP each means the Department of Environmental Protection.

Determination means any decision, oral or written, that is made by the Department in accordance with M.G.L. c. 21E and/or 310 CMR 40.0000 with regard to response actions and that is not an order issued pursuant to M.G.L. c. 21E, §§ 9 or 10, or a permit.

DDD means 2,2-bis(*p*-chlorophenyl)-1,1-dichloroethane.

DDE means dichlorodiphenyldichloroethylene.

DDT means 1,1,1-trichloro-2,2-bis(*p*-chlorophenyl)ethane.

Direct Hours means time expended by employees of the Department in planning, managing, directing or performing response actions, or otherwise ensuring compliance with the requirements of M.G.L. c. 21E and/or 310 CMR 40.0000, with respect to a specific site.

Discharge - means any addition, direct or indirect, of oil and/or hazardous material at or from a disposal site to any waters of the Commonwealth, POTW, sewer system, or Non-Publicly Owned Treatment Works, or to the ground surface or subsurface, that results from the management of Remedial Wastewater, Remedial Additives, and/or groundwater pursuant to 310 CMR 40.0000.

Disposal Site means any structure, well, pit, pond, lagoon, impoundment, ditch, landfill or other place or area, excluding ambient air or surface water, where uncontrolled oil and/or hazardous material has come to be located as a result of any spilling, leaking, pouring, abandoning, emitting, emptying, discharging, injecting, escaping, leaching, dumping, discarding or otherwise disposing of such oil and/or hazardous material. The term shall not include any site containing only oil or hazardous materials which: are lead-based paint residues emanating from a point of original application of such paint; resulted from emissions from the exhaust of an engine; are building materials still serving their original intended use or emanating from such use; or resulted from release of source, byproduct or special nuclear material from a nuclear incident, as those terms are defined in 42 U.S.C. § 2014, if such release was subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under 42 U.S.C. § 2210.

District means a fire, water, sewer, water pollution abatement, refuse disposal, light, school, economic development or improvement district, conservation or any other district, howsoever named, formed for the purpose of carrying out any of the aforementioned functions, whether established under general law or special act.

Document means writings or recordings of any nature, including, but not limited to, waste site cleanup activity opinions, applications, contracts, agreements, notices, communications, correspondence, memoranda, records, reports, petitions, plans, specifications, registers, books, logs, summaries, data, statistical statements, work papers, drafts, copies, graphs, charts, analytical records, journals, financial statements, and all other written, printed, recorded, electronic, magnetic or photographic matter, however produced or reproduced.

Downgradient means:

- (a) in reference to surface water, the direction perpendicular to lines of equal elevation over a distance in which elevation continuously decreases, measured from the point or area in question; or
- (b) in reference to groundwater, the direction perpendicular to lines of equipotential over a distance in which total head continuously decreases, measured from the point or area in question.

Downgradient Property means a parcel of land which is located downgradient of the parcel of land which is the source of a release which has come to be located thereon.

Eligible Person means an owner or operator of a site or a portion thereof from or at which there is or has been a release of oil or hazardous material who:

40.0006: continued

- (a) would be liable under M.G.L. c. 21E, § 5(a)(1) solely; and
- (b) did not cause or contribute to the release of oil or hazardous material from or at the site and did not own or operate the site at the time of the release.

Eligible Tenant means a person who acquires occupancy, possession or control of a site, or a portion thereof, after a release of oil or hazardous material from or at such site has been reported to the department, who did not cause or contribute to the release and who would not otherwise be liable pursuant to M.G.L. c. 21E, § 5(a)(2) through (5).

Endangered Species means those vertebrate and invertebrate animal species officially listed as endangered by the Massachusetts Division of Fisheries and Wildlife under 321 CMR 10.00: *Massachusetts Endangered Species Act Regulations*.

Engineered Barrier means a permanent cap with or without a liner that is designed, constructed and maintained in accordance with the requirements of 310 CMR 40.0996 and 310 CMR 40.0000.

Environment means waters, land, surface or subsurface strata, or ambient air of the Commonwealth.

Environmental Monitor means the publication of that name issued by the Executive Office of Environmental Affairs pursuant to 301 CMR 11.19.

Environmental Receptor means any living organism, other than humans, and/or any habitat which supports such organisms, and/or any other natural resource which comes into contact with oil and/or hazardous material as a result of a release to the environment.

Environmental Restriction means a restriction or other covenant concerning the use of property that is held or imposed by the Department pursuant to M.G.L. c. 21E, § 6.

EOEA means the Massachusetts Executive Office of Environmental Affairs.

EPA means the U.S. Environmental Protection Agency.

Excess Lifetime Cancer Risk means the estimated probability that an individual's exposure during a lifetime to an oil or hazardous material could result in cancer.

Exposure means any contact with or ingestion, inhalation or assimilation of oil and/or hazardous material, including, without limitation, irradiation.

Exposure Pathway means the mechanism by which human or environmental receptors inhale, consume, absorb, or otherwise take in oil and/or hazardous material at an Exposure Point.

Exposure Pathway Mitigation Measure means a remedial action directed at an Exposure Pathway that eliminates exposure to human or ecological receptors or reduces such exposures to meet applicable performance standards.

Exposure Point means a location of potential contact between a human or environmental receptor and a release of oil and/or hazardous material. An Exposure Point may describe an area or zone of potential exposure, as well as a single discrete point.

Exposure Point Concentration means the concentration of oil or hazardous material in a specific medium which a human or environmental receptor may contact at an Exposure Point.

Fee means a permit application fee for a Bureau of Waste Site Cleanup permit or an annual compliance assurance fee payable in accordance with M.G.L. c. 21E, § 3B, 310 CMR 4.00: *Timely Action Schedule and Fee Provisions* and 310 CMR 40.0000.

Fill Material means soil, sediments, rock and/or stone obtained off-site that is used to fill holes or depressions, create mounds, or otherwise artificially change the grade or elevation of real property.

40.0006: continued

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Final Inspection Report means the document that is required by 310 CMR 40.0870.

Fish Habitat means any surface water body that serves as a habitat for fresh or marine fauna, including, but not limited to, crustacean, fin fish and shellfish.

Flammable Range means the difference between the minimum and maximum volume percentages of the material in air that forms a flammable ignitable compressed gas.

Freshwater Environment (Reserved)

Force Majeure means any act or occurrence, beyond the reasonable control of a RP, PRP or Other Person, and without the fault of such person, directly affecting the ability of the RP, PRP or Other Person to comply with any deadline or time period imposed by M.G.L. c. 21E, 310 CMR 40.0000 or any order or determination issued by the Department pursuant to M.G.L. c. 21E or 310 CMR 40.0000, which event could not have been prevented, avoided or overcome by the exercise of due care, foresight or due diligence on the part of such person. Such force majeure events may include, but are not limited to, acts of God, fires, floods, strikes, labor actions, an order of court, a prohibition or inability arising under a federal, state or local statute, regulation, code, ordinance or by-law, acts of a public enemy, war embargo, insurrection, riot, the condemnation, taking, seizure or involuntary conversion of a site or any part thereof by the action of any federal, state or local governmental body, or any delay which results from inability to secure access to the site if the cause of the inability is not within the person's reasonable control. Legal, technical and financial inability, or increased costs or expenses associated with performance of any action called for by 310 CMR 40.0000 or an order issued by the Department, shall not be considered a force majeure.

Grant Agreement means the document which, upon signature by the Commissioner and the TAG Applicant or the authorized representative of the applicant, constitutes a binding agreement containing the terms and conditions of a Technical Assistance Grant and the obligations of the Department and the Grantee.

Grantee means a person or group of persons who has been awarded a Technical Assistance Grant in accordance with 310 CMR 40.1400.

Groundwater means any water below the earth's surface in the zone of saturation.

Habitat means the area or type of environment in which an organism or biological population normally lives or occurs, including, without limitation, wetland habitat, woodland habitat, grassland habitat and mountain habitat.

Hazard Index means a calculation of the possibility of non-cancer health effects as the result of exposure to one or more oil or hazardous materials with the same or similar modes of toxic action or toxic endpoints. The Hazard Index (HI) is defined as: $HI = D1 / AD1 + D2 / AD2 + \dots + Di / ADi$ where D is the daily dose (or daily concentration) for a particular oil or hazardous material, and AD is the allowable daily dose (or allowable daily concentration) for a particular oil or hazardous material specified by the Department. The allowable daily concentration is the Reference Concentration or other allowable daily concentration specified by the Department.

Hazard Quotient means a calculation of the possibility of non-cancer health effects as the result of exposure to an oil or hazardous material. The Hazard Quotient (HQ) is defined as: $HQ = D / AD$ where D is the daily dose (or daily concentration) for the oil or hazardous material and AD is the allowable daily dose (or allowable daily concentration) for the oil or hazardous material specified by the Department. The allowable daily concentration is the Reference Concentration or other allowable daily concentration specified by the Department.

40.0006: continued

Hazardous Material means material, including, but not limited to, any material in whatever form which, because of its quantity, concentration, chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare, or to the environment, when improperly stored, treated, transported, disposed of, used, or otherwise managed. The term shall not include oil, but shall include waste oil and all those substances which are included under 42 U.S.C. § 9601(14), but it is not limited to those substances. The term shall also include, but is not limited to, material regulated as hazardous waste or recyclable material under 310 CMR 30.000: *Hazardous Waste*.

Hazardous Waste means a waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical or infectious characteristics may cause, or significantly contribute to an increase in serious irreversible, or incapacitating reversible illness or pose a substantial present or potential hazard to human health, safety, public welfare or the environment when improperly treated, stored, transported, used or disposed of, or otherwise managed, however, not to include solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act of 1967, or source, special nuclear, or by product material as defined by the Atomic Energy Act of 1954, as further described in 310 CMR 30.000: *Hazardous Waste*.

Headspace Screening Method means an analytical screening procedure which relies upon the mass transfer of volatile oil and/or hazardous material from a solid or liquid test sample to an overlying confined space.

Historic Fill means Fill Material that based on the weight of evidence and consistent with the Conceptual Site Model:

- (a) was emplaced before January 1, 1983;
- (b) may contain, but is not primarily composed of, construction and demolition debris, reworked soils, dredge spoils, coal ash, wood ash or other solid waste material;
- (c) was contaminated with metals, hydrocarbons, and/or polycyclic aromatic hydrocarbons prior to emplacement, at concentrations consistent with the pervasive use and release of such materials prior to 1983;
- (d) does not contain oil or hazardous materials originating from operations or activities at the location of emplacement;
- (e) is not and does not contain a generated hazardous waste, other than Oil or Waste Oil;
- (f) does not contain chemical production waste, manufacturing waste, or waste from processing of metal or mineral ores, residues, slag or tailings; and
- (g) does not contain waste material disposed in a municipal solid waste dump, burning dump, landfill, waste lagoon or other waste disposal location.

Hot Spot means a discrete area where the concentrations of oil or hazardous material are substantially higher than those present in the surrounding area. A hot spot shall be identified based on consideration of both the concentration of an oil or hazardous material within a contaminated area and the spatial pattern of that contamination. The areal extent and spatial pattern of a hot spot may be determined through the analytical results from multiple samples taken within the area, or the results of limited sampling in combination with other knowledge about the release, such as the presence of discoloration, odors or a defined source area. Discrete areas where the average concentration within the area is greater than ten but less than one hundred times the average concentration in the immediate surrounding area is a Hot Spot unless there is no evidence that the discrete area would be associated with greater exposure potential than the surrounding area. In all cases, a discrete area where the concentration of an oil or hazardous material is greater than one hundred times the concentration in the surrounding area shall be considered a Hot Spot. In no case shall concentrations of oil or hazardous material equal to or less than an applicable Method 1 standard be considered indicative of a Hot Spot.

40.0006: continued

Hourly Rate of Compensation and Hourly Rate each means the total compensation per hour provided to an employee or contractor of the Department. With respect to employees of the Department, it is calculated by dividing the weekly pay rate of an employee by the authorized number of weekly hours of the employee, excluding over-time hours, and multiplying the resulting figure by a factor which reflects the average cost of paid leave, health insurance and pension benefits. With respect to contractors employed by the Department, it is the hourly rate for the employee established by the contract between the Department and the contractor or the employer of the contractor.

Human Receptor means a person who is likely to be affected by a site, as further described in 310 CMR 40.0900.

Immediate Response Action and IRA each means any response action performed in accordance with 310 CMR 40.0410.

Imminent Hazard means a hazard which would pose a significant risk of harm to health, safety, public welfare or the environment if it were present for even a short period of time, as further described in 310 CMR 40.0950.

Imminent Hazard Evaluation means an evaluation performed in accordance with 310 CMR 40.0951 through 310 CMR 40.0955.

Indirect Rate means a rate which reflects the average cost per hour of services provided by Department employees, and expenses incurred by the Department, in support of Direct Hours. The Indirect Rate includes, but is not limited to, time spent by Department employees performing management, administrative, clerical, training, fiscal management, information management, laboratory certification, quality assurance and quality control duties, and non-labor overhead expenses, including office space and equipment rentals, office supplies, telephone bills, field and laboratory equipment, training expenses, utility service, maintenance and repairs, printing and travel, medicare, unemployment insurance and workers' compensation payments.

Influent means any flow of Remedial Wastewater or groundwater into treatment works.

Informal conference means a conference not subject to those provisions of M.G.L. c. 30A, § 10, governing adjudicatory proceedings.

Initial Site Investigation Activities means any activity performed in accordance with 310 CMR 40.0405(1).

Innovative technology means technology which is state-of-the-art and/or experimental.

Institution means any publicly or privately owned hospital, health care facility, orphanage, nursing home, convalescent home, educational facility, or correctional facility, where such facility in whole or in part provides overnight housing.

Interim Deadline means a deadline established by the Department pursuant to M.G.L. c. 21E, § 3A(j), and 310 CMR 40.0167, other than a deadline that is either expressly set forth in 310 CMR 40.0000 or determined by reference to a specific provision in 310 CMR 40.0000.

Interim Wellhead Protection Area ("IWPA") means:

- (a) with respect to public water supply wells and wellfields whose pumping rate is 100,000 gallons per day or greater and for which the Department has not approved a hydrologically delineated Zone II, the ½ mile radius surrounding such well or wellfield; and
- (b) with respect to public water supply wells and wellfields whose pumping rate is less than 100,000 gallons per day and for which the Department has not approved a hydrologically delineated Zone II, the radius calculated by multiplying the maximum pumping rate in gallons per minute for such well or wellfield by 32 and adding 400 feet thereto (*i.e.* IWPA = $32y + 400$; where y = pumping rate in gallons per minute).

40.0006: continued

Knowledge means:

- (a) actual knowledge; or
- (b) knowledge a person acting in a reasonably prudent and intelligent manner would have, but for that person's willful, knowing or negligent avoidance of learning about the fact or facts in question. In determining whether a person has acted in a reasonably prudent and intelligent manner, any specialized knowledge or training possessed by that person and the circumstances surrounding the fact or facts in question shall be taken into account.

Known Source means, for the purposes of the Downgradient Property Status provisions at 310 CMR 40.0189, the original location of a release that has migrated in or on groundwater or surface water to a downgradient or downstream property, as established by a preponderance of credible scientific and technical evidence.

Lake means any open body of fresh water with a surface area of ten acres or more, including, without limitation, Great Ponds.

Leaching means the percolation or draining of liquid through oil and/or hazardous material.

Licensed Site Professional and LSP each means a hazardous waste site cleanup professional, as defined in M.G.L. c. 21A, § 19, holding a valid license issued by the Board of Registration of Hazardous Waste Site Cleanup Professionals pursuant to M.G.L. c. 21A, §§ 19 through 19J.

Lien Notice means a written notice that the Department intends to perfect a lien pursuant to M.G.L. c. 21E, § 13.

Light Nonaqueous Phase Liquid and LNAPL each means NAPL that has a specific gravity equal to or less than one.

Limited Removal Action and LRA each means a response action performed in accordance with 310 CMR 40.0318.

Living or Working Space means finished and unfinished space within a Daycare or Child Care Center, School or Residential Dwelling, where there is evidence of the potential for more than incidental use (use for more than one hour at a time). Crawl spaces and basements with only incidental use, such as storage or periodic laundry, are not considered Living or Working Space.

Lower Explosive Limit and LEL each means the concentration of oil and/or hazardous material in air below which a flame will not propagate if the mixture is ignited.

LSP Evaluation Opinion means an LSP Opinion submitted to the Department in accordance with 310 CMR 40.0600.

LSP-of-record means each Licensed Site Professional who has rendered an LSP Opinion submitted to the Department with respect to a specific site, unless and until such person notifies the Department in writing that he or she is no longer engaged or employed in his or her capacity as a Licensed Site Professional with respect to such site.

LSP Opinion and Opinion each means a "waste site cleanup activity opinion," as that phrase is defined in M.G.L. c. 21A, § 19, that has been submitted to the Department.

LSP Tier Classification Opinion means the LSP Opinion rendered in accordance with 310 CMR 40.0500.

Manage - means any direction or control over the management of Remediation Waste, Remedial Wastewater, Remedial Additives, or Containerized Waste at or from a disposal site.

40.0006: continued

Management - means the act, manner or practice of managing, handling or controlling Remediation Waste, Remedial Wastewater, Remedial Additives, Remedial Additive By-products, and/or Containerized Waste at or from a disposal site, including, but not limited to, any excavation, pumping, pouring, emission, containment, dumping, emptying, discarding, injection, discharge, displacement, collection, transportation, withdrawal, storage, treatment, detoxification, reuse, immobilization, solidification, incineration, encapsulation, removal, recycling, or disposal of such additives, waste, or wastewater.

Marine Environment (Reserved)

Massachusetts Contingency Plan and MCP each means 310 CMR 40.0000.

Measurement Endpoint means the result of a measurement that is used to evaluate an assessment endpoint.

MEPA means the Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61 through 62H, and 301 CMR 11.00: *MEPA Regulations*.

Migration pathway means a pathway by which oil and/or hazardous material is transported at or from a disposal site.

Modifying Factor (MF) means a factor greater than zero and less than or equal to ten by which a no-observed-adverse-effect level is divided to estimate a Reference Dose. The MF reflects qualitative professional judgments regarding scientific uncertainties not covered under the standard Uncertainty Factors, such as the completeness of the overall data base and the number of animals in the experimental study.

Monitored Natural Attenuation means a systematically designed and monitored Comprehensive Remedial Action that employs physical, chemical, and/or biological processes under favorable conditions to act without human intervention and primarily through degradation mechanisms to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil or groundwater, as described in publications by EPA, the Department and other sources that are generally accepted by professionals conducting response actions.

Monitoring Well means a well designed to facilitate the down-hole measurement of groundwater and/or gas levels and the collection of groundwater and/or gas samples.

NAPL with Micro-scale Mobility means a NAPL with a footprint that is not expanding, but which is visibly present in the subsurface in sufficient quantities to migrate or potentially migrate as a separate phase over a short distance and visibly impact an excavation, boring or monitoring well.

National Contingency Plan and NCP each means 40 CFR Part 300, as amended.

National Priorities List and NPL each means the National Priorities List published by the U.S. Environmental Protection Agency pursuant to CERCLA.

Natural Background means those levels of oil and hazardous material that would exist in the absence of the disposal site of concern, are ubiquitous and consistently present in the environment at and in the vicinity of the disposal site of concern, and are attributable to geologic or ecological conditions.

Nonaqueous Phase Liquid and NAPL each means oil and/or hazardous material that is present in the environment as a separate phase liquid.

Non-potential Drinking Water Source Area means:

- (a) any Potentially Productive Aquifer or portion thereof which underlies land which has been developed for one or more of the following uses as of January 1, 1996:

40.0006: continued

1. Industry, including:
 - a. heavy industry with facilities that manufacture, store and assemble raw or partially processed products;
 - b. light industry with facilities that manufacture or assemble smaller, partially processed products); and
 - c. warehouses and transportation facilities for bulk products;
2. Commerce, including stores, hotels, offices, shopping centers, restaurants, theaters, parking garages/lots and buildings used to distribute and sell goods and services;
3. Dense residential development and associated uses, including:
 - a. garden apartments (and attached recreational facilities);
 - b. tenements, town or row houses and apartment buildings with associated retail uses;
 - c. high density urban residential development with one to four families housed on lots less than ¼ acre in size;
 - d. mobile home parks.
4. Transportation and associated liquid storage facilities, including:
 - a. airports with paved landing strips, hangars, parking areas and related facilities (excluding small airfields without paved landing strips, hangars or other specialized facilities);
 - b. docks, warehouses and related land-based storage facilities for water transportation and commercial fishing;
 - c. rail yards, terminal freight and storage facilities, and rail stations for passengers;
 - d. terminal freight and storage facilities for truck freight;
 - e. bus terminals; and
 - f. divided highways with a right-of-way wider than 200 feet;
5. Urban open space, including:
 - a. open undeveloped land in the midst of urban areas or adjacent to them, including land that has been cleared for urban development;
 - b. buildings with grounds and green space which are used by Institutions to serve large numbers of people (*e.g.*, schools, hospitals, prisons); and
 - c. cemeteries.

(b) such developed land described in 310 CMR 40.0006: Non-potential Drinking Water Source Area(a) shall encompass an area at least 100 acres in size, but may include areas that have not been developed for the above -listed uses, provided that the land that has not been developed for the above-listed uses is:

1. less than 100 acres in size, and
2. completely surrounded by areas that have been developed for one or more of the above-listed uses.

(c) those portions of Potentially Productive Aquifers that underlie block groups (defined by the U.S. Census Bureau) identified by the most recent U.S. Census as having a population density equal to or greater than 4,400 persons per square mile; or

(d) any aquifer or portion of an aquifer categorized as a Non-potential Drinking Water Source Area pursuant to 310 CMR 40.0932(5)(c);

Non-publicly Owned Treatment Works - means any device or system used in the treatment (including recycling and reclamation) of sewage or industrial wastes of a liquid nature which is not publicly owned. A Non-publicly Owned Treatment Works includes any sewers, pipes, or other conveyances only if they convey wastewater to a Non-publicly Owned Treatment Works providing treatment.

Non-stable NAPL means a NAPL with a footprint that is expanding laterally or vertically by:

- (a) migrating along or within a preferred flow path;
- (b) discharging or periodically discharging to a building, utility, drinking water supply well, or surface water body; or
- (c) spreading as a bulk fluid through or from subsurface strata.

No Further Action Letter means a document submitted to the Department upon the completion of all response actions required by 310 CMR 40.000, as effective prior to October 1, 1993.

40.0006: continued

No Significant Risk means a level of control of each identified substance of concern at a site or in the surrounding environment such that no such substance of concern shall present a significant risk of harm to health, safety, public welfare or the environment during any foreseeable period of time.

No Substantial Hazard means a level of control of each identified substance of concern at a site or in the surrounding environment such that no such substance of concern shall present a Substantial Hazard to health, safety, public welfare, or the environment.

Notice of Activity and Use Limitation means a written notice of the activities, uses and/or exposures that provide the basis for a Permanent Solution or Temporary Solution Statement, as further described in 310 CMR 40.1074 through 40.1099.

Notice of Audit means a written or verbal notice given to a person by the Department that communicates that the Department intends to audit that person or a response action or site.

Notice of Intent to Assess a Civil Administrative Penalty and PAN each means a written notice given to a person that states that the Department is seeking to assess a civil administrative penalty pursuant to M.G.L. c. 21A, § 16, and 310 CMR 5.00: *Administrative Penalty*.

Notice of Noncompliance and NON each means a written notice given to a person by the Department that states that said person has failed to comply on any specified occasion with any described requirement, as further described in 310 CMR 5.12: *Notice of Noncompliance*.

Notice of Response Action and NORA each means a notice from the Department to a person informing the person of the Department's intent to undertake one or more response actions.

Notice of Responsibility and NOR each means a notice from the Department to a person informing such person of his or her potential liability pursuant to M.G.L. c. 21E, § 5.

Notification Requirements means the requirements for providing notification to the Department:
(a) of releases, and threats of release, of oil and/or hazardous material and Imminent Hazards set forth in 310 CMR 40.0300; and/or
(b) of changes in activities, uses and/or exposures set forth in 310 CMR 40.0020.

NPL Site means a disposal site published on the National Priorities List by EPA.

OHM means oil and/or hazardous material.

Oil means insoluble or partially soluble oils of any kind or origin or in any form, including, without limitation, crude or fuel oils, lube oil or sludge, asphalt, insoluble or partially insoluble derivatives of mineral, animal or vegetable oils and white oil. The term shall not include waste oil, and shall not include those substances which are included in 42 U.S.C. § 9601(14).

Oil facility means a structure, group of structures, equipment, or device, including a public vessel but not including any other type of vessel, that is used for one or more of the following purposes: exploring for, drilling for, producing, storing, handling, transferring, processing, or transporting oil. This definition shall include, without limitation, any motor vehicle, rolling stock, or pipeline used for one or more of the purposes set forth in the preceding sentence.

On-site Worker means a person employed full- or part-time at a property or properties at which a disposal site is located. On-site worker does not refer to workers engaged specifically in disposal site remediation activities.

Operations, Maintenance and/or Monitoring Plans means the document that is prepared in accordance with 310 CMR 40.0870.

40.0006: continued

Other Person means a person who undertakes a response action who is not a RP or PRP.

Outstanding Resource Waters means waters in the Commonwealth given a protected status due to their ecological, socioeconomic, recreational, and/or aesthetic value pursuant to 314 CMR 4.04(3).

Overhead means non-labor overhead expenses. It includes, but is not limited to, space and equipment rentals, office supplies, telephones, field and lab equipment, utilities, maintenance and printing. The hourly rate used in these provisions will be that calculated for the Department's fees set forth in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

Oxidizer means a material that yields oxygen readily to stimulate the combustion of organic matter; e.g., chlorate, permanganate, peroxide, nitrocarbonitrate, or inorganic nitrate.

Park, Playground and Recreation Area each means land set aside for use by the public for athletic, recreational or leisure activities.

Passenger Vehicle means a two-, three-, or four-wheeled conveyance used solely for non-commercial purposes.

Passive Exposure Pathway Mitigation Measure means a type of Exposure Pathway Mitigation Measure that does not rely upon the continual or periodic use of an on-site or *in-situ* mechanical or electro-mechanical device.

Periodic Review Opinion means an LSP Opinion that is prepared in accordance with 310 CMR 40.1050.

Permanent Solution means a measure or combination of measures which will, when implemented, ensure attainment of a level of control of each identified substance of concern at a disposal site or in the surrounding environment such that no substance of concern will present a significant risk of damage to health, safety, public welfare, or the environment during any foreseeable period of time.

Permanent Solution Statement means an LSP Opinion submitted to the Department to document the achievement of a Permanent Solution in accordance with 310 CMR 40.1000.

PCBs means polychlorinated biphenyls.

Permit means any permit, license, certificate, registration, plan approval, variance or other approval issued, or required, by the Department pursuant to M.G.L. c. 21E and 310 CMR 40.0000.

Permittee means a person authorized to perform response actions required by M.G.L. c. 21E and/or 310 CMR 40.0000 pursuant to a valid permit issued by or filed with the Department.

Person means any agency or political subdivision of the federal government or state; any state, public or private corporation or authority; any interstate body, foreign nation, individual, trust, firm, joint stock company, partnership, association or other entity; any officer, employee, or agent of such person; and any group of persons.

40.0006: continued

Phase Report means a Phase I Report prepared in accordance with 310 CMR 40.0483, Phase II Report prepared in accordance with 310 CMR 40.0835, Phase III Remedial Action Plan prepared in accordance with 310 CMR 40.0861, Phase IV Remedy Implementation Plan prepared in accordance with 310 CMR 40.0874, Phase IV As-Built Construction Report prepared in accordance with 310 CMR 40.0875, Phase IV Operation, Maintenance and Monitoring Plan prepared in accordance with 310 CMR 40.0874(3)(d), Final Inspection Report prepared in accordance with 310 CMR 40.0878, Phase IV Status and Remedial Monitoring Report prepared in accordance with 310 CMR 40.0877, and Phase V Status and Remedial Monitoring Report prepared in accordance with 310 CMR 40.0892.

Pilot Test means a test designed to acquire information on the anticipated performance of a remedial system. A Pilot Test shall be considered assessment if it is conducted and completed within 21 consecutive days, excluding time required for sample analyses, and involves only soil vapor, Nonaqueous Phase Liquid and/or groundwater extraction, otherwise it shall be considered remediation.

Playground (*see* Park)

Point Source means a discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock or vessel from which oil and/or hazardous material is or may be discharged.

Pond means any coastal or inland pond, as defined in 310 CMR 10.04: Pond.

Potential Drinking Water Source Area means groundwater located:

- (a) 500 feet or more from a public water supply distribution pipeline, unless the groundwater is located under a parcel of land or a facility where any portion of that parcel of land or facility is located less than 500 feet from a public water supply distribution pipeline.
- (b) within an area designated by a municipality specifically for the protection of groundwater quality to ensure its availability for use as a source of potable water supply. Such designation shall be in the form of:
 1. a local ordinance or bylaw adopted by the municipality (*e.g.*, an Aquifer Protection District or Zone);
 2. an intermunicipal agreement approved by the municipal legislative body; or
 3. an executed inter-governmental contract for the purchase or sale of drinking water (*e.g.*, a contract between a public authority supplying water and a municipality); or
- (c) within a Potentially Productive Aquifer that has not been excluded as a Non-Potential Drinking Water Source Area.

Potentially Productive Aquifer means:

- (a) all aquifers delineated by the U.S. Geological Survey (USGS) as a high or medium yield aquifer; and
- (b) all aquifers located east of the Cape Cod Canal (Cape Cod), on the Elizabeth Islands, on Martha's Vineyard, or on Nantucket.

Potentially Responsible Party and PRP each means a person who is potentially liable pursuant to M.G.L. c. 21E.

ppm means parts per million.

Private Water Supply Well means a well which is utilized by a private water system. For purposes of 310 CMR 40.0000, the phrase "private water system" is used to refer to a system for the provision of piped water for human consumption which has fewer than 15 service connections or does not regularly serve an average of at least 25 individuals daily at least 60 days of the year.

40.0006: continued

Professional Services means the rendering of LSP Opinions, and services associated with the rendering of LSP Opinions, by a Licensed Site Professional who has either:

- (a) in the case of an LSP Opinion related to an assessment:
 - 1. managed, supervised or actually performed such assessment, or
 - 2. periodically observed the performance by others of such assessment; or
- (b) in the case of an LSP Opinion related to a containment or removal:
 - 1. managed, supervised or actually performed such action, or
 - 2. periodically reviewed and evaluated the performance by others of such action.

Property Interest means, for purposes of 310 CMR 40.1250, an interest in property held by an owner, mortgagee or holder of a leasehold interest, holder of rights under an easement or other recorded instrument affecting title to property, or holder of a security interest or lien.

Protected Open Space means

- (a) any federal, state or local government-protected open space, including, but not limited to, parks, forests and watershed lands;
- (b) any land used for conservation purposes by a non-profit corporation, such as the Massachusetts Audubon Society, the Trustees of Reservation (excluding land held for its historic value only) and the Nature Conservancy; and
- (c) excluding any privately held land associated with a conservation restriction or easement or controlled by a person other than a non-profit corporation or Agency.

Public Involvement Activities means those activities which a person undertaking one or more response actions is required to perform by M.G.L. c. 21E and 310 CMR 40.1400 to inform the public of, and/or involve the public in, decisions regarding response actions at disposal sites, including, without limitation, the designation of a disposal site as a PIP Site, the provision of notice of response actions to local officials, the publication of notices of public meetings and/or of response actions in newspapers of general circulation in a community, the development of a Public Involvement Plan and the provision of relevant information to the public.

Public Involvement Plan Site and PIP Site each means a disposal site for which additional public involvement activities are required beyond those required for every disposal site and which has been designated as a PIP site pursuant to 310 CMR 40.1404.

Public Water Supply means a source of water supply, including, but not limited to, primary, backup and emergency sources, utilized by a public water system. For purposes of 310 CMR 40.0000, the terms "public water system," "primary source," "backup source," and "emergency source" shall have the meaning in 310 CMR 22.02: Public Water System, Primary Source, Backup Source, and Emergency Source.

Public Water Supply Distribution Pipeline means any piping used for the conveyance of potable water in a public water system.

Public Way means land in use as a public street or highway.

Rail Right-of-way means lands or interests in lands which are in use as rights-of-way for rail purposes. Rail Right-of-way includes rights-of-way which are in use for rail transportation as regulated by M.G.L. c. 161C, and rail rights-of-way which are in use by the Massachusetts Bay Transportation Authority. Rail Right-of-way does not include related facilities, such as rail yards and rail maintenance facilities.

Random Audit means an audit where the subject of the audit was selected using a methodology in which each member of a class has an equal probability of being selected for audit.

RCRA means the Federal Solid Waste Disposal Act as revised by the Resource Conservation and Recovery Act of 1976, P.L. 94 - 580, 42 U.S.C. §§ 6901 *et seq.*

40.0006: continued

Receptor means a Human Receptor or Environmental Receptor.

Record of Decision and ROD each mean the document prepared pursuant to 40 CFR 300.430(f) for a final remedy selection decision under CERCLA.

Recreation area (*See Park*)

Reference Concentration (RfC) means the daily concentration in air of an oil or hazardous material which would not be expected to result in any adverse non-cancer health effects.

Reference Dose (RfD) means the daily dose of an oil or hazardous material which would not be expected to result in any adverse non-cancer health effects.

Release means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment, but excludes:

- (a) emissions from the exhaust of an engine;
- (b) release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in 42 U.S.C. § 2014, if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under 42 U.S.C. § 2210;
- (c) the normal application of fertilizer;
- (d) the application of pesticides in a manner consistent with their labelling; and
- (e) the application of residuals in accordance with 310 CMR 32.00: *Land Application of Sludge and Septage*.

Release Abatement Measure and RAM each means any response actions undertaken in accordance with 310 CMR 40.0440.

Release Notification Form means the form required by 310 CMR 40.0333(1)(b) and 310 CMR 40.0371 for purposes of providing written notification of a release or threat of release to the Department.

Release Tracking Number means the file number assigned by the Department to a release or threat of release reported in accordance with 310 CMR 40.0300.

Remedial Additives - means any aqueous, gaseous, or solid phase agent that is designed to treat or enhance the treatment of, or assessment of, soil and/or groundwater. The term shall include oxidizing agents, encapsulants, sequestering agents, non-pathogenic microbes, enzymes, nutrients, surfactants, and anti-fouling agents used to inhibit microbial growth in remedial treatment systems and monitoring wells.

Remedial Additive By-product - means any physical, chemical, or biological reaction by-product that results from the application or discharge of Remedial Additives to soil and/or groundwater.

Remedial Action means any containment or removal.

Remedial Action Plan each means the document that is prepared in accordance with 310 CMR 40.0861 to justify the selection of a remedial action.

Remedial Monitoring Report means a report that documents monitoring data collected on and observations made of the operation and maintenance of an Active Remedial System or Active Remedial Monitoring Program during the applicable reporting period.

Remedial Site means a site at which remedial actions have been completed and for which no further remedial actions are planned.

40.0006: continued

Remedial System means one or more remedial components, Treatment Works, and/or conveyances used to contain, treat and/or remove oil or hazardous material in the environment. Remedial System does not include Exposure Pathway Mitigation Measures.

Remedial Technology means a design, measure or engineering practice which comprises, in whole or on part, a remedial action.

Remedial Wastewater - means any Contaminated Groundwater and/or Contaminated Surface Water, that is managed, including treatment pursuant to 310 CMR 40.0040.

Remediation Waste - means any Uncontainerized Waste, Contaminated Media, and/or Contaminated Debris that is managed pursuant to 310 CMR 40.0030. Remediation Waste does not include Containerized Waste.

Remedy Implementation Plan and RIP each means the document that is prepared in accordance with 310 CMR 40.0874 for implementation of a remedial action.

Remove and removal each means the cleanup or removal of released oil or hazardous materials from the environment, such actions as may be necessarily taken in the event of the threat of release of oil or hazardous material into the environment, the disposal of removed oil or hazardous material, or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the health, safety, public welfare or the environment, which may result from a release or threat of release. Such term includes, without limitation, treatment.

Reportable Concentration and RC each means the concentration of oil or hazardous material in soil or groundwater which requires notification to the Department under M.G.L. c. 21E, § 7, and/or 310 CMR 40.0360 through 310 CMR 40.0362.

Reportable Quantity and RQ each means the quantity of oil or hazardous material the release of which, or threat of release of which, requires notification to the Department under M.G.L. c. 21E, § 7, and/or 310 CMR 40.0350 through 310 CMR 40.0352.

Request for Information and RFI each means a request issued by the Department to any person for documents or other information relevant or material to a release, threat of release, site, vessel, oil or hazardous material, pursuant to M.G.L. c. 21E, §§ 2, 4 and 8, and 310 CMR 40.0165.

Requirement means a regulation, order, license, or approval issued or adopted by the Department, or any law which the Department has the authority or responsibility to enforce.

Residential Dwelling means a structure used or occupied, or intended to be used or occupied, in whole or in part, as the home or residence of one or more persons, including, but not limited, to single or multi-unit housing, a dormitory, or a retirement or continuing care facility. Residential Dwelling does not mean a structure with transient use, such as a hotel or hospital.

Residual Contamination means the concentrations of oil and/or hazardous material remaining at a site at which further remedial actions are not required by 310 CMR 40.0000.

Respond, Response and Response Action each means assess, assessment, contain, containment, remove or removal.

Response Action Contractor and Contractor each means a contractor or subcontractor who provides services associated with response actions to the Department.

Response Action Cost and Cost each means any cost incurred by the Department in the course of carrying out or overseeing directly or indirectly a response action, including, but not limited to, costs associated with the conduct of Public Involvement Activities, that is one or more of the following:

- (a) cost of direct hours;

40.0006: continued

- (b) services provided by Department employees and any related expenses incurred by the Department in support of those direct hours;
- (c) payments made to the Department's contractors, grantees or agents for performing or overseeing response actions at a specific site; and
- (d) any fees or other costs reasonably incurred in connection with a response action, including, but not limited to, fees and other costs associated with requisite federal, state and local permits and litigation costs.

Response Action Outcome and RAO each means the classification of Permanent and Temporary Solutions as further defined in 310 CMR 40.1000 in effect prior to June 20, 2014.

Response Action Outcome Statement means an LSP Opinion submitted to the Department to document achievement of the requirements of a Response Action Outcome prior to June 20, 2014.

Response Action Performance Standard and RAPS each means the level of diligence reasonably necessary to obtain the quantity and quality of information adequate to assess a site, to evaluate remedial action alternatives and to design and implement appropriate remedial actions, as further defined by 310 CMR 40.0191.

Responsible Party and RP each means a person who is liable under M.G.L. c. 21E to the Commonwealth, or to any other person, for any costs or damages.

Risk Characterization means the requirements and procedures for characterizing risks of harm to health, safety, public welfare and the environment set forth in 310 CMR 40.0900.

River means a waterbody contained within a channel, naturally or artificially created, which periodically or continuously contains flowing water or forms a connecting link between two bodies of standing water.

Route of Exposure means a mechanism by which an oil or hazardous material comes into contact with a receptor, including, but not limited to, ingestion, inhalation, dermal absorption and transpiration.

School means any public or private elementary or secondary school, other than a Daycare or Child Care Center.

Sediments means all detrital and inorganic or organic matter situated on the bottom of lakes, ponds, streams, rivers, the ocean, or other surface water bodies. Sediments are found:

- (a) in tidal waters below the mean high water line as defined in 310 CMR 10.23: *Additional Definitions for 310 CMR 10.21 through 10.37*; and
- (b) below the upper boundary of a bank, as defined in 310 CMR 10.54(2), which abuts and confines a water body.

Sheen means an iridescent appearance of any oil or waste oil on the surface of any river, stream, lake, pond, spring, impoundment, estuary, coastal water or groundwater. The term "sheen" shall not include detrital, inorganic or organic matter located in a terrestrial environment.

Significant Public Comment means comment which would appear, on its face, to constitute grounds for the Department to deny a permit or significantly modify a proposed permit decision.

Site means any building, structure, installation, equipment, pipe or pipeline, including any pipe discharging into a sewer or publicly-owned treatment works, well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or any other place or area where oil or hazardous material has been deposited, stored, disposed of or placed, or otherwise come to be located. The term shall not include any consumer product in consumer use or any vessel.

Site Activities and Uses means the uses and activities associated with a disposal site and the surrounding environment, as further defined by 310 CMR 40.0923.

40.0006: continued

Sludge means the accumulated solids and/or semisolids deposited or removed by the processing and/or treatment of gasses, water or other fluids.

Soil means any unconsolidated mineral and organic matter overlying bedrock that has been subjected to and influenced by geologic and other environmental factors, excluding sediment.

Sole Source Aquifer means an aquifer designated by EPA as the sole or principal source of drinking water for an area pursuant to § 1424(e) of the federal Safe Drinking Water Act.

Source of OHM Contamination means:

- (a) a point of discharge of OHM into the environment that may include, without limitation:
 - 1. leaking storage tanks, vessels, drums and other containers;
 - 2. dry wells or wastewater disposal systems that are not in compliance with regulations governing discharges from those systems; or
- (b) waste deposits, sludges, or impacted soil, sediment, or bedrock at or near a point of discharge or deposit of OHM into the environment containing sorbed OHM or NAPL that is contaminating surrounding environmental media via dissolution or volatilization processes;

except that the downgradient leading edge of a plume of oil and/or hazardous material dissolved in and migrating with groundwater or as vapor-phase shall not, in and of itself, be considered a Source of OHM Contamination.

Species of Special Concern means those vertebrate and invertebrate animal species officially listed as species of special concern by the Massachusetts Division of Fisheries and Wildlife under 321 CMR 10.00: *Massachusetts Endangered Species Act Regulations*.

Statement of Claim and Statement each means an instrument signed by the Commissioner, describing a particular site or sites and naming the person or persons then deemed by the Commissioner to be liable under M.G.L. c. 21E with respect to each such site and their residential addresses, to the extent known to the Commissioner, and declaring a lien upon the property of such person or persons for the payment of amounts due or to become due from such person or persons to the Commonwealth under M.G.L. c. 21E; provided, however, that neither failure to state any such address nor the designation of an incorrect address shall invalidate such statement; and provided, further, that successive statements, naming other persons so deemed to be liable, may be issued.

Status Report means an LSP Opinion, including, but not limited to, any plans and reports, required by these regulations or any determination or order to inform the Department as to the status of work in progress at a disposal site.

Stream means a body of running water, including brooks and creeks, which moves in a definite channel in the ground due to a hydraulic gradient, and which flows within, into or out of an, as defined in 310 CMR 10.04: Area Subject to Protection Under the Act.

Submittal means a document which any person sends, files, or otherwise delivers to the Department, or is required to send, file or otherwise deliver to the Department, pursuant to M.G.L. c. 21E, 310 CMR 40.0000 or any permit, order or determination issued thereunder.

Substantial Hazard means a hazard as further defined in 310 CMR 40.0956 that would pose a significant risk of harm to health, safety, public welfare, or the environment if it continued to be present for several years.

Substantial Release Migration and SRM. (*See Condition of Substantial Release Migration*)

Supplemental Technical Review means a review on the merits of a permit application and supporting materials, as supplemented, modified, or amended by the applicant in response to a statement identifying deficiencies in the application and supporting materials, as further described in 310 CMR 4.04(2)(b)3. and/or 40.1072.

40.0006: continued

Surface Water means all waters other than groundwater within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters and vernal pools.

Targeted Audit means an audit where the method used to identify the subject of the audit is any method other than that employed for a random audit and based upon specific criteria established by the Department.

Technical Assistance Grant and TAG each means a grant awarded by the Department pursuant to M.G.L. c. 21E, § 14(b), and 310 CMR 40.1400.

Technical Review means an initial review on the merits of the permit application and supporting materials, as further described in 310 CMR 4.04(2)(b)2. and 40.1072.

Temporary Solution means any measure or combination of measures which will, when implemented, eliminate any substantial hazard which is presented by a disposal site or by any oil and/or hazardous material at or from such site in the environment until a Permanent Solution is achieved.

Temporary Solution Statement means an LSP Opinion submitted to the Department to document the achievement of a Temporary Solution in accordance with 310 CMR 40.1000.

Threatened Species means those vertebrate and invertebrate animal species officially listed as threatened species by the Massachusetts Division of Fisheries and Wildlife under 321 CMR 10.00: *Massachusetts Endangered Species Act Regulations*.

Threat of Release means a substantial likelihood of a release of oil and/or hazardous material which requires action to prevent or mitigate damage to health, safety, public welfare or the environment which may result from the release. Circumstances which represent a threat of release include, but are not limited to, sites containing or conducting an amount of oil and/or hazardous material in excess of the Reportable Quantity for that oil and/or hazardous material, or of an unknown quantity, where no reportable release has occurred but where a person required by 310 CMR 40.0331 to report the threat of release has knowledge of any corrosion, damage, malfunction or other condition that is likely to result in a release.

Tier Classification means the requirements, standards and procedures set forth in 310 CMR 40.0500 for classifying a disposal site as either Tier I or Tier II.

Tier Classification Submittal means those documents which are required by 310 CMR 40.0510(2) to be submitted to the Department for purposes of Tier Classification.

Tier I Permit means any permit, and the terms and conditions stated therein, issued or required by the Department pursuant to M.G.L. c. 21E and 310 CMR 40.0700 prior to June 20, 2014.

Total Organic Vapors means the collective concentration of all volatile organic compounds measured by a flame ionization or photoionization detector.

Total Petroleum Hydrocarbons and TPH each means the total or cumulative concentration of hydrocarbons with boiling points equal to or greater than 150°C (C₉) and associated with a petroleum product, as measured by standard analytical techniques and/or by procedures approved by the Department, excluding the individual compounds listed at 310 CMR 40.0974(2).

Trade Secret means anything tangible which constitutes, represents, evidences or records a secret scientific, technical, merchandising, manufacturing, production, or management information, design, process, procedure, formula, invention or improvement.

40.0006: continued

Treatment means any method, technique or process designed to change the physical, chemical or biological character or composition of any oil or hazardous material so as to neutralize the oil or hazardous material or render it less hazardous, non-hazardous, or reduced in volume, including, without limitation, neutralization, incineration, stabilization or solidification.

Treatment Works - means any and all devices, processes and properties, real or personal, used to manage Remedial Wastewater, Remedial Additives, and/or Remediation Waste at or from a disposal site.

Uncertainty Factor means one or more factors, each generally an order of magnitude, by which a no-observed-adverse-effect level is divided in accordance with EPA-approved methodology to reflect uncertainty in the various types of data used to estimate a Reference Dose.

Unclassified Disposal Site means a location confirmed by the Department to be a disposal site prior to October 1, 1993, and which has not been classified in accordance with the Interim Disposal Site Classification System set forth in 310 CMR 40.544, prior to October 1, 1993.

Uncontainerized Hazardous Waste means uncontainerized waste that meets the criteria defining a listed or characteristic hazardous waste in 310 CMR 40.0300.

Uncontainerized Waste means any discarded oil and/or hazardous material at a disposal site, including, but not limited to, NAPL, that is not contained in drums, tanks, engineered impoundments, or other fabricated containers.

Underground Storage Tank means a structure of any size or capacity, including, but not limited to, ancillary piping, that is used or designed to be used for the storage of oil and/or hazardous material where 10% or more of the volume of such structure and piping is below the ground surface, excluding any structure that is a free standing container in a building.

Unit Risk means the Excess Lifetime Cancer Risk (ELCR) estimated to result from continuous exposure to an oil or hazardous material per concentration unit of $1\mu\text{g}/\text{m}^3$ in air or $1\mu\text{g}/\text{liter}$ in water.

Unknown Source means, for the purposes of the Downgradient Property Status provisions at 310 CMR 40.0189, the original location of a release that has migrated in or on groundwater or surface water to a downgradient or downstream property, where the original location has not been established by a preponderance of credible scientific and technical evidence.

Upgradient means

- (a) in reference to surface water, the direction perpendicular to lines of equal elevation over a distance in which elevation continuously increases, measured from the point or area in question; or
- (b) in reference to groundwater, the direction perpendicular to lines of equipotential over a distance in which total head continuously increases, measured from the point or area in question.

Upgradient Property means a parcel of land which is the source of a release which has come to be located on a parcel of land which is located downgradient thereof.

Utility-related Abatement Measure and URAM each means a response action performed in accordance with 310 CMR 40.0460.

Vadose Zone means the unsaturated zone below the ground surface and above the water table.

Vernal Pool means a water body that has been certified by the Massachusetts Division of Fisheries & Wildlife as a vernal pool.

40.0006: continued

Vernal Pool Habitat means any confined basin depression which, at least in most years, holds water for a minimum of two continuous months during the spring and/or summer, and which are free of adult fish populations, as well as the area within 100 feet of the mean annual boundaries of the depressions, to the extent that the habitat is within an Area Subject to Protection Under the Wetlands Protection Act, as specified in 310 CMR 10.02(1).

Vessel means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water.

Volatilization means the conversion of all or part of a liquid or solid into vapor.

Volatile Organic Compounds and VOCs each mean an organic compound with a boiling point equal to or less than 218°C that are targeted analytes in EPA Method 8260B and other purgeable organic methods specified in the Department's Compendium of Analytical Methods.

Waiver of Approvals and Waiver each mean a waiver granted by the Department in accordance with 310 CMR 40.537, prior to October 1, 1993.

Waiver Site means any non-priority disposal site for which the Department has approved an application for a Waiver of Approvals that has been counter-signed in accordance with 310 CMR 40.537, as effective prior to October 1, 1993, unless such approval has been withdrawn.

Waste Oil means used and/or reprocessed, but not subsequently re-refined, oil that has served its original intended purpose. Waste oil includes, but is not limited to, used and/or reprocessed fuel oil, engine oil, gear oil, cutting oil, and transmission fluid and dielectric fluid.

Water Quality Criteria and Ambient Water Quality Criteria each means the concentrations of oil and/or hazardous material in water developed by EPA pursuant to § 304(a)(1) of the federal Water Pollution Control Act.

Water Quality Standards means 314 CMR 4.00: *Massachusetts Surface Water Quality Standards* and 314 CMR 6.00: *Ground Water Quality Standards*.

Waters of the Commonwealth means all waters within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters, vernal pools and groundwater. The term shall not include impoundments of chemical wastes.

Watershed means the region or area measured in a horizontal topographic divide which directs surface runoff from precipitation, normally by gravity, into a stream or body of impounded surface water.

Water Table means the upper elevation of the surface of the saturated zone.

Well means a bored, drilled or driven shaft, or a dig hole, whose depth is greater than its largest surface dimension.

Wetland means any area subject to protection under the Wetlands Protection Act, M.G.L. c. 131, § 40, 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth* or Section 401 of the federal Water Pollution Control Act, 33 U.S.C. 1341.

White Oil means petroleum based oil which contains no aromatic hydrocarbons and is transparent, colorless, odorless and tasteless when cold. Synonyms for white oil include liquid paraffin, liquid petrolatum, USP mineral oil, and vaseline oil.

Wildlife means any mammal, bird, reptile, amphibian, fish, or other vertebrate or invertebrate animal species.

40.0006: continued

Zone A means the area adjacent to the bank of a Class A surface drinking water source and its tributaries, as defined in 310 CMR 22.02: Zone A.

Zone B means an area either ½ mile from the bank of a Class A surface drinking water source, or the watershed boundary, whichever is less.

Zone I means the area within the protective radius surrounding a public water supply well or wellfield required by 310 CMR 22.00: *Drinking Water*.

Zone II means that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated, as approved by the Department's Division of Water Supply pursuant to 310 CMR 22.00: *Drinking Water*.

Zone III means that land area beyond the area of Zone II from which surface water and groundwater drain into Zone II. The surface drainage area, as determined by topography, is commonly coincident with the groundwater drainage area and is used to delineate Zone III. In some locations, where surface and groundwater drainage are not coincident, Zone III shall consist of both the surface drainage and the groundwater drainage areas.

Zone of Saturation means any part of the earth's crust in which all voids are filled with water.

40.0007: Rules of Construction

- (1) 310 CMR 40.0000 shall be construed to effectuate the purposes of M.G.L. c. 21E.
- (2) As used in 310 CMR 40.0000, words in the singular also include the plural.
- (3) No provision of 310 CMR 40.0000 shall be construed to relieve any person from any obligation for Response Action Costs or damages related to a site or disposal site for which that person is liable under M.G.L. c. 21E or from any obligation for any administrative, civil or criminal penalty, fine, settlement, or other damages.
- (4) No provision of 310 CMR 40.0000 shall be construed to limit the Department's authority to take or arrange for, or to require any person to perform, any response action authorized by M.G.L. c. 21E which the Department deems necessary to protect health, safety, public welfare or the environment.
- (5) No provision of 310 CMR 40.0000 shall be construed to limit the Department's authority to reject or require modification of any submittal required by M.G.L. c. 21E, 310 CMR 40.0000, or any other permit, order, or determination issued thereunder if it determines that the submittal does not meet the requirements of the same.
- (6) No provision of 310 CMR 40.0000 shall be construed to imply authorization by the Department to any person other than the Department, or the Department's employees, agents or contractors, to enter any real or personal property not owned by him or her to carry out a response action, or otherwise injure or interfere with any other person's rights or interests in real or personal property, without that person's consent.
- (7) The provisions of 310 CMR 40.0000 are severable and if any provision or its application to any person or circumstance is held invalid, its invalidity shall not affect other provisions or applications which can be given effect without the invalid provision or application.
- (8) No provision of 310 CMR 40.0000 shall be construed to relieve any person of the necessity of complying with all other applicable federal, state or local laws.
- (9) No provision of 310 CMR 40.0000 shall be construed to create in any private party a right to publicly funded response or enforcement action or to create any duty of the Department to perform any response action at any particular time

40.0008: Computation of Time Periods and Deadlines

(1) General. Unless otherwise specifically provided by law, 310 CMR 40.0000 or any order or determination issued pursuant to M.G.L. c. 21E or 310 CMR 40.0000, any time period or deadline prescribed or referred to in 310 CMR 40.0000 or in any order or determination issued pursuant to M.G.L. c. 21E or 310 CMR 40.0000 shall begin with the first day following the act which initiates the running of the time period, and shall include every calendar day, including the last day of the time period so computed. If the last day is a Saturday, Sunday, legal holiday, or any other day on which the offices of the Department are closed, the time period shall run to the end of the next business day.

(2) Determining Date of Issuance of Document. Except as provided by 310 CMR 40.0008(5), each document given by the Department to a person pursuant to M.G.L. c. 21E and/or 310 CMR 40.0000 shall be deemed to be issued by the Department as follows:

(a) if served in hand, the document shall be deemed to be issued on the date when delivered:

1. personally to the person; or
2. personally to any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service; or
3. at the person's last known address in the Commonwealth; or
4. at the last known address of any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service; or

(b) if given by mail (either regular mail or certified mail, return receipt requested), the document shall be deemed to be issued on the date of mailing.

(3) Determining Date of Receipt of Document Issued by the Department. Each document given by the Department to a person pursuant to M.G.L. c. 21E and/or 310 CMR 40.0000 shall be deemed to be received by said person as follows:

(a) if served in hand, the document shall be deemed to be received when delivered:

1. personally to the person; or
2. personally to any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service; or
3. at the person's last known address in the Commonwealth; or
4. at the last known address of any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service; or

(b) if given by certified mail, return receipt requested, the document shall be deemed to be received either:

1. when signed for by:
 - a. the person; or
 - b. the person's officer, employee, or agent, including, without limitation, any officer, employee, or agent, authorized by appointment of the person or by law to accept service;
2. when returned by the U.S. Postal Service to the Department as unclaimed, unless the Department is persuaded that the document was not claimed for reasons beyond the control of the person to whom the document was sent;

(c) if given by regular mail, the document shall be deemed to be received no later than the third business day after it is mailed to the person, unless the Department is persuaded otherwise by the person to whom the document was mailed.

(4) Determining Date of Receipt of Document Submitted to the Department. Except as provided by 310 CMR 40.0008(5), each document required by, or submitted pursuant to, 310 CMR 40.0000 shall be deemed received by the Department as follows:

(a) if served in hand, the document shall be deemed to be received on the date when delivered to the appropriate regional office of the Department (*i.e.* the date stamped received), unless the date stamped is rebutted by production of a receipt from the Department; provided, however, that if the date stamped reflects a date within seven days of the date the submittal is due, the submittal shall be deemed to have been received by the due date;

40.0008: continued

- (b) if given by regular mail, the document shall be deemed to be received when delivered to the appropriate office of the Department (*i.e.* the date stamped received); provided, however, that if the date stamped reflects a date within seven days of the date the submittal is due, the submittal shall be deemed to have been received by the due date;
- (c) if given by certified mail, return receipt requested, the document shall be deemed to be received when delivered to the appropriate office of the Department (*i.e.* the date stamped received), unless the date stamped is rebutted by production of the return receipt; provided, however, that if the date stamped reflects a date within seven days of the date the submittal is due, the submittal shall be deemed to have been received by the due date; or
- (d) if given by electronic transmission, where the Department provides for submitting the document by such means, the document shall be deemed to be received on the date the transmission is delivered to the Department, except as provided in 310 CMR 40.0008(4)(d)1.:
 1. if the date the transmission is delivered to the Department is within seven days of the date the submittal is due, the submittal shall be deemed to have been received by the due date;
 2. for documents submitted electronically, submission of a printed copy to the Department shall not be required.

(5) Exceptions.

- (a) Adjudicatory Proceedings. Documents required or permitted to be filed under 310 CMR 1.00: *Adjudicatory Proceedings*, and 310 CMR 5.00: *Administrative Penalty*, shall be filed in accordance with 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.
- (b) Interim Deadlines and Notices of Noncompliance. For purposes of determining whether a person has complied with an Interim Deadline or come into compliance with a requirement by the date specified in a Notice of Noncompliance, each document required to be submitted shall be deemed received by the Department as follows:
 1. if served in hand, the document shall be deemed to be received on the date when delivered to the appropriate office of the Department (*i.e.* the date stamped received), unless the date stamped is rebutted by production of a receipt from the Department;
 2. if given by regular mail, the document shall be deemed to be received on the date when delivered to the appropriate office of the Department (*i.e.* the date stamped received);
 3. if given by certified mail, return receipt requested, the document shall be deemed to be received when delivered to the appropriate office of the Department (*i.e.* the date stamped received), unless the date stamped is rebutted by production of the return receipt; or
 4. if given by electronic transmission, the document shall be deemed to be received on the date the transmission is delivered to the Department.
- (c) Presumptive Approval of IRAs. Each written request for approval of an IRA shall be given to the Department by electronic transmittal, certified mail, return receipt requested, or served in hand. Each such submittal shall be deemed received by the Department as follows:
 1. if served in hand, the document shall be deemed to be received on the date when delivered to the appropriate office of the Department (*i.e.* the date stamped received), unless the date stamped is rebutted by production of a receipt from the Department;
 2. if given by certified mail, return receipt requested, the document shall be deemed to be received when delivered to the appropriate office of the Department (*i.e.* the date stamped received), unless the date stamped is rebutted by production of the return receipt; or
 3. if given by electronic transmission, the document shall be deemed to be received on the date the transmission is delivered to the Department.
- (d) Notification of Releases, Threats of Release and Imminent Hazards. Each notification required by 310 CMR 40.0300 shall be given to the Department (*i.e.* received) as follows:
 1. if given orally, the notification shall be deemed to be received on the date and at the time when communicated in person or by telephone;
 2. if given in writing and served in hand, the notification shall be deemed to be received on the date when delivered to the appropriate office of the Department (*i.e.* the date stamped received), unless the date stamped is rebutted by production of a receipt from the Department;

40.0008: continued

3. if given in writing by regular mail, the notification shall be deemed to be received on the date when delivered to the appropriate office of the Department (*i.e.* the date stamped received);
4. if given in writing by certified mail, return receipt requested, the notification shall be deemed to be received on the date when delivered to the appropriate office of the Department (*i.e.* the date stamped received), unless the date stamped is rebutted by production of the return receipt; or
5. if given by electronic transmission, the notification shall be deemed to be received on the date the transmission is delivered to the Department.

40.0009: Certification of Submittals

(1) Any person undertaking a response action shall include the following written declaration when expressly required by 310 CMR 40.0000, including, but not limited to, with any Release Notification Form, Status Report, Completion Statement, Phase V Report, Permanent or Temporary Solution Statement, Tier Classification Submittal, LSP Evaluation Opinion, Tier Classification Extension Submittal, Tier Classification Transfer Submittal, Periodic Review Opinion, Final Inspection Report, Construction Plan and Specifications, Operation, Maintenance and/or Monitoring Plan, Bill of Lading, Downgradient Property Status Submittal, Modification of Downgradient Property Status Submittal, or other LSP Opinion submitted to the Department pursuant to the MCP:

"I, _____, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this submittal, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the person or entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information."

By: _____
Signature Date

Title

For: _____
Name of person or entity

(2) The written declaration in 310 CMR 40.0009(1) required of a person undertaking a response action shall be made by the highest ranking individual(s) having day-to-day responsibility for the performance of the response action which is the subject of the submittal. The written declaration shall not be made by the Licensed Site Professional engaged or employed by the RP, PRP or Other Person to render Professional Services with respect to the site, unless the Licensed Site Professional's client or employer has authorized him or her in writing to act as his or her agent for the purpose of making the written declaration.

(3) The written declaration required by 310 CMR 40.0009(1) shall include the signature of each person making the submittal, the date on which each such person makes his or her attestation and the position or office of each such person.

(4) Each submittal filed with the Department pursuant to 310 CMR 40.0000 shall be accompanied by a completed transmittal form established by the Department for such purposes.

(5) No person filing a submittal required by M.G.L. c. 21E or 310 CMR 40.0000 with the Department shall alter, modify or nullify the contents of the transmittal form established by the Department for such purposes without the express approval of the Department.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0009: continued

(6) The Department may require any person providing information required to be submitted to the Department pursuant to M.G.L. c. 21E, 310 CMR 40.0000, or any order issued or determination made by the Department pursuant to M.G.L. c. 21E and 310 CMR 40.0000, to include the written declaration set forth in 310 CMR 40.0009(1).

40.0010: Effect of Orders and Appeals

(1) The issuance of an order under M.G.L. c. 21E, §§ 9 or 10, or any appeal of an order issued under M.G.L. c. 21E, § 9, shall not prevent the Department from issuing any future order(s) or from taking any other action authorized by law, including, but not limited to, taking or arranging for one or more response actions at the disposal site which is the subject of the order on appeal.

(2) While an appeal from an order issued under M.G.L. c. 21E, § 9, is pending, the Department may provide, pursuant to M.G.L. c. 21E, § 10(b), for the order or any part thereof to become provisionally effective and enforceable immediately if the Department finds that an Imminent Hazard exists or could result pending avoidable delay in compliance.

(3) If the event described in 310 CMR 40.0010(2) occurs, those parts of the order which become provisionally effective and enforceable immediately shall not be subject to the provisions of M.G.L. c. 30A, or any other law, governing adjudicatory proceedings. Any person who receives and complies with the terms of such an order may petition the Department for reimbursement for the reasonable costs of such compliance in accordance with M.G.L. c. 21E, § 10(b)(2), and 310 CMR 40.1200.

(4) While an appeal from a permit decision or order is pending, the Department may undertake such response actions as it deems reasonably necessary to protect health, safety, public welfare or the environment.

40.0011: Confidentiality of Information

(1) Any information, document, or particular part thereof, obtained by the Department or its Contractors pursuant to M.G.L. c. 21E, upon request shall be confidential, and shall not be considered to be a public record, when it is determined by the Commissioner in accordance with 310 CMR 3.00: *Access to and Confidentiality of Department Records and Files* that such information, record, or particular part thereof, relates to secret processes, methods of manufacture or production, or that such information, record, or particular part thereof, if made public, would divulge a trade secret.

(2) The Department shall be under no obligation to act upon any such request for confidentiality that is not made and substantiated in accordance with 310 CMR 3.24: *Requests for Protecting the Confidentiality of Trade Secrets*.

(3) 310 CMR 40.0011 shall not prevent disclosure of any information necessary for an enforcement or cost recovery action or to comply with CERCLA or FWPCA or as otherwise provided by 310 CMR 3.00: *Access to and Confidentiality of Department Records and Files*.

40.0013: Presumption of Irreparable Harm

Any violation of M.G.L. c. 21E, 310 CMR 40.0000, or any order or determination issued thereunder, shall be presumed to constitute irreparable harm to health, safety, public welfare, and the environment. Such presumption may be rebutted by a preponderance of the evidence.

40.0014: Document Retention

(1) General Requirements. Each person who submits one or more LSP Opinions to the Department shall preserve and maintain, or arrange for the preservation and maintenance of, all documents in his or her possession, custody or control, and shall arrange for the preservation and maintenance of all documents prepared or received by the Licensed Site Professional who rendered the LSP Opinion in the course of providing Professional Services pertaining to the site, that are material to the LSP Opinion, including, but not limited to, documents of sufficient detail

40.0014: continued

to substantiate the facts, data, conclusions and other information set forth in the LSP Opinion and any other documents material to the qualifications and limitations set forth therein. Such documents shall be kept at one or more locations reasonably accessible to the Department and in such form as to enable the Department to ascertain whether the response actions which are the subject of the LSP Opinion have been performed in compliance with the provisions of M.G.L. c. 21E, 310 CMR 40.0000 and any permit or order issued thereunder. Each such person shall make those documents available to the Department for inspection upon request. For purposes of 310 CMR 40.0014(1), the "person who submits one or more LSP Opinions to the Department" refers to the RP, PRP or Other Person who employed or engaged the LSP whose LSP Opinion is the subject of the submittal.

(2) Period of Retention. Any person required by 310 CMR 40.0014(1) to preserve and maintain any document shall preserve and maintain those documents until at least five years has passed since the date of the Department's receipt of either a Permanent Solution Statement or No Further Action Letter for the disposal site that is the subject of the submittal, or for the duration of the design life of the Permanent Solution, whichever is later. For purposes of 310 CMR 40.0014(2), the term "design life" means the period of time during which any physical structures are intended to maintain a level of No Significant Risk at a disposal site, as stated in a Permanent Solution Statement or No Further Action Letter.

40.0015: Content of Waste Site Cleanup Activity Opinions

(1) Each and every LSP Opinion submitted to the Department pursuant to M.G.L. c. 21E or 310 CMR 40.0000 shall bear the signature and seal of the LSP who rendered the LSP Opinion and the date on which the LSP Opinion was rendered.

(2) An LSP rendering an LSP Opinion for submittal to the Department shall:

- (a) identify in the LSP Opinion the material facts, data and other information known by him or her about the disposal site that is pertinent to the LSP Opinion; and
- (b) disclose and explain in the LSP Opinion the material facts, data, other information, and qualifications and limitations known by him or her which may tend to support or lead to an LSP Opinion contrary to, or significantly different from, the one expressed.

(3) The submittals required by 310 CMR 40.0000, which are LSP Opinions, include, but are not limited to, the following:

- (a) any Status Report submitted in accordance with 310 CMR 40.0000, including, but not limited to:
 - 1. any Immediate Response Action Status Report submitted pursuant to 310 CMR 40.0425;
 - 2. any Release Abatement Measure Status Report submitted pursuant to 310 CMR 40.0445;
 - 3. any Utility-related Abatement Measure Status Report submitted pursuant to 310 CMR 40.0465;
- (b) any Completion Statement submitted pursuant to 310 CMR 40.0000, including, but not limited to:
 - 1. any Immediate Response Action Completion Statement submitted pursuant to 310 CMR 40.0427, except as otherwise provided pursuant to 310 CMR 40.0411(3);
 - 2. any Release Abatement Measure Completion Statement submitted pursuant to 310 CMR 40.0446;
 - 3. any Utility-related Abatement Measure Completion Statement submitted pursuant to 310 CMR 40.0466;
 - 4. any Phase I Completion Statement submitted pursuant to 310 CMR 40.0484;
 - 5. any Phase II Completion Statement submitted pursuant to 310 CMR 40.0836;
 - 6. any Phase III Completion Statement submitted pursuant to 310 CMR 40.0862;
 - 7. any Phase IV Completion Statement submitted pursuant to 310 CMR 40.0879; and
 - 8. any Phase V Completion Statement submitted pursuant to 310 CMR 40.0893;
- (c) any Phase Report submitted pursuant to 310 CMR 40.0000, including, but not limited to:

40.0015: continued

1. any Scope of Work submitted pursuant to 310 CMR 40.0510(2)(f) or 310 CMR 40.0834;
 2. any Phase II Report submitted pursuant to 310 CMR 40.0835;
 3. any Remedial Action Plan submitted pursuant to 310 CMR 40.0861;
 4. any Notice of Commencement of Work submitted pursuant to 310 CMR 40.0870;
 5. any Remedy Implementation Plan submitted pursuant to 310 CMR 40.0874;
 6. any Final Inspection Report submitted pursuant to 310 CMR 40.0878;
 7. any Phase IV Status and Remedial Monitoring Report submitted pursuant to 310 CMR 40.0877;
 8. any Phase V Status and Remedial Monitoring Reports submitted pursuant to 310 CMR 40.0892; and
 9. any As-built Construction Report submitted pursuant to 310 CMR 40.0875;
- (d) any Immediate Response Action Plan submitted pursuant to 310 CMR 40.0424, except as otherwise provided pursuant to 310 CMR 40.0411(2);
- (e) any Release Abatement Measure Plan submitted pursuant to 310 CMR 40.0444;
- (f) any Permanent Solution Statement or Temporary Solution Statement submitted pursuant to 310 CMR 40.1000, except as otherwise provided pursuant to 310 CMR 40.1056(1)(g);
- (g) any LSP Tier Classification Opinion submitted pursuant to 310 CMR 40.0500;
- (h) any Periodic Review Opinion submitted pursuant to 310 CMR 40.1050;
- (i) any Activity and Use Limitation Opinion submitted pursuant to 310 CMR 40.1000;
- (j) any Audit Follow-up Plan submitted pursuant to 310 CMR 40.1160;
- (k) any Post-Audit Completion Statement submitted pursuant to 310 CMR 40.1170;
- (l) any Downgradient Property Status Opinion submitted pursuant to 310 CMR 40.0180; and
- (m) any Remedy Operation Status Opinion submitted pursuant to 310 CMR 40.0893.
- (4) No provision in the MCP is intended to render an LSP Opinion a warranty or guaranty; provided, however, that an Opinion shall be considered a representation:
- (a) that the Professional Services associated therewith were provided in accordance with the applicable standards of care;
 - (b) that the response action(s) which is (are) the subject of the Opinion was (were) performed in accordance with the applicable provisions of M.G.L. c. 21E, 310 CMR 40.0000, and any DEP order(s), permit(s) or approval(s); and
 - (c) that the conclusion(s) expressed therein is (are) based upon the rendering LSP's professional judgment and reflect his or her knowledge, information and belief.
- (5) Any rider annexed to an LSP Opinion concerning professional liability exposure shall be deemed void by the Department for enforcement purposes to the extent that it is inconsistent with 310 CMR 40.0009(4) or otherwise serves to compromise or diminish the content or meaning of the Opinion for the Department's purposes under M.G.L. c. 21E and/or the MCP. The Department's receipt, acceptance or approval of any document which contains such a rider, shall not be construed to imply Department approval or endorsement of the liability management mechanism or practice contained therein or the content thereof.
- (6) No provision in 310 CMR 40.0000 shall be construed to require that an LSP render a conclusion as to whether a person performing a response action has complied with a deadline or time period for the rendering of an LSP Opinion established by, or pursuant to, 310 CMR 40.0000.
- (7) Electronic Submittal of Waste Site Cleanup Activity Opinions.
- (a) On or after January 1, 2009, all LSP Opinions shall be submitted to the Department electronically on a form established by the Department for such purposes.
 - (b) The date of receipt of LSP Opinions by the Department shall be determined as specified in 310 CMR 40.0008(4).
 - (c) For LSP Opinions submitted electronically, submission of a printed copy to the Department shall not be required.

(40.0016: Laboratory Certification: Reserved)

40.0017: Environmental Sample Collection and Analyses

- (1) Any person undertaking response actions under the provisions of this Contingency Plan shall ensure that analytical and environmental monitoring data used in support of recommendations, conclusions, or LSP Opinions with respect to assessment, removal, or containment actions is scientifically valid and defensible, and of a level of precision and accuracy commensurate with its stated or intended use.
- (2) Procedures and methodologies employed for the collection and analysis of soil, sediment, water, vapor, air, and/or waste samples shall consist of:
 - (a) methods published by the Department, EPA, the American Society for Testing and Materials (ASTM), the American Public Health Association (APHA), the National Institute for Occupational Safety and Health (NIOSH), the American Water Works Association (AWWA), and other organizations with expertise in the development of standardized analytical testing methods;
 - (b) modification of published methods, provided that all modifications are completely documented; or
 - (c) unpublished methods, including analytical screening methods, provided that such methods are scientifically valid, are of a known and demonstrated level of precision and accuracy, and are completely described and documented in response action submittals.
- (3) All response action submittals to the Department under these regulations that contain the results of sample collection and analyses shall include the following information:
 - (a) the date, location, and time of sampling, and the name of the individual who collected the sample;
 - (b) specifications on any sample filtration or preservation procedures;
 - (c) the date of receipt of the sample at the laboratory, and the date(s) the sample was extracted and/or analyzed;
 - (d) the name and address of the laboratory, and the certification identification number and status of the laboratory, if certified;
 - (e) the sample matrix description and identification number(s);
 - (f) the sample preparation and/or analytical method(s) employed;
 - (g) the results of the analysis, in clearly expressed concentration units;
 - (h) the detection limit of each reported analyte based upon actual analytical conditions;
 - (i) details on any known conditions or findings which may effect the validity of analytical data, including unsatisfactory results obtained on quality assurance/ quality control blank, duplicate, surrogate or spiked samples; and
 - (j) any other information or data which may be required to explain or document provided data, including chain of custody forms, where appropriate, or other information requested by the Department based upon its review and evaluation of submitted documents.
- (4) Laboratory and other reports of sampling analyses of aqueous samples shall be reported as mass per unit volume and solid samples shall be reported as mass per unit mass, on a dry weight basis, unless other reporting units are more appropriate.
- (5) Any person undertaking response actions shall ensure that sample collection and analyses is performed by persons who are qualified by education, training and experience.
- (6) Any time environmental samples are taken at a property by a person(s) conducting response action(s), other than on behalf of the owner of the property, the person(s) conducting response actions shall comply with the notification provisions of 310 CMR 40.1403(10).

40.0018: Health and Safety Procedures

- (1) Any person undertaking response actions shall implement health and safety procedures designed to protect health, safety, public welfare and the environment during the performance of response actions. Such procedures shall include, without limitation, the following:
 - (a) measures to protect sensitive human populations from exposure to oil and/or hazardous material;
 - (b) the institution of air monitoring activities, if necessary, to protect the public from exposure to gases and air-borne particulates;

40.0018: continued

(c) measures that may be necessary to contain oil and/or hazardous material during the performance of response actions, including:

1. measures to control dust and other environmental media (*e.g.* wetting soils);
2. measures to decontaminate vehicles and equipment to minimize the spread of contaminated soil from the disposal site;
3. measures to secure on-site excavations and stockpiles of contaminated materials; and
4. discontinuance of response actions where necessary to protect public health and safety.

(2) The scope and detail of health and safety procedures shall be commensurate with the degree and nature of the risks posed to human and ecological populations by the disposal site and/or response actions. Standardized health and safety plans may be appropriate for routine activities conducted during response actions.

(3) Any person undertaking a response action shall ensure that a worker health and safety plan is implemented to the extent required by the federal Occupational Safety and Health Administration (OSHA) under the Occupational Safety and Health Act of 1970, 29 U.S.C. 651 *et seq.*, and any other applicable federal, state or local law.

40.0019: Violations of Environmental Restrictions

(1) No person shall violate, suffer, allow or cause any person to violate, an Environmental Restriction or other covenant held by the Department pursuant to M.G.L. c. 21E, § 6.

(2) For purposes of identifying and holding persons responsible for Response Action Costs and damages arising out of the violation of an Environmental Restriction or other covenant held by the Department pursuant to M.G.L. c. 21E, § 6, the Department shall consider taking action against only those persons who have violated, suffered, allowed or caused such persons to violate, the Environmental Restriction or other restrictive covenant. In determining whether to initiate enforcement action against any other person who may be liable for such costs or damages under M.G.L. c. 21E, the Department shall consider each of the following:

- (a) whether the Environmental Restriction or other restrictive covenant has been recorded and/or registered with the appropriate registry of deeds and/or land registration office in accordance with 310 CMR 40.1070 through 40.1099;
- (b) whether a level of No Significant Risk that relies on the Environmental Restriction or other Covenant has existed or has been achieved at the disposal site as set forth in the Permanent or Temporary Solution Statement;
- (c) whether such person has taken appropriate steps to prevent the violation; and
- (d) any other factor the Department deems relevant.

(3) No provision of 310 CMR 40.0000 shall be construed to limit the Department's authority to take or arrange, or to require any person to perform, any response action authorized by M.G.L. c. 21E which the Department deems necessary to protect health, safety, public welfare or the environment.

(4) No provision of 310 CMR 40.0000 shall be construed to relieve any person from any obligation for Response Action Costs or damages related to a site or disposal site for which that person is liable under M.G.L. c. 21E or from any obligation for any administrative, civil or criminal penalty, fine, settlement, or other damages.

40.0020: Violations of a Permanent Solution or Temporary Solution

(1) If the activities, uses, and/or exposures upon which a Permanent Solution or Temporary Solution Statement is based change at any time to cause human or environmental exposure, or an increased potential for human or environmental exposure, to oil and/or hazardous material, without an evaluation by an LSP in accordance with 310 CMR 40.1080, where applicable, and without additional response actions, if necessary, to achieve or maintain a condition of No Significant Risk or No Substantial Hazard, then the owner and operator of the property or properties subject to the Permanent Solution or Temporary Solution Statement at the time that the activities, uses, and/or exposures change, and any person liable under M.G.L. c. 21E for the disposal site who has knowledge of such, shall:

40.0020: continued

(a) notify the Department, in accordance with the procedures set forth in 310 CMR 40.0300, immediately upon gaining knowledge of any of the following:

1. any such change in activity, use and/or exposure;
2. any level of oil and/or hazardous material above an applicable Reportable Concentration;
3. any release and/or threat of release of oil and/or hazardous material that results from any such change in activity or use; or
4. any Imminent Hazard that results from such activities, uses, and/or exposures; and

(b) undertake any and all response actions required by M.G.L. c. 21E and 310 CMR 40.0000.

(2) For purposes of identifying and holding persons responsible for Response Action Costs and damages arising out of the violation of 310 CMR 40.0020(1), the Department shall consider taking action only against those persons who violated, suffered, allowed or caused such persons to violate, such provision. In determining whether to initiate enforcement action against any other person who may be liable for such costs or damages under M.G.L. c. 21E, the Department shall consider the factors set forth in 310 CMR 40.0019(2).

(3) No provision of 310 CMR 40.0000 shall be construed to limit the Department's authority to take or arrange, or to require any RP or PRP to perform, any response action authorized by M.G.L. c. 21E which the Department deems necessary to protect health, safety, public welfare or the environment.

(4) No provision of 310 CMR 40.0000 shall be construed to relieve any person from any obligation for Response Action Costs or damages related to a site or disposal site for which that person is liable under M.G.L. c. 21E or from any obligation for any administrative, civil or criminal penalty, fine, settlement, or other damages.

40.0021: Unlawful Interference with Response Actions

No person shall falsify, tamper with, alter, destroy, disturb or otherwise unlawfully interfere with any response action, including, but not limited to, any recovery or control mechanism or system, or any monitoring device or method, which any person has undertaken, is undertaking or intends to undertake, or which any person is required to perform or maintain, pursuant to M.G.L. c. 21E, 310 CMR 40.0000 or any order or determination issued by the Department.

40.0022: Accurate and Timely Submittal of Documents

(1) Except as provided by 310 CMR 40.0025, each person who is required by M.G.L. c. 21E, 310 CMR 40.0000 or any order or determination of the Department, to make one or more submittals to the Department shall make each submittal by the deadline or within the time period imposed therein.

(2) No person shall make, or cause any person to make, any false, inaccurate, incomplete or misleading statement in any document which that person submits, or causes any person to submit, to the Department pursuant to M.G.L. c. 21E, 310 CMR 40.0000 or any order or determination issued by the Department.

40.0023: Accurate and Complete Record-keeping

(1) No person shall make, or cause any person to make, any false, inaccurate, incomplete or misleading statement in any document which that person keeps or is required to keep pursuant to M.G.L. c. 21E, 310 CMR 40.0000 or any permit or order issued by the Department.

(2) No person shall knowingly fail to fully complete any document that such person is required to submit to the Department pursuant to M.G.L. c. 21E, 310 CMR 40.0000 or any permit or order issued by the Department.

40.0024: Timely Action and Anticipatory Noncompliance

(1) Except as provided by 310 CMR 40.0025 and 40.0172, each person undertaking one or more response actions shall perform each such response action, or portion of a response action, by the deadline for taking the action imposed by M.G.L. c. 21E, 310 CMR 40.0000 or any order or determination issued by the Department.

(2) In the event that the Department finds that a person who is undertaking a response action will likely fail to comply with any deadline for taking such action imposed by 310 CMR 40.0000 or any order or determination issued by the Department, the Department may require that person to provide the Department with reasonable assurance of his or her ability to perform the action in a timely manner, including, a compliance schedule, financial assurance and such other assurances as the Department reasonably deems necessary.

(3) 310 CMR 40.0024(2) shall not be construed to limit the Department's authority to establish Interim Deadlines in accordance with 310 CMR 40.0167.

40.0025: Extensions of Deadlines and Time Periods for *Force Majeure*

(1) Except as provided by 310 CMR 40.0025(2), if any *force majeure* occurs which causes or contributes to any delay in compliance with any deadline or time period specified in M.G.L. c. 21E, 310 CMR 40.0000 or any order or determination issued by the Department, except a deadline or time period for providing notification of a release or threat of release of oil and/or hazardous material, or an Imminent Hazard, as required by 310 CMR 40.0300, the person(s) who is responsible for performing the response action shall notify the Department in writing promptly upon learning of the delay, and prior to the running of any such deadline or time period, and state the anticipated length and cause of the delay, the measure or measures to be taken to minimize the delay and a timetable for implementing those measures, and shall take appropriate measures to avoid or minimize any delay.

(2) Notwithstanding 310 CMR 40.0025(1), in the event of any delay in compliance with a deadline established by 310 CMR 40.0560, the person undertaking response actions shall comply with the requirements and procedures set forth in 310 CMR 40.0560.

40.0027: Remedial Monitoring Report

(1) For a disposal site for which the requirement to submit Remedial Monitoring Reports applies as of April 3, 2006, the first Remedial Monitoring Report shall be submitted:

- (a) on the monthly anniversary of the submittal of the first Status Report for the remedial action when the remedial action is addressing an Imminent Hazard or Condition of Substantial Release Migration; or
- (b) concurrently with the submittal of the next Status Report for the remedial action when the remedial action is addressing conditions that do not pose an Imminent Hazard or Condition of Substantial Release Migration.

(2) Except as provided at 310 CMR 40.0027(3), a Remedial Monitoring Report shall document all monitoring and operational information relevant to the Active Operation and Maintenance of an Active Remedial System or Active Remedial Monitoring Program during the reporting period and since the submittal of any previous Remedial Monitoring Report. Such information includes, as applicable:

- (a) operating status of Active Remedial Systems, including any system shutdown and the date/duration of shutdown;
- (b) date(s) and number of monitoring events;
- (c) effluent concentrations;
- (d) identification of any discharges above permissible discharge concentrations;
- (e) recovery rates and/or volumes;
- (f) discharge volumes;
- (g) date, location, type, and volume of Remedial Additives applications;
- (h) groundwater data; and/or
- (i) related maps, graphs or diagrams;

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0027: continued

(3) Remedial Monitoring Reports shall not be required for Active Operation and Maintenance of an Active Remedial System or Active Remedial Monitoring Program that is limited to window fans deployed to vent vapors within a building. Information related to the operation of such window fans shall be included in the next applicable Status Report.

(4) Prior to April 3, 2007, Remedial Monitoring Reports may be submitted to the Department either electronically or as a printed copy.

(5) The date of receipt of a Remedial Monitoring Report by the Department shall be determined as specified in 310 CMR 40.0008(4).

(6) For Remedial Monitoring Reports submitted electronically, submission of a printed copy to the Department shall not be required.

(7) Effective Date on and after which All Remedial Monitoring Reports Must Be Submitted Electronically. On or after April 3, 2007, all Remedial Monitoring Reports must be submitted to the Department electronically on a form established by the Department for such purposes.

40.0028: Well Maintenance and Security

Any well installed or constructed for the purposes of sampling, monitoring or remediating environmental media or environmental conditions as part of response actions conducted under the MCP shall be maintained and secured throughout its period of service to prevent the introduction of contaminants to the subsurface environment or the exacerbation of groundwater contamination by the vertical movement of water within the borehole or annular space.

40.0030: Management Procedures for Remediation Waste

The provisions of 310 CMR 40.0031 through 40.0039, cited collectively as 310 CMR 40.0030, establish requirements and procedures for the management of Remediation Waste.

40.0031: General Provisions for the Management of Remediation Waste

(1) RPs, PRPs, and Other Persons undertaking response actions shall manage Remediation Waste in a manner that ensures the protection of health, safety, public welfare and the environment, and shall handle, store, transport, treat, recycle, reuse, dispose, or discharge Remediation Waste in compliance with the provisions of 310 CMR 40.0030 and all other applicable federal, state, and local laws, regulations, and bylaws.

(2) RPs, PRPs, and Other Persons conducting response actions shall consign, convey and/or transport Remediation Waste only to facilities and locations licensed, permitted, or approved to accept such materials by appropriate federal, state or local authorities.

(3) Response actions involving Remediation Waste which are conducted within the boundaries of a disposal site in compliance with the provisions of 310 CMR 40.0000 shall be considered, for the purposes of 310 CMR 30.801(11), remedial actions initiated by the Department under the provisions of M.G.L. c. 21E, except for those response actions involving Uncontainerized Hazardous Waste for which the Department has made a determination, pursuant to 310 CMR 40.0033(5), to require compliance with all or part of 310 CMR 30.000: *Hazardous Waste*. Otherwise, a valid license issued pursuant to M.G.L. c. 21C and 310 CMR 30.000: *Hazardous Waste* shall not be required to manage Remediation Waste within the boundaries of a disposal site, provided such Remediation Waste is managed in compliance with M.G.L. c. 21E and 310 CMR 40.0000.

(4) Response actions involving soil, groundwater, and Remediation Waste which are conducted in compliance with the provisions of 310 CMR 40.0032(3), 40.0034, and 40.0045(6) are deemed to be response actions conducted in compliance with the approval provisions of M.G.L. c. 21E for the purposes of 310 CMR 30.252(2).

40.0031: continued

(5) Remediation Waste which meet the criteria defining a listed hazardous waste or which are themselves a characteristic hazardous waste shall be accumulated, treated, and stored or otherwise managed at a disposal site in a manner that achieves a level of control and protection equivalent to that provided by the technical and management requirements of 310 CMR 30.000: *Hazardous Waste*.

(6) Remediation Waste, Containerized Waste, and Uncontainerized Waste which meet the criteria defining a listed or characteristic hazardous waste shall, when transported from a disposal site, comply with the requirements of 310 CMR 30.000: *Hazardous Waste*.

(7) All Remediation Waste shall be removed from a disposal site as soon as possible, and in all cases:

(a) within 120 days of its initial excavation or collection, unless it is managed in accordance with an Immediate Response Action Plan, Release Abatement Measure Plan, or Remedy Implementation Plan submitted to the Department within this 120 day timeframe that provides specific actions, schedule and procedures for on-site storage, treatment, reuse, or recycling of such Remediation Waste ; or

(b) within 90 days of its initial excavation or collection if such Remediation Waste meets the criteria defining a listed or characteristic hazardous waste.

40.0032: Contaminated Media and Contaminated Debris

(1) Contaminated Media and Contaminated Debris containing oil and/or waste oil at levels equal to or greater than an applicable Reportable Concentration specified in 310 CMR 40.0300 and 40.1600, and that are not otherwise a hazardous waste, shall be managed in compliance with the provisions of 310 CMR 30.252(1) or, in accordance with the provisions of 310 CMR 30.252(2), shall be managed under the Bill of Lading process described in 310 CMR 40.0034 or under a Hazardous Waste Manifest in accordance with 310 CMR 30.000, when they are transported from a disposal site.

(2) Contaminated Media and Contaminated Debris containing one or more hazardous materials at levels equal to or greater than an applicable Reportable Concentration specified in 310 CMR 40.0300 and 40.1600, and which are not a hazardous waste, shall be managed under the Bill of Lading process described in 310 CMR 40.0034 or under a Hazardous Waste Manifest in accordance with 310 CMR 30.000 when they are transported from a disposal site.

(3) Soils containing oil or waste oil at concentrations less than an otherwise applicable Reportable Concentration and that are not otherwise a hazardous waste, and soils that contain one or more hazardous materials at concentrations less than an otherwise applicable Reportable Concentration and that are not a hazardous waste, may be transported from a disposal site without notice to or approval from the Department under the provisions of this Contingency Plan, provided that such soils:

(a) are not disposed or reused at locations where the concentrations of oil or hazardous materials in the soil would be in excess of a release notification threshold applicable at the receiving site, as delineated in 310 CMR 40.0300 and 40.1600; and

(b) are not disposed or reused at locations where existing concentrations of oil and/or hazardous material at the receiving site are significantly lower than the levels of those oil and/or hazardous materials present in the soil being disposed or reused.

(4) Contaminated Groundwater and Contaminated Surface Water that is collected, treated, conveyed, withdrawn, contained or discharged at or from a disposal site as part of a response action shall be managed in compliance with applicable provisions of 310 CMR 40.0030 and 40.0040.

(5) Contaminated Media and Contaminated Debris managed under the Bill of Lading process described in 310 CMR 40.0034 shall not be disposed of at a land disposal facility if a feasible alternative exists that involves the reuse, recycling, destruction, and/or detoxification of such materials. An evaluation of whether such an alternative is feasible shall consider:

40.0032: continued

- (a) the volume and physical characteristics of the Contaminated Media and Debris;
- (b) the levels of oil and/or hazardous materials present within the Contaminated Media and Debris; and
- (c) the relative costs of management options.

40.0033: Uncontainerized Waste

(1) Remedial actions involving the storage, collection, treatment, disposal, containment, recycling or reuse of uncontainerized oil or waste oil within the boundaries of a disposal site shall be conducted in compliance with 310 CMR 40.0000.

(2) RPs, PRPs and Other Persons who store Uncontainerized Hazardous Waste at a site, excluding oil or waste oil, shall do so in accordance with the management requirements of 310 CMR 30.000: *Hazardous Waste*. When storing such waste at a site for a period greater than 90 days the RP, PRP, or Other Person shall provide, for the purposes of 310 CMR 30.801(11), written documentation to the Department in the next response action submittal that:

- (a) the storage complies with the management requirements of 310 CMR 30.000: *Hazardous Waste*;
- (b) provides a description of the type, quantity, and generation rate of any Uncontainerized Hazardous Waste being stored or accumulated;
- (c) provides justification for storage longer than 90 days; and
- (d) includes a projected timeline for storage of such wastes.

(3) RPs, PRPs and Other Persons conducting remedial actions that involve the treatment, disposal, recycling or reuse of Uncontainerized Hazardous Waste, excluding oil or waste oil, within the boundaries of a disposal site shall submit a written notice to the Department a minimum of 60 days prior to the initiation of such activities, except for response actions conducted as part of an Immediate Response Action.

(4) The notice required by 310 CMR 40.0033(3) shall include, without limitation, the following:

- (a) the address and Release Tracking Number(s) for the site;
- (b) the type of activity and why the activity may be subject to permitting requirements of 310 CMR 30.000: *Hazardous Waste*;
- (c) the type and quantity of Uncontainerized Hazardous Waste;
- (d) a schedule; and
- (e) a discussion of the reason for and goal of the activity.

(5) The Department shall review notices made pursuant to 310 CMR 40.0033(3) and determine whether the remedial action shall comply with all or part of the permitting requirements of 310 CMR 30.000. In determining whether or not compliance with all or only portions of the permitting requirements of 310 CMR 30.000: *Hazardous Waste* is required, the Department shall consider, without limitation:

- (a) the volume and toxicity of the uncontainerized hazardous waste;
- (b) the nature of the proposed remedial action; and
- (c) the potential for the proposed remedial action to impact health, safety, public welfare, and the environment. If the Department does not issue a written notification that such remedial action requires compliance with all or part of the permitting requirements of 310 CMR 30.000: *Hazardous Waste* within 45 days of receiving such notice, the remedial action shall be considered, for the purposes of 310 CMR 30.801(11), a remedial action initiated by the Department under the provisions of M.G.L. c. 21E.

40.0034: Bill of Lading Process

(1) Remediation Waste transported from a site under a Bill of Lading process, as described in 310 CMR 40.0030, shall be transported under a Bill of Lading in a form established by the Department for such purposes, which shall contain, without limitation, the information, Opinions, and certifications listed at 310 CMR 40.0035.

40.0034: continued

- (2) Remediation Waste managed under a Bill of Lading process shall not be transported from a site until all information, opinions, and certifications required in 310 CMR 40.0035(1)(a) through (i) are obtained by the RP, PRP, or Other Person conducting response actions.
- (3) Except as provided in 310 CMR 40.0034(4), Remediation Waste which is managed under the Bill of Lading process:
 - (a) shall only be stored at the site of excavation or collection;
 - (b) shall be stored in a secure manner protective of health, safety, public welfare and the environment in accordance with 40.0036; and
 - (c) shall be removed from the site of excavation or collection as soon as possible, and in all cases within 120 days of its initial excavation or collection, unless an Immediate Response Action Plan, Release Abatement Measure Plan, or Remedy Implementation Plan is submitted to the Department within this 120 day timeframe, and in accordance with all applicable provisions of 310 CMR 40.0000, proposing specific actions and procedures for on-site storage, treatment, reuse, or recycling of such Remediation Waste.
- (4) Remediation Waste containing oil or waste oil, but which is not otherwise a hazardous waste, and Remediation Waste containing hazardous material which is not a hazardous waste, may be removed from a site for temporary storage at another location owned or operated by the same RP, PRP, or Other Person conducting response actions, or to a facility permitted, licensed or approved to accept such materials provided:
 - (a) the transportation and storage of the Remediation Waste is supervised, managed, or overseen by a Licensed Site Professional in accordance with 310 CMR 40.0035;
 - (b) transportation and storage activities are conducted in a manner that is protective of health, safety, public welfare and the environment in accordance with 310 CMR 40.0036;
 - (c) all Remediation Waste is ultimately transported to an approved treatment, recycling, reuse, or disposal facility within 120 days of its initial excavation or recovery from a disposal site or within a time period specifically approved by the Department as part of its oversight of response actions at such site; and
 - (d) all Remediation Waste removed from an off-site temporary storage location is transported from the temporary storage location in accordance with the Bill of Lading provisions in 310 CMR 40.0035.
- (5) A completed Bill of Lading containing a signature of a representative of the receiving facility or receiving location shall be submitted to the Department within 30 days of the date of final shipment from the disposal site or storage/consolidation area, except for shipments of soils resulting from a Limited Removal Action conducted in accordance with 310 CMR 40.0318.
- (6) A completed Bill of Lading and supporting documentation for shipments of soil resulting from a Limited Removal Action conducted in accordance with 310 CMR 40.0318 shall be retained by the person conducting response actions for a minimum of five years or for as long as required by 310 CMR 40.0014, whichever is later.
- (7) The Department reserves the right to impose additional requirements on the management of Remediation Waste under the Bill of Lading process if the Department determines that such materials represent a hazard to health, safety, public welfare or the environment.
- (8) Remediation Waste generated during the performance of a Utility-related Abatement Measure in accordance with 310 CMR 40.0460 which is temporarily stored at another location owned or operated by the person undertaking such response action, or at a facility licensed, permitted, or approved to accept such materials, may be transported back to the site of generation for backfilling or treatment only if:
 - (a) such Remediation Waste containing oil or waste oil is not otherwise a hazardous waste;
 - (b) such Remediation Waste containing hazardous material is not a hazardous waste;
 - (c) such Remediation Waste is returned at or near the original point of excavation for backfilling or treatment within 14 days from the initial date of excavation;
 - (d) such Remediation Waste is stored in a secure manner protective of health, safety, public welfare and the environment, in accordance with 40.0036; and

40.0034: continued

(e) any Remediation Waste not returned at or near the original point of generation for backfilling or treatment within 14 days is transported in accordance with 310 CMR 40.0030 to an approved treatment, recycling, reuse, or disposal facility within 120 days of the initial date of generation.

40.0035: Bill of Lading Form

(1) The Bill of Lading shall contain, at a minimum, the following information, opinions, and certifications:

- (a) the address of the disposal site where the Remediation Waste was originally excavated or collected, and the address of any interim stockpiling, storage, and/or consolidation location;
- (b) the name, address, and telephone number of the RP, PRP, or Other Person conducting the response action;
- (c) the name and address of the transporter;
- (d) the name and address of the receiving facility or location;
- (e) except for Bills of Lading completed for Limited Removal Actions, as described in 310 CMR 40.0318, the Release Tracking Number for the disposal site where the Remediation Waste originated;
- (f) the estimated volume of Remediation Waste that will be shipped to the receiving facility;
- (g) the nature and composition of Remediation Waste that will be shipped to the receiving facility or storage location and the applicable Reportable Concentration reporting category for soil and/or groundwater described at 310 CMR 40.0360 associated with such Remediation Waste;
- (h) the signature and seal of a Licensed Site Professional related to the rendering of an Opinion on the adequacy of testing and assessment actions undertaken to characterize the Remediation Waste, and on whether the Remediation Waste, as characterized, conforms with permitting and regulatory requirements for acceptance at the receiving facility or location, or the dated signature of an authorized representative of the Department, certifying the adequacy of testing and assessment actions undertaken to characterize the Remediation Waste, and approving of its shipment to the listed receiving facility or location;
- (i) the dated signature of the RP, PRP, or Other Person conducting the response action, certifying the accuracy and completeness of the Bill of Lading, as specified in 310 CMR 40.0009; and
- (j) upon completion of all shipping activities, the dated signature of a representative of the receiving facility or location, attesting to the total volume or weight of Remediation Waste received by the facility or location.

(2) The Bill of Lading, or reproduction of the Bill of Lading, containing all information described in 310 CMR 40.0035(a) through (i), shall accompany each shipment of Remediation Waste transported from a disposal site.

40.0036: Management Requirements for Storing Remediation Waste

(1) All Remediation Waste shall be stored in a secure manner to prevent exposure to humans and the environment .

(2) Where practicable, the stockpiling or consolidating of Remediation Waste near sensitive human health receptors such as public and private water supply wells or sensitive environmental receptors such as wetlands, surface water bodies, or marine environments shall be avoided.

(3) All Remediation Waste stored at the site of generation or at a temporary storage location shall be placed entirely on a base composed of an impermeable material, and shall be immediately covered with the same material or other suitable material so as to minimize the infiltration of precipitation, volatilization of contaminants, and erosion of the stockpile. Any cover material used shall be properly secured and possess the necessary physical strength to resist tearing by the wind.

40.0036: continued

(4) Any failure of materials or procedures used in employing the base layer or cover layer as described in 310 CMR 40.0036(3) shall be immediately repaired, replaced, or re-secured so as to minimize precipitation infiltration, volatilization, and erosion/runoff of the Remediation Waste.

(5) All soils when transported upon public roadways shall be covered to minimize fugitive dust, and where necessary truck tire and undercarriage washing shall be employed to minimize tracking of soils onto public roadways.

(6) Movement and/or aeration of Remediation Waste stockpiles shall be limited to those activities that are necessary to manage such stockpiles in accordance with 310 CMR 40.0000. Landfarming of soil stockpiles is prohibited unless appropriate steps have been taken to minimize and treat potential air emissions pursuant to 310 CMR 40.0049.

40.0040: Management Procedures for Remedial Wastewater and Remedial Additives

The provisions of 310 CMR 40.0041 through 40.0047, cited collectively as 310 CMR 40.0040, establish requirements and procedures for the management of Remedial Wastewater and/or Remedial Additives, and for the construction, installation, modification, operation and maintenance of treatment works for the management of Remedial Wastewater and/or Remedial Additives.

40.0041: General Provisions for the Management of Remedial Wastewater and/or Remedial Additives

(1) In General. RPs, PRPs, and Other Persons performing response actions at a disposal site pursuant to M.G.L. c. 21E and 310 CMR 40.0000 shall manage Remedial Wastewater and/or Remedial Additives in a manner adequate to protect health, safety, public welfare, and the environment, and in compliance with the applicable provisions of M.G.L. c. 21E, 310 CMR 40.0000, and all other laws, regulations, orders, permits, and approvals applicable to such response actions.

(2) Discharges to Surface Water. No person performing response actions at a disposal site shall discharge Remedial Wastewater and/or Remedial Additives into any Surface Water, or construct, install, modify, operate or maintain an outlet or treatment works for such a discharge, except as provided by M.G.L. c. 21E and 310 CMR 40.0000.

(3) Discharges to the Ground Surface or Subsurface and/or Groundwater. No person performing response actions at a disposal site shall discharge Remedial Wastewater and/or Remedial Additives to the ground surface or subsurface and/or groundwater, or construct, install, modify, operate or maintain an outlet or treatment works for such a discharge, except as provided by M.G.L. c. 21E and 310 CMR 40.0000.

(4) Licensure under M.G.L. c. 21C. Response actions involving Remedial Wastewater and/or Remedial Additives which are conducted within the boundaries of a disposal site in compliance with the provisions of 310 CMR 40.0000 shall be considered, for the purposes of 310 CMR 30.801(11), remedial actions initiated by the Department under the provisions of M.G.L. c. 21E. A valid license issued pursuant to M.G.L. c. 21C and 310 CMR 30.000: *Hazardous Waste* shall not be required to manage Remedial Wastewater and/or Remedial Additives within the boundaries of a disposal site, provided such Remedial Wastewater and/or Remedial Additives are managed in compliance with M.G.L. c. 21E and 310 CMR 40.0000.

(5) Construction, Installation or Modification of Treatment Works. RPs, PRPs, and Other Persons performing response actions that involve the construction, installation or modification of treatment works for the management of Remedial Wastewater and/or Remedial Additives shall construct, install and modify such works in a manner adequate to protect health, safety, public welfare, and the environment, and in compliance with M.G.L. c. 21E and 310 CMR 40.0000.

40.0041: continued

(6) Operation and Maintenance of Treatment Works. RPs, PRPs, and Other Persons operating or maintaining treatment works for the management of Remedial Wastewater and/or Remedial Additives shall:

(a) Operate and maintain such works in a manner adequate to protect health, safety, public welfare, and the environment, and in compliance with M.G.L. c. 21E and 310 CMR 40.0000.

(b) Inspect such treatment works upon initial operation and at regular intervals thereafter. The frequency of such inspections shall be conducted in conformance with the requirements specified in 310 CMR 40.0040 and any Department, USEPA, POTW, or Non-Publicly Owned Treatment Works permit or approval. In addition, such persons shall inspect such treatment works upon any modification of the treatment works. At a minimum, such inspection shall determine:

1. the total volume of remedial wastewater treated since the previous inspection;
2. the average flow rate of the system at the time of the inspection;
3. the total volume of any non-aqueous phase oil or hazardous material recovered since the previous inspection; and
4. whether any maintenance activities are necessary to ensure that continued operation of the treatment works shall comply with the applicable requirements.

(c) Keep and maintain a log for such treatment works. At a minimum, the RP, PRP, or Other Person shall record the following in the log:

1. the name and affiliation of the person performing such inspection;
2. the date and time of such inspection;
3. the total volume of remedial wastewater treated since the previous inspection;
4. the average flow rate of the system at the time of the inspection;
5. the total volume of any non-aqueous phase oil or hazardous material recovered since the previous inspection;
6. a description of any maintenance activities performed during the inspection, or to be scheduled as a result of the inspection; and
7. a description of any problems or potential problems observed during the inspection.

(d) Keep maintenance and inspection log books and records in a secure on-site building. If a secure on-site building is not available, then such records shall be kept by the operator of the treatment works at an off-site location.

(7) Prevention of Unlawful Discharges. RPs, PRPs, and Other Persons shall take adequate measures to protect the treatment works from vandalism, and to prevent system failure, contaminant pass through, interference, by-pass, upset, and other events likely to result in a discharge of oil and/or hazardous materials to the environment, or to a POTW or Non-publicly Owned Treatment Works, which exceed or violate applicable standards and requirements. At a minimum, these measures include:

- (a) where applicable, an automatic high water/product shutoff switch to prevent overflow of the treatment works;
- (b) where applicable, an automatic pressure shutoff switch;
- (c) data collection devices including flow rate and flow total meters;
- (d) maintenance of a process and instrumentation diagram of the treatment works in the log book or on the treatment works indicating the location of controls, sampling ports, switches, gauges and other system components;
- (e) proper sealing of the treatment works to prevent any unlawful discharge of vapors;
- (f) proper precautions to prevent damage to the system by freezing or extreme heat, vehicles, or vandalism;
- (g) procedures or equipment for identifying system malfunction and communicating such malfunction to the system operator; and
- (h) posting the name and telephone number of the person to contact in the event of a malfunction in an accessible readily visible location.

(8) Prohibition on Discharge of Uncontainerized Waste. No person conducting response actions at a disposal site shall discharge Uncontainerized Waste to the environment or to a POTW or Non-publicly Owned Treatment Works.

40.0041: continued

(9) Inspection of Treatment Works. Except for discharges of Remedial Additives, and discharges of Remedial Wastewater that are discharged without treatment in accordance with 310 CMR 40.0040, RPs, PRPs, and Other Persons treating Remedial Wastewater at a disposal site pursuant to M.G.L. c. 21E and 310 CMR 40.0040 shall engage or employ a Wastewater Treatment Plant Operator having, at a minimum, a currently valid certification of Grade 2, as defined in 257 CMR 2.12: *Grades of Wastewater Treatment Facility Operators* (or higher if required by 257 CMR 2.13: *Classification of Wastewater Treatment Facilities*) to ensure the proper operation and maintenance of the treatment works. Such certified operator shall at a minimum inspect the treatment works at regular intervals of 30 days for the first three months following commencement of the discharge, or any modification of the treatment works associated with the discharge, and at regular intervals of three months thereafter for the duration of the discharge.

(10) Discharges in the Vicinity of Outstanding Resource Waters. Except as provided for in 310 CMR 40.0045(4), no person performing response actions at a disposal site pursuant to M.G.L. c. 21E and 310 CMR 40.0000 shall discharge Remedial Wastewater to the ground surface or subsurface, or to groundwater, at a point within 200 feet of a surface water body designated as an Outstanding Resource Water pursuant to 314 CMR 4.03(4), unless the concentrations of oil and/or hazardous material in the Remedial Wastewater discharged are below the applicable groundwater quality standards set forth in 314 CMR 6.00: *Ground Water Quality Standards* and the applicable Reportable Concentrations set forth in 310 CMR 40.0300 and 40.1600.

(11) Sampling and Analyses of Remedial Wastewater. RPs, PRPs, and Other Persons operating or maintaining treatment works for the management of Remedial Wastewater and/or Remedial Additives shall collect and analyze a sufficient number of soil and/or groundwater samples in accordance with 40.0017 to demonstrate that the discharge and treatment works are in compliance with the requirements of M.G.L. c. 21E and 310 CMR 40.0000.

(12) Sampling and Analyses of Remedial Additives and Remedial Additive By-products. RPs, PRPs, and Other Persons performing response actions involving Remedial Wastewater and/or Remedial Additives shall collect and analyze a sufficient number of samples of the affected soil and groundwater in accordance with 310 CMR 40.0017 to demonstrate that the response action meets the requirements of M.G.L. c. 21E and 310 CMR 40.0000.

(13) Transition Provision. Unless otherwise directed by the Department, RPs, PRPs, and Other Persons managing Remedial Wastewater and/or Remedial Additives at a disposal site pursuant to a Groundwater Discharge Permit, Surface Water Discharge Permit, or Sewer System Extension and Connection Permit, issued by the Department pursuant to 314 CMR 3.00: *Surface Water Discharge Permit Program*, 5.00: *Ground Water Discharge Permit Program* or 7.00: *Sewer System Extension and Connection Permit Program*, respectively, on or before August 25, 1995, may either:

- (a) manage such Remedial Wastewater and/or Remedial Additives in accordance with the terms and conditions of such permit, or
- (b) surrender such permit to the Department and manage the Remedial Wastewater and/or Remedial Additives in accordance with the requirements and procedures of M.G.L. c. 21E and 310 CMR 40.0000.

(14) Alternative Monitoring Plans. Notwithstanding any other provision of 310 CMR 40.0045 or 40.0046, a Licensed Site Professional may develop and submit an alternative plan for monitoring discharges for Remedial Wastewater and/or Remedial Additives, provided:

- (a) site-specific monitoring requirements have not been established by the Department in an order, permit or approval;
- (b) the plan is developed to demonstrate that the applicable standards and requirements for the discharge and treatment works have been met, and takes into consideration an evaluation of the following:
 - 1. monitoring data collected over a 12 month period for the discharge and treatment works;
 - 2. the potential risks to, and sensitivity of, human and ecological populations at, and in the vicinity of, the disposal site;
 - 3. the permeability of the soils at the disposal site;
 - 4. the presence of any natural groundwater divides or barriers at the disposal site;

40.0041: continued

5. the presence of geologic formations and deposits which could act as preferred groundwater migration pathways;
 6. any subsurface utilities and conduits, and other subsurface structures;
 7. the direction and rate of groundwater movement and flow;
 8. the type of treatment works and management procedures employed at the disposal site;
 9. the fate and transport characteristics of the oil and/or hazardous material present at the disposal site; and
 10. any other relevant information; and
- (c) the alternative plan, in his or her professional judgment, is adequate to demonstrate whether the applicable standards and requirements for the discharge have been met.

(15) Reservation of Rights. No provision of 310 CMR 40.0040 shall be construed to limit the Department's authority to impose on any person requirements for the management of Remedial Wastewater and/or Remedial Additives in addition to those requirements set forth in 310 CMR 40.0040 as the Department deems necessary to protect health, safety, public welfare, or the environment.

(16) No Implied Authority. No provision of 310 CMR 40.0040 shall be construed to imply authorization by the Department to any person to discharge Remedial Wastewater and/or Remedial Additives to any real or personal property not owned by him or her, or to otherwise injure or interfere with any other person's rights or interests, without that person's consent.

(17) Selection of Discharge Authorization. RPs, PRPs, and Other Persons may discharge Remedial Wastewater, Remedial Additives and/or groundwater at or from a disposal site either:

- (a) in accordance with the requirements set forth in M.G.L. c. 21E, and 310 CMR 40.0000; or
- (b) in accordance with the terms and conditions of a permit issued pursuant to M.G.L. c. 21, § 43, 314 CMR 3.00: *Surface Water Discharge Permit Program*, 5.00: *Ground Water Discharge Permit Program*, or 7.00: *Sewer System Extension and Connection Permit Program*, whichever is applicable.

40.0042: Remedial Wastewater Discharges to Surface Water

(1) Any person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 may discharge Remedial Wastewater to surface water, provided such discharge occurs in compliance with the terms and conditions of a NPDES permit or emergency exclusion granted by EPA pursuant to 33 U.S.C. 1251 *et seq.*, if applicable, and M.G.L. c. 21E and 310 CMR 40.0000.

(2) Any person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 may discharge Remedial Wastewater to surface water without a permit from the Department pursuant to M.G.L. c. 21, § 43, and 314 CMR 3.00, the Massachusetts' Surface Water Discharge Permit Program, provided the discharge is exempt from such permitting requirements under 314 CMR 3.05.

(3) Any person discharging Remedial Wastewater to surface water in accordance with an emergency exclusion granted by EPA pursuant to 33 U.S.C. 1251 *et seq.* shall cease such discharge on or before 120 days from the effective date of the emergency exclusion initially authorizing such discharge, unless:

- (a) EPA grants such person an extension of the emergency exclusion initially authorizing the discharge;
- (b) a permit application for the discharge has been submitted to EPA in accordance with the NPDES program established pursuant to 33 U.S.C. 1251 *et seq.*; or
- (c) such person has a NPDES permit from EPA authorizing the discharge.

40.0042: continued

- (4) Any person performing response actions at a disposal site pursuant to M.G.L. c. 21E and 310 CMR 40.0000 may discharge Remedial Wastewater to surface water that has been designated for protection as an Outstanding Resource Water under 314 CMR 4.04(3), only if:
- (a) such person has a currently valid variance for the discharge from the Department pursuant to 314 CMR 4.04(4); or
 - (b) such discharge has been approved by the Department as an Immediate Response Action pursuant to 310 CMR 40.0420 to abate, prevent, or eliminate an Imminent Hazard for which there is no alternative discharge outlet reasonably available or feasible.

40.0043: Remedial Wastewater Discharges to Publicly Owned Treatment Works (POTW)

- (1) Any person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 may discharge Remedial Wastewater to a sewer system without a permit from the Department pursuant to M.G.L. c. 21, § 43, and 314 CMR 7.00: *Sewer System Extension and Connection Permit Program*, provided the discharge is exempt from such permitting requirements under 314 CMR 7.05: *Activities not Requiring a Permit*.
- (2) Any person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 may discharge Remedial Wastewater to a sewer system and/or POTW, provided:
- (a) if such discharge is to a sewer system, such discharge complies with the terms and conditions of any permit, license or approval from the public entity controlling the sewer system, and M.G.L. c. 21E and 310 CMR 40.0000; and
 - (b) if such discharge is to a POTW, such discharge complies with the terms and conditions of any permit, license or approval from the public entity controlling the POTW, and M.G.L. c. 21E and 310 CMR 40.0000.
- (3) No provision of 310 CMR 40.0040 shall be construed to require any public entity controlling a sewer system or POTW to receive any discharge of Remedial Wastewater, or to limit the authority of any public entity controlling a sewer system or POTW, including, but not limited to, any authority to impose connection, user or permit fees, or to impose requirements for the management of Remedial Wastewater, including, but not limited to, any authority to impose monitoring and reporting requirements, to establish volume restrictions, or to impose pretreatment requirements.

40.0044: Remedial Wastewater Discharges to Non-publicly Owned Treatment Works

- (1) Any person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 may discharge Remedial Wastewater to a Non-publicly Owned Treatment Works, provided:
- (a) the person controlling the Non-publicly Owned Treatment Works has a permit for such works issued by the Department pursuant to 314 CMR 3.00: *Surface Water Discharge Permit Program*, 5.00: *Ground Water Discharge Permit Program*, and/or 8.00: *Supplemental Requirements for Hazardous Waste Management Facilities*, whichever is applicable, that includes specific effluent limitations for the particular oils and hazardous materials in the Remedial Wastewater;
 - (b) the Non-Publicly Owned Treatment Works has been designed or modified to provide a level of treatment adequate to comply with the applicable effluent limitations, as established by 314 CMR 3.00: *Surface Water Discharge Permit Program*, 5.00: *Ground Water Discharge Permit Program*, and/or 8.00: *Supplemental Requirements for Hazardous Waste Management Facilities*; and
 - (c) such discharge complies with the terms and conditions of any permit, license or approval from the person controlling the Non-publicly Owned Treatment Works, and M.G.L. c. 21E and 310 CMR 40.0000.
- (2) No provision of 310 CMR 40.0040 shall be construed to require any person controlling a Non-publicly Owned Treatment Works to receive any discharge of Remedial Wastewater, or to limit the authority of any such person, including, but not limited to, any authority to impose connection, user or permit fees, or to impose requirements for the management of Remedial Wastewater, including, but not limited to, any authority to impose monitoring and reporting requirements, to establish volume restrictions, or to impose pretreatment requirements.

40.0045: Remedial Wastewater Discharges to the Ground Surface or Subsurface and/or Groundwater

(1) Requirement for All Discharges to the Ground Surface or Subsurface and/or Groundwater. Any person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 may discharge Remedial Wastewater to the ground surface or subsurface and/or groundwater, provided such discharge:

- (a) does not erode or otherwise impair the functioning of the surficial and subsurface soils, infiltrate underground utilities, building interiors or subsurface structures, result in groundwater mounding within two feet of the ground surface, or result in flooding of, or breakout to the ground surface; and
- (b) otherwise complies with M.G.L. c. 21E and 310 CMR 40.0000.

(2) Any person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 may discharge Remedial Wastewater to the ground surface or subsurface and/or groundwater without a permit from the Department pursuant to M.G.L. c. 21, § 43, and 314 CMR 5.00, the Massachusetts Ground Water Discharge Permit Program, provided the discharge is exempt from such permitting requirements under 314 CMR 5.05.

(3) Requirements for Downgradient and Off-Site Discharges.

(a) Except as provided for in 310 CMR 40.0045(5) through (7), any person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 may discharge Remedial Wastewater to the ground surface or subsurface and/or groundwater, at a location either downgradient of the point of withdrawal or outside of the boundaries of the disposal site, provided:

1. the OHM concentrations discharged are below the applicable Reportable Concentrations established by 310 CMR 40.0300 and 40.1600, or, for OHM for which there is no applicable Reportable Concentration, the concentration discharged is below background or a concentration determined by a site-specific evaluation not to exacerbate existing conditions;
2. groundwater downgradient of the point of discharge is monitored at regular intervals of three months to detect any migration of oil and/or hazardous material at or from the disposal site;
3. the discharge from the treatment works is monitored after initial operation and any modification (*e.g.*, on the 1st, 3rd, 6th day, and weekly thereafter for the rest of the first month of operation), and at regular intervals of 30 days thereafter;
4. the discharge is not made to a location at which the concentrations of oil and/or hazardous material in the groundwater are significantly lower than the concentrations of oil and/or hazardous material in the discharge; and
5. the discharge does not exacerbate existing conditions, or prevent or impair the performance of remedial actions, at the disposal site.

(b) The discharge of Remedial Wastewater containing hazardous waste at a point outside of the boundaries of the disposal site is prohibited, except as provided by 310 CMR 30.000: *Hazardous Waste*.

(4) Requirements for Upgradient Discharges. Except as provided for in 310 CMR 40.0045(5) through (7), any person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 may discharge Remedial Wastewater to the ground surface or subsurface and/or groundwater, at a location upgradient of the point of withdrawal, provided:

- (a) hydraulic containment of the groundwater at the disposal site is maintained so that the Remedial Wastewater discharged upgradient of the point of withdrawal is contained or recaptured within the boundaries of the disposal site;
- (b) the area of hydraulic containment of the groundwater at the disposal site is monitored at regular intervals of 30 days for the first 12 months following commencement of the discharge, or any modification of the treatment works associated with the discharge, to demonstrate compliance with 310 CMR 40.0045(4)(a), and at regular intervals of three months thereafter for the duration of the discharge, unless additional and/or more frequent monitoring is necessary to demonstrate compliance with 310 CMR 40.0045(4)(a);
- (c) the discharge is not made to a location at which the concentrations of oil and/or hazardous material in the groundwater at such location is significantly lower than the concentrations of oil and/or hazardous material in the discharge; and

40.0045: continued

(d) the discharge does not exacerbate existing conditions, or prevent or impair the performance of remedial actions, at the disposal site.

(5) Requirements for Utility-related Abatement Measures.

(a) Any person performing a Utility-related Abatement Measure at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 may discharge Remedial Wastewater to the ground surface or subsurface and/or groundwater, provided:

1. the Remedial Wastewater is returned to the ground surface or subsurface at a point within 100 feet of the point of withdrawal;
2. the discharge does not exacerbate existing conditions, or prevent or impair the performance of remedial actions, at the disposal site; and

(b) Any person performing a Utility-related Abatement Measure pursuant to M.G.L. c. 21E and 310 CMR 40.0000 that includes the discharge of Remedial Wastewater to the ground surface or subsurface and/or groundwater, shall include a description of the discharge, including the concentration of the oils and/or hazardous materials encountered, the pumping rate and volume of the discharge, and a description of any treatment works employed, in the status reports and/or completion reports submitted to the Department pursuant to 310 CMR 40.0465 and 40.0466.

(6) Requirements for Discharges Containing Non-Reportable Concentrations of Oil and/or Hazardous Material.

(a) Any person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 may discharge groundwater containing oil and/or hazardous material in concentrations less than the applicable release notification threshold established by 310 CMR 40.0300 and 40.1600, to the ground subsurface and/or groundwater provided:

1. the discharge is not made to a location where the concentrations of any oil and/or hazardous material in discharge exceeds an applicable notification threshold established by 310 CMR 40.0300 and 40.1600 at such a location;
2. the discharge is not made to a location at which the concentrations of oil and/or hazardous material in the groundwater at such location are significantly lower than the concentrations of oil and/or hazardous material in the groundwater being discharged; and
3. the discharge does not otherwise exacerbate existing conditions, or prevent or impair the performance of remedial actions, at a disposal site.

(b) The discharge of groundwater containing hazardous waste at a point outside of the boundaries of the disposal site is prohibited, except as provided by 310 CMR 30.000: *Hazardous Waste*.

(7) Requirements for Discharges That Occur During Well Development or Sampling.

(a) Any person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 may discharge Remedial Wastewater or groundwater collected during development, purging, or sampling of groundwater monitoring wells to the ground subsurface, provided the Remedial Wastewater or groundwater is discharged as follows:

1. at the point of withdrawal; or
2. at a point upgradient of the point of withdrawal if the concentrations of any oil and/or hazardous material in the groundwater at the point of discharge are equal to or greater than the concentrations of the oil and/or hazardous material in the Remedial Wastewater.

(b) The discharge of Remedial Wastewater containing hazardous waste at a point outside of the boundaries of the disposal site is prohibited, except as provided by 310 CMR 30.000: *Hazardous Waste*.

40.0046: Application of Remedial Additives

(1) In General. Any person performing response actions at a disposal site may apply Remedial Additives to the ground surface or subsurface and/or groundwater provided such application, and any Remedial Additive By-product:

- (a) does not erode or otherwise impair the functioning of the surficial and subsurface soils, infiltrate underground utilities, building interiors or subsurface structures;
- (b) in cases where the application is to the subsurface, does not result in groundwater mounding within two feet of the ground surface, or result in flooding of or breakout to the ground surface;

40.0046: continued

(c) in cases where the Remedial Additives and/or Remedial Additive By-products contain OHM, does not result in the presence of such OHM in the soil or groundwater at any point measured 50 feet or more downgradient from the furthest downgradient point of application at concentrations equal to or greater than an applicable Reportable Concentration set forth in 310 CMR 40.0000;

(d) in cases where the Remedial Additives or Remedial Additive By-products do not contain OHM, does not result in the presence of such Remedial Additives or Remedial Additive By-products in soil or groundwater at any point measured 50 feet or more downgradient from the furthest downgradient point of application above a background concentration or above a level that will exacerbate existing conditions, or prevent or impair the performance of remedial actions at the disposal site; and

(e) is otherwise performed in compliance M.G.L. c. 21E and 310 CMR 40.0000.

(2) Relationship to Massachusetts Ground Water Discharge Permit Program. Any person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 may apply Remedial Additives to ground surface or subsurface and/or groundwater, without a permit from the Department pursuant to M.G.L. c. 21, § 43, and 314 CMR 5.00: *Groundwater Discharge Permitting Program*, the Massachusetts Ground Water Discharge Permit Program, provided the discharge is exempt from such permitting requirements under 314 CMR 5.05: *Activities Not Requiring a Permit*.

(3) Additional Requirements for the Application of Remedial Additives Near Sensitive Receptors.

(a) Prior approval by the Department pursuant to 310 CMR 40.0046(3)(b) is required for the application of Remedial Additives:

1. within 100 feet of any private water supply well;
 2. within 800 feet of any public water supply well or well field;
 3. within 800 feet of any surface water supply used in a public water system or any tributary of such surface water supply;
 4. within 50 feet of any other surface water body or any tributary of such surface water;
- or
5. within 100 feet of a School, Daycare or Child Care Center or occupied Residential Dwelling;

(b) Except as provided at 310 CMR 40.0045(3)(c), a written plan for the application of Remedial Additives shall be submitted to the Department using a form provided by the Department for such purpose prior to its implementation. Such plan shall be approved, conditionally approved, or denied by the Department in writing within 30 days of its receipt by the Department. Approval of such plan shall be presumed if the Department does not issue a written approval or denial of said plan within 30 days of receipt;

(c) Oral approval may be granted by the Department in situations where there has been a sudden release of oil and/or hazardous material and in other cases where written approval would delay the timely implementation of an Immediate Response Action. In such case where the Department grants oral approval for the application of Remedial Additives as part of an IRA, a written IRA Plan that documents such application of Remedial Additives shall be provided in accordance with the timeframes at 310 CMR 40.0420(7).

(4) Requirements for Treatment of Soil and Groundwater. Each person performing response actions at a disposal site pursuant to M.G.L. c. 21E and 310 CMR 40.0000 that include the application of Remedial Additives shall:

(a) prior to the initial application of Remedial Additives, collect soil and/or groundwater samples at the disposal site for analysis in accordance with 310 CMR 40.0017 to document the concentration of oil and hazardous material;

(b) prior to any subsequent application of Remedial Additives, collect and analyze soil and/or groundwater samples at the disposal site in accordance with 310 CMR 40.0017 to document the concentration of oil and hazardous material and/or Remedial Additive By-products, which may be present in soil and/or groundwater from previous application of Remedial Additives; and

40.0046: continued

(c) after each application of Remedial Additives, monitor the groundwater hydraulically upgradient and downgradient, and where practicable underlying the point of application of the Remedial Additives at regular intervals not to exceed every three months thereafter to detect any migration of oil and/or hazardous material, Remedial Additives and/or Remedial Additive By-products from the disposal site.

(5) Notwithstanding the requirements of 310 CMR 40.0046(4)(b), where the application of Remedial Additives is occurring more than once within a calendar month, sampling prior to any subsequent application may be limited to once monthly.

(6) Each person performing response actions at a disposal site pursuant to M.G.L. c. 21E and 310 CMR 40.0000 that include the application of Remedial Additives, shall after the final application of Remedial Additives at a disposal site, monitor the groundwater at regular intervals for a reasonable period of time to demonstrate compliance with 310 CMR 40.0046(1)(c), unless the concentrations of Remedial Additives applied were below applicable standards set forth in 40.0046(1)(c). For determining a reasonable time period, each person shall consider the types, concentrations, and application methodology of Remedial Additives applied, the presence of Remedial Additive By-products, rate and direction of groundwater movement and flow, and the permeability of the soils at the disposal site.

40.0047: Reporting Requirements for Discharges of Remedial Wastewater and Remedial Additives

(1) Reporting Requirements for Remedial Wastewater Discharges to Surface Water, Sewer Systems, POTWs, or Non-publicly Owned Treatment Works. Each person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 that includes the discharge of Remedial Wastewater to a surface water body, sewer system, POTW, or Non-Publicly Owned Treatment Works, shall include a description of the results of the inspections and monitoring required by 310 CMR 40.0040 in the pertinent status reports and/or completion reports submitted to the Department pursuant to 310 CMR 40.0000. In addition to the monitoring data required pursuant to 40.0040, RPs, PRPs, and Other Persons shall also include in pertinent status reports and/or completion reports all other relevant data for the discharge and/or treatment works, collected as a result of their own undertaking or to demonstrate compliance with requirements imposed by other entities. Such additional data includes, but is not limited to, the results of any monitoring required by EPA or the person controlling the sewer system, POTW or Non-publicly Owned Treatment Works receiving the discharge, and any influent monitoring results.

(2) Reporting Requirements for Discharges of Remedial Wastewater to the Ground Surface or Subsurface and/or Groundwater. Each person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 that includes the discharge of Remedial Wastewater to the ground surface or subsurface and/or groundwater, shall include a description of the results of the inspections and monitoring required by 310 CMR 40.0040 in the pertinent status reports and/or completion reports submitted to the Department pursuant to 310 CMR 40.0000. In addition to the monitoring data required pursuant to 310 CMR 40.0040, RPs, PRPs, and Other Persons shall also include in pertinent status reports and/or completion reports all other relevant data for the discharge and/or treatment works, collected either as a result of their own undertaking or to demonstrate compliance with 310 CMR 40.0000. Such additional monitoring data includes but is not limited to influent monitoring data, or other information concerning the performance of the treatment works.

(3) Reporting Requirements for Discharges of Remedial Additives. Each person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 that includes the application of Remedial Additives to the ground surface or subsurface and/or groundwater, shall include a description of the composition, volume, and concentration of the Remedial Additives applied, the methodology employed, and the results of the monitoring required by 310 CMR 40.0040 in the pertinent status reports and/or completion reports submitted to the Department pursuant to 310 CMR 40.0000. In addition to the monitoring data required

40.0047: continued

pursuant to 40.0040, RPs, PRPs, and Other Persons shall also include in pertinent status reports and/or completion reports all other relevant data for the application of and discharge of Remedial Additives, collected as a result of their own undertaking, or to demonstrate compliance with 310 CMR 40.0000. Such additional monitoring data includes but is not limited to soil or groundwater analyses obtained from areas where Remedial Additives have been applied, or any other information concerning the performance of the Remedial Additives.

(4) Except as provided for in 310 CMR 40.0045(5) through (7), each status report and completion report submitted in accordance with 310 CMR 40.0047(1) through (3), shall include the following:

- (a) the time and date of any inspections and/or monitoring for the period covered by the report;
- (b) graphical and tabular presentation of any monitoring results for the period covered by the report;
- (c) a description of any operation and maintenance activities, including, but not limited to, a description of any modification to the treatment works or shut-down; and
- (d) if applicable, the name and license number of the Wastewater Treatment Plant Operator employed or engaged at the disposal site, and a copy of his or her inspection report.

(5) Except as provided by 310 CMR 40.0311, each person performing response actions at a disposal site in accordance with M.G.L. c. 21E and 310 CMR 40.0000 that includes the discharge of Remedial Wastewater to a surface water body, sewer system, POTW, or Non-Publicly Owned Treatment Works, or the ground surface or subsurface and/or groundwater, shall report any non-compliance with discharge or concentration limits in 310 CMR 40.0040 through 40.0049 within 72 hours after obtaining knowledge of the circumstances. If the person performing response actions has not corrected the non-compliance, such person shall immediately take appropriate steps to reduce, eliminate and prevent reoccurrence of the noncompliance. Such person shall submit to the Department a written description of the non-compliance, including exact dates and times, and a description of the steps taken, or to be taken, to assess, reduce, eliminate and prevent reoccurrence of the noncompliance in the next applicable response action Status Report.

40.0049: Remedial Air Emissions

(1) Remedial actions that involve the emission or discharge of oil and/or hazardous material to the atmosphere shall be conducted in a manner that ensures the protection of health, safety, public welfare and the environment, in conformance with 310 CMR 40.0000, 310 CMR 7.00: *Air Pollution Control*, and any other applicable permits, approvals, laws or regulations.

(2) Except as provided in 310 CMR 40.0049(3), point-source atmospheric emissions of oil and hazardous material from remedial systems and operations, including, without limitation, packed-tower or diffused aeration air strippers, bioreactors, and soil vapor extraction systems, shall be treated by control devices prior to their discharge to the ambient air.

(3) Notwithstanding the provisions of 310 CMR 40.0049(2), except where specifically required in writing by the Department based upon its review of proposed or ongoing response actions, treatment of point-source remedial air emissions is not required at a disposal site if the untreated emissions:

- (a) are from an Active Exposure Pathway Mitigation Measure installed to prevent the migration of subsurface vapors into living/working spaces of a building, provided the total air emission rate of all volatile contaminants is less than 100 pounds/year; or
- (b) would be at or below a level of no significant risk to health, safety, public welfare, and the environment; provided, however, that the person undertaking the response action submits an LSP Opinion to the Department prior to commencement of the remedial action stating that such untreated emissions will present no significant risk to health, safety, public welfare and the environment, considering:
 1. the mass flux and toxicities of the oil and hazardous material being emitted;
 2. the types and proximity of human and ecological populations;

40.0049: continued

3. background concentrations of oil and hazardous material in the ambient atmosphere;
4. relevant policies issued by the Department; and
5. any other relevant factors.

(4) Treatment of point-source remedial air emissions may be waived by the Department at sites where timely actions are needed to prevent or abate an imminent hazard to health, safety, public welfare, or the environment. In such cases, control devices shall be installed as needed as soon as possible.

(5) Except as provided in 310 CMR 40.0049(7), air-emission control devices shall be designed, constructed, and operated in a manner that will ensure removal of at least 95% of the emitted oil and hazardous materials, on a weight basis.

(6) Monitoring Requirements for Remedial Actions that Require the Use of an Off-gas Control System. To ensure compliance with the 95% VOCs reduction performance standard, each person performing response actions at a disposal site pursuant to M.G.L. c. 21E and 310 CMR 40.0000 that require the use of off-gas control systems to reduce the emission or discharge amounts of oil and/or hazardous material to the atmosphere shall:

- (a) collect and analyze influent and effluent vapor samples from the off-gas control system one, seven, 14 and 28 days after system start-up, and monthly thereafter; and
- (b) document the results of the monitoring in the appropriate status report or Remedial Monitoring Report.

(7) Notwithstanding the provisions of 310 CMR 40.0049(5), except where treatment standards are specified in writing by the Department based upon its review of proposed or ongoing response actions, a Licensed Site Professional may submit an Opinion to the Department that achievement of a 95% level of emission reduction is not feasible or necessary at a disposal site, based upon an evaluation of conventional treatment technologies and risks to surrounding human or ecological populations. This Opinion shall be accompanied by an alternative treatment control plan that will be implemented at the disposal site.

(8) No provision of 310 CMR 40.0049(3) or (7) shall relieve any person conducting response actions of their obligations to comply with all applicable permitting requirements and treatment standards specified in 310 CMR 7.00: *Air Pollution Control*.

40.0050: Appeals of Orders and Permits

(1) Wherever expressly provided by 310 CMR 40.0000, any person who is aggrieved by a permit decision of the Department, or order issued pursuant to M.G.L. c. 21E, § 9, may request an adjudicatory hearing before the Department.

(2) Each request for a hearing must be sent to the Docket Clerk of the Department by certified mail or hand-delivered within 21 days of the date of issuance of the decision being appealed. A copy of the request shall be sent by certified mail or hand delivered simultaneously to:

- (a) the Chief Municipal Officer for the municipality where the disposal site is located;
- (b) the regional office of the Department that issued the decision or order; and
- (c) where the person aggrieved by a decision is a Permit Applicant who is appealing a permit decision, pursuant to 310 CMR 40.0770, such person shall also simultaneously send, by certified mail or hand delivery, a copy of the request for an adjudicatory hearing to each person who provided public comment.

(3) Any person who appeals a decision or order who is neither the applicant nor the person to whom such an order was issued is required to simultaneously send a copy of the hearing request by certified mail or by hand to the applicant. For purposes of 310 CMR 40.0000, an aggrieved person is any person who is entitled to become a party or intervene in the proceeding under 310 CMR 1.00: *Adjudicatory Proceedings*.

40.0050: continued

- (4) Each request for a hearing submitted pursuant to 310 CMR 40.0050 shall state clearly and concisely the facts which are grounds for the proceeding, in what manner the person, in whose name the request is made, is aggrieved and the remedy that is being sought. The appropriate filing fee required under 310 CMR 4.00: *Timely Action Schedule and Fee Provisions* shall be sent to the Department in the manner required therein.
- (5) Where an applicant is seeking a decision from the Department, the applicant has the burden of establishing, on the basis of credible evidence from a competent source, such facts as are necessary to meet the conditions and criteria set forth in the applicable provisions of 310 CMR 40.0000.
- (6) Where an aggrieved person is someone other than the applicant, the aggrieved person has the burden of establishing on the basis of credible evidence from a competent source, such facts as are necessary to meet the conditions and criteria set forth in applicable provisions of 310 CMR 40.0000.
- (7) The filing of an appeal shall not prevent the Department from issuing any future orders or taking any other action the Department reasonably deems necessary to respond to a release or threat of release of oil or hazardous material, including, but not limited to, taking or arranging one or more response actions at the site or location which is the subject of the appeal.
- (8) The following determinations shall not be subject to an adjudicatory hearing:
- (a) a decision whether to issue an order pursuant to M.G.L. c. 21E, § 10;
 - (b) a decision whether to issue a Notice of Responsibility to any person pursuant to 310 CMR 40.0160(1);
 - (c) a decision whether to issue a Notice of Intent to Take a Response Action pursuant to 310 CMR 40.0160(2);
 - (d) a decision whether to issue a Request for Information pursuant to 310 CMR 40.0165;
 - (e) a decision whether to establish Interim Deadlines pursuant to M.G.L. c. 21E, § 3A(j) and 310 CMR 40.0167;
 - (f) a decision whether to authorize site access pursuant to M.G.L. c. 21E, § 8, and 310 CMR 40.0173;
 - (g) a decision whether to develop an administrative record in accordance with 310 CMR 40.1300;
 - (h) a decision whether to audit a specific site to determine whether such site is in compliance with M.G.L. c. 21E, 310 CMR 40.0000, and any other law administered or enforced by the Department;
 - (i) a decision whether to initiate enforcement action against any person under M.G.L. c. 21E and/or 310 CMR 40.0000;
 - (j) a decision regarding a petition for reimbursement of costs under 310 CMR 40.1260;
 - (k) a decision whether to initiate Compliance Assistance under 310 CMR 40.1100;
 - (l) a decision whether to issue a Technical Assistance Grant;
 - (m) a decision upon administrative review of a demand for payment of Response Action Costs in accordance with 310 CMR 40.1220(3);
 - (n) any decision to suspend, revoke or refuse to renew any permit, authorization, approval, including, but not limited to, any Waiver of Approvals, or similar form of permission required by M.G.L. c. 21E and/or the MCP, where:
 - 1. DEP is expressly not required by the General Laws to grant a hearing; or
 - 2. DEP is required by law to take such action without exercising any discretion in the matter on the basis of a court conviction or judgment; or
 - 3. such action is based solely upon failure to file timely reports, schedules or applications, or to pay lawfully prescribed fees;
 - (o) any decision contained in a Notice of Audit Findings at the conclusion of an audit, provided, however, that any Notice of Intent to Assess a Civil Administrative Penalty or order accompanying such notice or issued following issuance of a Notice of Audit Finding shall be subject to an adjudicatory hearing;
 - (p) any decision to designate one or more disposal sites or response actions as a Special Project in accordance with 310 CMR 40.0026;

40.0050: continued

- (q) any Reclassification of a Tier IA disposal site made in accordance with 310 CMR 40.0583; and
- (r) any other determination, decision, authorization or approval under M.G.L. c. 21E and/or 310 CMR 40.0000 for which an adjudicatory hearing is not required by M.G.L. c. 30A, unless expressly required by 310 CMR 40.0000.

40.0051: Appeals Relative to Administrative Penalties

Whenever the Department seeks to assess a civil administrative penalty pursuant to M.G.L. c. 21A, § 16, M.G.L. c. 21E and 310 CMR 40.0000, the person who would be assessed the penalty shall have the right to an adjudicatory hearing. Any request for an adjudicatory hearing thereon shall be made in accordance with M.G.L. c. 21A, § 16, and 310 CMR 5.00: *Administrative Penalty*.

40.0060: Special Project Designation Permits

310 CMR 40.0061 through 40.0070, cited collectively as 310 CMR 40.0060, set forth the requirements and procedures for Special Project Designation Permits.

40.0061: Purpose and Eligibility

(1) The Department may designate certain projects as "Special Projects" through its approval of a Special Project Designation Permit. For disposal site(s) designated as Special Projects, Special Project Designation shall have the effect of:

- (a) extending the deadline for submitting a Tier Classification Submittal as required by 310 CMR 40.0500; or
- (b) extending specific deadline(s) for completing Comprehensive Response Actions (Phases II, III, IV or V) as required by 310 CMR 40.0560(2); and
- (c) establishing an annual compliance assurance fee schedule for the Special Project as described in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

(2) Eligible Applicants. The following entities may apply to the Department for Special Project Designation:

- (a) Any public body politic, including but not limited to any federal, state or municipal governmental entity; or
- (b) Any person who:
 - 1. is an Eligible Person or Eligible Tenant as defined in M.G.L. c. 21E and 310 CMR 40.0006 with respect to the proposed Special Project Designation area; and
 - 2. provides a letter of community support as described in 310 CMR 40.0061(3)(e) from the Chief Municipal Officer(s) of the community(ies) in which the proposed Special Project Designation area is located.

(3) Eligible Projects. Projects eligible for Special Project Designation Permits may include but are not limited to infrastructure improvement projects (e.g., construction or expansion of rail lines or roadways), redevelopment of one or more properties, or the performance of coordinated response actions addressing multiple disposal sites or a single site with multiple owners. Eligible projects shall meet each of the following criteria:

- (a) one or more disposal sites are, or are likely to be, located within the boundaries of the project;
- (b) proposed response actions will be managed in a coordinated fashion;
- (c) the applicant has secured adequate financing for the project and
- (d) compliance with the response action deadline(s) for which an extension is sought under the Special Project Designation as described in 310 CMR 40.0061(1)(a) or (b) would unreasonably decrease the cost-effectiveness or feasibility of project implementation;
- (e) for Special Project Designation Permit Applications to extend a specific deadline(s) for Comprehensive Response Actions as described in 310 CMR 40.0061(1)(b), submittal of a Tier Classification for the disposal site(s) included in the Special Project Designation prior to or concurrent with the submittal of the Special Project Designation Permit Application; and

40.0061: continued

(f) when the applicant is an Eligible Person or Eligible Tenant as described in 310 CMR 40.0061(2)(b), compliance with the following additional criteria for determining the eligibility of the project:

1. demonstration of community support for the project by providing a letter of community support in the Special Project Designation Permit Application from each municipality(ies) in which the property(ies) in the proposed Special Project Designation is located that describes the public benefit(s) of the project including economic development, infrastructure improvement, public housing, recreation or access;
2. except as provided in 310 CMR 40.0061(3)(f)3., each municipality may submit support for no more than two Special Project Designation Permit applications per annum for applications made by an Eligible Person or Eligible Tenant as described in 310 CMR 40.0061(2)(b), except where the population of the municipality exceeds 50,000, in which case the municipality may submit support for two Special Project Designation Permit Applications plus one additional Special Project Designation Permit Application per 50,000 residents provided the total number per annum does not exceed six;
3. notwithstanding 310 CMR 40.0061(3)(f)2., when the annual municipal limit has been reached, the Department may consider a Special Project Permit Application made by an Eligible Person or Eligible Tenant as an eligible project upon receiving a written request from the Chief Municipal Officer(s) of each municipality(ies) in which the property(ies) included in the proposed Special Project Designation is located;

(4) No annual limit shall apply to the number of Special Project Designation Permit Applications that may be made by a body politic as described in 310 CMR 40.0061(2)(a). Special Project Designation Permit Applications made by a body politic in a particular municipality shall not affect the limit on the number of Special Project Permit Applications that may be made by Eligible Person or Eligible Tenant applicants for projects in that municipality.

40.0062: Procedures for Applying for a Special Project Designation Permit

(1) Contents of Application. Each application filed with the Department shall include, at a minimum, the following:

- (a) a completed Transmittal Form for Permit Application and Payment using the form established by the Department for such purposes;
- (b) the applicable completed Permit Application using the form established by the Department for such purposes;
- (c) the applicable permit application fee payable pursuant to 310 CMR 4.00;
- (d) certification by the applicant that the application fee has been mailed, or hand-delivered to the Department, concurrent with submittal of the application;
- (e) an indication of the specific deadline(s) to be extended under the Special Project Determination pursuant to either 310 CMR 40.0061(1)(a) or (b);
- (f) a description of the project that includes:
 1. its expected duration;
 2. an explanation of why a Special Project Designation Permit is necessary to successfully implement the project,
 3. a map of the parcels within and the boundaries of the area for which the Special Project Designation Permit is sought;
 4. a description of any planned redevelopment of the parcels within the boundaries of the Special Project Designation area, that includes the location, size and use of buildings and infrastructure and open space, to the extent known;
 5. the Release Tracking Numbers for any known releases of oil and/or hazardous material at or from the subject properties that have been reported to the Department, a description of the source(s), nature and extent of such releases, to the extent identified and characterized, including any known or probable Exposure Pathways; and
 6. a description of how the project meets the criteria in 310 CMR 40.0061(3);
- (g) a list of any Status Reports, Phase Reports, or Completion Statements for any response actions that are in progress or have been completed at the time of Special Project Designation Permit Application is made that provides a description of the current status and projected schedule for completion of response actions in progress and the dates on which any completed Reports or Statements were submitted to the Department;

40.0062: continued

- (h) a description of response actions to be conducted under the Special Project Designation Permit, including a proposed schedule, to the extent such actions have been planned;
- (i) the name, business address, and telephone number of the person who will be conducting response actions under the Special Project Designation Permit;
- (j) when the application is made pursuant to 310 CMR 40.0061(1)(b) and a Tier Classification submittal has not been previously submitted to the Department, a Tier Classification submittal pursuant to 310 CMR 40.0500; notwithstanding 310 CMR 40.0501(6), a single Tier Classification may be provided for multiple parcels and multiple disposal sites within the boundaries of the Special Project Designation area;
- (k) justification that an extension of the specific deadline(s) sought under the Special Project Designation Permit will not compromise the protection of health, safety, public welfare, or the environment, based on known and potential risks from releases at or from the property(ies) proposed for inclusion in the Special Project Designation and the ability to manage known and potential risks throughout the duration of the Special Project Designation Permit;
- (l) when the applicant is an Eligible Person or Eligible Tenant as described in 310 CMR 40.0061(2)(b), a letter of community support that describes the public benefit(s) of the project pursuant to 310 CMR 40.0061(3)(f);
- (m) when the applicant is a person as described in 310 CMR 40.0061(2)(b), a certification that he or she is an Eligible Person or Eligible Tenant as defined in M.G.L. c. 21E and 310 CMR 40.0006;
- (n) a copy of the public notice as published pursuant to 310 CMR 40.1403(2)(b) and 310 CMR 40.0062(5) containing the date of publication and name of the newspaper;
- (o) when the applicant is not the Chief Municipal Officer of the community(ies) where the proposed project is located, a copy of the written notices sent to the Chief Municipal Officer(s) and Board(s) of Health as required by 310 CMR 40.0062(5);
- (p) a certification by the applicant and the person described in 310 CMR 40.0062(1)(i) (if different from the applicant) that, except as fully disclosed in the application, he or she is not subject to any outstanding administrative or judicial environmental enforcement action under any federal, state or local law;
- (q) a copy of an access agreement obtained by the applicant from each of the persons who own or control the properties included in the boundaries of the Special Project Designation area, if different from the applicant; and
- (r) the certification of the submittal required by 310 CMR 40.0009 by the applicant and the person described in 310 CMR 40.0062(1)(i) (if different from the applicant).

(2) An application for Special Project Designation Permit shall not be deemed complete if the Department determines that such application:

- (a) fails to contain all information and certifications required by 310 CMR 40.0062(1);
- (b) fails to include the applicable fee established by 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*; or
- (c) is incorrectly filled out.

(3) An application for a Special Project Designation Permit, or Special Project Designation Permit Modification, Transfer or Extension shall be reviewed in accordance with the procedures described in 310 CMR 40.0060 and 40.0070.

(4) A Special Project Designation Permit Application to extend a specific deadline(s) pursuant to 310 CMR 40.0061(1)(b) may be submitted concurrently with a Tier Classification submittal.

(5) Public Review of Application.

(a) Prior to the submission of a Special Project Designation Permit Application or Special Project Designation Permit Modification, Transfer or Extension, each applicant shall take the following actions to provide notice to the public and local officials that the Special Project Designation Permit Application is available at DEP for review and comment:

1. a public notice pursuant to 310 CMR 40.1403(2)(b) shall be published in a newspaper that circulates in the community(ies) in which the property(ies) included in the proposed Special Project Designation is located and in any newspapers that circulate in any other community(ies) which is, or is likely to be, affected by the disposal site; and

40.0062: continued

2. when the applicant is not the Chief Municipal Officer of the community(ies) where the project is located, at least three days prior to publication of the public notice, a copy of the written notice shall be delivered by mail or hand to the Chief Municipal Officer(s) and Board(s) of Health in the community(ies) in which the disposal site is located and in any other community(ies) that is, or is likely to be, affected by the disposal site.
- (b) The public notice required by 310 CMR 40.0062(5)(a) shall include, but not be limited to, the following information:
1. the address(s) of the properties proposed for inclusion in the Special Project Designation;
 2. the DEP Release Tracking Number(s);
 3. the name, address, and telephone number of the applicant(s);
 4. the date on or about which the applicant(s) intends to file the application with the Department;
 5. for an initial Special Project Designation Permit, a brief description of the deadline extension sought;
 6. for Special Project Designation Permit Modifications, Transfers or Extensions, a brief description of proposed modification, transfer or deadline extension sought; and
 7. a description of the procedures by which interested persons may review and comment on the Special Project Designation Permit Application.
- (c) Interested persons may submit written comments related to the Special Project Designation Permit Application within 20 days of the date that such Application is available at DEP for review and comment. Such written comments shall be submitted to the Department by mail or by hand delivery during normal Department business hours and to the Special Project Designation Permit applicant.
- (d) The Department shall consider and respond as it deems appropriate to public comments submitted in accordance with 310 CMR 40.0062(5).
- (e) On its own initiative, the Department may extend the period for submission of public comments.

(6) Response Action Deadlines During Special Project Designation Permit Application Review. Notwithstanding 310 CMR 40.0501(2):

- (a) the deadline for Tier Classification for a disposal site proposed for inclusion within a Special Project Designation pursuant to 310 CMR 40.0061(1) shall be stayed while the Department is reviewing the Special Project Designation Permit Application;
- (b) the next applicable Comprehensive Response Action deadline for a disposal site proposed for inclusion within a Special Project Designation pursuant to 310 CMR 40.0061(1)(b) shall be stayed while the Department is reviewing the Special Project Designation Permit Application.

(7) Response Action Deadlines if the Special Project Designation is Denied. If the Special Project Designation is denied by the Department pursuant to 310 CMR 40.0060, then for applications submitted:

- (a) pursuant to 310 CMR 40.0061(1)(a), the deadline for Tier Classification shall be the original deadline for Tier Classification (provided such deadline has not passed) or 90 days from the date of the Department's denial, whichever is later;
- (b) pursuant to 310 CMR 40.0061(1)(b), the deadline for the next applicable Comprehensive Response Action submittal shall be the original deadline for the submittal (provided such deadline has not passed) or 90 days from the date of the Department's denial, whichever is later.

40.0063: Approval of Applications for Special Project Designation Permits, and Special Project Designation Permit Modifications, Transfers or Extensions

- (1) Special Project Designation Permits and Special Project Designation Permit Modifications, Transfers or Extensions shall be approved in accordance with the process and schedule in 310 CMR 40.0070.

40.0063: continued

(2) The Department shall consider the criteria in 310 CMR 40.0063(3) and (4) and all other available information when reviewing a Special Project Designation Permit Application or a Modification, Transfer or Extension submitted pursuant to 310 CMR 40.0060, and when making the following decisions:

- (a) to grant a Special Project Designation Permit, or Special Project Designation Permit Modification, Transfer or Extension;
- (b) to grant a Special Project Designation Permit, or Special Project Designation Permit Modification, Transfer or Extension with conditions; or
- (c) to deny a Special Project Designation, or Special Project Designation Permit, Modification, Transfer or Extension.

(3) Department Decision Concerning Special Project Designation Permit and Special Project Designation Permit Modification, Transfer or Extension. In considering whether to grant or deny an application, the Department shall consider the following:

- (a) the extent to which risks posed by releases at or from property proposed for inclusion in the Special Project Designation have been identified and characterized and whether known or potential risks can likely be managed in a manner that protects health, safety, public welfare, and the environment;
- (b) whether the project meets the eligibility criteria in 310 CMR 40.0061(3);
- (c) whether compliance with the applicable response action deadline(s) described in 310 CMR 40.0500 that would be extended under the Special Project Designation would unreasonably decrease the cost-effectiveness of project implementation;
- (d) the extent to which the implementation and coordination of proposed response actions at the disposal site(s) in the project area is feasible and likely, and whether the applicant and other participants (e.g., property owners, if different from applicant) have agreed to such implementation and coordination;
- (e) the ability and willingness of the applicant to perform necessary response actions;
- (f) the environmental compliance history of the applicant and the party who will implement proposed response actions (if different from the applicant);
- (g) whether significant public comments can be addressed in the decision;
- (h) whether Department oversight of response actions is necessary; and
- (i) any other factor the Department deems relevant to the decision.

(4) The Department may deny a Special Project Designation Permit and Special Project Designation Permit Modification, Transfer or Extension if it determines that:

- (a) the applicant has submitted information in the application that he or she knew or reasonably should have known was false or misleading;
- (b) the application was not completed by an applicable deadline;
- (c) risks posed by releases at or from the property(ies) proposed for inclusion in the Special Project Designation have not been sufficiently identified, and characterized and/or cannot be managed to ensure that the deadline extension(s) sought under the Special Project Designation will not compromise the protection of health, safety, public welfare, and the environment;
- (d) compliance with the response action deadline(s) the applicant is seeking to extend under the Special Project Designation would not unreasonably decrease the cost-effectiveness of project implementation;
- (e) implementation of the proposed response actions is not feasible or likely, or property owners included in the Special Project Designation, if different from the applicant, have not agreed to such implementation;
- (f) there is significant public opposition to granting the Special Project Designation with respect to performance of response actions;
- (g) the applicant is not able or willing to oversee and coordinate implementation of the Special Project; or
- (h) the Department intends to oversee, undertake or arrange for the performance of necessary response actions at the disposal site.

40.0063: continued

- (5) Effect of Special Project Designation. The Department's decision to grant a Special Project Designation shall have the following effect on response action deadlines of 310 CMR 40.0000.
- (a) For Special Project Designations sought to extend the deadline for Tier Classification pursuant to 310 CMR 40.0061(1)(a), the deadline for Tier Classification shall be extended two years from the deadline specified at 310 CMR 40.0501(2);
 - (b) For Special Project Designations sought pursuant to extend a specific deadline(s) for Comprehensive Response Actions pursuant to 310 CMR 40.0061(1)(b), the specified Comprehensive Response Action deadline(s) shall be extended for a period of two years from the applicable deadline(s) in 310 CMR 40.0560;
 - (c) Additional deadline extensions may be sought upon the expiration of the Special Project Designation, pursuant to 310 CMR 40.0067.
- (6) A Special Project Designation Permit or Special Project Designation Permit Modification, Transfer or Extension shall become effective:
- (a) 36 days from the date the complete application is received by the Department, if the Permit is presumptively approved without conditions pursuant to 310 CMR 40.0070(3);
 - (b) on the date the Department issues its written approval of the Permit, if approved with conditions;
 - (c) 36 days from the date the Department issues a Notice of Extended Review, if the Department issues the applicant(s) a Notice of Extended Review in accordance with 310 CMR 40.0070(3)(c) and the Permit is presumptively approved without conditions pursuant to 310 CMR 40.0070(4); or
 - (d) on the date the Department issues its written approval of the Permit, if the applicant and the Department by written agreement extend any schedule for timely action or individual portion thereof for the review of a Permit application pursuant to 310 CMR 40.0070(6) or 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.
- (7) A Special Project Designation Permit or Special Project Designation Permit Extension shall be effective for two years, unless otherwise established by the Department; any modification or transfer of a permit shall be effective for the remaining duration of the permit being transferred or modified.

40.0064: Special Project Designation Conditions

- (1) Any person performing response actions to address a disposal site subject to a Special Project Designation shall comply with M.G.L. c. 21E, 310 CMR 40.0000, the terms and conditions of the Special Project Designation Permit and any other applicable federal, state or local laws.
- (2) All Special Project Designation Permits shall have as conditions of Designation the requirement that the Permittee shall:
- (a) oversee and coordinate the Special Project;
 - (b) comply with the terms and conditions of response actions established or approved by the Department during the course of the Special Project;
 - (c) comply with the notification regulations at 310 CMR 40.0300 for any release or threat of release of oil and/or hazardous material;
 - (d) comply with the requirements for conducting Immediate Response Actions to address two- or 72-hour releases or threats of release or Conditions of Substantial Release Migration in accordance with 310 CMR 40.0400;
 - (e) provide reasonable access to the parcel owned or controlled by the Permittee to employees, agents and contractors of the Department for all purposes authorized by M.G.L. c. 21E and to other persons performing response actions;
 - (f) avoid engaging in activities that could prevent or impede the implementation of reasonably likely response actions in the future;
 - (g) for Special Project Designations pursuant to 310 CMR 40.0061(1)(a), file a Tier Classification Submittal for any disposal site that requires further response actions by the date the Special Project Designation Permit expires, unless such Permit is extended pursuant to 310 CMR 40.0067 and 40.0070;

40.0064: continued

(h) for Special Project Designations pursuant to 310 CMR 40.0061(1)(b), file the next applicable Comprehensive Response Action Submittal for any disposal site that requires further response actions by the date the Special Project Designation Permit expires, unless such Permit is extended pursuant to 310 CMR 40.0067 and 40.0070;

(i) provide the Department with a report describing the status of response actions on an annual basis, unless an alternative schedule is established in the Special Project Designation Permit; and

(j) comply with any other conditions necessary to ensure the appropriate implementation of response actions.

(3) A Special Project Designation Permit shall not grant any property rights or exclusive privileges, nor shall it authorize any injury to private property or taking of property rights.

40.0065: Modification of Special Project Designation Permit

(1) The permittee may apply for a modification to a Special Project Designation Permit to add or remove property subject to the Special Project Designation.

(2) A request for a Special Project Designation Permit Modification shall include the following:

(a) a completed transmittal form using the form established by the Department for such purposes;

(b) a description of and rationale for the modification sought; and

(c) the certification required by 310 CMR 40.0009.

40.0066: Transfer of Special Project Designation Permit

(1) A permittee may apply for a transfer of Special Project Designation. An application for transfer of Special Project Designation shall include the following:

(a) a completed transmittal form using the form established by the Department for such purposes;

(b) a statement as to why the transfer is sought;

(c) a certification required by 310 CMR 40.0009 from the current permittee;

(d) written consent by the transferee to the terms and conditions of the Special Project Designation Permit;

(e) a certification required by 310 CMR 40.0009 from the transferee and the person described in 310 CMR 40.0062(1)(i) (if different from the transferee);

(f) a certification that the transferee is an Eligible Applicant pursuant to 310 CMR 40.0061(2); and

(g) the compliance history(ies) and certification(s) of the transferee and the person described in 310 CMR 40.0062(1)(i) (if different from the transferee) that, except as fully disclosed in the application, he or she is not subject to any outstanding administrative or judicial environmental enforcement action under any federal, state or local law.

40.0067: Extension of Special Project Designation Permit

(1) A permittee may apply for an extension of Special Project Designation. An application for an extension of Special Project Designation shall include the following:

(a) a completed transmittal form using the form established by the Department for such purposes;

(b) a statement as to why the extension is sought;

(c) a report describing the status of response actions and any known instances of noncompliance with 310 CMR 40.0000 associated with the Special Project Designation Permit, and a plan and schedule for proposed or continuing response actions;

(d) an LSP Opinion indicating that the plans and/or reports submitted are in conformance with the requirements of 310 CMR 40.0000;

(e) a certification by the applicant and the person described in 310 CMR 40.0062(1)(i) (if different from the applicant) that, except as fully disclosed in the request for extension, he or she is not subject to any outstanding administrative or judicial environmental enforcement action under any federal, state or local law; and

40.0067: continued

(f) the certification required by 310 CMR 40.0009 by the permittee and the person described in 310 CMR 40.0062(1)(i) (if different from the applicant).

(2) A Special Project Designation Permit Extension does not forgive any noncompliance of the permittee that resulted from the late submittal or failure to submit any response action submittal due during the duration of the Special Project Designation Permit.

40.0068: Termination of Special Project Designation Permit

(1) A Permittee may voluntarily surrender a Special Project Designation Permit provided that such Permittee notifies the Department in writing of such surrender using the transmittal form established by the Department for such purpose and submits a report to the Department describing the status of response actions. If applicable, the Permittee shall also comply with 310 CMR 40.0170(10).

(2) Special Project Designation Permit shall terminate if:

- (a) the Permittee voluntarily surrenders the Special Project Designation Permit as described in 310 CMR 40.0068(1);
- (b) the Permittee submits a Permanent Solution Statement pursuant to 310 CMR 40.1000 for the disposal site(s) covered by the Special Project Designation Permit;
- (c) an assessment is completed that demonstrates that no releases or threats of release have occurred at or from the properties subject to Special Project Designation Permit; or
- (d) the Special Project Designation Permit expires.

40.0069: Suspension and Revocation of Special Project Designation Permit

(1) The Department may suspend or revoke a Special Project Designation Permit for cause including, but not limited to, the following:

- (a) any violation of M.G.L. c. 21E, 310 CMR 40.0000, or Special Project Designation Permit condition, or other applicable law or regulation;
- (b) the submittal of false or misleading information by the Permittee; or
- (c) for nonpayment of annual compliance assurance fees required pursuant to 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

(2) Prior to the suspension or revocation of a Special Project Designation Permit for cause, the Department shall issue a notice of intent to suspend or revoke the Special Project Designation Permit which describes the basis for the proposed suspension or revocation and informs the person to whom it is issued of his or her right to request an adjudicatory hearing pursuant to M.G.L. c. 30A.

(3) Upon suspension or revocation of a Special Project Designation Permit, the Department shall establish new deadlines for the Tier Classification or Comprehensive Response Action deadline(s) extended under the Special Project Designation Permit for any disposal site that requires further response actions.

40.0070: Approval Process for Special Project Designation Permits

(1) General. 310 CMR 40.0070, together with 310 CMR 4.04: *Permit Applications Schedules and Fee*, define the review and approval process for a Special Project Designation Permit Application or a Special Project Designation Permit Modification, Transfer or Extension. The Department shall consider the requirements and criteria at 310 CMR 40.0060, when making a decision to grant or deny a Special Project Designation Permit or a Modification, Transfer or Extension of a Special Project Designation Permit.

(2) Commencement of Schedule. For purposes of 310 CMR 40.0070 and 310 CMR 4.04(2)(a), the computation of time periods shall commence on the day following the day a complete Special Project Designation Permit Application, Modification, Transfer or Extension is received at the appropriate regional office of the Department or on the day following the day the applicable permit application fee is received, as described in 310 CMR 40.0008, whichever occurs later.

40.0070: continued

(3) A Special Project Designation Permit, or Modification, Transfer or Extension of a Special Project Designation Permit, shall be presumed approved without conditions 36 days from the date of the commencement of the Application time period pursuant to 310 CMR 40.0070(2), unless prior to the end of the 36 day period, the Department provides to the applicant(s) one of the following:

- (a) a decision to deny the applicant a Special Project Designation Permit, or Modification, Transfer or Extension of a Special Project Designation Permit, based on the criteria in 310 CMR 40.0063(3) and (4);
- (b) a decision to grant the applicant a Special Project Designation Permit, or Modification, Transfer or Extension of a Special Project Designation Permit with conditions, based on the criteria in 310 CMR 40.0063(3) and (4); or
- (c) a Notice of Extended Review indicating that, because of the nature and complexity of the review, based on the criteria set forth in 310 CMR 40.0063(3) and (4), the Department requires an additional 36 days from the date the Notice of Extended Review is issued by the Department to complete its review.

(4) If the Department issues the applicant(s) a Notice of Extended Review in accordance with 310 CMR 40.0070(3)(c), the Special Project Designation Permit or Modification, Transfer or Extension shall be presumed approved without conditions 72 days from the date of the commencement of the Application time period, pursuant to 310 CMR 40.0070(2), unless the Department provides the applicant(s) with one of the following prior to 72 days from the date of the commencement of the Application time period:

- (a) a decision to deny the applicant Special Project Designation Permit, or Modification, Transfer or Extension of a Special Project Designation Permit, based on the criteria in 310 CMR 40.0063(3) and (4); or
- (b) a decision to grant the applicant a Special Project Designation Permit, or Modification, Transfer or Extension of a Special Project Designation Permit with conditions, based on the criteria in 310 CMR 40.0063(3) and (4).

(5) Presumptive approval of a Special Project Designation Permit, Modification, Transfer or Extension, pursuant to 310 CMR 40.0070 means the RP, PRP or Other Person has approval to proceed with Response Actions in compliance with all applicable provisions of 310 CMR 40.0000. Such presumptive approval shall not be construed as approval by the Department of the scope or adequacy of plans or of the response actions as actually conducted, or as forgiveness of non-compliance with any provision of 310 CMR 40.0000.

SUBPART B: ORGANIZATION AND RESPONSIBILITIES

40.0100: Overview of Roles and Responsibilities in Response Actions

(1) The Department is authorized to take or arrange for such response actions as it reasonably deems necessary to respond to releases or threats of release of oil and/or hazardous material. The Department has final administrative authority and discretion to determine any and all of the following:

- (a) whether a release of oil and/or hazardous material has occurred and/or whether a threat of release or Imminent Hazard exists;
- (b) whether a release or threat of release of oil and/or hazardous material requires a response action;
- (c) the appropriate extent and nature of a response action consistent with M.G.L. c. 21E and 310 CMR 40.0000;
- (d) the appropriate level of Department oversight of response actions undertaken by RPs, PRPs and Other Persons; and
- (e) whether a response action, application, Opinion or other submittal is in compliance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements.

(2) The Department, PRPs and Other Persons may undertake necessary response actions, provided such response actions are performed in compliance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable laws.

40.0100: continued

- (3) RPs shall undertake necessary response actions in compliance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable laws.
- (4) RPs, PRPs and Other Persons shall involve local, state, and federal agencies and organizations in decisions regarding response actions to the extent required by M.G.L. c. 21E, 310 CMR 40.0000 and other applicable laws.
- (5) RPs, PRPs and Other Persons shall involve the public in decisions regarding response actions to the extent required by M.G.L. c. 21E, 310 CMR 40.0000 and other applicable laws.
- (6) No LSP Opinion shall be required for any response action performed by the Department under 310 CMR 40.0000.

40.0101: Role of the Department in Response Actions

- (1) The Department may, without limitation:
 - (a) review and evaluate reports of releases or threats of release of oil and/or hazardous material and Imminent Hazards and, when reasonably necessary, perform or arrange for the performance of one or more response actions;
 - (b) collect or oversee the collection of pertinent facts regarding releases or threats of release of oil and/or hazardous material;
 - (c) require persons undertaking response actions to collect pertinent facts regarding releases or threats of release of oil and/or hazardous material;
 - (d) perform or arrange for performance of response actions by the Department, and/or RPs, PRPs or Other Persons;
 - (e) establish Interim Deadlines for the completion of response actions;
 - (f) issue permits, including, but not limited, to approvals and conditional approvals, to persons seeking to carry out response actions at those sites for which a permit is required by M.G.L. c. 21E and 310 CMR 40.0000;
 - (g) coordinate and oversee response actions conducted by RPs, PRPs or Other Persons to assure the consistency of the response actions with M.G.L. c. 21E and 310 CMR 40.0000;
 - (h) audit response actions not overseen or conducted by the Department;
 - (i) establish an administrative record upon which the selection of a response action is based;
 - (j) conduct or oversee, and/or require persons carrying out one or more response actions to conduct, Public Involvement Activities;
 - (k) conduct enforcement and seek reimbursement and compensation to which the Commonwealth is entitled pursuant to M.G.L. c. 21E;
 - (l) provide Technical Assistance Grants to eligible applicants in accordance with 310 CMR 40.1400;
 - (m) seek the resources of federal or other state agencies or local governments to respond to releases or threats of release of oil and/or hazardous material;
 - (n) authorize persons to enter any site, or other location to be investigated as a possible disposal site, not owned or operated by him or her for the purpose of performing one or more response actions upon the consent of the owner or operator thereof, in accordance with 310 CMR 40.0173;
 - (o) request persons to provide information to the Department with respect to a release or threat of release or any site or other location where oil and/or hazardous material is or might be located;
 - (p) acquire real property, or any interest therein, by purchase, gift or lease, or by eminent domain under the provisions of M.G.L. c. 79, if necessary to carry out the purposes of M.G.L. c. 21E;
 - (q) restrict the use of property that is or was a site, and modify or release such restrictions, if necessary to carry out the purposes of M.G.L. c. 21E;
 - (r) record, or cause, allow or require the owner of property that is or was a site to record, notice of the restrictions of the use of the property, or of the modification or release of the restrictions, in accordance with M.G.L. c. 21E, § 6;
 - (s) publish and maintain lists of Location to be Investigated and disposal sites;

40.0101: continued

- (t) conduct compliance assistance to provide guidance to persons undertaking response actions to assist such persons in achieving compliance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements;
- (u) specify requirements to prevent and control, and to counter the effects of, releases or threats of release of oil and/or hazardous material, in accordance with M.G.L. c. 21E, § 6. Such requirements may include, without limitation, but without duplication of requirements prescribed in other programs of the Department, the preparation of contingency plans, the acquisition, construction, maintenance and operation of equipment, facilities and resources for the monitoring, prevention and control of releases, and the staffing and training of personnel regarding the prevention and control of releases of oil or hazardous material; and
- (v) take any other action authorized by M.G.L. c. 21E and/or 310 CMR 40.0000 as it deems reasonably necessary.

(40.0102 through 40.0104: Roles of Other State Agencies and Organizations: Reserved)

(40.0105 through 40.0109: Role of Local Government: Reserved)

40.0110: Adequately Regulated Sites

- (1) Purpose. The regulations published at 310 CMR 40.0110 through 310 CMR 40.0114, cited collectively as 310 CMR 40.0110, establish requirements and procedures in accordance with M.G.L. c. 21E, § 3(c), for limiting the applicability of M.G.L. c. 21E and 310 CMR 40.0000 to response actions at disposal sites deemed adequately regulated by the Department under another program or by another government agency.
- (2) No provision of 310 CMR 40.0110 shall be construed to relieve any person from any liability for Response Action Costs or damages under M.G.L. c. 21E or from any obligation for any administrative, civil or criminal penalty, fine, settlement, or other damages.
- (3) No provision of 310 CMR 40.0110 shall be construed to limit the rights of private parties to seek contribution, reimbursement or equitable share from any other person under M.G.L. c. 21E.

40.0111: Federal Superfund Program

- (1) The Department shall deem response actions at a disposal site subject to CERCLA adequately regulated for purposes of compliance with 310 CMR 40.0000, provided:
 - (a) for sites at which a ROD has not been issued,
 - 1. the response actions are conducted in compliance with the National Contingency Plan and any applicable EPA approvals or orders; and
 - 2. subsequent site assessment, cleanup and/or closure activities are addressed pursuant to CERCLA; or
 - (b) the Department concurs with the ROD and/or other EPA decisions for remedial actions at such site in accordance with 40 CFR 300.515(e); or
 - (c) if the Department requests that EPA change or expand the EPA-selected remedial action, EPA agrees to integrate the Department's proposed changes or expansions into the planned CERCLA remedial action in accordance with 40 CFR 300.515(f); or
 - (d) if the Department does not concur with the ROD and/or other EPA decisions for remedial actions at such site, the EPA-selected remedial action is thereafter modified so as to integrate the Department's proposed changes or expansions into the planned CERCLA remedial work in accordance with CERCLA section 121(f)(2); or
 - (e) if the Department reviewed the ROD and/or other EPA decision for remedial actions at such site and has no comment with respect thereto.
- (2) 310 CMR 40.0000 shall apply to any release or threat of release of oil and/or hazardous material and to any response action that is not subject to CERCLA.
- (3) The Department shall take appropriate actions to obtain any federal monies available to fund response actions.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0111: continued

- (4) The Department shall seek to incorporate the requirements, standards and procedures established by M.G.L. c. 21E and/or 310 CMR 40.0000, to the extent practicable as follows:
- (a) in each site-specific cooperative agreement;
 - (b) in each Superfund state contract under CERCLA; and
 - (c) during the processes set forth in 40 CFR 300.515(d) and (e).
- (5) No provision in 310 CMR 40.0111 shall be construed to limit or waive the Department's authority to concur with the ROD for remedial actions at any NPL site.
- (6) No provision in 310 CMR 40.0111 shall be construed to limit or waive the application of any state law or regulation other than M.G.L. c. 21E and 310 CMR 40.0000, or any authority delegated to any agency of the Commonwealth pursuant to federal law.
- (7) No provision in 310 CMR 40.0111 shall be construed to limit or waive the Commonwealth's authority under CERCLA, including, but not limited to, the right to:
- (a) be substantially and meaningfully involved in the initiation, development and selection of response actions at NPL Sites; and
 - (b) bring or maintain an action under CERCLA or any other law for purposes of attaining state standards, requirements, criteria or limitations with respect to CERCLA remedial work.
- (8) At disposal sites deemed by the Department to be Adequately Regulated pursuant to 310 CMR 40.0111 where the selected remedy relies, in whole or in part, on the imposition of land use controls to minimize the potential for human or ecological exposure to contamination or to protect the integrity of a remedy, such controls may be implemented through a Notice of Activity and Use Limitation, in accordance with 310 CMR 40.1070(1)(c) and subject to the written approval of EPA and the Department. Notices of Activity and Use Limitation shall be implemented on a form developed by the Department for such purpose, and shall be subject to the following:
- (a) the provisions of 310 CMR 40.1074, except as otherwise provided in 310 CMR 40.1070(4);
 - (b) the obligation to incorporate into the Notice of Activity and Use Limitation, in full or by reference, the land use control requirements set forth in and/or developed pursuant to the ROD and/or the land use control plan approved by EPA;
 - (c) the obligation to notify and seek approval of EPA and the Department of any proposed change in land use that is not provided for in the Notice of Activity and Use Limitation; and
 - (d) EPA and Department approval of any Amendment of a Notice of Activity and Use Limitation or Termination of a Notice of Activity and Use Limitation.
- (9) Compliance with the terms and conditions of a Notice of Activity and Use Limitation implemented at an adequately regulated disposal site pursuant to 310 CMR 40.0111(8) is subject to audit and enforcement pursuant to M.G.L. c. 21E and 310 CMR 40.0000 and M.G.L. c. 21A, § 16 and 310 CMR 5.00: *Administrative Penalty*.
- (10) Adequately regulated disposal sites at which remedial actions have been completed in accordance with the ROD for that site, and subsequent design, construction, and other pertinent plans have been approved by EPA, and EPA has certified completion of the remedial action, will be considered to have achieved a Permanent Solution for purposes of M.G.L. c. 21E and 310 CMR 40.0000 for those hazardous substances subject to such remedial actions.

40.0112: Federal Corrective Action Pursuant to HSWA

- (1) General. HSWA Corrective Actions performed by persons other than the Department shall be deemed adequately regulated for purposes of 310 CMR 40.0000, provided the person undertaking such response actions does so in compliance with the terms and conditions of the applicable license, permit, approval or order issued pursuant to 42 U.S.C. §§ 6928(a), 6928(h), 6924(u) or 6924(v) and the following:
- (a) the general provisions in 310 CMR 40.0001 through 40.0099, except:
 - 1. the requirements for LSP Opinions set forth in 310 CMR 40.0015;

40.0112: continued

2. the requirements for force majeure set forth in 310 CMR 40.0025;
3. the provisions of 310 CMR 40.0050 with respect to permit decisions only;
- (b) the requirements and provisions in 310 CMR 40.0101 through 40.0199, except:
 1. the general requirements for conducting response actions set forth in 310 CMR 40.0190;
 2. the provisions of 310 CMR 40.0193 applicable to technical justification;
- (c) the requirements and procedures in 310 CMR 40.0300 for notifying the Department of a release, threat of release and/or Imminent Hazard, except those releases for which 120 day notification is required by 310 CMR 40.0315;
- (d) the requirements and procedures in 310 CMR 40.0405 through 40.0429 applicable to Immediate Response Actions, except:
 1. for the following Conditions of Substantial Release Migration:
 - a releases to the ground surface or to the vadose zone that, if not promptly removed or contained, are likely to significantly impact the underlying groundwater, or significantly exacerbate an existing condition of groundwater pollution;
 - b releases to the groundwater that have migrated or are expected to migrate more than 200 feet per year; or
 - c releases to the groundwater that have been or are within one year likely to be detected in a surface water body, wetland, or public water supply reservoir;
 2. requirements for approval of the Department set forth in 310 CMR 40.0420, if EPA has approved the response actions;
- (e) the requirements and procedures in 310 CMR 40.0900 and 40.1000 applicable to Risk Characterization; provided, however:
 1. such requirements shall apply only to locations:
 - a. outside the boundary of a landfill either licensed pursuant to 310 CMR 30.800 or having an interim license pursuant to 310 CMR 30.099(6); and
 - b. outside the boundary of a landfill which has been closed pursuant to 310 CMR 30.633; and
 2. the requirements therein applicable to Permanent or Temporary Solution Statements shall not apply; and
 3. the requirements therein shall not be deemed to preempt more stringent applicable federal and state standards; and
- (f) the requirements and procedures for Public Involvement Activities and Technical Assistance Grants in 310 CMR 40.1400 shall apply to the extent applicable and practicable as determined by the Department.

(2) Adequate Regulation During Pendency of Appeal. Unless otherwise provided by the Department, HSWA Corrective Actions performed by persons other than the Department shall be deemed adequately regulated for purposes of 310 CMR 40.0000 while an appeal from the applicable license, permit, approval or order is pending, provided the person undertaking such response actions complies with the following:

- (a) the general provisions in 310 CMR 40.0001 through 40.0099, except:
 1. the requirements for force majeure set forth in 310 CMR 40.0025;
 2. the provisions of 310 CMR 40.0050 with respect to permit decisions only;
- (b) the requirements and provisions in 310 CMR 40.0101 through 40.0199, except:
 1. the general requirements for conducting response actions set forth in 310 CMR 40.0190;
 2. the provisions of 310 CMR 40.0193 applicable to technical justification;
- (c) the requirements and procedures in 310 CMR 40.0300 for notifying the Department of a release, threat of release and/or Imminent Hazard, except those releases for which 120 day notification is required by 310 CMR 40.0315;
- (d) the requirements and procedures in 310 CMR 40.0405 through 40.0467 applicable to Immediate Response Actions, Release Abatement Measures and Utility-related Abatement Measures;
- (e) the requirements and procedures in 310 CMR 40.0900 and 40.1000 applicable to Risk Characterization; provided, however:

40.0112: continued

1. such requirements shall apply only to locations:
 - a. outside the boundary of a landfill either licensed pursuant to 310 CMR 30.800: *Licensing Requirements and Procedures* or having an interim license pursuant to 310 CMR 30.099(6); and
 - b. outside the boundary of a landfill which has been closed pursuant to 310 CMR 30.633: *Closure and Post-closure Care*; and
 2. the requirements therein applicable to Permanent or Temporary Solution Statements shall not apply; and
 3. the requirements therein shall not be deemed to preempt more stringent applicable federal and state standards; and
- (f) the requirements and procedures for Public Involvement Activities and Technical Assistance Grants in 310 CMR 40.1400 shall apply to the extent applicable and practicable as determined by the Department.
- (3) Any person who is performing a HSWA Corrective Action at a disposal site deemed adequately regulated pursuant to 310 CMR 40.0112 shall concurrently submit to the Department a copy of any document submitted to EPA for approval.
- (4) In order to ensure compliance with those requirements and procedures in 310 CMR 40.0000 which are applicable to HSWA Facilities deemed adequately regulated pursuant to 310 CMR 40.0112, the Department may conduct an audit of any RP, PRP or Other Person, or any response action, including, but not limited to, any HSWA Corrective Action, or any HSWA Facility that is a site in accordance with 310 CMR 40.1100.
- (5) No provision of 310 CMR 40.0112 shall be construed to limit or waive any of the Commonwealth's authority or rights under RCRA, including, but not limited to, the authority or right to:
- (a) provide comment or to appeal any license, permit approval or order proposed by EPA;
 - (b) seek and obtain authorization to administer and enforce a hazardous waste program, including, but not limited to, authority over HSWA Corrective Actions; and
 - (c) enter into agreements to establish a federal-state partnership to carry out the purposes of RCRA.
- (6) Notwithstanding any provision of 310 CMR 40.0000 to the contrary, except 310 CMR 40.0112(2), no person undertaking response actions at a HSWA Facility which the Department deems adequately regulated pursuant to a license, permit, approval or order issued pursuant to 42 U.S.C. §§ 6928(a), 6928(h), 6924(u) or 6924(v) shall be required to engage or employ a Licensed Site Professional for purposes of having such professional render one or more LSP Opinions with respect to such HSWA Corrective Action; provided, however, that such person shall employ or engage an LSP for purposes of 310 CMR 40.0035(1)(h), unless otherwise approved by the Department.

40.0113: RCRA Authorized State Hazardous Waste Program (M.G.L. c. 21C and 310 CMR 30.000: *Hazardous Waste*)

- (1) General. Response actions at 21C Facilities performed by persons other than the Department and permitted, approved or ordered by the Department pursuant to M.G.L. c. 21C and/or 310 CMR 30.000: *Hazardous Waste* shall be deemed adequately regulated for purposes of 310 CMR 40.0000, provided the person undertaking such response actions does so in compliance with the terms and conditions of any such permit, order or approval and the following:
- (a) the general provisions in 310 CMR 40.0001 through 310 CMR 40.0099, except:
 1. the requirements for LSP Opinions set forth in 310 CMR 40.0015;
 2. the requirements for force majeure set forth in 310 CMR 40.0025; and
 3. the provisions of 310 CMR 40.0050 with respect to permit decisions only;
 - (b) the requirements and provisions in 310 CMR 40.0101 through 310 CMR 40.0199, except:
 1. the general requirements for conducting response actions set forth in 310 CMR 40.0190;
 2. the provisions of 310 CMR 40.0193 applicable to technical justification;

40.0113: continued

- (c) the requirements and procedures in 310 CMR 40.0300 for notifying the Department of a release, threat of release and/or Imminent Hazard, except those releases for which 120 day notification is required by 310 CMR 40.0315;
- (d) the requirements and procedures in 310 CMR 40.0405 through 40.0429 applicable to Immediate Response Actions, except for the following Conditions of Substantial Release Migration:
 - 1. releases to the ground surface or to the vadose zone that, if not promptly removed or contained, are likely to significantly impact the underlying groundwater, or significantly exacerbate an existing condition of groundwater pollution;
 - 2. releases to the groundwater that have migrated or are expected to migrate more than 200 feet per year; or
 - 3. releases to the groundwater that have been or are within one year likely to be detected in a surface water body, wetland, or public water supply reservoir;
- (e) the requirements and procedures in 310 CMR 40.0900 and 40.1000 applicable to Risk Characterization; provided, however:
 - 1. such requirements shall apply only to locations:
 - a. outside the boundary of a landfill either licensed pursuant to 310 CMR 30.800: *Licensing Requirements and Procedures* or having an interim license pursuant to 310 CMR 30.099(6); and
 - b. outside the boundary of a landfill which has been closed in accordance with 310 CMR 30.633: *Closure and Post-closure Care*;
 - 2. the requirements therein applicable to Permanent or Temporary Solution Statements shall not apply; and
 - 3. the requirements therein shall not be deemed to preempt more stringent applicable federal or state standards; and
- (f) the requirements and procedures for Public Involvement Activities and Technical Assistance Grants in 310 CMR 40.1400 shall apply to the extent applicable and practicable as determined by the Department.

(2) Notwithstanding any provision of 310 CMR 40.0000 to the contrary, no person undertaking response actions at a 21C Facility which the Department deems adequately regulated by M.G.L. c. 21C and 310 CMR 30.000: *Hazardous Waste* shall be required to engage or employ a Licensed Site Professional for purposes of having such professional render one or more LSP Opinions; provided, however, that such person shall employ or engage an LSP for purposes of 310 CMR 40.0035(1)(h), unless otherwise approved by the Department.

40.0114: Solid Waste Management Facilities

- (1) General. Response actions performed by persons other than the Department at Solid Waste Management Facilities permitted, approved or ordered by the Department pursuant to M.G.L. c. 21H, M.G.L. c. 111, § 150A and/or 310 CMR 19.000 shall be deemed adequately regulated for purposes of 310 CMR 40.0000, provided the person undertaking such response actions does so in compliance with the terms and conditions of any such permit, order or approval and the following:
 - (a) the general provisions in 310 CMR 40.0001 through 40.0099, except:
 - 1. the requirements for LSP Opinions set forth in 310 CMR 40.0015;
 - 2. the requirements for force majeure set forth in 310 CMR 40.0025; and
 - 3. the provisions of 310 CMR 40.0050 with respect to permit decisions only;
 - (b) the requirements and provisions in 310 CMR 40.0101 through 40.0199, except:
 - 1. the general requirements for conducting response actions set forth in 310 CMR 40.0190;
 - 2. the provisions of 310 CMR 40.0193 applicable to technical justification;
 - (c) the requirements and procedures in 310 CMR 40.0300 for notifying the Department of a release, threat of release and/or Imminent Hazard, except those releases for which 120 day notification is required by 310 CMR 40.0315;
 - (d) the requirements and procedures in 310 CMR 40.0405 through 40.0429 applicable to Immediate Response Actions, except: for the following Conditions of Substantial Release Migration:

40.0114: continued

1. releases to the ground surface or to the vadose zone that, if not promptly removed or contained, are likely to significantly impact the underlying groundwater, or significantly exacerbate an existing condition of groundwater pollution;
 2. releases to the groundwater that have migrated or are expected to migrate more than 200 feet per year; or
 3. releases to the groundwater that have been or are within one year likely to be detected in a surface water body, wetland, or public water supply reservoir;
- (e) the requirements and procedures in 310 CMR 40.0900 and 40.1000 applicable to Risk Characterization; provided, however:
1. such requirements shall apply only to locations outside the boundary of a landfill permitted pursuant to 310 CMR 19.020 or outside the boundary of a landfill which has been closed in accordance with 310 CMR 19.140: *Landfill Closure Requirements*;
 2. the requirements therein applicable to Permanent or Temporary Solution Statements shall not apply; and
 3. the requirements therein shall not be deemed to preempt more stringent applicable federal or state standards; and
- (f) the requirements and procedures for Public Involvement Activities and Technical Assistance Grants in 310 CMR 40.1400 shall apply to the extent applicable and practicable as determined by the Department.

(2) Notwithstanding any provision of 310 CMR 40.0000 to the contrary, no person undertaking response actions at a Solid Waste Management Facility which the Department deems adequately regulated by M.G.L. c. 21H, M.G.L. c. 111, § 150A and 310 CMR 19.000: *Solid Waste Management* shall be required to engage or employ a Licensed Site Professional for purposes of having such professional render one or more LSP Opinions; provided, however, that such person shall employ or engage an LSP for purposes of 310 CMR 40.0035(1)(h), unless otherwise approved by the Department.

40.0120: Coordination with Responses by the United States Coast Guard to Discharges of Oil

(1) Except as provided by 310 CMR 40.0120(2) and (3), response actions performed by the U.S. Coast Guard, including, but not limited to, response actions performed by its contractors under its supervision and control, pursuant to the Federal Water Pollution Control Act, 33 U.S.C. 1321(c), in response to a release of oil into navigable waters shall be exempt from the following requirements:

- (a) any requirement to obtain a permit, approval or other authorization from the Department issued pursuant to M.G.L. c. 21E or the MCP for such response actions;
- (b) any requirement to employ or engage a Licensed Site Professional for purposes of performing such response actions;
- (c) any requirement to submit a plan or report to the Department for such response actions under M.G.L. c. 21E or the MCP, provided that the U.S. Coast Guard, upon request by the Department, provides the Department with a copy of any and all plans and reports prepared pursuant to the Federal Water Pollution Control Act, 33 U.S.C. 1321(c); and
- (d) any requirement to submit a Permanent or Temporary Solution Statement to the Department for such a release.

(2) The exemption in 310 CMR 40.0120(1) shall not apply to any release of oil into navigable waters for which the U.S. Coast Guard is an RP or PRP.

(3) Notwithstanding 310 CMR 40.0120(1)(b), the U.S. Coast Guard shall employ or engage a Licensed Site Professional for purposes of complying with the requirements set forth in 310 CMR 40.0035(1)(h).

(4) No provision in 310 CMR 40.0120 shall be construed to relieve any RP or PRP of his or her responsibility for complying with M.G.L. c. 21E and the MCP.

(5) No provision in 310 CMR 40.0120 shall be construed to relieve the U.S. Coast Guard or any other party of its responsibility under M.G.L. c. 21E, the MCP or any other applicable law for notifying the Department of a release or threat of release of oil or hazardous material.

40.0120: continued

(6) No provision in 310 CMR 40.0120 shall be construed to relieve the U.S. Coast Guard or any other party of the necessity of complying with all other applicable federal, state and local laws.

40.0150: Role of Other Persons

(1) Any person threatened or damaged by a release or threat of release of oil and/or hazardous material, and any Other Person, may undertake response actions, provided such response actions are performed in compliance with M.G.L. c. 21E, 310 CMR 40.0000 and any other applicable laws.

(2) As provided in M.G.L. c. 21E, § 4, any person who without charge renders assistance in a response action at the request of a duly authorized representative of the Department shall not be held liable, notwithstanding any other provision of law, for civil damages as a result of any act or omission by such person in removing oil and/or hazardous material, except for acts or omissions of gross negligence or willful misconduct.

(3) As provided in M.G.L. c. 21E, § 4, any person, except a person who is liable pursuant to M.G.L. c. 21E, § (5)(a)(1), who provides care, assistance or advice in response to a release or threat of release of oil into or onto the tidal waters of the United States, including, without limitation, the territorial sea, or to any tidal shorelines adjoining any waters of the United States, or to the Zone established by Presidential Proclamation No. 5030, dated March 10, 1983, including, without limitation, the ocean waters of the areas referred to as "eastern special areas" in Article 3(1) of the Agreement between the United States of America and the Union of Soviet Socialist Republics on the Maritime Boundary, signed June 1, 1990, which is consistent with applicable state law, or the NCP or as otherwise directed by the federal on-scene coordinator predesignated by EPA or the United States Coast Guard to coordinate and direct a federal response for oil removal under subpart D of the NCP, or by the state official with responsibility for oil spill response, shall not be liable for removal costs or damages which result from actions taken or omitted in the course of providing such care, assistance or advice, except with respect to personal injury, wrongful death, gross negligence or willful misconduct, notwithstanding any other law to the contrary.

40.0160: Departmental Notice to Responsible Parties and Potentially Responsible Parties

(1) Notices of Responsibility.

(a) The Department shall attempt to identify and notify RPs and PRPs of their potential liability under M.G.L. c. 21E through the issuance of a Notice of Responsibility (NOR) prior to taking or arranging a response action. The determination of whom to notify of their potential liability under M.G.L. c. 21E rests in the sole discretion of the Department. The Department's failure to notify any particular RP or PRP shall not preclude recovery by the Commonwealth or any other person against that RP or PRP for any reimbursement or compensation to which the Commonwealth or that person is entitled, nor shall it preclude the Department or any other person from taking any other action authorized or required by M.G.L. c. 21E, 310 CMR 40.0000, any order or determination issued by the Department or any other law.

(b) The Department may notify RPs and PRPs, orally or in writing, of their potential liability under M.G.L. c. 21E. If the Department provides such oral notice, the Department shall follow up such notice with a written NOR. Written NORs shall include a summary of actions undertaken to date at the site by the Department, RPs, PRPs and Other Persons and a description of the following:

1. the actions which the Department currently determines are necessary to respond to the release or threat of release;
2. the procedure by which, and extent to which, the RP or PRP can become involved in the response action; and
3. the liability which the RP or PRP may incur as a result of the release or threat of release.

40.0160: continued

(2) Notice of Intent To Take a Response Action.

(a) The Department shall attempt to notify the owner or operator of a site, or a fiduciary or secured lender that has title to or possession of a site, from or at which there is or has been a release or threat of release of oil and/or hazardous material of the Department's intent to perform a response action at the site.

(b) Such notice may be made orally or in writing. The Department shall provide written notice of its intent to perform a response action whenever time allows.

(c) Such notice will not be given if the Department is unable to identify or locate the owner or operator, or fiduciary or secured lender that has title to or possession of the site, or when providing such notice would be impractical because of an emergency or other circumstances. In cases where the notice is impractical in view of the emergency or other circumstances, the Department shall promptly thereafter notify the owner or operator, or the fiduciary or secured lender that has title to or possession of the site, in writing that the Department has undertaken a response action at the site.

(d) Failure by the Department to give notice to an owner or operator of the Department's intention to perform a response action shall not limit or preclude any RP's or PRP's liability pursuant to M.G.L. c. 21E, 310 CMR 40.0000 or any other law.

40.0165: Departmental Requests for Information (RFI)

(1) Upon reasonable request, any person shall furnish information, and provide the Department access to any and all documents, material to a release or threat of release of oil and/or hazardous material or any site or other location where oil and/or hazardous material is or might be located. The Department may request any person to furnish such information through the issuance of a Request for Information.

(2) The Department may require any person to whom a Request for Information is directed to promptly amend or supplement any response thereto upon such person's obtaining new information which is material to the RFI or to correct any errors or omissions in any response thereto later discovered by such person. Such a requirement may be imposed in the RFI itself.

(3) A person to whom a Request for Information is directed shall separate those parts of each and every document responsive to such request which such person claims are protected from disclosure from those parts of the documents to which such person makes no such claim; provided, however, that if such person claims that a document sought, or any part thereof, is a trade secret protected from disclosure, such person shall submit the entire document to the Department together with a request for confidentiality in accordance with 310 CMR 3.00. If a person to whom an RFI is directed claims a document sought, or any part thereof, is protected from disclosure, such person shall submit to the Department those parts which he or she does not claim are entitled to protection with a statement as to the nature of the protected information and the basis for the claim that the information is protected from disclosure.

(4) For each and every document requested that a person to whom a RFI is directed claims is not in his or her possession, custody or control, such person shall submit a statement in response thereto to the effect that he or she does not have the information requested and, if he or she has such knowledge, identify the person or persons from whom the information may be obtained.

(5) RFIs may be made orally or in writing. If the Department issues an oral RFI, the Department shall follow up that request with a written RFI. Each written RFI shall include, without limitation, the following:

(a) a description of the information requested and/or documents to which the Department is seeking access;

(b) a reasonable deadline for providing the information requested or access sought;

(c) the name, address and telephone number of the Department's employee(s), agent(s), representative(s) or contractor(s) to whom the information requested or access sought shall be provided; and

(d) notice to the person to whom the RFI is directed of his or her obligations under M.G.L. c. 21E, §§ 2, 4 and 8, and 310 CMR 40.0165(1) through (4).

40.0166: Department Right of Entry

For the purpose of administration and enforcement of M.G.L. c. 21E and 310 CMR 40.0000 and for the protection of human health, safety, public welfare or the environment, employees, agents and contractors of the Department may enter any site, vessel or any other location to be investigated as a possible site at reasonable times and upon reasonable notice to investigate, sample or inspect any documents, conditions, equipment, practice or property. In the event that the Department reasonably determines as a result of an investigation, sampling or inspection that there has been a release or that there exists a threat of release of oil or hazardous material, the Department may enter a site, vessel or location, and areas proximate thereto, and perform or arrange for the performance of such response actions as it reasonably deems necessary.

40.0167: Interim Deadlines

(1) The Department may establish and enforce reasonable Interim Deadlines consistent with M.G.L. c. 21E and 310 CMR 40.0000 for the performance of response actions, and the furnishing of information and provision of access to documents and other information to DEP, including, but not limited to, deadlines for compliance with Requests for Information, applicable orders, permits and other requirements, and deadlines for the termination of settlement discussions.

(2) Any person who is required to comply with an Interim Deadline may request, in writing, an extension thereof prior to the running of any such deadline. Each such request shall state clearly and concisely the facts which are grounds for the extension and the relief sought. The Department may modify an Interim Deadline if it deems such action appropriate. Any such modification shall be made in writing.

(3) The Department shall establish Interim Deadlines in writing by means of, but not limited to, the following:

- (a) an approval of an application or work schedule;
- (b) the issuance of a permit, Request for Information, Notice of Responsibility or Notice of Response Action; or
- (c) the issuance of an order pursuant to M.G.L. c. 21E, § 9 or 10.

(4) The Department's decision to establish, modify or refuse to modify one or more Interim Deadlines in accordance with 310 CMR 40.0167 shall not be subject to M.G.L. c. 30A, or any other law, governing adjudicatory proceedings.

(5) If the person required to comply with an Interim Deadline does not make a timely application for an extension thereof in accordance with 310 CMR 40.0167(2), the Interim Deadline shall be presumed to constitute a reasonable Interim Deadline consistent with M.G.L. c. 21E and 310 CMR 40.0000. Such presumption may be rebutted by a preponderance of the evidence.

40.0168: List of Locations and Disposal Sites

(1) Commencing on or about August 1, 1993, the Department shall publish and maintain a Transition List of Sites and Locations (the "1993 Transition List"). The Department shall identify in the 1993 Transition List, and any addendum thereto, the status of disposal sites and Locations to Be Investigated ("LTBIs") to enable RPs, PRPs and Other Persons to ascertain the actions they are required by 310 CMR 40.0600 (the "Transition Provisions") to undertake to achieve or demonstrate compliance with M.G.L. c. 21E and 310 CMR 40.0000.

(2) Commencing on or about January 1, 1994, the Department shall maintain a list of Locations to be Investigated and disposal sites.

(3) Commencing on or about January 1, 1994, the Department shall publish on at least an annual basis a list of disposal sites that have been classified as Tier I in accordance with 310 CMR 40.0500, including addenda thereto. The published lists may also include, without limitation, the following:

40.0168: continued

- (a) any disposal site for which the Department has not received:
 - 1. a Permanent or Temporary Solution Statement; or
 - 2. a Tier Classification Submittal.
 - (b) any disposal site for which the Department has reason to believe that response actions have not been performed in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and/or any other applicable requirement;
 - (c) any disposal site classified as Tier I for which the Department has received a Permanent or Temporary Solution Statement in compliance with the applicable deadline; and
 - (d) any confirmed disposal site included on any list published by the Department in accordance with 310 CMR 40.520(1), as effective prior to October 1, 1993, or on the 1993 Transition List, unless a No Further Action Letter is received by the Department with respect to such disposal site prior to October 1, 1993.
- (4) Any list published in accordance with 310 CMR 40.0168(3) shall not include any of the following:
- (a) any disposal site at which there has been a release of oil and/or hazardous material and for which the Department has received a Permanent or Temporary Solution Statement, except as otherwise provided by 310 CMR 40.0168(3)(b) or (c);
 - (b) any disposal site at which an RP, PRP or Other Person, excluding the Department, is performing one or more response actions in compliance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements, and less than one year has passed since the earliest date computed in accordance with 310 CMR 40.0404(3);
 - (c) any disposal site:
 - 1. that has been classified as a Tier II disposal site in accordance with 310 CMR 40.0500; and
 - 2. at which an RP, PRP or Other Person, excluding authorized personnel, agents and Contractors of the Department, is performing one or more response actions in compliance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements;
 - (d) any disposal site deemed adequately regulated by another program or government agency pursuant to M.G.L. c. 21E, § 3(c), and 310 CMR 40.0110, except disposal sites subject to CERCLA.
- (5) The fact that a location, site, or disposal site has not been placed on the list published pursuant to 310 CMR 40.0168(1) or 40.0168(2), shall not prevent the Department from taking or arranging for response actions at such locations, sites or disposal sites which are consistent with M.G.L. c. 21E, 310 CMR 40.0000 and any other applicable requirement; or from taking any enforcement action pursuant to M.G.L. c. 21E, 310 CMR 40.0000 or any other law which the department has the authority to enforce.
- (6) The inclusion of a site on any list published or maintained by the Department in accordance with 310 CMR 40.0168(3) shall be sufficient for purposes of M.G.L. c. 21E, § 10(b)(1)(B)(i).
- (7) The Department shall make appropriate notations to its databases and the lists published and maintained in accordance with 310 CMR 40.0168 to reflect the Department's receipt of LSP Evaluation Opinions and Permanent or Temporary Solution Statements for disposal sites and LTBI's identified therein.
- (8) Any person who has reason to believe that the Department has listed a disposal site or LTBI, or the status thereof, in error may request, in writing, that the Department make appropriate changes to the pertinent list.
- (9) The Department's listing of any disposal site or LTBI in accordance with 310 CMR 40.0168, shall not be subject to M.G.L. c. 30A, or any other law, governing adjudicatory proceedings.

40.0169: The Role of Licensed Site Professionals

- (1) RPs, PRPs and Other Persons shall engage or employ the services of one or more LSPs as necessary to meet the requirements of 310 CMR 40.0000.

40.0169: continued

(2) The Department will designate as an LSP-of-Record for a site any LSP whose signature and seal appears on any document received by the Department with respect to a site. An LSP whose engagement or employment terminates in connection with a site at which he or she is designated as an LSP-of-Record shall notify the Department in writing within 21 days of such termination.

(3) LSPs shall render Opinions only in accordance with M.G.L. c. 21A, §§ 19 through 19J, 309 CMR 4.00: *Rules of Professional Conduct* and 6.00: *Design and Use of Licensed Site Professional's Seal*, M.G.L. c. 21E, 310 CMR 40.0000 and other applicable laws.

40.0170: The Role of RPs, PRPs and Other Persons in Response Actions

(1) RPs, PRPs, and secured lenders and fiduciaries who hold title to or possession of a site or vessel, shall notify the Department of a release or threat of release of oil and/or hazardous material and of any Imminent Hazards in accordance with 310 CMR 40.0300.

(2) RPs, PRPs and Other Persons shall obtain all necessary permits and approvals before undertaking a response action.

(3) No person shall undertake any response action for which a permit or approval has been issued by the Department in any manner not in conformance with the terms and conditions thereof.

(4) RPs, PRPs and Other Persons shall perform response actions in accordance with the following:

(a) except as expressly provided by 310 CMR 40.0000, each and every response action shall be properly and promptly performed within deadlines prescribed by, or pursuant to, M.G.L. c. 21E and/or 310 CMR 40.0000, including any Interim Deadlines;

(b) each RP, PRP or Other Person, or group of RPs, PRPs or Other Persons, who is undertaking or intends to undertake one or more response actions shall participate in and/or conduct, whichever is applicable, Public Involvement Activities in accordance with M.G.L. c. 21E, § 14, 310 CMR 40.1400 and any other applicable requirements; and

(c) each RP, PRP or Other Person, or group of RPs, PRPs or Other Persons, performing a response action shall identify all permits, licenses or other approvals which may be required by any local, state or federal agency, and any agreements necessary to conduct a response action, and shall proceed to obtain the necessary permits, licenses, approvals, and agreements sufficiently far in advance of deadlines imposed by M.G.L. c. 21E, 310 CMR 40.0000 or any other applicable requirements to enable him or her to complete response actions by such deadlines.

(5) Where necessary to ensure the timely and proper performance and completion of response actions, the Department may require that a RP, PRP or Other Person undertaking response actions provide assurance to the Department that the RP, PRP or Other Person has sufficient financial resources to perform the response action or a specific portion thereof. The Department may require such persons to provide such financial assurance at any time during the performance of a response action. Examples of the financial assurance mechanisms which may be required by the Department include, but are not limited to, trust funds, stand-by trust funds, letters of credit, escrow deposits and surety bonds.

(6) In the event that a RP or PRP requests an opportunity to perform a response action at any time after the Department has commenced a response action, the Department may require that the RP or PRP either pay, or provide a financial assurance mechanism for the payment of, all Costs the Department has incurred in connection with the disposal site prior to allowing the RP or PRP to conduct the remainder of the response action.

(7) The Department may refuse to allow a RP, PRP or Other Person to perform a response action, unless the Department is persuaded that:

(a) the RP, PRP or Other Person will comply with the deadlines and time periods for taking such actions imposed by M.G.L. c. 21E, 310 CMR 40.0000 and/or any order, permit or approval issued by the Department;

40.0170: continued

- (b) the RP's, PRP's or Other Person's performance of the response action will not result in or cause a hazard, or exacerbate an existing hazard, to health, safety, public welfare or the environment;
- (c) the RP, PRP or Other Person will otherwise conduct the response action in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable laws; and
- (d) the RP, PRP or Other Person has a satisfactory record of compliance with the statutes, regulations and other requirements administered or enforced by the Department.

(8) The Department may enter into a consent order with a RP, PRP or Other Person which sets forth necessary response actions, time periods and deadlines for the performance thereof and requirements for submittals to the Department. Each such consent order may include provisions regarding contribution protection, site access, cost recovery, processes for resolving disputes arising under such consent order, and any other matter.

(9) Other Persons undertaking response actions at sites may discontinue such response actions without being deemed by the Department to have acquired liability under M.G.L. c. 21E solely on the basis of having voluntarily conducted such response actions and without being deemed in noncompliance with future deadlines, provided, such persons:

- (a) notify the Department in writing of their intent to discontinue response actions at the site prior to the running of an applicable deadline and surrender or transfer the Tier I Permit they possess, if any, for the site;
- (b) submit a Status Report to the Department informing the Department of the status of the work conducted at the site at the time of providing the notice required by 310 CMR 40.0170(9); and
- (c) do not cause or contribute to the release at the disposal site or cause the release, or the disposal site, to become worse than it otherwise would have been had such response actions not been performed.

In the event an Other Person is conducting response actions at a disposal site pursuant to a Tier I or Tier II Classification, the Department will stop assessing such Other Person annual compliance assurance fees upon the Department's receipt of the notice and Status Report required by 310 CMR 40.0170(9)(a) and (b); provided, however, that payment of such fees shall be required for the billable year in which such notice and Status Report is received.

(10) No provision of 310 CMR 40.0000 shall be construed to imply that only one person may undertake response actions at a disposal site.

40.0171: Failure to Perform a Response Action

In the event that a RP, PRP or Other Person initiates a response action that is determined by the Department to be in noncompliance with M.G.L. c. 21E, 310 CMR 40.0000 or any other applicable requirement, or in the event that no person undertakes a necessary response action, the Department may take any or all of the following actions:

- (1) proceed to perform or arrange for the performance of the response action;
- (2) negotiate a consent order with the RP, PRP or Other Person for the completion of the response action;
- (3) issue an order under M.G.L. c. 21E, §§ 9 or 10, to the RP, PRP or Other Person to perform the response action; and
- (4) take any other action and seek any other relief authorized by M.G.L. c. 21E, 310 CMR 40.0000 or any other law.

40.0172: Technical, Financial and Legal Inabilities

- (1) General Requirements. Each RP and PRP, and any Other Person when such person is performing response actions under 310 CMR 40.0000, who has reason to believe that one or more necessary response actions are beyond his or her technical, financial or legal ability to perform shall promptly notify the Department in writing upon gaining knowledge of such inability. Each RP and PRP shall complete those response actions and portions of response actions which are within his or her technical, financial and legal ability to perform. Each RP and PRP shall make reasonable efforts to pursue civil and administrative procedures available to remedy each such technical, financial or legal inability.
- (2) No person may claim that any necessary response action is beyond his or her technical ability to perform unless he or she submits with such notice a Phase III Report prepared in accordance with 310 CMR 40.0850 which indicates that neither feasible Temporary Solutions, nor feasible Permanent Solutions, exist for the disposal site.
- (3) Upon obtaining reason to believe that one or more response actions are beyond his or her financial ability to perform, an RP or PRP shall undertake, to the extent that he or she has sufficient assets available, reasonable steps to:
 - (a) implement one or more Temporary Solutions on all or portions of the site that will, at a minimum, prevent the exposure of persons to oil and/or hazardous materials and otherwise reduce the risks of harm posed by the disposal site to health, safety, public welfare and the environment;
 - (b) implement one or more Temporary Solutions that will contain the further release or threat of release of oil and/or hazardous material from a structure or container; and
 - (c) implement Immediate Response Actions to abate or prevent Imminent Hazards and/or to address a Condition of Substantial Release Migration.
- (4) Content of Notice. The notice required by 310 CMR 40.0172(1) shall include all of the following:
 - (a) the name, location and Release Tracking Number(s) assigned by the Department to the site;
 - (b) the name, address and telephone number of the RP, PRP or Other Person providing the notice;
 - (c) a clear and concise statement of the facts which demonstrate such person's technical, financial or legal inability;
 - (d) a plan prepared by an LSP for implementing the measures required by 310 CMR 40.0172(3) to the extent such person has sufficient assets available; and
 - (e) a description, including but not limited to an implementation schedule, of the measures such person is taking, or intends to take, to remedy such inability.
- (5) Effect of Providing Notice. If the Department determines that:
 - (a) a response action is beyond a RP's or PRP's technical, financial or legal ability to perform; and
 - (b) such person has provided the notice required by 310 CMR 40.0172(4) in good faith, such inability shall be a defense to any civil administrative penalty that the Department seeks to assess for noncompliance arising out of such inability with any deadline or time period established pursuant to M.G.L. c. 21E, 310 CMR 40.0000 and/or any order, permit or approval issued thereunder, except a violation of any Notification Requirement, that commences after the date of the Department's receipt of such notice; provided, however, that this defense shall not be available for any violations that occur or continue after such inability ceases. The RP or PRP claiming any such inability shall have the burden of establishing such inability by a preponderance of the evidence in any such proceeding.
- (6) Submittal of the notice required by 310 CMR 40.0172(4) shall not relieve any person from any obligation for the cost of response actions related to the site for which that person is legally responsible or in any way affect any legal or equitable right of the Department to issue any future order with respect to the site that is the subject of the notice or any other claim, action, suit, cause of action or demand which the Department may have with respect to the site, except as provided by 310 CMR 40.0172(5).

40.0172: continued

(7) Effect of Failure to Provide Notice. M.G.L. c. 21E, § 5(e) provides a defense to an action by the Commonwealth for recovery of two to three times the full amount of the Department's Response Action Costs against a Responsible Party. A person who fails to provide the notice required by 310 CMR 40.0172, or provides such notice without a good faith basis, may be held liable under M.G.L. c. 21E, § 5(e), for up to three times the full amount of the Department's Response Action Costs incurred with respect to the site at issue, plus litigation costs and attorneys' fees, in an action for recovery of those Costs by the Commonwealth.

40.0173: Site Access Authorization

(1) After making reasonable efforts to obtain reasonable access to any site or other location to be investigated as a possible site not owned by him or her, a RP, PRP or Other Person who is unable to obtain such access may request, in writing, that the Department authorize him or her, or his or her employees, agents, representatives or contractors, to enter such site or location for the purpose of performing one or more necessary response actions. Each such request for authorization shall include all of the following information:

- (a) the identity of the person making the request and his or her relationship to the site or location;
- (b) the nature and location of the response action(s) that he or she intends to undertake, the anticipated duration of the response action(s) and the reason(s) such access is necessary to perform the response action(s);
- (c) the identity of the person or persons who own or operate the site or location to which the Department's authorization for access is sought;
- (d) the results of any and all attempts to obtain such access; and
- (e) certification that a copy of the request has been sent to each person or persons who own or operate such sites or locations.

(2) Any person who intends to submit such a request for authorization to the Department shall send a copy thereof to each person who owns and operates the site or location to which access is sought by certified mail, return receipt requested, and a statement informing such person that he or she may file a response thereto with the Department in accordance with 310 CMR 40.0173, prior to submitting the request to the Department. Each person to whom a copy of the request is sent may submit a response to the request, in writing, to the Department.

(3) The Department may take any of the following actions in response to a request for such authorization:

- (a) the Department may authorize any person, in writing, pursuant to its authority under M.G.L. c. 21E, § 8, to enter any site, vessel or location upon consent of the owner or operator thereof for the purpose of performing one or more response actions in accordance with any terms, conditions or requirements established by the Department;
- (b) the Department may issue to any person a Request for Information;
- (c) the Department may issue an order under M.G.L. c. 21E, §§ 9 or 10, requiring any person to perform one or more response actions;
- (d) the Department may seek and execute an administrative inspection warrant or criminal search warrant in accordance with applicable law;
- (e) the Department may take or arrange the performance of any necessary response action in accordance with M.G.L. c. 21E and 310 CMR 40.0000;
- (f) the Department may issue a Notice of Responsibility to any person who is a PRP; and
- (g) the Department may deny the request or take any other action authorized by M.G.L. c. 21E, 310 CMR 40.0000 or any other law.

(4) In addition to the actions set forth in 310 CMR 40.0173(3), the Department may designate as its authorized representative for the purpose of access one or more RPs, PRPs or Other Persons, including employees, agents and contractors of such parties. The Department may exercise the authority contained in M.G.L. c. 21E, § 8, to obtain access for its designated representative. An RP, PRP or Other Person may only be designated as the Department's authorized representative if such person has agreed to serve as the Department's designated representative and to indemnify the Department to the Department's satisfaction for any injuries or damages that occur as a result of the activities undertaken by such person pursuant to such designation.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0173: continued

(5) The Department's decision in response to a request for Site Access Authorization under 310 CMR 40.0173 shall not be subject to M.G.L. c. 30A, or any other law, governing adjudicatory proceedings.

(6) The authority in 310 CMR 40.0173 is intended to be exercised at the Department's discretion. No provision in 310 CMR 40.0173 shall be construed to create in any person a right to the Department's authorization for access or to create any duty of the Department to obtain access to any site or other location for any person.

40.0180: Downgradient Property Status

310 CMR 40.0181 through 40.0189, cited collectively as 310 CMR 40.0180, sets forth the requirements and procedures for asserting and maintaining a Downgradient Property Status.

40.0181: Purpose

The purposes for enabling an owner or operator of property which comprises a portion of a disposal site and which is located downgradient of a property which is the source of the release of oil and/or hazardous material located thereon to establish Downgradient Property Status are:

- (1) to establish requirements, procedures and deadlines applicable to properties downgradient from a release of oil and/or hazardous material which comprise a portion of a disposal site;
- (2) to limit the assessment of annual compliance assurance fees under 310 CMR 4.00 while the activities required by 310 CMR 40.0185 are on-going; and
- (3) to facilitate access to properties which comprise a portion of a disposal site by persons undertaking response actions.

40.0182: Applicability

Any person who is liable or potentially liable under M.G.L. c. 21E, § 5(a)(1) or (2) for certain releases of oil and/or hazardous material on Downgradient Property, and who satisfies the requirements and procedures set forth in 310 CMR 40.0183 or 40.0187, may submit to the Department a Downgradient Property Status Submittal in accordance with 310 CMR 40.0183(3), or a Modification of a Downgradient Property Status Submittal in accordance with 310 CMR 40.0187(2).

40.0183: General Requirements and Procedures for Asserting Downgradient Property Status

- (1) General. Any person who meets the requirements of, and complies with the procedures in, 310 CMR 40.0183 and 40.0185 shall have Downgradient Property Status for purposes of 310 CMR 40.0184, unless and until such Status is terminated in accordance with 310 CMR 40.0186.
- (2) Criteria. Any present or past owner or operator of a downgradient or downstream property where a release of oil and/or hazardous material has come to be located may provide a Downgradient Property Status Submittal to the Department if all of the following are met:
 - (a) such person has notified the Department of the release if notification is required by 310 CMR 40.0300;
 - (b) the source of the release of oil and/or hazardous material at the downgradient or downstream property is or was located on one or more upgradient or upstream location(s) and oil and/or hazardous material from that location(s) has come to be located at the downgradient or downstream property as a result of migration of the oil and/or hazardous material in or on groundwater or surface water, regardless of whether the upgradient or upstream location(s) which is the source has been identified as the source of the release(s);
 - (c) no act of such person has contributed to the release described in 310 CMR 40.0183(2)(b), or caused such release to become worse than it otherwise would have been;

40.0183: continued

- (d) such person is not, and was not at any time, affiliated with any other person:
 - 1. who owned or operated the property from which the release described in 310 CMR 40.0183(2)(b) originated, or caused such release; and
 - 2. who is potentially liable under M.G.L. c. 21E for the disposal site through any direct or indirect contractual, corporate or financial relationship other than:
 - a. that established by any instrument creating such person's interest in the downgradient property; or
 - b. that established by an instrument wholly unrelated to the disposal site and which would not otherwise render such person potentially liable as a result of the relationship; and
- (e) to the extent such person has performed response actions at the disposal site, those response actions have been performed in compliance with the requirements and procedures in M.G.L. c. 21E and 310 CMR 40.0000.

(3) Content of Submittal. A Downgradient Property Status Submittal shall consist of the following:

- (a) a completed transmittal form established by the Department for such purposes;
- (b) a Downgradient Property Status Opinion prepared in accordance with 310 CMR 40.0015 and 310 CMR 40.0183(4);
- (c) the certification required by 310 CMR 40.0009; and
- (d) the fee, if applicable, required by 310 CMR 4.03: *Annual Compliance Assurance Fee*.

(4) Performance Standard for a Downgradient Property Status Opinion. A Downgradient Property Status Opinion shall be based on investigative and assessment actions of sufficient scope and level of effort to conclude that the criteria in 310 CMR 40.0183(2)(b) have been met. The Opinion shall include an explanation and documentation of the technical basis for the conclusions stated therein, and be based on the following:

- (a) an evaluation of the boundaries of the property which is the subject of the Opinion;
- (b) an evaluation of the disposal site boundaries, to the extent they have been defined by assessments conducted to date;
- (c) an evaluation of the releases of oil and/or hazardous material at the disposal site, to the extent that such releases have been identified;
- (d) an evaluation of the relevant hydrogeologic conditions, including, at a minimum, groundwater flow direction and local transport characteristics based on field data, when migration of oil and/or hazardous material has occurred via groundwater;
- (e) a plan showing the downgradient or downstream property and the disposal site boundaries (to the extent known), the locations of any known or suspected source(s) of oil and/or hazardous material(s) release(s) that have come to be located at the downgradient or downstream property, the direction of groundwater flow and/or surface water flow (as appropriate), the locations where samples were collected for analysis, and the results of the analyses; and
- (f) an evaluation of the need to conduct an Immediate Response Action, as defined in 310 CMR 40.0412.

(5) Notice to Abutters and PRPs. Prior to, or concurrent with, providing the Downgradient Property Status Submittal to the Department, the person providing such Submittal shall provide a copy of the Downgradient Property Status Opinion to each of the following persons:

- (a) the owners and operators of abutting property upgradient and downgradient from the property which is the subject of the Submittal and, where the abutting upgradient and/or downgradient property is a public way, the owners and operators of the next upgradient and/or downgradient property; and
- (b) the owners and operators of any property which is a known or suspected source of the release.

(6) Public Involvement. Public Involvement Activities shall be conducted in accordance with 310 CMR 40.1400. Public Involvement Activities required for Downgradient Property Status specifically include 310 CMR 40.1403(3)(g).

40.0184: Effect of Providing a Downgradient Property Status Submittal or a Modification of a Downgradient Property Status Submittal

(1) Any person who establishes and maintains Downgradient Property Status in accordance with the requirements and procedures in 310 CMR 40.0180 shall not be subject to the subsequent deadlines for Tier Classification and Comprehensive Response Actions in 310 CMR 40.0500, unless and until such Status is terminated in accordance with 310 CMR 40.0186.

(2) Upon receipt of a Downgradient Property Status Submittal or a Modification of a Downgradient Property Status Submittal filed in accordance with 310 CMR 40.0183 or 40.0187, respectively, the Department shall suspend the assessment of Tier I or Tier II annual compliance assurance fees, if applicable, on the person making such Submittal; provided, however, that payment of such fees shall be required for the billable year in which the Submittal is provided to the Department, except as provided in 310 CMR 4.03: *Annual Compliance Assurance Fee*.

(3) The provision of a Downgradient Property Status Submittal, or a Modification of a Downgradient Property Status Submittal, to the Department shall not relieve any person from any prospective obligation to provide notification in accordance with 310 CMR 40.0300 or to perform Immediate Response Actions required by 310 CMR 40.0410. Any person providing a Downgradient Property Status Submittal, or a Modification of a Downgradient Property Status Submittal, to the Department may perform Release Abatement Measures in accordance with 310 CMR 40.0440, Utility-related Abatement Measures in accordance with 310 CMR 40.0460, and/or a Phase I - Initial Site Investigation Activities in accordance with 310 CMR 40.0480.

(4) The provision of a Downgradient Property Status Submittal, or a Modification of a Downgradient Property Status Submittal, to the Department shall not relieve any person from any obligation for the cost of response actions related to the disposal site for which that person is legally responsible or in any way affect any legal or equitable right of the Department to issue any future order with respect to the disposal site that is the subject of the Submittal or any other claim, action, suit, cause of action or demand which the Department may have with respect to the disposal site, except as provided by 310 CMR 40.0184(1).

(5) No provision in 310 CMR 40.0180 shall be construed to relieve any person from any obligation to conduct response actions in response to any release of oil and/or hazardous material which does not meet the criteria in 310 CMR 40.0183(2)(b).

(6) The provision of a Downgradient Property Status Submittal, or a Modification of a Downgradient Property Status Submittal, to the Department pursuant to 310 CMR 40.0183 or 310 CMR 40.0187, respectively, shall not be construed as, or operate as, barring, diminishing, or in any way affecting any legal or equitable right, defense, claim, demand or cause of action that the person providing such Submittal may have under applicable law.

40.0185: Maintenance of Downgradient Property Status

(1) Each person providing a Downgradient Property Status Submittal, or a Modification of a Downgradient Property Status Submittal, to the Department shall meet the following requirements to maintain such Downgradient Property Status:

- (a) no act of such person causes the release, contributes to the release, or causes such release to become worse than it otherwise would be;
- (b) to the extent that such person has ownership or possession of the downgradient property, such person provides reasonable access to the downgradient property which is the subject of the Downgradient Property Status Submittal to employees, agents, and contractors of the Department and to other persons conducting response actions;
- (c) such person undertakes reasonable steps to prevent the exposure of human and environmental receptors to oil and/or hazardous material at the downgradient property which is the subject of the Submittal;

40.0185: continued

- (d) if such person elects to undertake response actions after providing the Submittal to the Department, conducts such response actions in compliance with M.G.L. c. 21E and 310 CMR 40.0000;
- (e) such person makes reasonable efforts to identify persons who may be responsible or potentially responsible for the release and provides the notice required by 310 CMR 40.0183(5) to such persons; and
- (f) such person avoids engaging in any activity which could prevent or impede the implementation of reasonably likely response actions in the future.

(2) Based upon site-specific circumstances, the Department may require a person who provides a Downgradient Property Status Submittal, or a Modification of a Downgradient Property Status Submittal, to the Department to develop and implement a management plan for the property in order to prevent, eliminate, or minimize danger to health, safety, public welfare and/or the environment.

40.0186: Termination of Downgradient Property Status

- (1) Downgradient Property Status shall terminate if:
 - (a) information indicates that the criteria in 310 CMR 40.0183(2) are no longer being met;
 - (b) the person providing the Downgradient Property Status Submittal fails to meet the requirements in 310 CMR 40.0185 for maintaining such Status;
 - (c) the person providing the Downgradient Property Status Submittal notifies the Department in writing that such person intends to perform Comprehensive Response Actions in accordance with 310 CMR 40.0800;
 - (d) the Department establishes Interim Deadlines in accordance with 310 CMR 40.0167 for the person providing the Downgradient Property Status Submittal; or
 - (e) the Downgradient Property Status Submittal or Modification of a Downgradient Property Status Submittal is modified to terminate Downgradient Property Status.
- (2) Any person having Downgradient Property Status who gains knowledge of information which indicates that the criteria in 310 CMR 40.0183(2) are no longer being met shall provide written notice thereof to the Department within 60 days of gaining such knowledge.
- (3) Any person having Downgradient Property Status may terminate such Status by providing the Department with written notice of his or her intent to terminate such Status. The termination shall become effective upon the Department's receipt of such notice.

40.0187: Modification of a Downgradient Property Status Submittal

- (1) General. Any present or past owner or operator of a downgradient property with Downgradient Property Status may provide a Modification of a Downgradient Property Status Submittal to the Department if all of the following are met:
 - (a) the criteria specified in 310 CMR 40.0183(2);
 - (b) if a Modification of a Downgradient Property Status Submittal has not previously been submitted to the Department, the person seeking such Status obtains the written consent thereto of the person who previously submitted the Downgradient Property Status Submittal for the subject property; and
 - (c) if a Modification of a Downgradient Property Status Submittal has previously been submitted to the Department, the person seeking such Status obtains the written consent thereto of the person who most recently submitted a Modification of a Downgradient Property Status Submittal for the subject property.
- (2) Content of Submittal. A Modification of a Downgradient Property Status Submittal shall consist of the following:
 - (a) a completed transmittal form established by the Department for such purposes;
 - (b) the certification required by 310 CMR 40.0009 by the person making such Submittal;
 - (c) the written consent required by 310 CMR 40.0187(1)(b) or (c);

40.0187: continued

- (d) certification by the person whose consent is required by 310 CMR 40.0187(1)(b) or (c) that the Downgradient Property Status has been maintained in accordance with 310 CMR 40.0185;
- (e) certification by the person making such Submittal that he or she meets the criteria in 310 CMR 40.0183(2)(a),(c),(d), and (e); and
- (f) certification by the person making such Submittal that he or she has no information contrary to the conclusion stated in 310 CMR 40.0183(2)(b).

(3) Effect of Providing a Modification of a Downgradient Property Status Submittal. Any person who submits a Modification of a Downgradient Property Status Submittal to the Department in accordance with 310 CMR 40.0187 shall have Downgradient Property Status in accordance with 310 CMR 40.0184 unless and until such Status is terminated in accordance with 310 CMR 40.0186.

(4) Notice to Abutters and PRPs. Each person submitting a Modification of a Downgradient Property Status Submittal to the Department shall concurrently provide a copy of such Submittal to the persons described in 310 CMR 40.0183(5).

(5) Public Involvement. Each person submitting a Modification of a Downgradient Property Status Submittal to the Department shall conduct Public Involvement Activities in accordance with 310 CMR 40.1400. Public Involvement Activities required for a Modification of a Downgradient Property Status Submittal specifically include 310 CMR 40.1403(3)(g).

40.0190: General Requirements for Conducting Response Actions

(1) For each release or threat of release of oil and/or hazardous materials at a disposal site, one or more Permanent Solutions to the extent feasible shall be implemented by the applicable deadline to achieve a level of No Significant Risk. No disposal site shall be deemed to have had all the necessary and required response actions taken for such site unless and until a level of No Significant Risk exists or has been achieved in compliance with M.G.L. c. 21E and 310 CMR 40.0000.

(2) Permanent Solutions shall be implemented if:

- (a) a level of No Significant Risk does not yet exist at the disposal site;
- (b) Permanent Solutions are feasible; and
- (c) immediate implementation of one or more Permanent Solutions would be more cost-effective than phased implementation of Temporary Solutions and Permanent Solutions.

(3) At each disposal site, unless a level of No Significant Risk already exists or one or more Permanent Solutions is feasible and immediate implementation of such Permanent Solutions would be more cost-effective than phased implementation of Temporary Solutions and Permanent Solutions, one or more Temporary Solutions shall be implemented to the extent feasible by the applicable deadline. Such solutions shall eliminate any substantial hazard to health, safety, public welfare or the environment which is presented by the disposal site or by any oil and/or hazardous materials at or from the disposal site in the environment.

(4) If appropriate, Permanent Solutions or Temporary Solutions may be implemented on portions of a disposal site.

(5) Where feasible, implementation of a Permanent Solution shall include a measure or measures designed to reduce to the extent possible the level of oil and/or hazardous materials in the environment to background.

(6) In determining whether a Permanent Solution will achieve a level of No Significant Risk during any foreseeable period of time, the criteria and standards set forth in 310 CMR 40.0900 and any current or reasonably foreseeable uses of the site and the surrounding environment that may be affected by oil and/or hazardous materials at the site or in the surrounding environment shall be considered.

40.0190: continued

(7) RPs, PRPs and Other Persons shall employ or engage persons having the appropriate training, and as required, currently valid licenses or certifications to conduct a response action at a disposal site.

40.0191: Response Action Performance Standard (RAPS)

(1) The Response Action Performance Standard (RAPS) is the level of diligence reasonably necessary to obtain the quantity and quality of information adequate to assess a site and evaluate remedial action alternatives, and to design and implement specific remedial actions at a disposal site to achieve a level of No Significant Risk for any foreseeable period of time and, where feasible, to reduce to the extent possible the level of oil and/or hazardous materials in the environment to background levels.

(2) RAPS shall be employed during the performance of all response actions conducted pursuant to 310 CMR 40.0000, and shall include, without limitation, the following:

- (a) consideration of relevant policies and guidelines issued by the Department and EPA;
- (b) use of accurate and up-to-date methods, standards and practices, equipment and technologies which are appropriate, available and generally accepted by the professional and trade communities conducting response actions in accordance with M.G.L. c. 21E and 310 CMR 40.0000 under similar circumstances; and
- (c) investigative practices which are scientifically defensible, and of a level of precision and accuracy commensurate with the intended use of the results of such investigations.

(3) The application of RAPS shall be protective of health, safety, public welfare and the environment and shall include, without limitation, in the context of meeting the requirements of this Contingency Plan, consideration of the following:

- (a) technologies which reuse, recycle, destroy, detoxify or treat oil and/or hazardous materials, where feasible, to minimize the need for long-term management of contamination at or from a disposal site;
- (b) containment measures as feasible Permanent Solutions only where reuse, recycling, destruction, detoxification and treatment are not feasible;
- (c) remedial actions to reduce the overall mass and volume of oil and/or hazardous material at a disposal site to the extent feasible, regardless of whether it is feasible to achieve one or more Temporary Solutions and/or Permanent Solutions or whether it is feasible to achieve background for the entire disposal site and not include the dilution of contaminated media with uncontaminated media;
- (d) response actions to restore groundwater, where feasible, to the applicable standards of quality within a reasonable period of time to protect the existing and potential uses of such resources; and
- (e) eliminating or reducing, to the extent practicable and consistent with response action requirements and objectives, total energy use, air pollutant emissions, greenhouse gases, water use, materials consumption, and ecosystem and water resources impacts, resulting from the performance of response actions through energy efficiency, renewable energy use, materials management, waste reduction, land management, and ecosystem protection.

40.0193: Technical Justification

(1) A Licensed Site Professional may provide technical justification for forgoing any specific activity required by 310 CMR 40.0000, related to Initial Site Investigation Activities performed in accordance with 310 CMR 40.0405(1), Phase I Initial Site Investigation Activities performed in accordance with 310 CMR 40.0480 through 40.0483, Phase II Comprehensive Site Investigation Activities performed in accordance with 310 CMR 40.0830, and Phase III Identification and Evaluation of Response Action Alternatives performed in accordance with 310 CMR 40.0850 through 40.0860, if in his or her professional judgment any particular requirement is unnecessary or inappropriate based upon the conditions and characteristics of a disposal site. The LSP shall employ RAPS in determining whether any such activity is unnecessary or inappropriate.

40.0193: continued

(2) When forgoing any particular activity in accordance with 310 CMR 40.0193(1), the LSP shall identify such activity, and shall set forth the basis for such technical justification, in the pertinent submittal.

SUBPART C: NOTIFICATION OF RELEASES
AND THREATS OF RELEASE OF OIL AND HAZARDOUS MATERIAL;
IDENTIFICATION AND LISTING OF OIL AND HAZARDOUS MATERIAL

40.0300: Notification of Releases and Threats of Release of Oil and Hazardous Material; Identification and Listing of Oil and Hazardous Material

310 CMR 40.0301 through 40.0399, cited collectively as 310 CMR 40.0300, contain requirements and procedures for notifying the Department of releases and threats of release of oil and/or hazardous material.

40.0301: Purpose and Scope

(1) The purpose of 310 CMR 40.0300 is to identify oil and hazardous material which are subject to the provisions of this Contingency Plan, to identify those releases and threats of release of such oil and hazardous material that require notification to the Department, to set forth the time periods and procedures for notification, and to set forth provisions to allow limited removal of such oil and hazardous material under certain circumstances.

(2) Nothing in 310 CMR 40.0300 shall relieve any person described in M.G.L. c. 21E, § 5(a)(1) through (5) from any liability which that person would otherwise possess in connection with a release or threat of release of any oil or hazardous material that is listed at 310 CMR 40.1600, identified by characteristic in 310 CMR 40.0347 or otherwise meets either the definition of oil or the definition of hazardous material, which are set forth in 310 CMR 40.0006.

(3) The Department may take response actions, seek any reimbursement or compensation to which the Commonwealth is entitled, and/or pursue enforcement actions in connection with any release or threat of release of oil and/or hazardous material, provided, however, that the Department shall not seek penalties for failure to provide notification to the Department of any release or threat of release:

- (a) unless notification is required pursuant to the provisions of 310 CMR 40.0300, or
- (b) for which notification is exempted pursuant to the provisions of 310 CMR 40.0317.

40.0302: Applicability

(1) The provisions of 310 CMR 40.0300 shall apply to all releases and threats of release of oil and/or hazardous material to the environment, except as set forth in 310 CMR 40.0302(2).

(2) The notification requirements set forth in 310 CMR 40.0300 shall only apply to:
(a) releases and threats of release that commence on or after October 1, 1993; and
(b) releases and threats of release of which knowledge is possessed or obtained on or after October 1, 1993, by any person listed at 310 CMR 40.0331.

Notwithstanding any other provision hereof, the applicable "2 Hour", "72 Hour" and "120 Day" notification time periods which arise solely as a result of 310 CMR 40.0300 shall commence no earlier than October 1, 1993.

40.0303: Role of Licensed Site Professional

Persons required to provide oral and/or written notification to the Department of releases and threats of release of oil and/or hazardous material to the environment pursuant to the provisions of 310 CMR 40.0300 may wish to retain the services of competent individuals, time permitting, or as circumstances require, to investigate, evaluate, and/or otherwise facilitate the fulfillment of that requirement, but shall not be obligated to use a Licensed Site Professional for that purpose.

40.0310: Releases and Threats of Release Which Require Notification

40.0311: Releases Which Require Notification Within Two Hours

Except as provided in 310 CMR 40.0317 or 40.0332(1) or (7), persons required to notify under 310 CMR 40.0331 shall notify the Department as soon as possible but not more than two hours after obtaining knowledge that a release meets one or more of the following sets of criteria:

(1) a sudden, continuous or intermittent release to the environment of any hazardous material that is listed at 310 CMR 40.1600 or that exhibits one or more of the characteristics described in 310 CMR 40.0347, when:

- (a) the quantity of the release is equal to or greater than the applicable Reportable Quantity specified at 310 CMR 40.0352 or 40.1600; and
- (b) it is likely that the release occurred within any period of 24 consecutive hours or less;

(2) a sudden, continuous or intermittent release to the environment of any hazardous material that is listed at 310 CMR 40.1600 or that exhibits one or more of the characteristics described in 310 CMR 40.0347, when:

- (a) the quantity of the release is unknown;
- (b) it is likely that the quantity of the release is equal to or greater than the applicable Reportable Quantity specified at 310 CMR 40.0352 or 40.1600; and
- (c) it is likely that the release occurred within any period of 24 consecutive hours or less;

(3) a sudden, continuous or intermittent release to the environment of oil that is listed at 310 CMR 40.1600 when:

- (a) the quantity of the release is equal to or greater than the applicable Reportable Quantity specified at 310 CMR 40.0351 or 40.1600; and
- (b) it is likely that the release occurred within any period of 24 consecutive hours or less;

(4) a sudden, continuous or intermittent release to the environment of oil that is listed at 310 CMR 40.1600, when:

- (a) the quantity of the release is unknown;
- (b) it is likely that the quantity of the release is equal to or greater than the applicable Reportable Quantity specified at 310 CMR 40.1600; and
- (c) it is likely that the release occurred within any period of 24 consecutive hours or less;

(5) a sudden, continuous or intermittent release to the environment of any quantity of oil or waste oil that is listed at 310 CMR 40.1600 that results in the appearance of a sheen on surface water;

(6) a release to the environment indicated by the measurement of oil and/or hazardous material in a private drinking water supply well at concentrations equal to or greater than a Category RCGW-1 Reportable Concentration, as described in 310 CMR 40.0360 through 40.0369 and listed at 310 CMR 40.1600;

(7) any release of any oil and/or hazardous material, in any quantity or concentration, that poses or could pose an Imminent Hazard, as described in 310 CMR 40.0321 and 40.0950;

(8) any release of oil and/or hazardous material described in 310 CMR 40.0311(1) through (4) or 40.0311(7) that is indirectly discharged to the environment by means of discharge to a stormwater drainage system;

(9) any release of oil and/or hazardous material described in 310 CMR 40.0311(7) that is indirectly discharged into the environment by means of discharge to a sanitary sewerage system.

40.0312: Threats of Release Which Require Notification Within Two Hours

Except as provided in 310 CMR 40.0317 or 40.0332(1) or (7), persons required to notify under 310 CMR 40.0331 shall notify the Department as soon as possible but not more than two hours after obtaining knowledge that a threat of release meets one or more of the following sets of criteria:

40.0312: continued

- (1) a threat of release to the environment of oil and/or hazardous material that is listed at 310 CMR 40.1600 or that exhibits one or more of the characteristics described in 310 CMR 40.0347, when:
 - (a) it is likely that the release threatened is about to occur; and
 - (b) it is likely that the quantity of the release, if it occurred, would be equal to or greater than the applicable Reportable Quantity specified at 310 CMR 40.0351, 40.0352 or 40.1600; or
- (2) a threat of release to the environment of oil and/or hazardous material that is listed at 310 CMR 40.1600 or that exhibits one or more of the characteristics described in 310 CMR 40.0347, which poses or could pose an Imminent Hazard, as described in 310 CMR 40.0321, irrespective of the quantity likely to be released.

40.0313: Releases Which Require Notification Within 72 Hours

Except as provided in 310 CMR 40.0317 or 40.0332(7), persons required to notify under 310 CMR 40.0331 shall notify the Department not more than 72 hours after obtaining knowledge that a release of oil and/or hazardous material(s) meets one or more of the following sets of criteria:

- (1) a release to the environment indicated by the presence of Nonaqueous Phase Liquid (NAPL) in a groundwater monitoring well, excavation, or subsurface structure in which NAPL has come to be located at a measured thickness equal to or greater than ½ inch (0.04 feet) at a location greater than 30 feet from School, Daycare or Child Care Center or occupied Residential Dwelling;
- (2) a release to the environment indicated by the presence of oil and/or hazardous material within ten feet of the exterior wall of an underground storage tank, as established by measurement of equal to or greater than 100 parts-per-million (ppm) by volume of total organic vapors "as benzene" in the headspace of a soil or groundwater sample using a headspace screening method, and where such sample was obtained:
 - (a) greater than two feet below the ground surface; and
 - (b) as part of a closure assessment required pursuant to 527 CMR 9.00: *Tanks and Containers* and 40 CFR Parts 280 and 281, or in connection with the removal or closure of an underground storage tank otherwise regulated by M.G.L. c. 148 or 527 CMR 9.00: *Tanks and Containers*;
- (3) a release to the environment indicated by the measurement of oil and/or hazardous material in the groundwater at concentrations equal to or greater than a Category RCGW-1 Reportable Concentration, as described in 310 CMR 40.0360 through 40.0369 and listed at 310 CMR 40.1600, within:
 - (a) the Zone I of a public water supply well; or
 - (b) 500 feet of a private water supply well; or
- (4) a Condition of Substantial Release Migration, where such condition is associated with a release for which notification otherwise is or has at any time in the past been required in accordance with 310 CMR 40.0300. A Condition of Substantial Release Migration means a condition at a disposal site that includes any of the following:
 - (a) releases that have resulted in the discharge of separate-phase oil and/or separate-phase hazardous material to surface waters, buildings, or underground utilities or conduits;
 - (b) releases to the ground surface or to the vadose zone that, if not promptly removed or contained, are likely to significantly impact the underlying groundwater, or significantly exacerbate an existing condition of groundwater pollution;
 - (c) releases to the groundwater that have migrated or are expected to migrate more than 200 feet per year;
 - (d) releases to the groundwater that have been or are within one year likely to be detected in a public or private water supply well;
 - (e) releases to the groundwater that have been or are within one year likely to be detected in a surface water body, wetland, or public water supply reservoir; or

40.0313: continued

(f) releases to the groundwater or to the vadose zone that have resulted or have the potential to result in the discharge of vapors into a School, Daycare or Child Care Center or occupied Residential Dwelling. Conditions that indicate a potential discharge of vapors into a School, Daycare or Child Care Center or occupied Residential Dwelling include, but are not limited to:

1. soil or soil gas impacted with one or more volatile organic compounds within six feet, measured horizontally from the wall of the structure, and within ten feet measured vertically from the basement floor or foundation at concentrations that are likely to discharge vapors into the structure;
2. one or more volatile organic compound in the groundwater exceed the applicable Groundwater Category GW-2 Standard within 30 feet of the structure, and the average annual depth to groundwater in that area is 15 feet or less;
3. volatile light non-aqueous phase liquid (LNAPL) is present in a groundwater monitoring well, excavation, or subsurface depression within 30 feet of the structure at a measured thickness equal to or greater than $\frac{1}{8}$ inch (0.01 feet); or
4. evidence of vapor migration along preferential pathways at a location that is likely to result in the discharge of vapors into the structure.

40.0314: Threats of Release Which Require Notification Within 72 Hours

Except as provided in 310 CMR 40.0317, persons required to notify under 310 CMR 40.0331 shall notify the Department not more than 72 hours after obtaining knowledge of a threat of release of oil and/or hazardous material to the environment from an Underground Storage Tank, as established by a test conducted in conformance with the methodology prescribed for that test which indicates there is a substantial likelihood of a leak equal to or greater than 0.05 gallons per hour:

- (1) in a single walled Underground Storage Tank;
- (2) in the inner wall of a double-walled Underground Storage Tank; or
- (3) in the outer wall of a double-walled Underground Storage Tank.

40.0315: Releases Which Require Notification Within 120 Days

Except as provided in 310 CMR 40.0317 or 40.0318, persons required to notify under 310 CMR 40.0331 shall notify the Department not more than 120 days after obtaining knowledge that a release meets one or more of the following sets of criteria:

- (1) a release to the environment indicated by the measurement of one or more hazardous materials in soil or groundwater in an amount equal to or greater than the applicable Reportable Concentration described in 310 CMR 40.0360 through 40.0369 and listed at 310 CMR 40.1600;
- (2) a release to the environment indicated by the measurement of oil and/or waste oil in soil in an amount equal to or greater than the applicable Reportable Concentration described in 310 CMR 40.0360 through 40.0369 and listed at 40.1600, where the total contiguous volume of the oil and/or waste oil contaminated soil is equal to or greater than two cubic yards;
- (3) a release to the environment indicated by the measurement of oil in groundwater in an amount equal to or greater than the applicable Reportable Concentration described in 310 CMR 40.0360 through 40.0369 and listed at 310 CMR 40.01600; or
- (4) a release to the environment indicated by the presence of a subsurface Nonaqueous Phase Liquid (NAPL) in a groundwater monitoring well, excavation, or other subsurface structure in which NAPL has come to be located at a measured thickness equal to or greater than $\frac{1}{8}$ inch (0.01 feet) and less than $\frac{1}{2}$ inch (0.04 feet).

40.0317: Releases and Threats of Release Which Do Not Require Notification

Notwithstanding the provisions of 310 CMR 40.0311 through 40.0315, the following releases and threats of release of oil and/or hazardous material are exempt from the notification requirements set forth in 310 CMR 40.0300:

- (1) releases of oil that occur during normal handling and transfer operations at an oil facility, if the releases are completely captured by a properly functioning oil/water separator; provided, however, that releases of oil which exceed the capacity of the oil/water separator, and that releases of oil from the oil/water separator, itself, in excess of its discharge permit limits, shall be subject to the notification requirements set forth in 310 CMR 40.0300;
- (2) releases or threats of release of gasoline or diesel fuel that result from the rupture of the fuel tank of a passenger vehicle as a result of an accident involving that vehicle;
- (3) releases of oil and/or hazardous material that are discharged or emitted from an outfall, stack or other point source, or as fugitive emissions, any of which are regulated under and have received a valid permit, license, or approval, or which are operating under a valid registration, order or guideline issued under a federal or state statute or regulation, unless the release:
 - (a) exceeds the amount allowed by the permit, license, approval, registration, order or guideline; and
 - (b) represents an Imminent Hazard to health, safety, public welfare or the environment. This provision shall not relieve any person from any other duty to notify which may exist under any other statute or regulation, nor shall it in any way limit the authority of any other agency, political subdivision or authority of the federal or state government or of any office or division of the Department to enforce or otherwise carry out the duties assigned to it by law;
- (4) releases of radionuclides regulated by EPA under 42 USC § 9602, 33 USC §§ 1321 and 1361, and 40 CFR Part 302 *et seq.*;
- (5) releases of forbidden, Class A or Class B explosives, as defined in 49 CFR §§ 173.50, 173.53 and 173.88 respectively, if the explosives are under military transport or supervision and the U.S. Army Explosive Ordnance responds to the release;
- (6) releases of methane, propane, and other component compounds associated with a release of natural gas, natural gas liquids and liquified natural gas;
- (7) sheens:
 - (a) resulting from emissions or discharges from outboard motors in recreational use; or
 - (b) associated with normal surface water runoff from roadways, driveways, and parking lots;
- (8) releases of hazardous material indicated by residues in the environment:
 - (a) emanating from a point of original application of lead-based paint;
 - (b) resulting from emissions from the exhaust of an engine; or
 - (c) resulting from the application of pesticides in a manner consistent with their labelling;
- (9) releases of oil and/or hazardous material related to coal, coal ash, or wood ash, excluding wood ash resulting from the combustion of lumber or wood products that have been treated with chemical preservatives;
- (10) releases of oil and/or hazardous material resulting from the land application, reuse, or disposal of wastewater residuals and/or dredged spoils conducted in accordance with an approval, permit or certification issued by the Department under the authority of 310 CMR 32.00: *Land Application of Sludge and Septage*, 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth*, M.G.L. c. 21, §§ 26 through 53, M.G.L. c. 111, § 17, M.G.L. c. 83, § 6 and 7 and c. 21A, § 14 and any regulations promulgated thereunder;
- (11) releases of oil and/or hazardous material in groundwater detected by sampling conducted by Public Water Supply owners or operators under 310 CMR 22.00: *Drinking Water* as indicated by the presence of oil and/or hazardous material in a public water supply source;

40.0317: continued

- (12) releases of oil and/or hazardous material resulting or emanating from:
 - (a) the asphalt binder in bituminous pavement;
 - (b) piers, pilings and building foundation structures;
 - (c) landscaping timbers in use;
 - (d) utility poles in use; or
 - (e) building materials that are in good repair and still serving their original intended use;

- (13) releases indicated solely by the presence of oil and/or hazardous material in soils that are treated, recycled, reused or disposed of at a facility licensed, permitted or approved by the Department, provided that:
 - (a) the soil has been excavated and transported from a disposal site in compliance with 310 CMR 40.0000; and
 - (b) the facility is operated in a manner consistent with the terms and conditions of its license, permit or approval;

- (14) releases of oil and/or hazardous material that require notification solely because an RP, PRP or Other Person obtains knowledge of media concentrations and/or site conditions that meet one or more of the sets of criteria set forth in 310 CMR 40.0311 through 40.0315, when such media concentration value(s) and/or knowledge of site conditions resulted from a sampling, analytical or observational error, as established by a preponderance of the evidence and/or as verified by additional sampling, analyses, and/or observation, within the applicable time period for notification;

- (15) releases of oil and/or hazardous material that require notification solely because an RP, PRP or Other Person obtains knowledge of soil concentrations equal to or greater than one or more applicable Reportable Concentrations, as specified in 310 CMR 40.0315, where a Limited Removal Action conducted under the provisions of 310 CMR 40.0318 has reduced soil concentrations of oil and/or hazardous material at the disposal site to an amount less than the Reportable Concentration(s), within the allowable time period for notification;

- (16) releases indicated by the presence of oil and/or hazardous material in concentrations or quantities which would otherwise meet one or more of the sets of criteria set forth in 310 CMR 40.0313 through 310 CMR 40.0315 at a disposal site where:
 - (a) a response action is being undertaken in compliance with the provisions of 310 CMR 40.0000 to address such release;
 - (b) a release notification was previously provided to the Department for the disposal site on which the release has been observed or documented; and
 - (c) such presence of oil and/or hazardous material is consistent with the types, nature, exposure potential and quantities of oil and/or hazardous material for which that notification was provided to the Department;

- (17) releases indicated by the presence of oil and/or hazardous material at disposal sites for which a determination or statement as specified in 310 CMR 40.0317(17)(a) through (f) has been provided, in concentrations that would otherwise meet one or more of the sets of criteria set forth in 310 CMR 40.0313 or 40.0315, unless the presence of such oil and/or hazardous material would negate or change such determinations or statements were that presence taken into account in the preparation thereof, or changes in activities, uses, and/or exposures at the disposal site require notification to the Department pursuant to the provisions of 310 CMR 40.0020. In this context, determinations or statements include:
 - (a) a disposal site where a Permanent Solution Statement has been submitted to the Department in compliance with the provisions of 310 CMR 40.1000;
 - (b) a disposal site where a Class A or Class B Response Action Outcome Statement has been submitted to the Department in compliance with the provisions of 310 CMR 40.1000;
 - (c) a disposal site where a No Further Action Letter has been submitted to the Department in compliance with the provisions of 310 CMR 40.0600;
 - (d) a disposal site where the Department has made a written determination that no further actions are required;

40.0317: continued

- (e) a disposal site where an LSP Evaluation Opinion has been submitted to the Department in compliance with 310 CMR 40.0600 stating either that the site is not a disposal site for which notification is required pursuant to 310 CMR 40.0300 and no further response actions are required or that completed response actions meet the requirements of a Response Action Outcome; or
 - (f) a disposal site where a Waiver Completion Statement has been submitted to the Department in compliance with the provisions of 310 CMR 40.537 and/or 40.0630.
- (18) threats of release indicated by the outcome of tank tests specified in 310 CMR 40.0314, where a tank test outcome has resulted from a testing error, as documented within the allowable time period for notification by an additional test conducted on identical and unrepaired underground storage tank system elements;
- (19) releases of oil and/or hazardous material to:
- (a) an underground utility vault if such releases are completely contained within the vault; or
 - (b) the interior of a building, provided such releases are completely contained within the building;
- (20) releases of chloroform in groundwater attributable to naturally-occurring ecological processes and/or leakage or discharges from a public water supply system;
- (21) releases of oil or waste oil of less than a Reportable Quantity that result in a sheen on a surface water, provided that:
- (a) federal officials receive notice of such release pursuant to the Federal Water Pollution Control Act as amended;
 - (b) a response occurs as directed by those federal officials and according to other federal, state or local requirements applicable to such a release and response;
 - (c) the sheen does not persist for more than 24 consecutive hours; and
 - (d) the sheen does not recur at the same location within any 30 day period; and
- (22) arsenic, beryllium or nickel in Boston Blue Clay or arsenic in an area documented by the U.S. Geological Survey or in other scientific literature as an area of elevated arsenic measured in soil or groundwater that
- (a) is consistently present in the environment at and in the vicinity of the sampling location;
 - (b) is solely attributable to natural geologic or ecologic conditions; and
 - (c) has not been mobilized or transferred to another environmental medium or increased in concentration in an environmental medium as a result of anthropogenic activities.
- (23) releases of propane, provided that such releases are managed according to the Massachusetts Division of Fire Services gas leak Emergency and Reporting Procedure in 527 CMR 6.00: *Liquefied Petroleum Gas Containers and Systems*.

40.0318: Limited Removal Actions

- (1) Limited Removal Actions may be undertaken by RPs, PRPs or Other Persons prior to notification to the Department of those "120 Day Notification" releases described in 310 CMR 40.0315.
- (2) Limited Removal Actions shall not be initiated or continued:
- (a) after obtaining knowledge that a release or threat of release requires notification under the "2 Hour" or "72 Hour" notification provisions of 310 CMR 40.0311 through 40.0314, whether or not notification has been made to the Department; or
 - (b) following notification to the Department by any person listed at 310 CMR 40.0331 of any release or threat of release of oil and/or hazardous material at the disposal site which requires notification under 310 CMR 40.0315.

40.0318: continued

- (3) RPs, PRPs or Other Persons who undertake Limited Removal Actions shall conform to the Response Action Performance Standard specified in 310 CMR 40.0191.
- (4) Limited Removal Actions shall be restricted to the excavation and off-site recycling, reuse, treatment, and/or disposal of not more than the following cumulative volumes of soil removed from a disposal site with measured concentrations of oil or hazardous material equal to or greater than an applicable Reportable Concentration:
 - (a) not more than 100 cubic yards of soil contaminated solely by a release of oil, oil blends containing fuel oil additives registered in accordance with the regulations at 40 CFR 79, or waste oil; and
 - (b) not more than 20 cubic yards of soil contaminated by a release of hazardous material or a mixture of oil or waste oil and hazardous material.
- (5) All excavation activities conducted by an RP, PRP or Other Person as a Limited Removal Action shall occur within 120 days of obtaining knowledge of a release described in 310 CMR 40.0315.
- (6) All contaminated soil generated as a result of a Limited Removal Action shall be stockpiled, stored, characterized, transported, and recycled, reused, treated, or disposed of as set forth in 310 CMR 40.0030.
- (7) Records documenting:
 - (a) the concentrations of oil and/or hazardous material in soil at the disposal site following a Limited Removal Action; and
 - (b) the chemical characterization and volume of soil removed from a disposal site as part of a Limited Removal Action, shall be maintained by the RP, PRP or Other Person undertaking the Limited Removal Action for a minimum of five years or for so long as is required under 310 CMR 40.0014, whichever is longer.
- (8) Limited Removal Actions conducted in compliance with the provisions of 310 CMR 40.0318 shall not require oversight by a Licensed Site Professional, except for Limited Removal Actions that involve the use of the Bill of Lading soil management process described in 310 CMR 40.0030.
- (9) In those cases where volumes of contaminated soil encountered unexpectedly exceed initial estimates and the volumetric excavation limits specified in 310 CMR 40.0318(4), persons required to notify under 310 CMR 30.0331 shall notify the Department of the release at the disposal site within the allowable time period for notification, and the person conducting the Limited Removal Action shall either:
 - (a) cease remedial actions; or
 - (b) continue removal actions at the disposal site as a Release Abatement Measure, as specified in 310 CMR 40.0443.

40.0320: Releases and Threats of Release That Pose Imminent Hazards

40.0321: Reporting of Releases and Threats of Release That Pose or Could Pose an Imminent Hazard

- (1) For the purpose of fulfilling the "Two Hour" release notification obligations of 310 CMR 40.0311(7), the following releases shall be deemed to pose an Imminent Hazard to health, safety, public welfare and/or the environment:
 - (a) a release to the environment which results in the presence of oil and/or hazardous material vapors within buildings, structures, or underground utility conduits at a concentration equal to or greater than 10% of the Lower Explosive Limit;
 - (b) a release to the environment of reactive or explosive hazardous material, as described in 310 CMR 40.0347, which threatens human health or safety;
 - (c) a release to a roadway that endangers public safety;
 - (d) a release to the environment of oil and/or hazardous material which poses a significant risk to human health when present for even a short period of time, as specified in 310 CMR 40.0950;

40.0321: continued

- (e) a release to the environment of oil and/or hazardous material which produces immediate or acute adverse impacts to freshwater or saltwater fish populations; or
- (f) a release to the environment which produces readily apparent effects to human health, including respiratory distress or dermal irritation.

(2) For the purpose of fulfilling the "Two Hour" release notification obligations of 310 CMR 40.0311(7), the following releases could pose an Imminent Hazard to human health:

- (a) a release to the environment indicated by the measurement of oil and/or hazardous material in a private drinking water supply well at a concentration equal to or greater than ten times the Category RCGW-1 Reportable Concentration, as described in 310 CMR 40.0360 through 40.0369 and listed at 310 CMR 40.1600; or
- (b) a release to the environment indicated by the measurement of concentrations of hazardous material, equal to or greater than any of the following concentrations at the ground surface or within a depth of twelve inches below the ground surface, at any location within 500 feet of a residential dwelling, school, playground, recreation area or park, unless access by children is controlled or prevented by means of bituminous pavement, concrete, fence, or other physical barrier

Hazardous Material	CAS number	Concentration (ug/g dry wt)
Arsenic (total)	7440382	40
Cadmium (total)	7440439	60
Chromium (VI) (or Total Chromium in the absence of CrVI data)	18540299	200
Cyanide (available)	57125	100
Mercury (total)	7439976	300
Methyl Mercury	22967926	10
PCB (total)	1336363	10

or

- (c) a release to the environment for which estimated long-term risk levels associated with current exposures are greater than ten times the Cumulative Receptor Risk Limits in 310 CMR 40.0993(10). Past exposures may be included in such evaluations to the extent that it is reasonable to quantify those exposures.

(3) For the purpose of fulfilling the notification obligations of 310 CMR 40.0312(2), threats of release which pose or could pose an Imminent Hazard to health, safety, public welfare and/or the environment shall consist of any threat of release where, if the release were to occur, it is likely that that release would meet any of the criteria described in 310 CMR 40.0321(1) or (2).

(4) Notwithstanding the provisions of 310 CMR 40.0321(2) and 40.0321(3), a person required to notify under 310 CMR 40.0331 may demonstrate to the Department by a preponderance of the evidence that release or site conditions specified in 310 CMR 40.0321(2) and/or (3) do not constitute an actual Imminent Hazard to human health, in conformance with the Imminent Hazard Evaluation process described in 310 CMR 40.0426, and in consideration of the site-specific factors and the risk assessment and risk management criteria contained in 310 CMR 40.0950. No such demonstration, however, shall relieve any person of the obligation to notify the Department of a release or threat of release under the provisions of 310 CMR 40.0311 or 40.0312.

(5) No provision contained in 310 CMR 40.0321 shall limit the Department's authority to determine that an Imminent Hazard exists at any site, consistent with the provisions of 310 CMR 40.0950, nor shall any such provision limit the Department's authority to undertake response actions, seek any reimbursement or compensation due to the Commonwealth, or pursue enforcement actions in accordance with any such determination.

40.0322: Response Actions to Prevent or Abate Imminent Hazards

- (1) An Immediate Response Action, as described in 310 CMR 40.0400, shall be taken to prevent, eliminate, or abate all Imminent Hazards.

40.0322: continued

- (2) Immediate Response Actions shall not be delayed or deferred at sites where continued inaction would likely result in the development of an Imminent Hazard condition.

40.0330: Notification Requirements and Procedures

40.0331: Who Shall Notify

- (1) The following persons shall notify the Department in accordance with 310 CMR 40.0300 of a release or threat of release of oil or hazardous material:

- (a) the owner or operator of a vessel or a site from or at which there is or has been a release or threat of release of oil and/or hazardous material;
- (b) any person who at the time of storage or disposal of any hazardous material owned or operated any site at or upon which such hazardous material was stored or disposed of and from which there is or has been a release or threat of release of hazardous material;
- (c) any person who by contract, agreement, or otherwise, directly or indirectly, arranged for the transport, disposal, storage or treatment of hazardous material to or in a site or vessel from or at which there is or has been a release or threat of release of hazardous material;
- (d) any person who, directly or indirectly, transported any hazardous material to transport, disposal, storage or treatment vessels or sites from or at which there is or has been a release or threat of release of such material;
- (e) any person who otherwise caused or is legally responsible for a release or threat of release of oil and/or hazardous material from a site or vessel;
- (f) any fiduciary who holds title to or possession of a site or vessel from or at which there is or has been a release or threat of release of oil and/or hazardous material;
- (g) any secured lender who holds title to or possession of a site or vessel from or at which there is or has been a release or threat of release of oil and/or hazardous material;
- (h) any agency of the Commonwealth or any public utility company that owns a right of way that is a site from or at which there is or has been a release or threat of release of oil and/or hazardous material; and
- (i) any person otherwise required to notify the Department of a release or threat of release pursuant to M.G.L. c. 21E.

- (2) If a release to the environment has occurred or a threat of release to the environment exists at any site or vessel and there is a substantial likelihood that such release or threat of release includes or would include oil and/or hazardous material which appears at 310 CMR 40.1600 or exhibits any of the characteristics described in 310 CMR 40.0347, then any owner, operator, or fiduciary or secured lender who holds title to or possession of such site or vessel, shall determine whether such is the case, and whether any such release or threat of release requires notification to the Department under 310 CMR 40.0300.

40.0332: Timing of Notifications

- (1) Two Hour Notifications. Notification to the Department of any release or threat of release specified in 310 CMR 40.0311 and 40.0312 shall be made as soon as possible but not more than two hours after obtaining knowledge that the release or threat of release meets one or more of the sets of notification criteria, unless the person responsible for notifying establishes, by a preponderance of the evidence, that extenuating circumstances prevented notification within said two hour time period. In that event, notification to the Department shall be made as soon as possible thereafter, taking into account the extenuating circumstances. Extenuating circumstances shall include, without limitation, the following:

- (a) a lack of reasonably available communication equipment at the site of the release or threat of release;
- (b) a need to take actions prior to notification in order to mitigate or prevent an Imminent Hazard and/or threat to public safety; and/or
- (c) a physical injury to the person responsible for notifying caused by or associated with the release or threat of release, when the injury reasonably prevents that person from notifying.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0332: continued

(2) 72 Hour Notifications. Notification to the Department of any release or threat of release specified in 310 CMR 40.0313 and 40.0314 shall be made not more than 72 hours after obtaining knowledge that the release or threat of release meets one or more of the sets of notification criteria.

(3) 120 Day Notifications. Notification to the Department of any release specified in 310 CMR 40.0315 shall be made not more than 120 days after obtaining knowledge that the release meets one or more of the sets of notification criteria, and prior to the commencement of any remedial actions at the site, with the exception of Limited Removal Actions, as set forth in 310 CMR 40.0318.

(4) If a release or threat of release is subject to more than one notification time period, the shorter time period shall apply.

(5) No provision of 310 CMR 40.0332 shall be construed to prevent a person responsible for notifying from implementing a response action necessary to mitigate or prevent an Imminent Hazard.

(6) No provision of 310 CMR 40.0332 shall be construed to allow an unreasonable delay in notification of the Department after obtaining knowledge of a release or threat of release that meets one or more of the sets of notification criteria specified in 310 CMR 40.0311 or 40.0312.

(7) The notification timelines specified in 310 CMR 40.0332 shall commence at the time that the person required to notify obtains knowledge, or at the time that a person who has knowledge obtains the status of a person required to notify, whichever is later.

40.0333: How to Notify

(1) Two Hour and Seventy-Two Hour Notifications. Persons described in 310 CMR 40.0331(1) shall:

(a) notify the Department of a release or threat of release specified in 310 CMR 40.0311 through 40.0314, by calling a telephone number published by the Department and designated for that purpose and orally providing to the Department the information specified in 310 CMR 40.0334; and

(b) within 60 days thereafter, submit a completed Release Notification Form, as described in 310 CMR 40.0371, to the Department office located in the DEP region in which the release or threat of release occurred. Where appropriate, the Release Notification Form may be accompanied by a Permanent or Temporary Solution Statement, as described in 310 CMR 40.1000.

(2) 120 Day Notifications. Persons described in 310 CMR 40.0331(1) shall notify the Department of a release specified in 310 CMR 40.0315 by submitting a completed Release Notification Form, as described in 310 CMR 40.0371, to the Department office located in the DEP region in which the release occurred. Where appropriate, the Release Notification Form may be accompanied by a Permanent or Temporary Solution Statement, as described in 310 CMR 40.1000.

40.0334: Content of the Notification

Oral notification to the Department pursuant to 310 CMR 40.0333(1)(a) shall consist of the following information to the extent known to the person responsible for providing the notification:

(a) the name and telephone number of the caller;

(b) the location of the release or threat of release, including, where applicable:

1. the address [street name and number, city or town, and zip code]; and

2. a narrative description of the location (*e.g.*, location aid such as mile marker, business type/name);

(c) the date and time the release occurred;

(d) the set(s) of notification criteria that is the basis for notification;

40.0334: continued

- (e) the name of the oil and/or hazardous material(s) released or of which there is a threat of release;
- (f) the approximate quantity of the oil and/or hazardous material(s) which has been released or of which there is a threat of release;
- (g) the source of the release or threat of release;
- (h) a brief description of the release or threat of release;
- (i) the name and telephone number of the owner/operator of the site or vessel where the release has occurred or at which there is a threat of release;
- (j) the name and telephone number of a contact person at the site or vessel where the release has occurred or at which there is a threat of release;
- (k) a description of Immediate Response Actions taken or proposed to be taken in response to the release or threat of release, as specified in 310 CMR 40.0420;
- (l) the names of other federal, state or local government agencies that have been notified of and/or have responded to the release or threat of release; and
- (m) any other information, including without limitation, potential environmental impacts, that is relevant to assessing the degree of hazard posed by the release or threat of release.

40.0335: Retracting a Notification

- (1) A notification of a release or threat of release of oil and/or hazardous material made by a person described in 310 CMR 40.0331(1) may be retracted in those cases where additional information obtained subsequent to such notification substantiates that:
 - (a) in the case of a reported release, no release actually occurred;
 - (b) in the case of a reported threat of release, conditions posing a threat of release did not actually exist; or
 - (c) the subject release or threat of release did not meet one or more of the sets of notification criteria specified in 310 CMR 40.0300. Retractions of this nature shall only be made by the person described at 310 CMR 40.0331(1) who originally provided notification to the Department of such release or threat of release, or, in cases where notification was made on behalf of a corporate entity, by another authorized employee or agent of that corporation.
- (2) All retractions pursuant to 310 CMR 40.0335 shall be in writing and shall include, at a minimum, the following:
 - (a) the address of the location at which the release or threat of release was initially reported;
 - (b) the Release Tracking Number assigned by the Department for the reported release or threat of release;
 - (c) an explanation of the events and site conditions that resulted in the original notification;
 - (d) a summation of facts, data, and/or other relevant information that demonstrates that the release did not actually occur or the conditions posing the threat of release did not actually exist, or that the release or threat of release did not meet one or more sets or reporting criteria; and
 - (e) the signature of the person retracting the notification, attesting to the accuracy and completeness of the information contained in the retraction submittal, as specified at 310 CMR 40.0009.
- (3) Except as provided in 310 CMR 40.0335(7), all retractions pursuant to 310 CMR 40.0335 must be received by the Department no later than 60 days after the person providing the retraction first notified the Department of the subject release or threat of release.
- (4) All retractions pursuant to 310 CMR 40.0335 shall be submitted to the Department using a transmittal form established by the Department for such purposes.
- (5) Submission of a notification retraction in conformance with the provisions of 310 CMR 40.0335 shall terminate all future response action requirements and submittals that would otherwise be necessitated by the reporting of said release or threat of release, unless written notice to the contrary is provided by the Department within 21 days of the Department's receipt of such retraction.

40.0335: continued

(6) Nothing in 310 CMR 40.0335 shall limit the Department's authority to initiate, oversee, or order the performance of any response action deemed necessary by the Department to protect health, safety, public welfare, or the environment.

(7) The deadline for retracting notifications established by 310 CMR 40.0335(3) shall be extended to the date that is 90 days after the effective date of the first revision to the definition of the term "Potentially Productive Aquifer" in 310 CMR 40.0006 and to 310 CMR 40.0932(5)(b) promulgated after December 15, 1995, provided that the following conditions are met:

- (a) the groundwater at such disposal site at the time of notification is defined as Category RCGW-1 solely pursuant to 310 CMR 40.0362(1)(a)3. (*i.e.*, such groundwater is defined as RCGW-1 solely because the groundwater is within a Potentially Productive Aquifer); and/or
- (b) the soil is defined as Category RCS-1 solely pursuant to 310 CMR 40.0361(1)(a)2. (*i.e.*, the soil is defined as RCS-1 solely due to its location above groundwater that meets the requirements of 310 CMR 40.0362(1)(a), and such groundwater is defined as Category RCGW-1 solely pursuant to the requirements of 310 CMR 40.0362(1)(a)3.).

40.0336: Notification Requirements for Persons that Receive a Notice of Responsibility

(1) Except as provided in 310 CMR 40.0336(2), persons who have not previously notified the Department of a release or threat of release in accordance with 310 CMR 40.0300, and who receive a Notice of Responsibility from the Department requiring submittal of a Release Notification Form for a release or threat of release, shall submit such Release Notification Form to the appropriate Department Regional Office within 60 days of receipt of such Notice of Responsibility.

(2) Persons who received a Notice of Responsibility pursuant to 310 CMR 40.0336(1) who believe:

- (a) they are not a person described at 310 CMR 40.0331(1);
- (b) a release of oil or hazardous material did not actually occur;
- (c) conditions posing a threat or release did not actually exist; or
- (d) a release or threat of release which did occur did not meet one or more sets of notification criteria set forth in 310 CMR 40.0300, shall submit notice of the same to the Department within 60 days of receipt of such Notice of Responsibility.

40.0340: Identification of Oil and Hazardous Material

40.0341: Purpose and Scope

310 CMR 40.0340 through 40.0347, cited collectively as 40.0340:

- (1) identify and otherwise describe those oils and hazardous materials which are subject to 310 CMR 40.0000;
- (2) set forth the criteria used by the Department to list certain oils and hazardous materials at 310 CMR 40.1600 and to identify the characteristics of unlisted hazardous materials as set forth in 310 CMR 40.0347; and
- (3) set forth the procedures for adding and deleting oil or hazardous material to or from 310 CMR 40.1600.

40.0342: Methods of Identification of Oil and Hazardous Material

(1) The Department employs three methods to identify or otherwise describe those oils and hazardous materials which are subject to M.G.L. c. 21E and 310 CMR 40.0000. These methods are:

- (a) identification of those substances which meet the definitions of oil or hazardous material set forth in 310 CMR 40.0006;
- (b) listing of specific oils and hazardous materials; and
- (c) identification of the characteristics of a material which make it hazardous.

40.0342: continued

- (2) Accordingly, a substance is an oil or hazardous material if:
- (a) the substance meets any of the definitions of oil or hazardous material set forth in 310 CMR 40.0006;
 - (b) the substance is listed at 310 CMR 40.1600; or
 - (c) the substance exhibits any of the characteristics of a hazardous material identified in 310 CMR 40.0347(1) through (5).

40.0343: Criteria for Listing Oil and Hazardous Material

In determining whether to list a substance as an oil or hazardous material, the Department shall consider whether or not the substance meets the statutory definition of oil or hazardous material. This determination by the Department shall include, but not be limited to, a consideration of the following factors:

- (1) whether or not other state or federal agencies with expertise in the regulation and management of such substances have identified or characterized that substance as hazardous to health, safety, public welfare, or to the environment;
- (2) the extent to which the substance exhibits the characteristics of acute toxicity, chronic toxicity, carcinogenicity, mutagenicity, ignitability, corrosivity, reactivity, infectivity or radioactivity; and
- (3) any substantial and relevant scientific data submitted by any person in support of adding any substance to or deleting any substance from 310 CMR 40.1600.

40.0344: Adding and Deleting Substances to or from the Massachusetts Oil and Hazardous Material List

- (1) The Department shall review the Massachusetts Oil and Hazardous Material List, which appears at 310 CMR 40.1600, at least once every five years for the purposes of adding or deleting oil and/or hazardous material.
- (2) Substances may be added to or deleted from 310 CMR 40.1600 at any time in accordance with the following procedures:
 - (a) The Department may, in accordance with the procedures set forth in M.G.L. c. 30A and other applicable laws for adopting, amending or repealing regulations:
 - 1. add substances to 310 CMR 40.1600 that meet any of the criteria set forth in 310 CMR 40.0343; or
 - 2. delete substances from 310 CMR 40.1600 that do not meet the criteria set forth in 310 CMR 40.0343.
 - (b) Any person may petition the Commissioner to add a substance to or delete a substance from 310 CMR 40.1600. Any such petition shall include scientific evidence that a material does or does not meet the criteria set forth in 310 CMR 40.0343.
- (3) Any substance that is added to or deleted from either the CERCLA List of Hazardous Substances set out at 40 CFR Part 302.4 or the List of Extremely Hazardous Substances set out at 40 CFR Part 355, Appendix A after the date of promulgation of 310 CMR 40.0300 shall be evaluated by the Department pursuant to the criteria set forth in 310 CMR 40.0343 to determine if that substance should be added to or deleted from 310 CMR 40.1600.

40.0345: The Massachusetts Oil and Hazardous Material List

The oils and hazardous materials listed at 310 CMR 40.1600 are subject to the requirements of 310 CMR 40.0000 unless specifically excluded from regulation thereunder. The Reportable Quantities and Reportable Concentrations which appear beside listed oils and hazardous materials represent those levels which, upon their release or threat of release, invoke the notification requirements of 310 CMR 40.0300.

40.0346: Criteria for Determining the Characteristics of Hazardous Material

In determining whether a substance should be identified as a hazardous material by characteristic, the Department shall first determine that the characteristic can be either:

- (1) measured by an available standardized test method that is within the capability of independent laboratories that are available to the public; or
- (2) reasonably detected by persons handling hazardous material through their knowledge of those materials.

40.0347: Characteristics of Hazardous Material

310 CMR 40.0347 describes the characteristics of materials that are hazardous materials but that may not be listed at 310 CMR 40.1600. Any material that exhibits one or more of the following characteristics is subject to 310 CMR 40.0000, unless it is specifically excluded from regulation thereunder.

(1) Ignitability:

- (a) A substance is a hazardous material if a representative sample exhibits any of the following properties:
 1. it is a liquid and has a flash point of less than 60°C [approximately 140°F]. However, an aqueous solution of ethyl alcohol which contains less than 24% alcohol by volume is not considered ignitable under 310 CMR 40.0000;
 2. it is not a liquid and is capable under standard temperature and pressure of catching fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard;
 3. it is a compressed gas and ignitable; or
 4. it is an oxidizer;
- (b) The flash point of liquids shall be determined by any of the following methods:
 1. a Pensky-Martens Closed Cup Tester, using the test method specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods";
 2. a Setaflash Closed Cup Tester, using the test method specified in 310 CMR 30.152(1)(a); or
 3. an equivalent test method approved by the Department;
- (c) Compressed gas shall be characterized as ignitable if any of the following occurs when the gas is subjected to any of the following tests:
 1. either a mixture of 13% or less (by volume) with air forms a flammable mixture or the flammable range is wider than 12% regardless of the lower limit. These limits shall be determined at atmospheric temperature and pressure using sampling methods and test procedures acceptable to the U.S. Bureau of Explosives;
 2. using the Flame Projection Apparatus of the U.S. Bureau of Explosives, the flame projects more than 18 inches beyond the ignition source with the valve opened fully, or the flame flashes back and burns at the valve with any degree of valve opening;
 3. using the Open Drum Apparatus of the U.S. Bureau of Explosives, there is any significant propagation of flame away from the ignition source; or
 4. using the Closed Drum Apparatus of the U.S. Bureau of Explosives, there is any explosion of the vapor-air mixture in the drum.

(2) Corrosivity:

- (a) A material is a hazardous material if a representative sample exhibits any of the following properties:
 1. it is aqueous and has a pH equal to or less than 2.0 or equal to or greater than 12.5;
 2. it is a liquid and corrodes steel (Type SAE 1020) at a rate greater than 6.35 mm per year at a test temperature of 55°C; or
 3. it is a liquid or solid that causes visible destruction or irreversible alterations in mammalian skin tissue at the site of contact.
- (b) pH shall be determined by a pH meter using either method 5.2 in the "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" or by an equivalent test method approved by the Department.

40.0347: continued

(c) The rate of corrosion of steel shall be determined by the test method specified by the National Association of Corrosion Engineers, standard TM-01-60, as standardized in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" or by an equivalent test method approved by the Administrator of EPA or by the Department.

(3) Reactivity. A material is a hazardous material if a representative sample exhibits any of the following properties:

- (a) it is normally unstable and readily undergoes violent changes without detonating;
- (b) it reacts violently with water;
- (c) it forms potentially explosive mixtures with water;
- (d) when mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to health, safety, public welfare, or the environment;
- (e) it is a cyanide or sulfide-bearing material which, when exposed to a pH of between 2.0 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to health, safety, public welfare, or the environment;
- (f) it is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement;
- (g) it is readily capable of detonation or explosive decomposition or reaction at a standard temperature and pressure; or
- (h) it is a forbidden explosive, a Class A or Class B explosive, as defined in 49 CFR §§ 173.50, 173.53 and 173.88, respectively.

(4) Toxicity. A material is a hazardous material if it exhibits the characteristic of toxicity described at 310 CMR 30.125B, unless specifically excluded.

(5) Infectious Material. Infectious materials are those materials, that, because of their infectious characteristics may:

- (a) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or
- (b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed. Infectious materials include but are not limited to those infectious wastes described in 105 CMR 130.360: *Medical Waste Disposal*. Infectious materials are hazardous materials subject to 310 CMR 40.0000, unless specifically excluded from regulation thereunder.

40.0350: Reportable Quantities for Oil and Hazardous Material

(1) The Reportable Quantities for the following substances are established in 310 CMR 40.0351 and 40.0352:

- (a) oils and hazardous materials that are listed at 310 CMR 40.1600; and
- (b) hazardous materials that exhibit one or more of the characteristics set forth in 310 CMR 40.0347(1) through (5).

(2) All releases into the environment of the same oil or hazardous material from a single facility in a 24 hour period shall be aggregated to determine if a Reportable Quantity for the respective oil or hazardous material has been reached or exceeded.

40.0351: Reportable Quantities for Oil

Reportable Quantities for oils appear at 310 CMR 40.1600.

40.0352: Reportable Quantities for Hazardous Material

(1) Listed Hazardous Material:

- (a) Reportable Quantities for listed hazardous material appear at 310 CMR 40.1600; and
- (b) the applicable Reportable Quantity for a hazardous material that is listed at 310 CMR 40.1600 and that also exhibits one or more of the characteristics described at 310 CMR 40.0347(1) through (5) shall be the Reportable Quantity listed at 310 CMR 40.1600 for that particular hazardous material.

40.0352: continued

(2) Unlisted Hazardous Materials Identified by Characteristic. The Reportable Quantity for hazardous materials that are not listed at 310 CMR 40.1600 but that exhibit one or more of the characteristics of ignitability, corrosivity or reactivity described at 310 CMR 40.0347(1) through 40.0347(3) or that are infectious materials as described in 310 CMR 40.0347(5) is ten pounds.

(3) Unlisted Hazardous Materials which are Hazardous Material Because They Exhibit the Characteristic of Toxicity:

(a) The Reportable Quantity for unlisted hazardous materials that exhibit the characteristic of toxicity under the provisions of 310 CMR 30.125B shall be the Reportable Quantity listed at 310 CMR 40.1600 for the hazardous material on which the characteristic of toxicity is based. The Reportable Quantity applies to the entire amount of the unlisted hazardous material and not merely to the listed component hazardous material. If an unlisted hazardous material exhibits the characteristic of toxicity on the basis of more than one of its component hazardous materials, the Reportable Quantity for the entire amount of the unlisted hazardous material shall be the Reportable Quantity for that component hazardous material which has the lowest Reportable Quantity in 310 CMR 40.1600.

(b) If an unlisted hazardous material exhibits the characteristic of toxicity, as described in 310 CMR 30.125B, and one or more of the other characteristics described in 310 CMR 40.0347(1) through (3), or in 310 CMR 40.0347(5), the Reportable Quantity for the entire amount of the unlisted hazardous material shall be the lowest of the applicable Reportable Quantities.

(4) Mixtures or solutions:

(a) When a mixture or solution contains one or more component materials that are hazardous materials which appear at 310 CMR 40.1600 or that exhibit one or more of the characteristics of ignitability, corrosivity, or reactivity described at 310 40.0347(1) through (3), releases or threats of release to the environment of the mixture shall be reported to the Department under 310 CMR 40.0311 through 40.0312, when any of the following conditions exist:

1. the concentrations of the component hazardous materials are known and the quantity of any of the component hazardous materials released or threatening to be released is equal to or greater than the Reportable Quantities for those component hazardous materials;

2. the mixture or solution contains at least two component hazardous materials, the concentrations of the component hazardous materials are known and the quantity of any of the component hazardous materials released or threatened to be released does not exceed their respective Reportable Quantity but the total quantity of the hazardous material in the mixture or solution released or threatened to be released is equal to or greater than 50 pounds; or

3. the concentrations of the component hazardous materials are not known, and the total quantity of the mixture or solution released or threatened to be released is equal to or greater than the Reportable Quantity for that component hazardous material which has the lowest Reportable Quantity in 310 CMR 40.1600.

(b) The Reportable Quantity for mixtures which are hazardous material because they exhibit the characteristic of toxicity, as described in 310 CMR 30.125B, shall be determined according to 310 CMR 40.0352(3).

(c) The Reportable Quantity provisions of 310 CMR 40.0352(4) do not apply to soils, sediments, residuals, surface waters and groundwaters that are being managed otherwise in compliance with all federal, state and local laws, regulations, and ordinances.

(5) Materials Containing Polychlorinated Biphenyls:

(a) Releases or threats of release to the environment of materials that contain polychlorinated biphenyls shall be reported to the Department pursuant to 310 CMR 40.0300, if:

1. the concentration of polychlorinated biphenyls in a material is either unknown or known to be less than 500 ppm, and the release or threat of release of such material is equal to or greater than ten gallons; or

2. the concentration of polychlorinated biphenyls in a material is known or likely to be equal to or greater than 500 ppm, and the release or threat of release of such material is equal to or greater than one gallon.

40.0352: continued

(b) The Reportable Quantity provisions of 310 CMR 40.0352(5) do not apply to soils, sediments, residuals, surface waters and groundwaters that are being managed otherwise in compliance with all federal, state and local laws, regulations, and ordinances.

40.0360: Reportable Concentrations for Oil and Hazardous Material

(1) A release indicated by the measurement of oil and/or hazardous material in soil and/or groundwater requires notification to the Department under the provisions of 310 CMR 40.0315 if the measured concentration of one or more listed substance in 310 CMR 40.1600 in any soil or groundwater sample is equal to or greater than the media and category-specific Reportable Concentration value listed at 310 CMR 40.1600 in effect on the date of the sample analysis.

(2) Except for gasoline, kerosene, and aviation fuel, the Reportable Concentration for the oils listed at 310 CMR 40.1600 shall be the Reportable Concentration established in 310 CMR 40.1600 for Total Petroleum Hydrocarbons (TPH) or the Reportable Concentrations established in 310 CMR 40.1600 for the Aliphatic Hydrocarbon Fractions and/or Aromatic Hydrocarbon Fractions which comprise these products. Notification shall not be required for sites solely on the basis of a measurement of TPH equal to or greater than an applicable Reportable Concentration if data exists demonstrating that concentrations of the Aliphatic and Aromatic Hydrocarbon Fractions comprising the TPH are less than the applicable Reportable Concentrations established in 310 CMR 40.1600.

(3) The Reportable Concentration for gasoline, kerosene, and aviation fuel shall be the Reportable Concentrations established in 310 CMR 40.1600 for the Aliphatic and Aromatic Hydrocarbon Fractions which comprise these products.

(4) The Reportable Concentration for Chromium shall be the Reportable Concentration established in 310 CMR 40.1600 for Total Chromium or the Reportable Concentrations established in 310 CMR 40.1600 for the specific species of chromium. Notification shall not be required for sites solely on the basis of a measurement of Total (unspeciated) Chromium equal to or greater than the Reportable Concentration for Total Chromium if data exists demonstrating that the concentrations of Hexavalent Chromium (Cr VI) and Trivalent Chromium (Cr III) are both less than their applicable Reportable Concentrations established in 310 CMR 40.1600.

(5) The Reportable Concentration values for the hazardous materials listed at 310 CMR 40.1600, including hazardous materials that may be components of oil or waste oil, shall be compared to concentrations of hazardous material in soil or groundwater that have been measured by the analytical procedures detailed in EPA Publication SW-846, *Test Methods for Evaluating Solid Waste*, the Department's Compendium of Analytical Methods or any other appropriate analytical procedure, as described in 310 CMR 40.0017.

(6) The techniques utilized for obtaining soil and groundwater samples for comparison to the Reportable Concentration values listed at 310 CMR 40.1600 shall be in conformance with generally accepted practices and procedures, consistent with the Response Action Performance Standard described in 310 CMR 40.0191, and shall not involve measures or steps that are undertaken to cause or promote the dilution of analyte values for the sole purpose of avoiding reporting obligations imposed in 310 CMR 40.0315.

(7) Persons notifying the Department of a release under the provisions of 310 CMR 40.0315 and 40.0360 through 40.0369 shall specify whether the measured concentration of one or more of the listed substances in 310 CMR 40.1600 constitutes a release of oil, hazardous material, or both oil and hazardous material. Such a determination shall be based upon:

- (a) factual evidence relating to the source and mechanism of the release;
- (b) factual evidence relating to the storage, use and disposal of oil and hazardous material at the site of the release; and/or
- (c) analytical characterization of the release.

40.0361: Reportable Concentrations of Oil and Hazardous Material in Soil

(1) For the purpose of determining whether a notification obligation exists under 310 CMR 40.0315, measured concentrations of any oil or hazardous material listed at 310 CMR 40.1600 shall be compared to the Reportable Concentration value in the reporting category that best characterizes the current use of the site under evaluation, as described below:

(a) Reporting Category RCS-1. Reporting category RCS-1 shall be applied to all soil samples obtained:

1. at or within 500 feet of a residential dwelling, a residentially-zoned property, school, playground, recreational area or park; or
2. within the geographic boundaries of a groundwater resource area categorized as RCGW-1 in 310 CMR 40.0362(1)(a).

(b) Reporting Category RCS-2. Reporting category RCS-2 shall be applied to all soil samples that are not obtained from category RCS-1 areas.

(2) Reporting category RCS-1 shall be selected whenever and wherever reasonable doubts exist over the selection of the appropriate soil Reportable Concentration category.

40.0362: Reportable Concentrations of Oil and Hazardous Material in Groundwater

(1) For the purpose of determining whether a notification obligation exists under 310 CMR 40.0315, measured dissolved concentrations of any oil or hazardous material listed at 310 CMR 40.1600 shall be compared to the Reportable Concentration value in the reporting category that best characterizes the site under evaluation, as described below:

(a) Reporting Category RCGW-1. Reporting category RCGW-1 shall be applied to all groundwater samples obtained:

1. within a Current Drinking Water Source Area; or
2. within a Potential Drinking Water Source Area.

(b) Reporting Category RCGW-2. Reporting category RCGW-2 shall be applied to all groundwater samples that are not obtained from category RCGW-1 areas.

(2) Reporting category RCGW-1 shall be selected whenever and wherever reasonable doubts exist over the selection of the appropriate groundwater Reportable Concentration category.

40.0370: Requirements for Releases of Oil and/or Hazardous Material That Do Not Require Notification

(1) Response actions shall be undertaken for releases or threats of release of oil and/or hazardous material that do not require notification under 310 CMR 40.0300 if the releases or threats of release pose a significant risk to health, safety, public welfare, or the environment, as described in 310 CMR 40.0900.

(2) Persons undertaking response actions for releases or threats of release of oil and/or hazardous material that do not require notification under 310 CMR 40.0300, unless otherwise notified by the Department, are not subject to the submittal requirements, approvals, or fees specified in 310 CMR 40.0000. All such response actions shall conform to all applicable federal, state or local laws, regulations, or ordinances.

40.0371: Release Notification Form

(1) Written notification of releases and threats of release required under 310 CMR 40.0333 shall be submitted to the Department on a form established by the Department for such purposes and shall include, without limitation, the following:

(a) the location and address where the release or threat of release occurred;

1. the street number, city or town, and zip code, where applicable; and
2. the location coordinates;

(b) the time and date when the release or threat of release occurred;

(c) the time(s) and date(s) when the person(s) required to provide the notification to the Department pursuant to 310 CMR 40.0331 obtained knowledge that the release or threat of release met one or more sets of notification criteria established in 310 CMR 40.0311 through 40.0315;

40.0371: continued

- (d) the time(s) and date(s) when oral notification of the release or threat of release was made to the Department, if applicable;
- (e) the set(s) of notification criteria met, as specified at 310 CMR 40.0311 through 40.0315;
- (f) the names and amounts of oil and/or hazardous material released or threatened to be released;
- (g) the names and mailing addresses of the owners of all properties impacted by the release or threat of release;
- (h) the name(s) and address(es) of the person(s) providing the notification of the release or threat of release;
- (i) the affiliation of the person(s) making the notification to the site of the release or threat of release, as described in 310 CMR 40.0331;
- (j) a signed and dated certification statement from the person(s) reporting the release or threat of release attesting to the truth and accuracy of the information provided, as specified at 310 CMR 40.0009; and
- (k) such other information as the Department may from time to time determine is necessary and useful in the fulfillment of its statutory obligations under M.G.L. c. 21E and 310 CMR 40.0300.

(2) Persons required to notify of releases or threats of release to the Department under 310 CMR 40.0300 shall make reasonable efforts to obtain and preserve the information required in the Release Notification Form described in 310 CMR 40.0371(1), in order to furnish same to the Department.

(3) Persons providing notification of a release(s) or threat(s) of release(s) shall also provide a copy of the Release Notification Form to the Chief Municipal Officer and the Board of Health in accordance with 310 CMR 40.1403(3)(h).

SUBPART D: PRELIMINARY RESPONSE ACTIONS
AND RISK REDUCTION MEASURES

40.0400: Preliminary Response Actions and Risk Reduction Measures

310 CMR 40.0401 through 40.0499, cited collectively as 310 CMR 40.0400, set forth requirements and procedures for Preliminary Response Actions and risk reduction measures.

40.0401: Purpose and Scope

The purpose of 310 CMR 40.0400 is to describe the nature and extent of Preliminary Response Actions that are undertaken at a site or vessel following a release or the discovery of a release or a threat of release of oil and/or hazardous material, and to prescribe standards and procedures for conducting Immediate Response Actions, Release Abatement Measures, and Utility-related Abatement Measures, whether they are conducted as part of a Preliminary Response Action or at any other time.

40.0402: Applicability

The provisions of 310 CMR 40.0400 apply to releases and threats of release of oil and/or hazardous material that require reporting to the Department under the provisions of 310 CMR 40.0300. No provision of 310 CMR 40.0400 shall limit the authority of the Department to initiate, oversee or order the performance of any response action deemed necessary by the Department to protect health, safety, public welfare or the environment.

40.0403: Responses to Releases and Threats of Release

(1) Response actions shall be taken by RPs, and may be taken by PRPs and Other Persons, to assess and, where necessary, remediate all releases and threats of release of oil and/or hazardous material to the environment.

40.0403: continued

- (2) The nature, extent and timing of response actions shall be dependent upon the type(s) and amount(s) of oil and/or hazardous material released or threatening to be released, site conditions, and the proximity and sensitivity of human and environmental receptors.
- (3) Preliminary Response Actions, as described in 310 CMR 40.0405, shall be conducted within the one year period following the earliest date specified in 310 CMR 40.0404(3). Preliminary Response Actions may be sufficient for complete evaluation and/or remediation of localized or uncomplicated releases and threats of release at some sites, and shall consist of:
 - (a) Initial Site Investigation Activities, as described in 310 CMR 40.0405(1), up to and including those activities required for preparation of a Phase I Report, if necessary, as described in 310 CMR 40.0480; and
 - (b) where required, one or more Immediate Response Actions, as described in 310 CMR 40.0410, or, where appropriate, one or more Release Abatement Measures, as described in 310 CMR 40.0440.
- (4) Comprehensive Response Actions, as described in 310 CMR 40.0800, shall be undertaken whenever a Permanent Solution, as described in 310 CMR 40.1000, is not achieved at a site based upon Preliminary Response Actions.
- (5) A Permanent Solution Statement, as described in 310 CMR 40.1000, shall be submitted to the Department at the conclusion of response actions conducted at a site pursuant to 310 CMR 40.0000. A Permanent Solution Statement may be submitted for one or more releases or threats of release at a site, disposal site, or portion of a disposal site.

40.0404: Timing of Response Actions

- (1) RPs and any other persons conducting response actions shall initiate, implement, and complete those response actions described in 310 CMR 40.0400 within the time frames specified in 310 CMR 40.0400 and/or any Interim Deadlines specified by the Department pursuant to 310 CMR 40.0167.
- (2) RPs and any other persons conducting response actions shall submit all required plans, status reports, completion reports, and other required response action documentation described in 310 CMR 40.0400 within the time frames specified in 310 CMR 40.0400 and/or any Interim Deadline specified by the Department pursuant to 310 CMR 40.0167.
- (3) Except for notifications retracted pursuant to the provisions of 310 CMR 40.0335, a Permanent Solution Statement or Tier Classification Submittal shall be received by the Department within one year of the earliest following dates:
 - (a) the date that oral notification is received by the Department from any person listed at 310 CMR 40.0331 of a release or threat of release that requires notification pursuant to the "two Hour" or "72 Hour" notification provisions of 310 CMR 40.0311 through 40.0314;
 - (b) the date that written notification is received by the Department from any person listed at 310 CMR 40.0331 of a release that requires notification pursuant to the "120 Day" notification provisions of 310 CMR 40.0315; or
 - (c) the date that the Department issues a Notice of Responsibility to any person listed at 310 CMR 40.0331 specifying that they are an RP or PRP for a release or threat of release that requires a response action pursuant to 310 CMR 40.0400.
- (4) Remedial actions shall not be undertaken or continued at any site by any person until that person provides notification to the Department of their knowledge of any releases or threats of release that meet one or more sets of notification criteria specified in 310 CMR 40.0300, except for:
 - (a) Limited Removal Actions undertaken in compliance with the provisions of 310 CMR 40.0318;
 - (b) time-critical Immediate Response Actions undertaken to address a release or threat of release of oil and/or hazardous material pursuant to the provisions of 310 CMR 40.0332 and 310 CMR 40.0421;

40.0404: continued

- (c) the limited excavation of contaminated soil associated with the closure of an Underground Storage Tank system, as specified at 310 CMR 40.0421(3); or
- (d) time-critical Utility-related Abatement Measures undertaken to prevent or abate an immediate and substantial danger to public safety, as specified in 310 CMR 40.0462(3).

(5) Releases and/or threats of release that occur at a disposal site after Tier Classification of that disposal site shall not be subject to the one year time frames specified in 310 CMR 40.0404(3), provided that response actions are being conducted at the disposal site in compliance with the provisions of 310 CMR 40.0000, including, where appropriate, the submission of all necessary Immediate Response Action Plans, Status Reports, and Completion Statements.

40.0405: Overview of Preliminary Response Actions

(1) Initial Site Investigation Activities.

(a) Initial Site Investigation Activities shall consist of limited investigative and assessment actions of sufficient scope and level of effort to make and/or guide determinations on required and appropriate response actions at a site. Initial Site Investigation Activities may include, without limitation:

1. evaluation of records relating to the release, threat of release or impacted site;
2. evaluation of underground storage tank testing results;
3. testing and/or retesting of underground storage tanks;
4. evaluation of environmental monitoring data;
5. limited sampling and analysis of soil, sediment, groundwater, surface water, soil gas, indoor air or ambient air; and
6. any other limited investigations, monitoring, surveys, testing or information gathering activities necessary to evaluate releases and threats of release of oil and/or hazardous material, excluding removal and containment actions.

(b) The objective of Initial Site Investigation Activities is to obtain preliminary information and data on a release, a threat of release and/or site in order to:

1. determine the existence, source, nature and approximate extent of the release or threat of release;
2. determine if the release or threat of release poses or could pose an Imminent Hazard, as described in 310 CMR 40.0321;
3. determine if an Immediate Response Action is necessary, as described in 310 CMR 40.0412;
4. determine if a Limited Removal Action is appropriate at the site, as described in 310 CMR 40.0318;
5. determine if a Release Abatement Measure is appropriate at the site, as described in 310 CMR 40.0440;
6. identify persons who are responsible or potentially responsible for the release or threat of release;
7. obtain, assemble and record information and data needed to evaluate the release or threat of release; and
8. determine if a demonstration can readily be made that a condition of No Significant Risk exists or has been achieved at the site, before or after the completion of a Limited Removal Action, Immediate Response Action, or Release Abatement Measure.

(c) The results of Initial Site Investigation Activities shall:

1. be used to support a Permanent Solution Statement at the conclusion of Preliminary Response Actions; or
2. be used as the basis for a Phase I Report, as described in 310 CMR 40.0480, whenever a Permanent Solution Statement is not filed for a site within one year of the initial notification to the Department of a release or threat of release at the site by any person listed at 310 CMR 40.0331.

(d) When used to support a Permanent Solution Statement, the results of Initial Site Investigation Activities shall be reported in a response action report or in a Phase I Report, pursuant to 310 CMR 40.0481, and shall contain all information, data, records and documents necessary for that purpose.

(e) Assessment activities conducted at a site prior to Tier Classification, as described in 310 CMR 40.0500, shall not require approval from the Department.

40.0405: continued

(2) Immediate Response Actions

(a) Immediate Response Actions are assessment and/or remedial actions that shall be undertaken in an expeditious manner to address sudden releases, Imminent Hazards and other time-critical release or site conditions. Immediate Response Actions shall be taken whenever and wherever timely actions are required to assess, eliminate, abate or mitigate adverse or unacceptable release, threat of release and/or site conditions, as set forth in 310 CMR 40.0412.

(b) Except as provided in 310 CMR 40.0420(12), remedial actions conducted as part of an Immediate Response Action require prior approval from the Department.

(3) Release Abatement Measures. Release Abatement Measures are remedial actions that may be voluntarily undertaken by persons conducting response actions at disposal sites. The purposes of Release Abatement Measures are to remediate limited or localized releases, and/or to mitigate the impacts of larger releases until such time as more comprehensive remedial actions can be instituted at the disposal site, in accordance with 310 CMR 40.0800.

40.0406: Possible Outcomes of Preliminary Response Actions

(1) Within the one year time period specified in 310 CMR 40.0404(3), one of the following actions shall be taken by RPs, and may be taken by PRPs or Other Persons:

(a) a Permanent Solution Statement shall be submitted to the Department, as described in 310 CMR 40.1000, indicating that assessment and/or remedial actions taken at the site have resulted in a Permanent Solution; or

(b) a Phase I Report and Tier Classification Submittal shall be submitted to the Department, in accordance with the provisions of 310 CMR 40.0500, indicating that a Comprehensive Response Action will be undertaken at the site.

(2) Permanent Solution Statements submitted to the Department at the conclusion of Preliminary Response Actions, and prior to Tier Classification, shall be accompanied by the Permanent Solution fee specified in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*, unless the Permanent Solution Statement is received by the Department within 120 days following the earliest date computed pursuant to 310 CMR 40.0404(3).

40.0410: Immediate Response Actions

310 CMR 40.0411 through 40.0429, cited collectively as 310 CMR 40.0410, set forth requirements and procedures for conducting Immediate Response Actions.

40.0411: General Provisions for Immediate Response Actions

(1) Immediate Response Actions shall assess release, threat of release and/or site conditions and, where appropriate, contain, isolate, remove or secure a release or threat of release of oil and/or hazardous material in order to:

(a) abate, prevent or eliminate an Imminent Hazard to health, safety, public welfare or the environment; and/or

(b) respond to other time-critical release, threat of release and/or site conditions.

(2) Any person who performs an Immediate Response Action shall do so in accordance with all applicable requirements and specifications prescribed in 310 CMR 40.0000. Except when specifically exempted by the Department due to the Department's level of involvement in the oversight of the Immediate Response Action, RPs, PRPs and Other Persons conducting Immediate Response Actions shall engage or employ the services of a Licensed Site Professional.

(3) The Department may make a determination that an Immediate Response Action involving assessment, containment and/or removal actions is needed at any site, consistent with the provisions of 310 CMR 40.0412. In such cases, the Department shall inform the RP or PRP of the need for, and scope of, response actions. When informing the RP or PRP would unacceptably delay the conduct of the Immediate Response Action, or when the RP or PRP is unable or unwilling to conduct the required actions, or otherwise fails to act in a timely manner, the Department may undertake the Immediate Response Action.

40.0411: continued

- (4) Immediate Response Actions shall not, to the extent practicable, prevent or impede the implementation of future response actions.
- (5) Immediate Response Actions shall be conducted in compliance with all applicable local, state and federal permitting and approval requirements.
- (6) Health and safety procedures consistent with the provisions of 310 CMR 40.0018 shall be implemented at sites where an Immediate Response Action is being conducted.
- (7) RPs, PRPs and Other Persons undertaking response actions under the provisions of 310 CMR 40.0000 shall continually assess and evaluate release and site conditions in order to determine if an Immediate Response Action is required.
- (8) RPs, PRPs or Other Persons conducting an Immediate Response Action that involves a remedial action(s) to prevent, control, or eliminate an Imminent Hazard or address a Critical Exposure Pathway shall comply with the provisions of 310 CMR 40.1403(11) for notifying Affected Individuals.

40.0412: Sites Where an Immediate Response Action is Required

Immediate Response Actions shall be conducted at the following sites:

- (1) sites or vessels where a release or threat of release of oil and/or hazardous material has occurred which requires notification to the Department under the "Two Hour" notification provisions of 310 CMR 40.0311 or 40.0312;
- (2) sites where a release or threat of release of oil and/or hazardous material has occurred which requires notification to the Department under the "72 Hour" notification provisions of 310 CMR 40.0313 or 40.0314;
- (3) sites where a release of oil and/or hazardous material has resulted in conditions which have been determined to pose an Imminent Hazard pursuant to 310 CMR 40.0950; and
- (4) any other site or vessel where the Department determines that immediate or accelerated response actions are necessary to prevent, eliminate, or minimize damage to health, safety, public welfare or the environment.

40.0414: Scope and Types of Immediate Response Actions

- (1) At a minimum, Immediate Response Actions shall involve the assessment of the release or threat of release and/or site conditions described in 310 CMR 40.0412. The nature and extent of assessment actions taken as an Immediate Response Action shall be commensurate with the type and amount of oil and/or hazardous material released or threatening to be released, site complexity, and the sensitivity of site and surrounding human and environmental receptors, and shall be adequate and sufficient for determining:
 - (a) the degree of hazard posed by the release, threat of release and/or site conditions;
 - (b) whether remedial actions are required at the site prior to the completion of a Phase IV Remedy Implementation Plan, as described in 310 CMR 40.0870; and
 - (c) where appropriate, the nature, extent, and timing of any required removal or containment actions.
- (2) Immediate Response Actions shall be presumed to require the initiation of one or more containment or removal actions. Except as provided in 310 CMR 40.0414(3) through 40.0414(5), the presumption for containment and/or removal actions may be rebutted, however, by the RP, PRP or Other Person conducting response actions, based upon a showing by a preponderance of the evidence that:
 - (a) the release, threat of release and/or site conditions do not present an Imminent Hazard, either at the present time or for the time period that is likely to be required for the implementation and/or completion of Comprehensive Response Actions; and

40.0414: continued

(b) the unmitigated migration of oil and/or hazardous material at the site, at present and for the time period that is likely to be required for the implementation and/or completion of Comprehensive Response Actions, is not likely to:

1. substantially increase the extent, area, or magnitude of environmental contamination;
2. substantially increase the degree or complexity of future remedial actions;
3. substantially increase cleanup costs; or
4. otherwise result in a substantial hazard to health, safety, public welfare or the environment.

(3) Immediate Response Actions shall be presumed to require the elimination and/or mitigation of Critical Exposure Pathways, which are defined in 310 CMR 40.0006. This presumption may be rebutted, however, by the RP, PRP or Other Person conducting response actions, based upon a showing by a preponderance of the evidence that:

- (a) the Critical Exposure Pathway(s) does not present an Imminent Hazard, either at present or for the time period that is likely to be required for the implementation and/or completion of Comprehensive Response Actions;
- (b) it is not feasible to eliminate the Critical Exposure Pathway(s); and
- (c) in cases where it is not feasible to eliminate the Critical Exposure Pathway(s), it is not feasible to mitigate the Critical Exposure Pathway(s).

(4) Immediate Response Actions shall be presumed to require the prevention and/or mitigation of Critical Exposure Pathways, which are defined in 310 CMR 40.0006. This presumption may be rebutted, however, by the RP, PRP or Other Person conducting response actions, based upon a showing by a preponderance of the evidence, that:

- (a) the Critical Exposure Pathway(s) does not present an Imminent Hazard, either at present or for the time period that is likely to be required for the implementation and/or completion of Comprehensive Response Actions;
- (b) it is not feasible to prevent the Critical Exposure Pathway(s); and
- (c) in cases where prevention is not feasible, it is not feasible to mitigate the Critical Exposure Pathway(s).

(5) Immediate Response Actions shall be presumed to require the prevention of impact(s) to public water supplies at sites where such impact is likely to occur within the time period that is likely to be required for the implementation and/or completion of Comprehensive Response Actions. This presumption may be rebutted, however, by the RP, PRP or Other Person conducting response actions, based upon a showing by a preponderance of the evidence that:

- (a) it is unlikely that the site will present impact(s) to the public water supply, for the time period that is likely to be required for the implementation and/or completion of Comprehensive Response Actions;
- (b) it is not feasible to prevent the impact(s) to the public water supply; and
- (c) in cases where prevention is not feasible, it is not feasible to mitigate the impact(s) to the public water supply.

(6) Immediate Response Actions may include:

- (a) preparation of technical reports or memoranda documenting why accelerated removal or containment actions are or are not required;
- (b) an assessment of whether an Imminent Hazard to health, safety, public welfare or the environment exists at the site;
- (c) collection and assessment of soil, sediment, surface water, groundwater, soil gas, or atmospheric or indoor air samples;
- (d) assessment of the validity of underground storage tank testing results;
- (e) assessment of the need to take timely actions to prevent releases from occurring at a site where a threat of release has been identified;
- (f) installation of fences, warning signs, including, where appropriate, multilingual and symbolic signs, and/or the institution of other security or site control measures;
- (g) installation of drainage controls;
- (h) construction or stabilization of berms, dikes or impoundments;
- (i) temporary covering or capping of contaminated soils or sludges;
- (j) installation of waste or product recovery and groundwater treatment systems or soil vapor extraction systems;

40.0414: continued

- (k) removal of contaminated soils;
- (l) removal of the contents of, or removal of, drums, barrels, tanks or other bulk containers which contain or may contain oil and/or hazardous material;
- (m) temporary evacuation or relocation of residents from the site and/or surrounding area;
- (n) provision of temporary alternative water supplies;
- (o) installation of a sub-slab soil gas depressurization system beneath an occupied structure;
- or
- (p) any other assessment, containment or removal action consistent with the purpose and scope of an Immediate Response Action or otherwise deemed necessary by the Department.

(7) A cap or engineered barrier that is constructed in accordance with the performance standards contained in 310 CMR 40.0996(5) as an Immediate Response Action will not be considered part of a Permanent Solution at a disposal site, unless and until a Phase III is performed pursuant to the provisions of 310 CMR 40.0850 demonstrating the lack of a feasible alternative.

40.0420: Requirements, Approvals, and Time Lines for Conducting Immediate Response Actions

- (1) Immediate Response Actions shall be taken by RPs, and may be taken by PRPs or Other Persons, in response to all releases and threats of release described in 310 CMR 40.0412.
- (2) Immediate Response Actions shall be conducted in compliance with all applicable provisions and time lines specified in 310 CMR 40.0400, and in compliance with any response action requirements deemed necessary by the Department and/or specified by the Department in its approval of Immediate Response Action Plans.
- (3) RPs, PRPs and Other Persons shall communicate to the Department their intentions to conduct Immediate Response Actions which are required pursuant to 310 CMR 40.0412. Such communication shall be provided orally to the Department on the earliest of the following dates:
 - (a) at the time an RP, PRP, or Other Person is providing oral notification to the Department of a "Two Hour" or "72 Hour" release or threat of release described in 310 CMR 40.0311 through 40.0314;
 - (b) at the time a person is orally informed by the Department that they are an RP or PRP for a site at which an Immediate Response Action is required pursuant to 310 CMR 40.0412;
 - (c) within 72 hours of the time a person receives a Notice of Responsibility from the Department indicating that they are an RP or PRP for a site at which an Immediate Response Action is required pursuant to 310 CMR 40.0412; or
 - (d) within an Interim Deadline specified by the Department pursuant to 310 CMR 40.0167.
- (4) When orally communicating to the Department their intentions to conduct an Immediate Response Action, RPs, PRPs or Other Persons shall inform the Department:
 - (a) whether or not the RP, PRP or Other Person intends to conduct an Immediate Response Action in the time period and manner warranted by the release, threat of release and/or site conditions, in compliance with all applicable provisions of 310 CMR 40.0400, and in compliance with any specific response action requirements which have been communicated to them by the Department;
 - (b) whether the Immediate Response Action will involve the implementation of remedial actions; and
 - (c) if remedial actions are proposed, details on the nature and extent of such actions.
- (5) Upon review and consideration of the oral communication provided by the RP, PRP or Other Person, DEP shall orally approve, deny, or conditionally approve:
 - (a) the details of remedial actions proposed at the time of such communication, in cases where the Immediate Response Action will involve removal or containment actions; or
 - (b) a recommendation that remedial actions are not required at the time of such communication, in cases where the Immediate Response Action will involve assessment actions only.

40.0420: continued

(6) Except as provided in 310 CMR 40.0421, approval from the Department shall be required prior to the implementation of an Immediate Response Action, or significant modification of a previously approved Immediate Response Action that involves remedial actions. Such approval may be granted orally by the Department in situations where there has been a sudden release of oil and/or hazardous material, where there exists a threat of release of oil and/or hazardous material, and in other cases where written approval would delay the timely implementation of an Immediate Response Action. Where time permits, and in situations where the Department declines to provide oral approval, RPs, PRPs, and Other Persons shall seek approval to conduct Immediate Response Actions by submittal to the Department of an Immediate Response Action Plan pursuant to the provisions of 310 CMR 40.0420(7) and 40.0424.

(7) Except as provided at 310 CMR 40.0420(8), and without regard to whether oral approval was given by the Department to conduct or initiate Immediate Response Actions, RPs and other persons conducting response actions shall submit to the Department an Immediate Response Action Plan, within the earliest of the following time periods:

- (a) within 60 days of providing oral notification to the Department of those "Two Hour" or "72 Hour" releases or threats of release specified in 310 CMR 40.0311 through 40.0314;
- (b) within 60 days of orally communicating to the Department knowledge of a Condition of Substantial Release Migration at a disposal site;
- (c) within 60 days of the date that the Department issues a Notice of Responsibility indicating that they are an RP or PRP for a site at which an Immediate Response Action is required pursuant to 310 CMR 40.0412; or
- (d) within a time period established by the Department as an Interim Deadline in accordance with 310 CMR 40.0167.

(8) Submission to the Department of an Immediate Response Action Plan is not required if an Immediate Response Action Completion Report, as described in 310 CMR 40.0427, or a Permanent Solution Statement, as described in 310 CMR 40.1000, is received by the Department by the due date of the Immediate Response Action Plan.

(9) All written Immediate Response Action Plans submitted to the Department shall be approved, conditionally approved, or denied by the Department in writing within 21 days of receipt. Approval of such plan shall be presumed if the Department does not issue a written approval or denial of said plan within 21 days of receipt. Immediate Response Actions that had previously been orally approved by the Department shall continue during this review period.

(10) In approving an Immediate Response Action Plan, the Department may specify conditions of approval, including, but not limited to:

- (a) the role of the Department in overseeing or conducting various elements of the Immediate Response Action;
- (b) Interim Deadlines for one or more elements of the Immediate Response Action; or
- (c) submittal requirements for one or more elements of the Immediate Response Action.

(11) RPs, PRPs and Other Persons conducting Immediate Response Actions shall do so in conformance with all conditions and deadlines of any oral or written approval granted by the Department pursuant to 310 CMR 40.0420.

(12) Approval from the Department shall not be required to conduct or initiate Immediate Response Actions that consist solely of the construction of a fence and/or the posting of signs, provided the Department is informed of such actions in the next required response action submittal.

(13) Presumptive approval of an Immediate Response Action Plan pursuant to 310 CMR 40.0420(9) means the RP, PRP or Other Person has approval to proceed with Immediate Response Actions in compliance with all applicable provisions of 310 CMR 40.0000. Such presumptive approval shall not be construed as approval by the Department of the scope or adequacy of plans or of the response actions as actually conducted, or as forgiveness of non-compliance with any provision of 310 CMR 40.0000.

40.0421: Immediate Response Actions That Do Not Require Prior Approval From the Department

(1) Except where specifically prohibited in writing by the Department, assessment activities may be conducted at any site without prior notice to or approval from the Department to conduct such activities.

(2) Prior notice to and approval from the Department shall not be required to conduct or initiate remedial actions in those cases where the delay involved in notifying and obtaining approval from the Department would substantially exacerbate release or site conditions or endanger health, safety, public welfare or the environment. Immediate Response Actions conducted or initiated under such circumstances may include, without limitation, containment and/or removal actions that are undertaken:

- (a) immediately after a sudden release of oil and/or hazardous material;
- (b) immediately after the discovery of a release to prevent, abate or eliminate an Imminent Hazard; or
- (c) immediately after the discovery of a threat of release, in order to prevent a release from occurring.

Persons conducting or initiating remedial actions under the provisions of 310 CMR 40.0421(2) shall notify the Department of those remedial actions undertaken and needed to be taken at the site as soon as possible, and not later than 24 hours after commencement thereof.

(3) Prior notice to and approval from the Department shall not be required to excavate and stockpile up to 100 cubic yards (cumulative for the disposal site of concern) of soils contaminated by a release of oil or waste oil at concentrations or quantities that meet one or more of the sets of criteria specified in 310 CMR 40.0313, and resulting from the closure of an Underground Storage Tank, provided:

- (a) site conditions do not pose an Imminent Hazard to human health, safety, public welfare, or the environment;
- (b) contaminated soils are managed in conformance with the provisions of 310 CMR 40.0030;
- (c) notification is provided to the Department within the time frames required by 310 CMR 40.0332, specifying the nature and extent of soil removal activities; and
- (e) appropriate Immediate Response Actions are initiated subsequent to notification, in conformance with all provisions of 310 CMR 40.0420.

40.0424: Immediate Response Action Plans

(1) An Immediate Response Action Plan shall contain the following:

- (a) the name, address, telephone number and relationship to the site of the person assuming responsibility for conducting the Immediate Response Action;
- (b) a description of the release or threat of release, site conditions and surrounding receptors;
- (c) a description of any Immediate Response Actions undertaken to date at the site;
- (d) the reason why an Immediate Response Action is required;
- (e) the objective(s), specific plan(s) and proposed schedule for the Immediate Response Action, including, as appropriate, plans and/or sketches of the site and any proposed investigative and/or remedial installations;
- (f) a statement as to whether Remediation Waste will be excavated, collected, stored, treated or re-used at the site;
- (g) where appropriate, a proposed environmental monitoring plan, for implementation during and/or after the Immediate Response Action;
- (h) a listing of federal, state or local permits that will likely be needed to conduct the Immediate Response Action;
- (i) except as exempted pursuant to 310 CMR 40.0411(2), the seal and signature of the Licensed Site Professional who prepared the Immediate Response Action Plan; and
- (j) such other information as the Department may deem appropriate and necessary, based on site specific conditions, in order to review and evaluate the Immediate Response Action Plan in question.

40.0424: continued

(2) An Immediate Response Action Plan shall be updated and modified, if necessary, based upon the acquisition and evaluation of significant new information and data on release, threat of release and/or site conditions. Each significant modification of an Immediate Response Action Plan shall be resubmitted to the Department for review and approval.

(3) Immediate Response Action Plans shall be submitted to the Department using a transmittal form established by the Department for such purposes.

40.0425: Immediate Response Action Status and Remedial Monitoring Reports

(1) Unless otherwise specified in writing by the Department, a person conducting Immediate Response Actions shall submit a written Status Report to the Department 120 days after the date on which that person first communicated to the Department his or her intention to conduct that Immediate Response Action.

(2) Except as provided in 310 CMR 40.0425(5), following submission of the first such Status Report, additional Status Reports shall be submitted to the Department every six months thereafter, until such time as an Immediate Response Action Completion Report is submitted to the Department, as described in 310 CMR 40.0427. Each Status Report shall document Immediate Response Action activities occurring over the period of time since the previously submitted Status Report.

(3) Immediate Response Action Status Reports shall contain, at a minimum, the following information:

- (a) the status of assessment and/or remedial actions;
- (b) any significant new site information or data;
- (c) details of and/or plans for the management of Remediation Waste, Remedial Waste-water and/or Remedial Additives;
- (d) any other information required by the Department in its approval of the Immediate Response Action Plan; and
- (e) an LSP Opinion as to whether the Immediate Response Action is being conducted in conformance with the Immediate Response Action Plan and any conditions of approval established by the Department.

(4) Status Reports shall not be required for sites where an Immediate Response Action Completion Report or a Permanent Solution Statement is received by the Department prior to the date on which the first Status Report is required pursuant to 310 CMR 40.0425(1).

(5) Where Immediate Response Actions are being undertaken solely to eliminate, mitigate, or prevent a Critical Exposure Pathway that does not pose an Imminent Hazard with the use of an Active Exposure Pathway Mitigation Measure, Status Reports shall be submitted to the Department as follows:

- (a) Status Reports shall be submitted at the frequency specified in 310 CMR 40.0425(2) unless and until a Status Report containing the following information is submitted:
 1. Results of sampling demonstrating the Active Exposure Pathway Mitigation Measure is effectively maintaining, at a minimum, a condition of No Significant Risk for the Receptors of Concern;
 2. A listing of the specific system conditions, operating parameters, and/or maintenance necessary for ensuring the ongoing effectiveness of the Active Exposure Pathway Mitigation Measure in maintaining a condition of No Significant Risk for the Receptors of Concern;
 3. A description of a monitoring program designed to ensure the ongoing effectiveness of the Active Exposure Pathway Mitigation Measure in maintaining a condition of No Significant Risk for the Receptors of Concern; and
 4. An LSP Opinion supporting a reduced reporting schedule pursuant to 310 CMR 40.0425(5)(b) as being adequate to document the ongoing Immediate Response Actions.
- (b) Once the IRA Status Report outlined in 310 CMR 40.0425(5)(a) has been submitted, the frequency at which IRA Status Reports shall be submitted to the Department may be reduced to annually thereafter, until such time as an IRA Completion Report is submitted to the Department, as outlined in 310 CMR 40.0427.

40.0425: continued

(c) Notwithstanding the provisions of 310 CMR 40.0425(5), any person conducting response actions pursuant to this section that rely on an Active Exposure Pathway Mitigation Measure, who has knowledge of the failure of the Measure to effectively maintain a condition of No Significant Risk and/or the need to substantially modify such Measure, shall provide a modified IRA Plan to the Department pursuant to 310 CMR 40.0424(2) within 30 days of obtaining such knowledge. Such IRA Plan shall include plans and a timetable to correct failures and/or to implement modifications.

(d) Notwithstanding any provision to the contrary, the Department may establish Interim Deadlines and alternate schedules for the submission of Status Reports for IRAs addressing Critical Exposure Pathways.

(6) Immediate Response Action Status Reports shall be submitted to the Department using a transmittal form established by the Department for such purposes.

(7) For a disposal site where Active Operation and Maintenance of a remedial action is being conducted as part of an Immediate Response Action, in addition to and/or in conjunction with the submittal of IRA Status Reports, a Remedial Monitoring Report shall be submitted to the Department on a form established by the Department for such purposes at the following frequency:

(a) except as provided in 310 CMR 40.0425(7)(c), when an Immediate Response Action includes Active Operation and Maintenance of a remedial action to address an Imminent Hazard or Condition of Substantial Release Migration, with the first IRA Status Report and monthly thereafter. In such cases where Active Operation and Maintenance of a remedial action is initiated after the submittal of the first IRA Status Report, the initial Remedial Monitoring Report shall be submitted on the monthly anniversary of the submittal of the first IRA Status Report;

(b) except as provided in 310 CMR 40.0425(7)(c), when an Immediate Response Action includes Active Operation and Maintenance of a remedial action to address conditions that do not pose an Imminent Hazard or Condition of Substantial Release Migration, with the first IRA Status Report and every six months thereafter. In such cases where Active Operation and Maintenance of a remedial action is initiated after the submittal of the first IRA Status Report, the initial Remedial Monitoring Report shall be submitted on the next six-month anniversary of the submittal of the first IRA Status Report.

(c) where IRA Status Reports are submitted annually pursuant to 310 CMR 40.0425(5)(b), Remedial Monitoring Reports shall be submitted with the annual IRA Status Reports.

(d) Notwithstanding any provision to the contrary, the Department may establish Interim Deadlines and alternate schedules for the submission of Remedial Monitoring Reports.

40.0426: Imminent Hazard Evaluations

(1) An Imminent Hazard Evaluation shall be performed as part of an Immediate Response Action at sites where a release or threat of release could pose an Imminent Hazard to human health, safety, public welfare, or the environment, as described in 310 CMR 40.0321(2), and may be performed at sites where a release or threat of release is deemed to pose an Imminent Hazard, as described in 310 CMR 40.0321(1).

(2) Unless otherwise specified in writing by the Department, RPs, PRPs and Other Persons conducting Immediate Response Actions at a site where a release or threat of release could pose an Imminent Hazard to human health, as described in 310 CMR 40.0321(2), shall initiate an Imminent Hazard Evaluation within 14 days of obtaining knowledge of such a condition, and shall submit to the Department, within 60 days of obtaining knowledge of such a condition:

(a) an LSP Opinion as to whether an Imminent Hazard to human health actually exists at the site, as described in 310 CMR 40.0950; or

(b) when such an Opinion cannot yet be made, an LSP Opinion:

1. describing the investigative efforts that have been made and remain to be taken in order to determine whether an Imminent Hazard to human health actually exists at the site, as well as a timetable for the remaining activities; or
2. proposing a plan to undertake removal and/or containment actions at the site to address those conditions that could pose an Imminent Hazard to human health.

40.0426: continued

(3) Unless otherwise specified in writing by the Department, RPs, PRPs, or Other Persons conducting response actions at sites where a release or threat of release could pose an Imminent Hazard to safety, public welfare, or the environment shall initiate an Imminent Hazard Evaluation within 14 days of obtaining knowledge of such a condition, and shall submit to the Department, within 60 days of obtaining knowledge of such a condition:

- (a) an LSP Opinion as to whether an Imminent Hazard to safety, public welfare, or the environment actually exists at the site; or
- (b) when such an Opinion cannot yet be made, an LSP Opinion:
 - 1. describing the investigative efforts that have been made and remain to be taken in order to determine whether an Imminent Hazard to safety, public welfare, or the environment actually exists at the site, as well as a timetable for the remaining activities; or
 - 2. proposing a plan to undertake removal and/or containment actions at the site to address those conditions that could pose an Imminent Hazard to safety, public welfare, or the environment.

(4) RPs, PRPs and Other Persons conducting Immediate Response Actions at a site where a release or threat of release poses or could pose an Imminent Hazard, as specified in 310 CMR 40.0321 and 40.0950, shall keep the Department informed as to the progress being made in addressing and/or abating the Imminent Hazard, in report submittals made as part of the Immediate Response Action Status Reports, or in accordance with a reporting frequency and procedure established by the Department as part of its approval of the Immediate Response Action Plan.

(5) Imminent Hazard Evaluations shall be submitted to the Department using a transmittal form established by the Department for such purposes.

(6) Active remedial systems and/or continuing response actions required and/or approved by the Department to address an Imminent Hazard condition at a site shall not be terminated by the RP, PRP, or Other Person conducting Immediate Response Actions until such time as response objectives and/or approval conditions have been met, and until approval to do so has been obtained from the Department. All requests to terminate such actions shall be submitted to the Department using a transmittal form established by the Department for such purposes, and shall contain data, documentation, and technical information sufficient to justify cessation of such actions. Approval to terminate such actions shall be presumed if the Department does not issue a written approval or denial of such a request within 21 days of receipt of the same.

40.0427: Immediate Response Action Completion Reports

(1) An Immediate Response Action shall be considered complete when the release, threat of release and/or site conditions which give rise to the need for that Immediate Response Action, as described in 310 CMR 40.0412, have been assessed and, where necessary, remediated in a manner and to a degree that will ensure, at a minimum:

- (a) the accomplishment of any necessary stabilization of site conditions;
- (b) the elimination or control of any Imminent Hazards to health, safety, public welfare and the environment, without the continued operation and maintenance of Active Remedial Systems or Active Exposure Pathway Mitigation Measures or the incorporation of ongoing response actions to eliminate or control the Imminent Hazard into the Phase IV Remedy Implementation Plan for the disposal site; and
- (c) the completion of time-critical measures addressing the elimination, prevention or mitigation of Critical Exposure Pathway(s) as documented with an LSP Opinion concluding that:
 - 1. the Critical Exposure Pathway(s) have been eliminated using passive measures;
 - 2. a feasibility study, as specified at 310 CMR 40.0414(3) and (4), supports the conclusion that it is not feasible to eliminate, prevent, or mitigate the Critical Exposure Pathway(s);
 - 3. a feasibility study, conducted as part of a Phase III evaluation of Comprehensive Remedial Alternatives as specified in 310 CMR 40.0860, supports the conclusion that it is not feasible to eliminate, prevent, or mitigate the Critical Exposure Pathway(s) as part of the Comprehensive Remedial Alternative; or

40.0427: continued

4. mitigation of Critical Exposure Pathway(s) is continuing by incorporation of ongoing response actions to address the Critical Exposure Pathway(s) into the Phase IV Remedy Implementation Plan for the disposal site.
- (2) Except as specified in 310 CMR 40.0427(3), an Immediate Response Action Completion Report shall be submitted to the Department within 60 days of completion of all assessment, containment and/or removal actions conducted as part of the Immediate Response Action.
- (3) An Immediate Response Action Completion Report shall not be required for sites where a Permanent Solution Statement, as described in 310 CMR 40.1000, is submitted to the Department by an RP, PRP, or Other Person within 120 days of first informing the Department of the need to conduct an Immediate Response Action at the site, as specified in 310 CMR 40.0420(3).
- (4) Immediate Response Action Completion Reports shall contain, at a minimum, the following:
 - (a) a description of the release or threat of release, site conditions and surrounding receptors;
 - (b) a description of the work completed, including work undertaken in response to any conditions of approval imposed by the Department, and any work undertaken at the site that was not included in the scope of the Immediate Response Action Plan, where submitted;
 - (c) all investigatory and monitoring data obtained during the implementation of the Immediate Response Action;
 - (d) a succinct statement on the findings and conclusions of the Immediate Response Action;
 - (e) details and documentation on the management of any Remediation Waste, Remedial Wastewater and/or Remedial Additives managed at the site as part of the Immediate Response Action;
 - (f) a description of any ongoing activities related to the Immediate Response Action that will be conducted at the site, including monitoring activities, security measures and the maintenance of fences, caps and other passive systems; and
 - (g) a description of any ongoing activities related to the Immediate Response Action that will be conducted at the site as part of Comprehensive Response Actions.
- (5) Immediate Response Action Completion Reports shall be submitted to the Department appended to a Completion Statement form established by the Department for such purposes. The Completion Statement form shall contain:
 - (a) except as exempted pursuant to 310 CMR 40.0411(2), an LSP Opinion on whether the Immediate Response Action was conducted in accordance with 310 CMR 40.0410, any approval conditions specified by the Department, and, where submitted, the Immediate Response Action Plan(s); and
 - (b) the certification of the submittal required by 310 CMR 40.0009.
- (6) Except as provided in 310 CMR 40.0427(7), an Immediate Response Action shall not be considered complete until all stockpiled/stored Remediation Waste generated as a result of the Immediate Response Action is removed from the site pursuant to the provisions of 310 CMR 40.0030.
- (7) Remediation Waste may be stored, treated, managed, disposed, recycled or reused at a site following the submission to the Department of an Immediate Response Action Completion Report and Completion Statement only if:
 - (a) such actions are conducted in conformance with the provisions of 310 CMR 40.0030; and
 - (b) a Release Abatement Measure Plan pursuant to the provisions of 310 CMR 40.0440 or a Remedy Implementation Plan pursuant to the provisions of 310 CMR 40.0870 is submitted to the Department as an attachment to the Immediate Response Action Completion Statement.
- (8) Unless otherwise directed by the Department, Immediate Response Action Completion Reports shall not require approval from the Department.

40.0428: Public Involvement

- (1) Public Involvement Activities shall be conducted in accordance with 310 CMR 40.1400 through 40.1406. Public Involvement Activities relevant to Immediate Response Actions may include, without limitation, those activities set forth at 310 CMR 40.1403(3)(b), (c), (f), (5) and (9).
- (2) If the disposal site where the Immediate Response Action is conducted is a Public Involvement Plan Site, a Public Involvement Plan that is consistent with 310 CMR 40.1405 shall be implemented by the RP, PRP or Other Person conducting response actions at that site.

40.0429: Possible Outcomes of an Immediate Response Action

One or more of the following actions shall be taken by an RP, PRP or Other Person following the completion of an Immediate Response Action:

- (1) the filing of a Permanent Solution Statement, in accordance with the provisions of 310 CMR 40.1000;
- (2) the initiation of a Release Abatement Measure, in accordance with the provisions of 310 CMR 40.0440; or
- (3) the continuation of further Preliminary or Comprehensive Response Actions, in accordance with the provisions of 310 CMR 40.0400 or 40.0800.

40.0440: Release Abatement Measures

310 CMR 40.0441 through 40.0449, cited collectively as 310 CMR 40.0440, set forth requirements and procedures for conducting Release Abatement Measures.

40.0441: General Provisions for Release Abatement Measures

- (1) Release Abatement Measures are intended to reduce risks at a disposal site and/or increase the cost effectiveness of response actions by allowing the implementation of certain accelerated remedial actions to stabilize, treat, control, minimize or eliminate releases until such time as a Permanent or Temporary Solution is achieved, as described in 310 CMR 40.1000, or until Comprehensive Remedial Actions can be implemented, as described in 310 CMR 40.0800. Release Abatement Measures may also be used to perform an additional remedial action(s) at a site for which a Permanent or Temporary Solution Statement has been submitted, in accordance with 310 CMR 40.1067.
- (2) Release Abatement Measures shall be limited in scope and complexity, as described in 310 CMR 40.0442, in order to prevent adverse impacts to health, safety, public welfare or the environment that could result from the implementation of complicated or large-scale remedial actions at disposal sites where there has not been adequate assessment, evaluation, planning and/or public involvement.
- (3) An RP, PRP or Other Person may propose to the Department to conduct a Release Abatement Measure at a disposal site at any time following notification to the Department of a release or threat of release pursuant to 310 CMR 40.0300.
- (4) Any person who conducts a Release Abatement Measure shall do so in accordance with all applicable requirements and specifications prescribed in 310 CMR 40.0000. RPs, PRPs, and Other Persons conducting Release Abatement Measures shall employ or engage a Licensed Site Professional as required by these regulations.
- (5) Release Abatement Measures shall comply with all local, state and federal permitting and approval requirements.
- (6) Health and safety procedures consistent with the provisions of 310 CMR 40.0018 shall be implemented at all sites where a Release Abatement Measure is being conducted.

40.0442: Scope and Types of Release Abatement Measures

- (1) The scope and complexity of Release Abatement Measures shall be commensurate with the amount of information known about, and the degree of risk associated with, release and disposal site conditions. A Release Abatement Measure shall not:
 - (a) be implemented without a level of understanding of disposal site conditions and surrounding receptors sufficient to support the actions taken;
 - (b) be continued at a disposal site where encountered oil and/or hazardous material, migration pathways, or exposure routes are substantially different from those anticipated;
 - (c) be conducted in a manner that is likely to result in the exposure of surrounding human or ecological receptors to levels of oil and/or hazardous material that could pose a significant risk of harm to health, safety, public welfare or the environment, as described in 310 CMR 40.0950;
 - (d) prevent or impede the implementation of likely future response actions; or
 - (e) be conducted in a manner inconsistent with the Response Action Performance Standard described in 310 CMR 40.0191.

- (2) Release Abatement Measures conducted in accordance with the provisions of 310 CMR 40.0442(1) may include, without limitation:
 - (a) the excavation and off-site disposal of up to 500 cubic yards (cumulative, for the disposal site in question) of soil contaminated by oil and/or hazardous material at concentrations equal to or greater than applicable Reportable Concentrations, in conformance with 310 CMR 40.0030;
 - (b) the excavation and on or off-site treatment, recycling or reuse of up to 1500 cubic yards (cumulative, for the disposal site in question) of soil contaminated by oil and/or hazardous material at concentrations equal to or greater than applicable Reportable Concentrations, in conformance with 310 CMR 40.0030;
 - (c) the initiation of passive or active NAPL recovery systems that discharge to a closed container, or groundwater recovery or treatment systems that discharge Remedial Wastewater and/or Remedial Additives in accordance with 310 CMR 40.0040 to a sewer system, POTW, Non-publicly Owned Treatment Works, surface water body, or to the ground surface or subsurface and/or groundwater; or
 - (d) the implementation of a soil vapor extraction system and/or groundwater sparging system, with appropriate off-gas treatment and controls, as described in 310 CMR 40.0049.

- (3) Notwithstanding 310 CMR 40.0442(1)(d), Release Abatement Measures may include construction of a structure that could prevent or impede the implementation of likely response actions in the future, provided that prior to or concurrent with conducting such activities, the following are completed for the area within and adjacent to the footprint of the proposed structure in a manner that achieves the substantive technical standards set forth in 310 CMR 40.0800 and 40.0900:
 - (a) a site assessment;
 - (b) a risk characterization;
 - (c) a feasibility evaluation;
 - (d) if the Exposure Point Concentrations of contaminants under such structure exceed applicable soil Upper Concentration Limits (UCLs) specified in 310 CMR 40.0996(6), the reduction of concentrations to levels at or below UCLs to the extent feasible pursuant to 310 CMR 40.0860(4);
 - (e) the elimination or control of any Source of OHM Contamination as specified in 310 CMR 40.1003(5);
 - (f) the management of NAPL as specified in 310 CMR 40.1003(7)(a); and
 - (g) any other remedial actions deemed necessary to ensure the eventual achievement of a level of No Significant Risk for the entire disposal site.

- (4) A cap or engineered barrier, as defined in 310 CMR 40.0996(5), that is constructed as a Release Abatement Measure will not be considered part of a Permanent Solution at a disposal site, unless and until a Phase III performed pursuant to the provisions of 310 CMR 40.0850 demonstrates the lack of a feasible alternative.

40.0442: continued

(5) Release Abatement Measures shall not involve the excavation of greater than 1500 cubic yards (cumulative, for the disposal site in question) of soil contaminated by oil and/or hazardous material at concentrations equal to or greater than applicable Reportable Concentrations, unless a statement is provided in the Release Abatement Measure Plan by the RP, PRP, or Other Person conducting response actions certifying that, based upon information and opinions provided by an LSP, such persons have sufficient financial resources to manage excavated materials in the manner and time frames specified at 310 CMR 40.0030.

40.0443: Approvals Required to Conduct Release Abatement Measures

(1) A Release Abatement Measure shall not be conducted at any disposal site until a complete Release Abatement Measure Plan, as described in 310 CMR 40.0444, has been received by the Department. A Release Abatement Measure Plan shall not be considered complete until all information described in 310 CMR 40.0444 is received in the appropriate DEP regional office, accompanied by a certification of payment, in cases where a fee is specified pursuant to 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

(2) Subsequent to the receipt by the Department of a complete RAM Plan, unless otherwise specified by the Department in writing, approval shall not be required from the Department to conduct the Release Abatement Measure. Exemption from the need to obtain approval from the Department in these cases shall not relieve RPs, PRPs, or Other Persons of their obligation to submit to the Department all required Release Abatement Measure Plans, Status Reports and Completion Reports.

(3) Any person implementing a Release Abatement Measure shall conform to all proposals and specifications contained in the Release Abatement Measure Plan, and any conditions specified by the Department.

(4) A modified Release Abatement Measure Plan shall be submitted to the Department prior to implementing a modification of a Release Abatement Measure if:

- (a) contaminants or conditions are discovered that significantly increase the degree or change the type of exposure to nearby receptors; or
- (b) a significant change is proposed to on-site treatment processes.

All other modifications may be implemented immediately and shall be documented with the next required response action submittal pursuant to 310 CMR 40.0440.

(5) Remedial actions specified in a Release Abatement Measure Plan shall be initiated by the RP, PRP, or Other Person conducting response actions at a disposal site within one year from the date of the Department's receipt of a complete Release Abatement Measure Plan. Release Abatement Measure Plans not initiated in this manner shall be considered invalid and unapproved.

40.0444: Release Abatement Measure Plans

(1) A Release Abatement Measure Plan shall not be considered complete unless it contains, at a minimum, the following:

- (a) the name, address, telephone number and relationship to the site of the person assuming responsibility for conducting the Release Abatement Measure;
- (b) a description of the release or threat of release, site conditions and surrounding receptors;
- (c) the objective(s), specific plan(s) and proposed implementation schedule for the Release Abatement Measure, including, as appropriate, descriptions, plans and/or sketches of the site, any proposed structures to be constructed or installed in the project area, and any proposed investigative and/or remedial installations;
- (d) a statement as to whether Remediation Waste, Remedial Wastewater and/or Remedial Additives will be excavated, collected, stored, treated, discharged, applied, reused, or otherwise managed at the site;
- (e) where appropriate, a proposed environmental monitoring plan, for implementation during and/or after the Release Abatement Measure;

40.0444: continued

- (f) a listing of federal, state and/or local permits likely to be needed to conduct the Release Abatement Measure;
- (g) the seal and signature of the Licensed Site Professional who prepared the Release Abatement Measure Plan;
- (h) the certification required at 310 CMR 40.0442(5), if greater than 1500 cubic yards of Remediation Wastes are to be generated and managed at the disposal site; and
- (i) any other information that the Department, during its review and evaluation of the Release Abatement Measure Plan, determines to be necessary to complete said plan, in view of site specific circumstances and conditions.

(2) All Release Abatement Measure Plans submitted to the Department prior to Tier Classification of the disposal site shall be accompanied by the appropriate fee established in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*. No fee is required for Release Abatement Measure Plans submitted to the Department after Tier Classification of the disposal site or after submittal of a Permanent Solution Statement for the disposal site.

(3) Release Abatement Measure Plans shall be submitted to the Department using a transmittal form established by the Department for such purposes.

40.0445: Release Abatement Measure Status and Remedial Monitoring Reports

(1) Persons conducting Release Abatement Measures shall submit a Status Report 120 days following receipt by the Department of the initial Release Abatement Measure Plan, and every six months thereafter, until a Release Abatement Measure Completion Report, in accordance with the provisions of 310 CMR 40.0446, has been submitted to the Department. Each Status Report shall document Release Abatement Measure activities occurring over the period of time since the previously submitted Status Report.

(2) Release Abatement Measure Status Reports shall contain, at a minimum, the following information:

- (a) the status of response operations;
- (b) any significant new site information or data;
- (c) details of and/or plans for the management of Remediation Waste, Remedial Waste-water and/or Remedial Additives;
- (d) any other information that the Department during its review and evaluation of a Status Report determines to be necessary to complete said Status Report, in view of site specific circumstances and conditions; and
- (e) an LSP Opinion as to whether the Release Abatement Measure is being conducted in conformance with the Release Abatement Measure Plan and any conditions of approval established by the Department.

(3) Status Reports shall not be required for sites where a Release Abatement Measure Completion Report or a Permanent Solution Statement is received by the Department prior to the date on which the first Status Report is required pursuant to 310 CMR 40.0445(1). In the case of a Release Abatement Measure conducted at a site already subject to a Permanent Solution Statement in accordance with 310 CMR 40.1067, a Release Abatement Measure Status Report shall be required unless a Release Abatement Measure Completion Report or a revised Permanent Solution Statement is received by the Department prior to the date on which the first Status Report is required pursuant to 310 CMR 40.0445(1).

(4) Release Abatement Measure Status Reports shall be submitted to the Department using a transmittal form established by the Department for such purposes.

(5) For a disposal site where Active Operation and Maintenance of a remedial action is being conducted as part of a RAM, a Remedial Monitoring Report shall be submitted to the Department on a form established by the Department for such purposes at a frequency of every six months and concurrently with the submittal of the RAM Status Report. In such cases when the Active Operation and Maintenance of a remedial action is initiated after the submittal of the first RAM Status Report, the Remedial Monitoring Report shall be submitted concurrently with the next RAM Status Report.

40.0446: Release Abatement Measure Completion Report

- (1) A Release Abatement Measure Completion Report shall be submitted to the Department no later than 60 days following the completion of those remedial actions proposed in the Release Abatement Measure Plan and/or approved by the Department pursuant to 310 CMR 40.0443.
- (2) A Release Abatement Measure shall be considered complete when the objectives of the Release Abatement Measure Plan have been met, and when all active and ongoing remedial actions related to the Release Abatement Measure have been terminated.
- (3) Unless otherwise specified in writing by the Department, a Release Abatement Measure Completion Report shall not be required for sites where a Permanent Solution Statement, as described in 310 CMR 40.1000, is submitted to the Department within 120 days following receipt by the Department of the complete initial Release Abatement Measure Plan to conduct the Release Abatement Measure or in the case of a Release Abatement Measure conducted at a site already subject to a Permanent or Temporary Solution Statement in accordance with 310 CMR 40.1067, a revised Permanent or Temporary Solution Statement is submitted.
- (4) A Release Abatement Measure Completion Report shall contain, at a minimum, the following:
 - (a) a description of the release or threat of release, site conditions, and surrounding receptors;
 - (b) a description of the Release Abatement Measure completed at the disposal site, including work undertaken in response to any conditions of approval imposed by the Department;
 - (c) all investigatory and monitoring data obtained during the implementation of the Release Abatement Measure;
 - (d) a succinct statement of findings and conclusions resulting from implementation of the Release Abatement Measure, including a statement as to whether the objectives of the Release Abatement Measure have been met;
 - (e) details and documentation on the management of any Remediation Waste, Remedial Wastewater and/or Remedial Additives managed at the site as part of the Release Abatement Measure; and
 - (f) a description of any ongoing activities related to the Release Abatement Measure that will be conducted at the disposal site, including monitoring activities, and the maintenance of fences, caps, and other passive systems.
- (5) Release Abatement Measure Completion Reports shall be submitted to the Department appended to a Completion Statement form established by the Department for such purposes. The Completion Statement form shall contain:
 - (a) an LSP Opinion on whether the Release Abatement Measure was conducted in accordance with 310 CMR 40.0440, any approval conditions specified by the Department, and, where submitted, the Release Abatement Measure Plan; and
 - (b) the certification of the submittal required by 310 CMR 40.0009.
- (6) Except as provided in 310 CMR 40.0446(7), a Release Abatement Measure shall not be considered complete until all stockpiled/stored Remediation Waste generated as a result of the Release Abatement Measure is removed from the site pursuant to the provisions of 310 CMR 40.0030.
- (7) Remediation Waste may be stored, treated, managed, disposed, recycled or reused at a site following the submission to the Department of a Release Abatement Measure Completion Report and Completion Statement only if:
 - (a) such actions are conducted in conformance with the provisions of 310 CMR 40.0030; and
 - (b) a Remedy Implementation Plan pursuant to the provisions of 310 CMR 40.0870 is submitted to the Department as an attachment to the Release Abatement Measure Completion Statement.
- (8) Unless otherwise directed by the Department, Release Abatement Measure Completion Reports are not subject to approval by the Department.

40.0447: Public Involvement

(1) Public Involvement Activities shall be conducted in accordance with 310 CMR 40.1400 through 40.1406. Public Involvement Activities required for Release Abatement Measures specifically include 310 CMR 40.1403(3)(d), and may include, without limitation, those activities set forth at 40.1403(3)(f).

(2) If the disposal site where the Release Abatement Measure was conducted is a designated Public Involvement Priority site, then a Public Involvement Plan consistent with 310 CMR 40.1405 shall be implemented by the RP, PRP or Other Person conducting response actions at that site.

40.0448: Possible Outcomes of a Release Abatement Measure

One of the following actions shall be taken by an RP, PRP, or Other person following the completion of a Release Abatement Measure:

(1) the filing of a Permanent Solution Statement, in accordance with the provisions of 310 CMR 40.1000; or

(2) the continuation of further Preliminary or Comprehensive Response Actions, in accordance with the provisions of 310 CMR 40.0400 or 40.0800.

40.0460: Utility-related Abatement Measures

310 CMR 40.0461 through 40.0469, cited collectively as 310 CMR 40.0460, set forth requirements and procedures to conduct Utility-related Abatement Measures.

40.0461: General Provisions for Utility-related Abatement Measures

(1) Except as provided in 310 CMR 40.0461(3), Utility-related Abatement Measures may be taken at sites where oil and/or hazardous material is present in the soil or groundwater at levels equal to or greater than an applicable Reportable Concentration value listed at 310 CMR 40.0360 and 40.1600, by:

- (a) persons overseeing or directly responsible for utility construction activities; or
- (b) persons overseeing or directly responsible for site preparation work requested or required by a Public or Private Utility company or Public Authority prior to any utility construction activity.

(2) Except as provided in 310 CMR 40.0461(7), Utility-related Abatement Measures may be taken on public rights of way, utility easements and private property, to respond to and properly manage contamination encountered during the installation, repair, replacement or decommissioning of:

- (a) sanitary sewerage, water, or drainage systems and related appurtenances;
- (b) steam lines;
- (c) natural gas pipelines and related appurtenances; and
- (d) above ground or underground electric, telephone, telecommunication cables or other conduits, and related appurtenances.

(3) Utility-related Abatement Measures shall neither be initiated nor continued at any site where a "Two Hour" or "72 Hour" release or threat of release has been identified, as described in 310 CMR 40.0311 through 40.0314, until such time as an Immediate Response Action Completion Report has been submitted to the Department.

(4) Except as provided in 310 CMR 40.0462(4), persons conducting Utility-related Abatement Measures shall engage or employ a Licensed Site Professional as required by 310 CMR 40.0000.

(5) Utility-related Abatement Measures:

- (a) shall be limited to only those assessment, containment or removal actions that are necessary for the completion of construction activities;
- (b) shall not prevent or impede the implementation of likely future response actions; and
- (c) shall not include the construction of residential, commercial, or industrial buildings.

40.0461: continued

- (6) Utility-related Abatement Measures shall be undertaken in conformance with all applicable procedures and requirements specified in 310 CMR 40.0460.
- (7) Utility-related Abatement Measures shall not be initiated at sites where the installation of new public utilities are proposed until sufficient evaluation has been made of the nature and extent of encountered and suspected contamination, the scope and expense of necessary mitigative actions, and benefits and limitations of project alternatives.
- (8) The Department may, at its discretion, require, undertake or order the initiation of any assessment or remedial actions deemed necessary at any construction site to prevent, abate or eliminate damage or the likelihood of damage to health, safety, public welfare or the environment.

40.0462: Conducting Utility-related Abatement Measures

- (1) Except as provided in 310 CMR 40.0462(3), Utility-related Abatement Measures shall not be undertaken by a person performing construction activities until after that person has notified the Department orally or in writing of:
 - (a) any release or threat of release of oil and/or hazardous material at the construction site for which notification to the Department by any person is required under the provisions of 310 CMR 40.0315;
 - (b) their intentions to conduct a Utility-related Abatement Measure in compliance with all applicable requirements of 310 CMR 40.0460; and
 - (c) the name and license number of the Licensed Site Professional who has been engaged or employed by the person conducting the Utility-related Abatement Measure.
- (2) Persons providing oral notification to the Department pursuant to 310 CMR 40.0462(1) shall submit written confirmation of such notice to the Department within seven days, using a transmittal form established by the Department for such purposes. Such confirmation shall include submittal of a Release Notification Form as described in 310 CMR 40.0371, in cases where the person conducting the Utility-related Abatement Measure is also a person required to notify pursuant to the provisions of 310 CMR 40.0331.
- (3) Notwithstanding the provisions of 310 CMR 40.0462(1), notification to the Department of releases that require notification pursuant to 310 CMR 40.0315 shall not be required prior to the initiation of Utility-related Abatement Measures in cases where emergency actions are being undertaken to repair a damaged or defective utility installation. In such cases, notification shall be provided to the Department as soon as possible thereafter, and within 72 hours of conducting the Utility-related Abatement Measure.
- (4) Notwithstanding any other provisions of 310 CMR 40.0460 or 310 CMR 40.0030, persons conducting Utility-related Abatement Measures shall not be required to engage or employ a Licensed Site Professional for conducting Utility-related Abatement Measures that are limited to the excavation and/or handling of:
 - (a) not more than 100 cubic yards (cumulative, for any site) of soil contaminated solely by a release of oil or waste oil at concentrations equal to or greater than an applicable Reportable Concentration; or
 - (b) not more than 20 cubic yards (cumulative, for any site) of soil contaminated by a release of hazardous material or a mixture of hazardous material and oil or waste oil at concentrations equal to or greater than an applicable Reportable Concentration.
- (5) Contaminated soil removed from a construction site under the provisions of 310 CMR 40.0462(4) shall be managed in compliance with all applicable provisions of 310 CMR 40.0030, excluding 310 CMR 40.0034(4)(a).

40.0462: continued

(6) If the on-site temporary storage of Remediation Waste is precluded due to public safety or traffic concerns, such Remediation Waste may be temporarily stored at another location owned or operated by the RP, PRP or Other Person conducting the Utility-related Abatement Measure, or at a facility permitted, licensed or approved to accept such materials, provided such Remediation Waste is returned to the original site of generation for backfilling or on-site treatment within 14 days of its removal from the site, and is otherwise managed in accordance with the applicable provisions of 310 CMR 40.0460 and 40.0030.

(7) Except for those emergency repairs that occur during non-business hours, Utility-related Abatement Measures shall not be undertaken on any property until a reasonable attempt is made to notify the owner of the property of the discovery of contamination and of the scope and detail of the proposed response action. In the event of emergency repairs, the owner of the property in question shall be notified as soon as possible thereafter. Notwithstanding the foregoing, no rights to undertake any actions beyond those rights otherwise possessed by persons undertaking such actions are created by this provision.

40.0463: Approvals Required to Conduct Utility-related Abatement Measures

(1) Utility-related Abatement Measures conducted in conformance with all applicable provisions of 310 CMR 40.0460 shall not require approval from the Department under the provisions of 310 CMR 40.0400. Persons conducting Utility-related Abatement Measures shall comply with all other applicable federal, state and local laws, ordinances, regulations, rules and bylaws.

(2) Notwithstanding 310 CMR 40.0463(1), the Department shall have the right to prohibit any person from undertaking any Utility-related Abatement Measure, or to approve such measures subject to such conditions as the Department deems necessary, in order to protect and preserve health, safety, public welfare and/or the environment, based upon site specific circumstances and conditions.

40.0464: Performance Standards for Utility-related Abatement Measures

The following performance standards shall be met for all Utility-related Abatement Measures:

(1) contamination at the disposal site shall not be exacerbated as a result of Utility-related Abatement Measures or as a result of structures placed within an area of identified contamination;

(2) construction workers, surrounding human populations, and environmental receptors shall be reasonably protected from exposure to oil and/or hazardous material during and following construction activities; and

(3) contaminated soil, contaminated groundwater, and other Remediation Wastes removed from the disposal site and construction area shall be managed in compliance with the provisions of 310 CMR 40.0030 and all applicable federal, state and local laws.

40.0465: Utility-related Abatement Measures Status and Remedial Monitoring Reports

(1) Persons conducting Utility-related Abatement Measures shall submit a Status Report to the Department 120 days following notification to the Department of their intentions to conduct a Utility-related Abatement Measure pursuant to 310 CMR 40.0462(1)(b), and every six months thereafter, until a Utility-related Abatement Measure Completion Report is submitted to the Department in accordance with 310 CMR 40.0466. Each Status Report shall document Utility-related Abatement Measure activities occurring over the period of time since the previously submitted Status Report.

(2) Utility-related Abatement Measure Status Reports shall contain, at a minimum, the following information:

40.0465: continued

- (a) the status of response operations;
- (b) any significant new site information or data;
- (c) details of and/or plans for the management of Remediation Waste, Remedial Wastewater and/or Remedial Additives;
- (d) any other information required by the Department pursuant to any condition that the Department imposes on the right to conduct Utility-related Abatement Measures, pursuant to 310 CMR 40.0463(2); and
- (e) an LSP Opinion as to whether the Utility-related Abatement Measure is being conducted in conformance with the provisions of 310 CMR 40.0000 and any conditions established by the Department.

(3) Status Reports shall not be required for any Utility-related Abatement Measure completed within 120 days following notification to the Department of the intention to conduct the same, pursuant to 310 CMR 40.0462(1)(b).

(4) Utility-related Abatement Measure Status Reports shall be submitted to the Department using a transmittal form established by the Department for such purposes.

(5) For a disposal site where Active Operation and Maintenance of a remedial action is being conducted as part of a URAM, a Remedial Monitoring Report shall be submitted to the Department on a form established by the Department for such purposes at a frequency of every six months and concurrently with the submittal of the URAM Status Report. In such cases when the Active Operation and Maintenance of a remedial action is initiated after the submittal of the first URAM Status Report, the Remedial Monitoring Report shall be submitted concurrently with the next URAM Status Report.

40.0466: Utility-related Abatement Measure Completion Reports

(1) A Utility-related Abatement Measure Completion Report shall be submitted to the Department within 60 days of the completion of all response actions associated with a Utility-related Abatement Measure.

(2) A Utility-related Abatement Measure Completion Report shall contain, at a minimum, the following:

- (a) a succinct summary of information and data pertaining to the discovery, location and evaluation of encountered contamination, and of all response actions undertaken and/or completed;
- (b) documentation on the management of Remediation Waste, Remedial Additives and/or Remedial Wastewater managed at the site; and
- (c) details on any proposed or ongoing active or passive remedial systems that will remain in place at the site.

(3) Except as provided in 310 CMR 40.0466(4), a Utility-related Abatement Measure shall not be considered complete until all stockpiled/stored Remediation Waste generated as a result of the Utility-related Abatement Measure is removed from the site pursuant to the provisions of 310 CMR 40.0030.

(4) Remediation Waste may be stored, treated, managed, disposed, recycled or reused at a site following the submission to the Department of a Utility-related Abatement Measure Completion Report and Completion Statement only if:

- (a) such actions are conducted in conformance with the provisions of 310 CMR 40.0030; and
- (b) a Release Abatement Measure Plan pursuant to the provisions of 310 CMR 40.0440 or a Remedy Implementation Plan pursuant to the provisions of 310 CMR 40.0870 is submitted to the Department as an attachment to the Utility-related Abatement Measure Completion Statement.

(5) Except as provided in 310 CMR 40.0466(6), Utility-related Abatement Measure Completion Reports shall be submitted to the Department appended to a Completion Statement form established by the Department for such purposes. The Completion Statement form shall contain:

40.0466: continued

- (a) an LSP Opinion on whether the Utility-related Abatement Measure was conducted in accordance with 310 CMR 40.0460 and any approval conditions specified by the Department; and
- (b) the certification of the submittal required by 310 CMR 40.0009.

(6) Notwithstanding the provisions of 310 CMR 40.0466(5), an LSP Opinion shall not be required for Utility-related Abatement Measure Completion Reports documenting response actions at those Utility-related Abatement Measures described at 310 CMR 40.0462(4).

40.0467: Possible Outcomes of Utility-related Abatement Measures

The following actions are possible following the initiation and/or completion of Utility-related Abatement Measures:

- (1) Utility-related Abatement Measures are terminated due to the discovery of a "Two Hour" or "72 Hour" release or threat of release described in 310 CMR 40.0311 through 40.0314, and continued work on the construction project requires the implementation of an Immediate Response Action by an RP, PRP, or Other Person;
- (2) Utility-related Abatement Measures have adequately remediated the release or threat of release encountered at the site, allowing for the filing of a Permanent Solution Statement, as described in 310 CMR 40.1000; or
- (3) additional response actions are necessary at the site following the completion of Utility-related Abatement Measures, to be conducted by persons identified as Responsible Parties under M.G.L. c. 21E, § 5(a), or electively by PRPs or Other Persons.

40.0480: Phase I - Initial Site Investigation Report

310 CMR 40.0481 through 40.0489, cited collectively as 310 CMR 40.0480, set forth requirements and procedures for preparing a Phase I - Initial Site Investigation Report.

40.0481: General Provisions for Phase I Initial Site Investigation Report

- (1) A Phase I Initial Site Investigation Report (hereinafter referred to as the "Phase I Report") is a document which contains the results of Preliminary Response Actions undertaken at a disposal site pursuant to 310 CMR 40.0400. The purpose of a Phase I Report is to record information in a standardized format in order to:
 - (a) facilitate the evaluation and Tier Classification of a disposal site in those cases where Comprehensive Response Actions may need to be undertaken; or
 - (b) where appropriate, support a Permanent or Temporary Solution Statement filed prior to Tier Classification of a disposal site.
- (2) A Phase I Report shall be submitted to the Department for any disposal site undergoing Tier Classification under the provisions of 310 CMR 40.0500.
- (3) The preliminary description of hydrogeologic conditions at a disposal site required in a Phase I Report pursuant to 310 CMR 40.0483(d) shall be based upon the installation of a minimum of three groundwater monitoring wells, in locations near known or likely release or source areas. This requirement may be modified or eliminated based upon the exercise of Technical Justification by a Licensed Site Professional, as described in 310 CMR 40.0193.

40.0482: Performance Standards

A Phase I Report shall provide sufficient information to meet the requirements of the Tier Classification process described in 310 CMR 40.0500 or, where appropriate, support a Permanent or Temporary Solution Statement filed for a site prior to Tier Classification.

40.0483: Content of Phase I Report

(1) Except as provided in 310 CMR 40.0483(2) and 40.0193, the following information shall be contained in all Phase I Reports submitted to the Department, in the format established below:

(a) General Disposal Site Information. The Phase I Report shall provide general information which defines and describes the disposal site and surrounding area, including:

1. the DEP Release Tracking Number(s) applicable to the disposal site under investigation;
2. the address(es) and geographical location coordinates of the disposal site and/or properties comprising the disposal site;
3. a Disposal Site Locus Map, based upon a U.S.G.S. topographic or equivalent map, depicting 500 foot and ½ mile radii from the boundaries of the disposal site;
4. an estimate of the number of on-site workers at the disposal site;
5. an estimate of the residential population within a ½ mile radius of the disposal site;
6. a general description of land uses surrounding the disposal site;
7. the number of Institutions within 500 feet of the disposal site; and
8. a listing and description of any of the following natural resource areas located within 500 feet of the disposal site:
 - a. all surface waters, including wetlands, vernal pools, ponds, lakes, streams, rivers, and reservoirs;
 - b. drinking water supplies consisting of Zone II areas, Interim Wellhead Protection Areas, Zone A areas, Potentially Productive Aquifers, and private wells; and
 - c. Areas of Critical Environmental Concern, Sole Source Aquifers, local, state and/or federal protected open space, fish habitats, and habitats of Species of Special Concern or Threatened or Endangered Species.

(b) Disposal Site Map. Phase I Reports shall include one or more maps or plans depicting the location of the following:

1. disposal site boundaries, to the extent they have been defined by assessments conducted to date;
2. boundaries of properties located within the disposal site; and
3. the following structures, areas and monitoring points, as appropriate:
 - a. on-site buildings;
 - b. floor and storm drains;
 - c. subsurface utilities serving or transecting the disposal site;
 - d. oil and/or hazardous material storage and disposal structures and/or areas;
 - e. the location of any known oil and/or hazardous material releases and/or threats of release; and
 - f. monitoring wells, borings, test pits and other relevant sampling and screening points.

(c) Disposal Site History. The disposal site history shall be presented in the Phase I Report in reverse chronological order, beginning with the current use of the disposal site, and shall include the following:

1. Owner/Operator and Operations History.
 - a. a list of current and relevant previous owners and operators of the properties comprising the disposal site, including dates of ownership and operation; and
 - b. a description of current and historical uses of the disposal site, including residential, commercial and industrial activities and manufacturing processes, and the location of buildings and structures currently or previously located on the disposal site.
2. Release History. A description of any known and relevant releases of oil and/or hazardous material at the disposal site shall be provided. For each relevant release, the description shall include:
 - a. the source and location of the release;
 - b. the known or suspected cause of the release;
 - c. the known or approximate date and duration of the release;
 - d. the type of oil and/or hazardous material released;
 - e. the known or approximate volume of the release; and
 - f. any measures taken to assess, contain or mitigate the release.
3. Oil and/or Hazardous Material Use and Storage History. The Phase I Report shall describe all relevant current and past use and storage of oil and/or hazardous material at the disposal site, and shall include a description of the following:

40.0483: continued

- a. types of oil and/or hazardous material, including generic names, chemical names and trade names, if available;
 - b. uses of oil and/or hazardous material;
 - c. quantities used;
 - d. periods of use;
 - e. on-site storage locations, underground storage tanks, above-ground tanks, drums, lagoons, pits and piles; and
 - f. age and volume of tanks and other storage containers.
4. Waste Management History. The Phase I Report shall include a general description of all known relevant waste management practices, excluding the off-site disposal of solid waste. This description shall address the types of wastes or waste streams, and the locations of points of discharge or on-site disposal or treatment with respect to the following:
- a. land disposal, including landfills and lagoons;
 - b. subsurface disposal including drains, dry wells, septic systems and leach fields;
 - c. surface water discharges to natural and man-made water bodies;
 - d. discharges to wastewater treatment plants; and
 - e. any other relevant means of disposal or treatment.
5. Environmental Permits and Compliance History. The Phase I Report shall include a history of all relevant local, state and federal environmental permits and oil and/or hazardous material storage permits issued for the disposal site or on-site facilities, including without limitation information on any permit violations. Relevant permits may include but are not limited to:
- a. permits for M.G.L. c. 21E response actions;
 - b. oil and/or hazardous material storage permits;
 - c. wastewater discharge permits;
 - d. groundwater discharges permits;
 - e. air quality discharges permits;
 - f. wetlands alteration permits;
 - g. Resource Conservation and Recovery Act (RCRA) permits; and
 - h. National Pollution Discharge Elimination System (NPDES) permits.
6. Potentially Responsible Parties. The Phase I Report may include a list of the names and addresses of all Potentially Responsible Parties identified for the disposal site.
- (d) Site Hydrogeological Characteristics. The Phase I Report shall include details of subsurface investigations conducted at the disposal site, together with a preliminary or generalized description and depiction of site hydrogeologic conditions, including, without limitation:
1. a concise description of all relevant geologic, hydrologic, geophysical and other subsurface investigations and assessments conducted to date at the disposal site;
 2. documentation on boring advancement, well construction and well development, including copies of well drilling logs, within or appended to the Phase I Report;
 3. a characterization of general site topography, including slope, presence of bedrock outcrops and surface drainage features;
 4. a characterization of geologic and stratigraphic conditions, including:
 - a. soil type(s), stratigraphy and evidence of filling or waste disposal;
 - b. where appropriate, the known or estimated depths to, and description of, bedrock; and
 5. a description and graphical depiction of groundwater flow direction or potentiometric surface elevations, indicating the location of monitoring wells.
- (e) Nature and Extent of Contamination. The Phase I Report shall provide information on the nature and extent of contamination, as determined by Initial Site Investigation Activities and Preliminary Response Actions undertaken to date at the disposal site, including:
1. evidence of releases of oil and/or hazardous material to the environment including visual and olfactory evidence, results of field screening and laboratory analysis, and historical knowledge;
 2. the names, concentrations, and volumes (if applicable) of all released oil and hazardous material detected to date at the disposal site:

40.0483: continued

- a. volumes shall be reported in gallons, pounds, tons or cubic feet, as appropriate;
 - b. analytical results for each media sampled shall be summarized in the text and in tables in the body of the Phase I Report;
 - c. for the purpose of disposal site classification, maximum and minimum concentrations for each contaminant detected shall be identified in a summary table in the body of the Phase I Report;
 3. laboratory data sheets, included in an appendix to the Phase I Report;
 4. information and details on the approximate horizontal and vertical extent of contamination based on best available information, as obtained from site investigations of scope and detail commensurate with release and site conditions; and
 5. information and details on NAPL, if present or suspected, including NAPL stability and the approximate horizontal and vertical extent of NAPL contamination, as obtained from site investigations of scope and detail commensurate with release and site conditions.
- (f) Migration Pathways and Exposure Potential. The Phase I Report shall describe and evaluate known and potential contaminant migration pathways and exposure points, to the extent that such information is known, including:
1. evidence of and the potential for oil and/or hazardous material migration by one or more of the following pathways:
 - a. air;
 - b. soil;
 - c. groundwater;
 - d. soil gas;
 - e. preferential flow pathways such as subsurface utility lines and void spaces; and/or
 - f. surface water, including sediments;
 2. a discussion of known and potential human exposure to oil and hazardous material present at the disposal site, by inhalation, dermal contact or ingestion of contaminants; and
 3. a discussion of known and potential impacts of oil and hazardous material present at the disposal site to environmental receptors, with special attention given to the natural resource areas referenced in 310 CMR 40.0483(1)(a)8.c.
- (g) Evaluation for Immediate Response Actions. The Phase I Report shall include an evaluation of the need to conduct an Immediate Response Action, as described in 310 CMR 40.0412.
- (h) Conclusions. The Phase I Report shall include a Conclusions section containing a summary of findings and statement of conclusions with respect to the site, a preliminary Conceptual Site Model for the disposal site and the outcome of Initial Site Investigation Activities, as documented in the Phase I Report, and as described in 310 CMR 40.0486.

(2) In addition to the Phase I Report requirements set forth in 310 CMR 40.0483(1), such additional information as may be necessary to adequately and completely characterize a disposal site in accordance with the Response Action Performance Standard described in 310 CMR 40.0191, and/or as required by unique release, threat of release and/or site conditions, shall be provided in the Phase I Report. It may also be appropriate to eliminate certain information categories, or investigation or assessment elements from the Phase I Report, as may be consistent with unique release, threat of release and/or site conditions, by application of the Technical Justification standard set forth in 310 CMR 40.0193.

40.0484: Phase I Report Completion Statement

- (1) All Phase I Reports submitted to the Department in support of a Permanent or Temporary Solution Statement, or as part of Tier Classification of a disposal site pursuant to 310 CMR 40.0500, shall be appended to the appropriate transmittal form established by the Department for such purposes.
- (2) The Completion Statement form submitted with a Phase I Report shall include the following:
 - (a) an LSP Opinion as to whether the Phase I Report conforms with applicable requirements specified in 310 CMR 40.0480;

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0484: continued

- (b) the outcome of the Phase I Report, as described in 310 CMR 40.0486; and
- (c) the certification of the submittal required by 310 CMR 40.0009.

40.0485: Public Involvement

Public Involvement Activities shall be conducted in accordance with 310 CMR 40.1400 through 40.1406. Public Involvement Activities relevant to Initial Site Investigation Activities specifically include those activities set forth in 310 CMR 40.1403(3)(e), and may include, but are not limited to, those activities set forth in 310 CMR 40.1403(3)(a) and (4)(f).

40.0486: Possible Outcomes of a Phase I Report

The following outcomes are possible upon completion of a Phase I Report:

- (1) Comprehensive Response Actions are necessary at the disposal site. Tier Classification of the site pursuant to the provisions of 310 CMR 40.0500 shall be undertaken by RPs, PRPs, or Other Persons, if necessary, and prior to the initiation of Comprehensive Remedial Actions; or
- (2) the requirements of a Permanent Solution have been met, pursuant to the provisions of 310 CMR 40.1000, and a Permanent or Temporary Solution Statement shall be submitted to the Department by the RP, PRP, or Other Person conducting response actions.

SUBPART E: TIER CLASSIFICATION AND RESPONSE ACTION DEADLINES

40.0500: Tier Classification and Response Action Deadlines

The regulations published at 310 CMR 40.0500 through 40.0599, cited collectively as 310 CMR 40.0500, establish requirements and procedures for Tier Classification, and deadlines for completing response actions at disposal sites. Tier Classification results are considered by the Department in determining the appropriate level of Departmental oversight for response actions conducted by RPs, PRPs and Other Persons at disposal sites.

40.0501: Scope and Applicability

(1) 310 CMR 40.0500 establishes requirements and procedures for the performance of response actions at Tier I and Tier II disposal sites, including, but not limited to, requirements for re-evaluating such disposal sites and requirements for submittals. For Tier Classified disposal sites, the specific deadlines for RPs, PRPs and Other Persons to achieve a Permanent or Temporary Solution pursuant to 310 CMR 40.1000 are determined in accordance with 310 CMR 40.0560.

(2) Except as provided in 310 CMR 40.0501(3), all sites for which the Department receives notification of a release or threat of release of oil and/or hazardous material pursuant to 310 CMR 40.0300 on or after October 1, 1993, or has discovered or discovers that a release or threat of release of oil and/or hazardous material has occurred, shall be classified by RPs, PRPs or Other Persons as either a Tier I or Tier II disposal site in accordance with 310 CMR 40.0500. An RP, PRP or Other Person shall submit a Tier Classification Submittal to the Department by the following deadlines:

- (a) within one year of the earliest date computed in accordance with 310 CMR 40.0404(3); or
- (b) as otherwise specified by the Department in an Interim Deadline pursuant to 310 CMR 40.0167 or order pertaining to such release or threat of release. In the event that multiple deadlines for Tier Classification would be established by 310 CMR 40.0501(2) with respect to any specific disposal site, the earliest of the applicable deadlines shall apply for the purposes of Tier Classification.

40.0501: continued

(3) Notwithstanding any provision of 310 CMR 40.0501(2) to the contrary, an RP, PRP or Other Person conducting response actions at a disposal site shall not be required to submit a Tier Classification Submittal if such RP, PRP or Other Person submits either a Permanent Solution Statement pursuant to 310 CMR 40.1000 or a Downgradient Property Status Submittal pursuant to 310 CMR 40.0180 to the Department within one year of the earliest date computed in accordance with 310 CMR 40.0404(3).

(4) Except as provided at 310 CMR 40.0062(1)(j) for Special Project Designations, an individual Tier Classification Submittal may be for a single discrete disposal site located on one or more parcels of land or to address multiple discrete disposal sites located on a single parcel of land.

(5) An RP, PRP or Other Person may undertake Phase II and Phase III Comprehensive Response Actions pursuant to 310 CMR 40.0800 prior to Tier Classification without the Department's prior approval, unless otherwise specified in writing by the Department.

40.0502: Tier ID Disposal Sites

(1) A disposal site shall be deemed a Tier ID ("default") disposal site if any of the following apply:

(a) an RP, PRP or Other Person for such disposal site fails to submit to the Department one of the following by the applicable deadline in 310 CMR 40.0501:

1. a Permanent Solution Statement; or
2. a Tier Classification Submittal; or

(b) the person undertaking response actions is in noncompliance with M.G.L. c. 21E, 310 CMR 40.0000 or any other applicable requirement, and the Department reclassifies the disposal site as a Tier ID disposal site pursuant to 310 CMR 40.0583.

(2) An RP, PRP or Other Person shall not conduct Comprehensive Response Actions pursuant to 310 CMR 40.0800 at a Tier ID disposal site.

(3) An RP, PRP or Other Person for any disposal site that was not previously classified and is deemed a Tier ID disposal site pursuant to 310 CMR 40.0502(1) shall Tier Classify such disposal site pursuant to the requirements at 310 CMR 40.0510.

(4) Any disposal site deemed a Tier ID disposal site pursuant to 310 CMR 40.0502(1)(b) shall be reclassified as follows:

(a) if the disposal site was previously classified pursuant to 310 CMR 40.0510, then the previous classification shall be effective when the Department determines that the RP, PRP, or Other Person has addressed the non-compliance, provided such classification has not expired;

(b) if the disposal site was not previously classified pursuant to 310 CMR 40.0510, then the RP, PRP, or Other Person shall classify the disposal site pursuant to 310 CMR 40.0510.

40.0510: Tier Classification Process

(1) The Tier Classification process consists of:

(a) the completion of a Phase I - Initial Site Investigation Report in accordance with 310 CMR 40.0480;

(b) a comparison of conditions at a disposal site with the Tier I Criteria set forth in 310 CMR 40.0520(2);

(c) the preparation and filing with the Department of a Tier Classification Submittal in accordance with 310 CMR 40.0510(2); and

(d) the public involvement activities relevant to Tier Classification, including, but not limited to, those activities set forth in 310 CMR 40.1403(3) and (6). Response actions may be initiated or continued at the disposal site during the comment period described in 310 CMR 40.1403(6)(a), unless otherwise prohibited by the Department.

40.0510: continued

- (2) A Tier I or Tier II Classification Submittal shall consist of the following:
- (a) a completed Tier Classification transmittal form using the form established by the Department for such purposes;
 - (b) an LSP Tier Classification Opinion pursuant to 310 CMR 40.0510(4);
 - (c) the certification required by 310 CMR 40.0009;
 - (d) the certification required by 310 CMR 40.0540(1);
 - (e) the compliance history required by 310 CMR 40.0540(2); and
 - (f) a conceptual Phase II Scope of Work that, at a minimum, includes:
 1. a general plan for assessing contaminants of concern, potential receptors and potential exposure pathways, identifying the likely technical approach(es) to be used; and
 2. a projected schedule that includes interim milestones.
- (3) Tier Classification Public and Written Notice Requirements.
- (a) The following actions must be taken to provide notice to the public and local officials of the Tier Classification:
 1. within seven days of filing a Tier Classification Submittal, publish a public notice pursuant to 310 CMR 40.1403(2)(b) as specified at 310 CMR 40.1403(6)(a);
 2. at least three days prior to publication of the public notice, provide a written notice pursuant to 310 CMR 40.1403(2)(a) to the Chief Municipal Officer(s) and Board(s) of Health in the community(ies) in which the disposal site is located and in any other community(ies) that is, or is likely to be, affected by the disposal site as specified at 310 CMR 40.1403(6)(b); and
 3. in the case of a Tier I Classification for a disposal site where there is evidence of groundwater contamination with oil and/or hazardous material at concentrations equal to or exceeding the applicable RCGW-1 Reportable Concentration set forth in 310 CMR 40.0360, and such groundwater is located within an Interim Wellhead Protection Area, Zone II, or Zone A of a Class A surface drinking water source, provide the owner(s) of the Public Water Supply with a written notice pursuant to 310 CMR 40.1403(2)(a) at least three days prior to publication of the public notice, that includes:
 - a. a copy of the public notice; and
 - b. a copy of the disposal site map included in the Phase I Report pursuant to 310 CMR 40.0483(1)(b).
 - (b) Publication of the public notice shall be documented to the Department as specified at 310 CMR 40.1403(2)(c)2.
 - (c) A copy of each written notice sent to local officials and, where applicable, Public Water Supply owner(s), pursuant to 310 CMR 40.0510(3)(a)2. and 3. respectively, shall be concurrently submitted to the Department as specified at 310 CMR 40.1403(2)(c)1.
- (4) An LSP Tier Classification Opinion shall consist of:
- (a) a completed Phase I Report, as described in 310 CMR 40.0480;
 - (b) on the basis of the Tier I Criteria, an LSP Opinion as to whether a disposal site should be classified as Tier I or Tier II; and
 - (c) any other information required by 310 CMR 40.0520 or 40.0530, including, but not limited to, any other Phase Reports, Status Reports and Completion Statements material to the LSP Tier Classification Opinion.
- (5) Unless otherwise specified by the Department, the Tier Classification effective date shall be the date a complete Tier Classification Submittal is received by the Department. Such Tier Classification (either Tier I or Tier II) shall apply unless and until the RP, PRP or Other Person submits a subsequent Tier Classification to the Department pursuant to 310 CMR 40.0530 that reclassifies the disposal site or the Department reclassifies the disposal site pursuant to 310 CMR 40.0583.
- (6) Reclassification of a disposal site does not change the effective date of the Tier Classification.

40.0520: Basis for Tier Classification

(1) Disposal Site Information.

(a) Any person performing Tier Classification for a disposal site shall evaluate such disposal site using the Tier Classification Criteria described in 310 CMR 40.0520(2). The evaluation shall be based upon data, facts and other information obtained during Phase I, and any other relevant data, facts or information known by the person performing Tier Classification, including, but not limited to, any data, facts or information obtained during a Phase II - Comprehensive Site Assessment, if Phase II work has been performed at such disposal site.

(b) All relevant data, facts and other information considered during Tier Classification shall be documented in the applicable Phase Report(s) and the LSP Tier Classification Opinion. LSPs shall use the Response Action Performance Standard in 310 CMR 40.0191 to develop an LSP Tier Classification Opinion.

(c) Any person performing Tier Classification may account for risk reduction measures, if any, that have been completed at the disposal site pursuant to 310 CMR 40.0400 prior to performing such Tier Classification, including Immediate Response Actions, Release Abatement Measures and Utility-related Abatement Measures.

(2) Tier I Criteria. Any disposal site which meets the following criteria at the time of Tier Classification shall be classified as Tier I:

(a) there is evidence of groundwater contamination with oil and/or hazardous material at concentrations equal to or exceeding the applicable RCGW-1 Reportable Concentration set forth in 310 CMR 40.0360, and such groundwater is located within an Interim Wellhead Protection Area, Zone II, or within 500 feet of a Private Water Supply Well;

(b) an Imminent Hazard is present;

(c) one or more remedial actions are required as part of an Immediate Response Action pursuant to 310 CMR 40.0414(2); or

(d) one or more response actions are required as part of an Immediate Response Action to eliminate or mitigate a Critical Exposure Pathway pursuant to 310 CMR 40.0414(3).

(3) Any disposal site that meets one or more of the Tier I Criteria set forth in 310 CMR 40.0520(2) and is classified as Tier I may be reclassified as Tier II pursuant to 310 CMR 40.0530 once the Tier I Criteria no longer apply at the disposal site.

(4) Tier II Classification. Any disposal site that is not Tier ID pursuant to 310 CMR 40.0502 or 40.0520(5) and does not meet the Tier I Criteria described at 310 CMR 40.0520(2) shall be classified as Tier II.

(5) Transition Provisions. Effective June 20, 2014:

(a) previously tier classified disposal sites shall have the following tier classification:

1. disposal sites with a classification of Tier IA, Tier IB, or Tier IC shall be classified as Tier I;

2. disposal sites with a classification of Tier II shall be classified as Tier II; and

3. disposal sites with a classification of Tier ID shall be classified as Tier ID; and

(b) any prior conditions of approval related to the schedule and/or manner for conducting response actions at the disposal site shall remain in effect.

40.0530: Reclassification by RPs, PRPs, or Other Persons During Response Actions

(1) Except as provided at 310 CMR 40.0530(5), an RP, PRP or Other Person performing response actions at a disposal site following Tier Classification shall re-evaluate such disposal site using the Tier I Criteria specified in 310 CMR 40.0520(2) if he or she obtains new or additional data, facts or other information which result in a finding that would cause reclassification of the disposal site from Tier II to Tier I.

(2) An RP, PRP or Other Person performing response actions at a Tier II disposal site who obtains knowledge that the disposal site meets the Tier I Criteria shall submit to the Department a Tier Classification Submittal within 60 days of obtaining such knowledge.

40.0530: continued

(3) An RP, PRP or Other Person may downgrade a Tier I disposal site classification if upon re-evaluation of the disposal site pursuant to the Tier I Criteria at 310 CMR 40.0520(2) the disposal site is determined to no longer meet one or more of the Tier I Criteria. In such case, an RP, PRP or Other Person for a Tier I disposal site shall submit a revised Tier Classification Submittal to document the reclassification from Tier I to Tier II that includes the information specified at 310 CMR 40.0510(2)(a) through (c).

(4) Except as otherwise specified by the Department, reclassification of a disposal site by an RP, PRP or Other Person who has been performing and is continuing to perform response actions at such disposal site shall not change the response action deadlines based upon the initial Tier Classification effective date of such disposal site, as detailed in 310 CMR 40.0560(1) and (2).

(5) Reclassification pursuant to 310 CMR 40.0530 shall not be required for disposal sites classified as Tier II prior to June 20, 2014 for conditions that meet the Tier I Criteria specified in 310 CMR 40.0520(2)(c) and (d) where the RP, PRP, or Other Person had knowledge of and was conducting response actions to address such conditions prior to June 20, 2014.

40.0540: Demonstration of Ability and Willingness

(1) Each person filing a Tier Classification Submittal with the Department shall include the certification required by 310 CMR 40.0009 and the following written declaration:

"I attest under the pains and penalties of perjury that (i) I/the person(s) or entity(ies) on whose behalf this submittal is made has/have personally examined and am/is familiar with the requirements of M.G.L. c. 21E and 310 CMR 40.0000; (ii) based upon my inquiry of the/those Licensed Site Professional(s) employed or engaged to render Professional Services for the disposal site which is the subject of this Transmittal Form and of the person(s) or entity(ies) on whose behalf this submittal is made, and my/that person's(s') or entity's(ies)' understanding as to the estimated costs of necessary response actions, that/those person(s) or entity(ies) has/have the technical, financial and legal ability to proceed with response actions for such site in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements; and (iii) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is aware of the requirements in 310 CMR 40.0172 for notifying the Department in the event that I/the person(s) or entity(ies) on whose behalf this submittal is made am/is(are) unable to proceed with the necessary response actions."

(2) Each person filing a Tier Classification Submittal with the Department shall include therein a statement detailing such person's history of compliance with the Department's regulations, including, but not limited to, M.G.L. c. 21E, 310 CMR 40.0000, and other laws for the protection of health, safety, public welfare and the environment administered or enforced by the Department or other federal, state and local government agencies, that are relevant to conditions at the disposal site.

NON-TEXT PAGE

40.0560: Response Action Deadlines and Requirements for Tier Classified Disposal Sites

(1) Deadlines for Achieving a Permanent Solution, Temporary Solution or Remedy Operation Status. Except as expressly provided by 310 CMR 40.0000 or as otherwise ordered or agreed to in writing by the Department, an RP, PRP or Other Person undertaking response actions at a disposal site shall achieve a Permanent Solution, Temporary Solution, or Remedy Operation Status within five years of the effective date of initial Tier Classification. The eventual achievement of a Permanent Solution is required at all disposal sites where a Temporary Solution or Remedy Operation Status is achieved.

- (a) The Tier Classification for a disposal site pursuant to 310 CMR 40.0510 shall expire five years from the effective date of the initial Tier Classification of such disposal site; and
- (b) An RP, PRP or Other Person shall not conduct Comprehensive Response Actions pursuant to 310 CMR 40.0800 at a disposal site for which a Tier Classification has expired unless a Tier Classification Extension is obtained pursuant to 310 CMR 40.0560(7).

(2) Deadlines for Submittals. Except as provided by 310 CMR 40.0530(4), 40.0560(3), or 40.0000 or as otherwise ordered or agreed to in writing by the Department, an RP, PRP or Other Person undertaking response actions at a Tier Classified disposal site shall submit the following documents to the Department by the following deadlines:

- (a) a conceptual scope of work for a Phase II - Comprehensive Site Assessment pursuant to 310 CMR 40.0834 prior to the implementation of Phase II field work, updated as necessary to reflect material modifications from the conceptual scope of work submitted pursuant to 310 CMR 40.0510(2)(f) at the time of initial Tier Classification, unless the Phase II field work had been implemented prior to Tier Classification;
- (b) a Phase II Report within three years of the effective date of Tier Classification;
- (c) if applicable, a Phase III Remedial Action Plan within four years of the effective date of Tier Classification;
- (d) if applicable, a Phase IV Remedy Implementation Plan within four years of the effective date of Tier Classification; and
- (e) a Permanent Solution Statement, or Temporary Solution Statement pursuant to 310 CMR 40.1000, or a Remedy Operation Status Submittal pursuant to 310 CMR 40.0893, within five years of the effective date of Tier Classification.

(3) Notwithstanding any provision of 310 CMR 40.0560(2) to the contrary, submittal to the Department of those documents described in 310 CMR 40.0560(2)(a) through (d) shall not be required at any disposal site for which a Permanent Solution Statement is submitted to the Department prior to an applicable document submittal deadline.

(4) Approvals.

- (a) Except as provided in 310 CMR 40.0560(4)(b), an RP, PRP or Other Person undertaking response actions at a disposal site classified as Tier I or Tier II pursuant to 310 CMR 40.0510 may perform the response actions which are the subject of the submittals required by 310 CMR 40.0560(2) without the Department's prior approval thereof.
- (b) Notwithstanding 310 CMR 40.0560(4)(a), the Department may at any time require an RP, PRP or Other Person undertaking response actions at a Tier Classified disposal site to obtain prior Departmental approval of one or more of the submittals specified by 310 CMR 40.0560(2) or the response actions or submittals required pursuant to 310 CMR 40.0800. The Department may require such prior approval for submittals or response actions as they relate to the entire disposal site or to some portion thereof.
- (c) No person shall perform Phase IV response actions at a disposal site classified as Tier I or Tier II pursuant to 310 CMR 40.0510 unless and until 20 days have passed from the date of publication of the notice required by 310 CMR 40.0510(3).
- (d) No person shall perform Comprehensive Response Actions at Tier ID disposal sites unless and until the disposal site is classified as Tier I or Tier II pursuant to 310 CMR 40.0510.

(5) Notification of Delay in Compliance with Deadlines for Tier Classified Disposal Sites. Except as provided by 310 CMR 40.0025 or 40.0167, if any delay in compliance with any deadline or time period required by 310 CMR 40.0560(2) occurs after a disposal site is Tier Classified, the RP, PRP or Other Person performing response action shall notify the Department in writing using a transmittal form provided by the Department for such purposes prior to missing any such deadline or time period, and shall take appropriate measures to minimize such delay in compliance with any deadline or time period. Such notification of delay:

40.0560: continued

- (a) shall state the reason for such delay, the measure or measures to be taken to minimize the delay and a proposed schedule for implementing those measures;
- (b) does not forgive an RP's, PRP's or Other Person's noncompliance with deadlines for response actions in 310 CMR 40.0000.

(6) Notification of Initial Field Activities. RPs, PRPs or Other Persons conducting response actions at Tier Classified disposal sites shall notify the Department at least seven days prior to the commencement of initial field activities related to the implementation of Comprehensive Response Actions. Upon such notification, the Department may impose conditions on and/or arrange to observe the conduct of field work including, but not limited to, the installation of monitoring wells, the excavation of test pits, field sampling of environmental media, soil removal, installation of groundwater recovery systems, the start of Phase IV construction activities, and observation of Phase V monitoring activities.

(7) Tier Classification Extensions.

- (a) If a Permanent Solution Statement, Temporary Solution Statement or Remedy Operation Status Submittal has not been submitted to the Department for a Tier Classified disposal site prior to the expiration of the Tier Classification, the person undertaking response actions at such site shall extend the Tier Classification by submitting a Tier Classification Extension Submittal to the Department.
- (b) The Tier Classification Extension Submittal shall be provided to the Department at least 45 days before the date of expiration of the Tier Classification.
- (c) The Tier Classification Extension Submittal shall consist of the following:
 - 1. a completed transmittal form using a form provided by the Department for such purposes, which shall include a statement explaining why a Permanent Solution, Temporary Solution, or Remedy Operation Status has not been achieved at the site.
 - 2. a description of the status of response actions, including a plan and a proposed schedule for implementing such plan, which details the steps that will be taken in order to achieve, at a minimum, a Temporary Solution at the disposal site pursuant to 310 CMR 40.1000 within one year of the effective date of the Tier Classification Extension, and a schedule for achieving a Permanent Solution, if feasible;
 - 3. the certification required by 310 CMR 40.0009;
 - 4. the certification required by 310 CMR 40.0540(1);
 - 5. an updated compliance history required by 310 CMR 40.0540(2) since the effective date of the Tier Classification; and
 - 6. an LSP Opinion indicating that the plans and/or reports submitted are in conformance with the requirements of 310 CMR 40.0000.
- (d) Where a complete Tier Classification Extension Submittal is submitted to the Department at least 45 days before the date of expiration of the Tier Classification, the Tier Classification Extension shall take effect on the expiration date of the previous Tier Classification unless the Department issues a written denial for such Extension prior to the expiration date of the previous Tier Classification. Unless otherwise specified by the Department, the Extension shall be effective for a period of two years beyond the effective date of the Tier Classification. An RP, PRP or Other Person shall notify the Department pursuant to 310 CMR 40.0560(7) if additional extensions are required thereafter; and
- (e) The Department reserves the right to reconsider the need for Departmental oversight or to initiate enforcement actions related to any Tier Classification Extension Submittal or when any timeline for achieving a Permanent Solution, Temporary Solution, or Remedy Operation Status pursuant to 310 CMR 40.0560 is exceeded; and
- (f) A Tier Classification Extension obtained under 310 CMR 40.0560(7) does not forgive an RP's, PRP's or Other Person's noncompliance with any provisions of 310 CMR 40.0000, including but not limited to, noncompliance that resulted from the late submittal or failure to submit an IRA Plan, Status Report, Phase I Report, Tier Classification, Phase II Report, Phase III Remedial Action Plan, Phase IV Remedy Implementation Plan, and/or failure to achieve a Permanent Solution, Temporary Solution, or Remedy Operation Status. A Tier Classification Extension means the RP, PRP or Other Person has approval to continue with response actions in compliance with all applicable provisions of 310 CMR 40.0000. Such Extension shall not be construed as approval by the Department of the scope or adequacy of plans or of the response actions as actually conducted.

40.0560: continued

(8) Changes in Persons Undertaking Response Actions at Tier Classified Disposal Sites.

(a) No person other than a person who has filed a Tier Classification Submittal for a disposal site with the Department may perform Comprehensive Response Actions at such disposal site, unless that person submits a Tier Classification Transfer Submittal to the Department.

(b) A Tier Classification Transfer Submittal shall consist of the following:

1. a completed transmittal form using a form provided by the Department for such purposes, which shall include a statement and/or report explaining the reasons for the change in persons undertaking response actions and a proposed effective date for such change;
2. a listing of all Status and Phase Reports for response actions completed since the effective date of the Tier Classification;
3. the certification required by 310 CMR 40.0009 by the current RP, PRP or Other Person for such disposal site and by the transferee;
4. the certification required by 310 CMR 40.0540(1) by the transferee;
5. the compliance history required by 310 CMR 40.0540(2) for the transferee; and
6. an LSP Opinion indicating that the plans and/or reports submitted are in conformance with the requirements of 310 CMR 40.0000.

(c) A change in persons conducting response actions at a Tier Classified disposal site shall take effect 30 days after submission of a complete Tier Classification Transfer Submittal to the Department unless the Department issues a written denial of such transfer prior to the termination of such 30 day time period.

(d) The Department reserves the right to reconsider the need for Departmental oversight or to initiate enforcement actions related to any Tier Classification Transfer Submittal or when any timeline for achieving a Permanent or Temporary Solution pursuant to 310 CMR 40.0560 at a Tier Classified disposal site is not met.

40.0570: Requirements for Eligible Persons, Eligible Tenants or Other Persons Seeking to Re-establish Response Action Deadlines

(1) Notwithstanding 310 CMR 40.0560, Eligible Persons, Eligible Tenants or Other Persons who are required or intend to conduct response actions at a Tier Classified disposal site and who have not previously submitted a Tier Classification Submittal for the disposal site may seek to re-establish the deadlines for response actions by submitting a Tier Classification Submittal; provided, however, that for the purpose of re-establishing deadlines pursuant to 310 CMR 40.0570:

(a) Eligible Persons who became an owner or operator of a site or portion thereof prior to December 14, 2007 shall make such submittal within 120 days of December 14, 2007, unless the Department agrees to a later date;

(b) Eligible Persons who become an owner or operator of a site or portion thereof after December 14, 2007 shall make such submittal within 120 days of becoming such an owner or operator, unless the Department agrees to a later date;

(c) Eligible Tenants who acquire occupancy, possession or control of a site or portion thereof prior to December 14, 2007 shall make such submittal within 120 days of December 14, 2007, unless the Department agrees to a later date;

(d) Eligible Tenants who acquire occupancy, possession or control of a site or portion thereof after December 14, 2007 shall make such submittal within 120 days of acquiring such occupancy, possession or control, unless the Department agrees to a later date;

(e) Persons who became Other Persons prior to December 14, 2007 shall make such submittal within 120 days of December 14, 2007, unless the Department agrees to a later date; and

(f) Persons who became Other Persons after December 14, 2007 shall make such submittal within 120 days of becoming an Other Person, unless the Department agrees to a later date.

(2) Unless otherwise specified by the Department in writing, deadlines re-established pursuant to 310 CMR 40.0570 shall be calculated from the effective date of the Tier Classification submittal to the Department pursuant to 310 CMR 40.0570(1).

40.0570: continued

(3) An Eligible Person, Eligible Tenant, or Other Person seeking to re-establish response action deadlines pursuant to 310 CMR 40.0570 must provide with the Tier Classification Submittal a written certification pursuant to 310 CMR 40.0009 stating that:

- (a) such person, in the case of a person asserting to be an Eligible Person, is an owner or operator of the disposal site or a portion thereof who would be liable under M.G.L. c. 21E, § 5(a)(1) solely, did not cause or contribute to the release, and did not own or operate the site at the time of the release;
- (b) such person, in the case of a person asserting to be an Eligible Tenant, is a person who acquired occupancy, possession or control of the disposal site, or a portion thereof, after the release of oil or hazardous material has been reported to the department, did not cause or contribute to the release, and would not otherwise be liable pursuant to M.G.L. c. 21E, § 5(a)(2) through (5);
- (c) such person, in the case of a person asserting to be an Other Person, is not an RP or PRP, with specific facts sufficient to support this statement;
- (d) such person is not, and was not at any time, affiliated with any other person
 1. who owned or operated the property from which the release originated, or caused such release, and
 2. who is potentially liable under M.G.L. c. 21E for the disposal site through any direct or indirect contractual, corporate or financial relationship other than:
 - a. that established by any instrument creating such person's interest in property within the disposal site boundaries; or
 - b. that established by an instrument wholly unrelated to the disposal site and which would not otherwise render such person potentially liable as a result of the relationship; and
- (e) such person, if a trust, consists of trustees, members and/or beneficiaries, all of whom satisfy 310 CMR 40.0570(3)(a) through (d).

Nothing in 310 CMR 40.0570 shall preclude the Department from considering any other information relative to whether such person is an Eligible Person, Eligible Tenant or Other Person.

(4) Any person seeking to re-establish response action deadlines pursuant to 310 CMR 40.0570 may elect to rely upon a Phase I Report, conceptual Phase II Scope of Work, and Tier Classification contained in a Tier Classification Submittal previously provided to the Department, provided that the new Tier Classification Submittal includes an LSP Opinion stating that such Application or Submittal relies on such previously provided information.

(5) Provided that 310 CMR 40.0570(1) through (4) are satisfied, and unless at any time following the Department's receipt of a Tier Classification Submittal pursuant to 310 CMR 40.0570(5) the Department establishes an Interim Deadline(s) as described in 310 CMR 40.0167 for conducting response actions, the response action submittal deadlines for Eligible Persons, Eligible Tenants or Other Persons undertaking response actions pursuant to 310 CMR 40.0570 shall be re-established as follows:

- (a) a scope of work for a Phase II - Comprehensive Site Assessment pursuant to 310 CMR 40.0834 prior to the implementation of Phase II field work, unless the Phase II field work had been implemented prior to Tier Classification;
- (b) a Phase II Report within three years of the effective date of the Tier Classification;
- (c) if applicable, a Phase III Remedial Action Plan and a Phase IV Remedy Implementation Plan within four years of the effective date of Tier Classification; and
- (d) a Permanent or Temporary Solution Statement pursuant to 310 CMR 40.1000, or a Remedy Operation Status Submittal pursuant to 310 CMR 40.0893, within five years of the effective date of Tier Classification.

(6) If the person filing the certification pursuant to 310 CMR 40.0570(3) is subsequently determined not to be an Eligible Person, Eligible Tenant or Other Person, or if such certification is determined at any time to be inaccurate or untrue, the original response action deadlines for the site shall supersede the deadlines established pursuant to 310 CMR 40.0570.

(7) In establishing Interim Deadlines for response actions pursuant to 310 CMR 40.0570 and 310 CMR 40.0167, the Department may consider, without limitation, the complexity of the disposal site and the extent to which response actions have already been completed for the disposal site.

40.0570: continued

(8) Nothing in 310 CMR 40.0570 shall limit a person's ability to seek a transfer of a Tier Classification; provided, however, that any response action deadline re-established pursuant to 310 CMR 40.0570 shall apply only to the Eligible Person, Eligible Tenant or Other Person making the submittals set forth in 310 CMR 40.0570, or to any subsequent Eligible Person, Eligible Tenant or Other Person to whom the Tier Classification is transferred who also files the certification described in 310 CMR 40.0570(3) within the applicable deadline specified in 310 CMR 40.0570(1).

40.0583: Department Reclassification of a Tier Classified Disposal Site

(1) General. The Department may, on its own initiative, reclassify a Tier I, Tier ID or Tier II disposal site to a different Tier Classification pursuant to 310 CMR 40.0583.

(2) Effect of Reclassification. A Reclassification made in accordance with 310 CMR 40.0583 shall have the effect of superseding the existing site classification.

(3) Criteria. The Department shall consider the Tier Classification Criteria at 310 CMR 40.0520 when reclassifying a Tier Classified disposal site.

40.0584: Participation by the Public, RPs, PRPs, and Other Persons in Department Reclassification

(1) Within seven days of reclassifying a Tier Classified disposal site pursuant to 310 CMR 40.0583, the Department shall provide notice to the public of the Reclassification as follows:

(a) by publishing a public notice pursuant to 310 CMR 40.1403(2)(b);

(b) by mail or hand delivery of a copy of the public notice to the Chief Municipal Officer and Board of Health in the community(ies) in which the disposal site is located and in any other community(ies) which the Department believes are likely to be affected by the disposal site;

(c) by mail or hand delivery of a copy of the public notice to any person the Department reasonably believes:

1. is an RP or a PRP for the disposal site;

2. is an Other Person conducting response actions for the disposal site;

3. holds title to, or an ownership interest in any real property comprising the disposal site or portion thereof or which may be affected by the disposal site and whose name and address is known to the Department at the time the Department decides to re-classify the disposal site; and

4. is the operator of the disposal site, if different from the owner;

(d) if the disposal site is a Public Involvement Plan (PIP) site, by mail to each person whose name and address appears on the PIP mailing list established pursuant to 310 CMR 40.1400;

(2) Content of Notice. The notice required by 310 CMR 40.0584(1) shall include, but not be limited to, the following information:

(a) the name and address of the disposal site;

(b) the DEP Release Tracking Number(s);

(c) the intended Reclassification category of the disposal site; and

(d) a statement of the basis for the Reclassification.

40.0585: Right to Request an Adjudicatory Hearing

(1) Any person who is aggrieved by a decision of the Department to reclassify a disposal site pursuant to 310 CMR 40.0583 to a Tier Classification category that is higher than the previous classification may request an adjudicatory hearing before the Department in accordance with 310 CMR 40.0050.

(2) A request for adjudicatory hearing pursuant to 310 CMR 40.0585 shall:

(a) comply with 310 CMR 40.0050 and 1.00: *Adjudicatory Proceedings*; and

(b) state the reason(s) the decision to reclassify does not comply with 310 CMR 40.0000.

(3) The adjudicatory hearing shall be limited to the issue of whether the Department's decision to reclassify is in accordance with the criteria set forth in 310 CMR 40.0583(3).

40.0590: Public Involvement

Public involvement activities shall be conducted in accordance with 310 CMR 40.1400

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

through 40.1406. Public involvement requirements relevant to Tier Classification include, but are not limited to, those activities set forth at 310 CMR 40.1403(6).

SUBPART H: COMPREHENSIVE RESPONSE ACTIONS

40.0800: Comprehensive Response Actions

310 CMR 40.0801 through 40.0899, cited collectively as 310 CMR 40.0800, contain the requirements and procedures for conducting Comprehensive Response Actions at disposal sites.

40.0801: Applicability

The procedures, requirements, and standards set forth in 310 CMR 40.0800 apply to all disposal sites for which a Phase I Initial Site Investigation Report has been prepared in accordance with the provisions of 310 CMR 40.0480, and where additional response actions are necessary to assess the disposal site and/or evaluate and implement Comprehensive Remedial Actions to achieve a Permanent or Temporary Solution under 310 CMR 40.1000.

40.0810: General Provisions for Comprehensive Response Actions

(1) Comprehensive Response Actions shall be performed in sequential phases. The phases of Comprehensive Response Actions consist of:

- (a) Phase II - Comprehensive Site Assessment;
- (b) Phase III - Identification and Selection of Comprehensive Remedial Action Alternatives;
- (c) Phase IV - Implementation of the Selected Remedial Action Alternative; and
- (d) Phase V - Operation, Maintenance and/or Monitoring

(2) The results of each phase of Comprehensive Response Actions shall be documented in one or more reports, and submitted to the Department in a manner specified in 310 CMR 40.0800 and within the applicable deadlines specified in 310 CMR 40.0550 and 40.0560. Where appropriate, Comprehensive Response Action reports may be combined and submitted to the Department simultaneously.

(3) Each phase of Comprehensive Response Actions shall build upon the results of previous work, continuing until a Permanent or Temporary Solution as described in 310 CMR 40.1000 is reached for the disposal site. The Department shall not recognize receipt of a Completion Statement for a Phase unless the Completion Statement for the previous Phase has been submitted.

(4) RPs, PRPs and Other Persons conducting Comprehensive Response Actions at disposal sites shall comply with all applicable provisions of 310 CMR 40.0800 and this Contingency Plan.

(5) RPs, PRPs and Other Persons conducting Comprehensive Response Actions shall engage or employ the services of a Licensed Site Professional.

(6) The scope and level of detail of response actions taken under 310 CMR 40.0800 shall be commensurate with the nature and complexity of the specific disposal site. The investigation process described in 310 CMR 40.0800 is intended to allow for varying levels of effort from disposal site to disposal site to avoid the collection of unnecessary information and unwarranted steps that could delay remedial actions. In all cases, the scope and level of detail of response actions taken under 310 CMR 40.0800 shall be sufficient to ensure that the applicable requirements and performance standards of these regulations are met, and that the response actions are conducted in a manner consistent with the Response Action Performance Standard as described in 310 CMR 40.0191.

(7) Technical justification, as described in 310 CMR 40.0193, may be provided to limit or forego one or more of the assessment or evaluation elements of 310 CMR 40.0800. Technical justification may not be used to forgo procedural requirements, such as the submission of reports,

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0810: continued

notices or documents required as part of Comprehensive Response Actions under 310 CMR 40.0800. When technical justification is used to forgo or limit an assessment or evaluation element, a description of the site-specific conditions and characteristics that make the requirement unwarranted and any documentation necessary to support any such justification shall be provided in the applicable submittal to the Department.

(8) If at any time during the conduct of response actions under 310 CMR 40.0800 an Imminent Hazard, sudden release, or other time-critical release or site condition is identified at a disposal site, as described in 310 CMR 40.0412, Immediate Response Actions shall be performed as set forth in 310 CMR 40.0400.

(9) Comprehensive Response Actions shall be conducted in a manner protective of health, safety, public welfare, and the environment, and in accordance with the Health and Safety provisions of 310 CMR 40.0018.

(10) Nothing in 310 CMR 40.0800 shall limit the ability of the Department to initiate, oversee, or order the performance of any response action deemed necessary by the Department to protect health, safety, public welfare, or the environment or impose additional requirements which are consistent with the purposes on M.G.L. c. 21E or 310 CMR 40.0000.

(11) Notwithstanding any provision to the contrary, the Department may at any time require an RP, PRP or Other Person undertaking Comprehensive Response Actions pursuant to 310 CMR 40.0800 to obtain prior Departmental approval of one or more of the response actions or submittals required pursuant to 310 CMR 40.0800. The Department may require such prior approval for submittals or response actions as they relate to the entire disposal site or to some portion thereof.

40.0830: Phase II - Comprehensive Site Assessment

310 CMR 40.0831 through 40.0849, cited collectively as 310 CMR 40.0830, contain the requirements and procedures for conducting Phase II - Comprehensive Site Assessments at disposal sites.

40.0832: General Provisions

(1) A Scope of Work, as described in 310 CMR 40.0834, shall be developed and submitted to the Department in accordance with 310 CMR 40.0510 prior to the initiation of Comprehensive Site Assessment activities at any disposal site that has been classified as Tier I or Tier II under the provisions of 310 CMR 40.0500, unless the Phase II fieldwork has been implemented prior to Tier Classification.

(2) A Phase II Report, as described in 310 CMR 40.0835, shall be prepared to document information obtained as a result of Comprehensive Site Assessment activities and support conclusions and Opinions based upon the findings of the assessment. The Phase II Report shall reference or incorporate elements of the Phase I Report, as appropriate, and may be combined with the Phase III Report described in 310 CMR 40.0850.

40.0833: Performance Standards

(1) A Phase II - Comprehensive Site Assessment shall collect, develop and evaluate sufficient information to support conclusions and Opinions regarding:

- (a) the source, nature, extent, and potential impacts of releases of oil and/or hazardous material;
- (b) the risk of harm posed by the disposal site to health, safety, public welfare and the environment; and
- (c) the need to conduct remedial actions at the disposal site.

(2) The Phase II Report shall thoroughly document, evaluate and discuss the findings and conclusions of the Phase II Comprehensive Site Assessment, and where applicable, provide the basis for identifying and evaluating remedial action alternatives.

40.0834: Conceptual Phase II Scope of Work

- (1) Except as otherwise specified by the Department, Department approval of the conceptual Phase II Scope of Work shall not be required.
- (2) Except as otherwise specified by the Department, the conceptual Phase II Scope of Work shall provide:
 - (a) the general scope and nature of investigative and sampling programs that will be undertaken to characterize the source, extent, and migration pathways of oil and/or hazardous material, and the risk of harm posed to health, safety, public welfare or the environment, based upon the initial Conceptual Site Model developed in Phase I;
 - (b) the name and license number of the LSP engaged or employed by the person conducting the Comprehensive Response Action; and
 - (c) a projected schedule for implementation of the Phase II - Comprehensive Site Assessment.

40.0835: Phase II Report

- (1) A Phase II Report shall be submitted to the Department at the conclusion of Comprehensive Site Assessment activities pursuant to the applicable deadlines set forth in 310 CMR 40.0550 or 40.0560 or at Interim Deadlines specified by the Department.
- (2) A Phase II Report shall present, contain, or append relevant information, data, findings, and Opinions related to the Comprehensive Site Assessment of the disposal site.
- (3) A Phase II Report shall set forth in narrative and, to the extent possible, in maps, graphs, and tables, the disposal site Conceptual Site Model, approach, methods and results of the Phase II - Comprehensive Site Assessment.
- (4) The information and assessment findings outlined in 310 CMR 40.0835(4) shall be provided in the Phase II Report. Depending upon specific site and release conditions, it may be necessary to provide additional information to adequately characterize the disposal site, consistent with the Response Action Performance Standard described in 310 CMR 40.0191, or it may be appropriate to forgo particular assessment or information gathering elements and provide Technical Justification as described in 310 CMR 40.0193.
 - (a) Disposal Site Name, Location and Locus Map, updated, if necessary, from what was provided in the Phase I Report;
 - (b) Detailed Disposal Site Map(s), updated, as necessary, from the base map(s) provided in the Phase I Report, and depicting all investigatory and sampling points relevant to the Comprehensive Site Assessment, the boundaries of the disposal site in plan view, and, as appropriate, the vertical extent of contamination at the disposal site;
 - (c) Disposal Site History, updated, supplemented, or modified if necessary from information provided in the Phase I Report;
 - (d) Site Hydrogeological Characteristics, including details of subsurface investigations conducted at the disposal site, together with a comprehensive description and depiction of site hydrogeologic conditions, including, without limitation:
 1. a description of all relevant geologic, hydrologic, geophysical, and other subsurface investigations and assessments conducted at the disposal site;
 2. documentation related to borings, well construction, and well development, including copies of well drilling logs, within or appended to the Phase II Report; and
 3. a detailed characterization of geologic and hydrogeologic conditions at the disposal site, including:
 - a. groundwater potentiometric surface(s), gradients, flow rates, and flow direction(s);
 - b. soil type(s), stratigraphy, and permeability;
 - c. where appropriate, bedrock type and characteristics, depths and contours; and
 - d. an evaluation and description of the potential for flooding;
 - (e) Environmental Fate and Transport of Oil and/or Hazardous Material, including, as appropriate:

40.0835: continued

1. an evaluation of the environmental fate and transport characteristics of the oil and/or hazardous material identified at the disposal site, including, without limitation, mobility, stability, volatility, persistence and bioaccumulative potential of the oil and/or hazardous material;
 2. identification and characterization of existing and potential migration pathways of the oil and/or hazardous material at and from the disposal site, including, as appropriate, air, soil, groundwater, soil gas, preferential migration pathways such as subsurface utility lines and other subsurface void spaces, surface water, sediment, and food chain pathways; and
 3. an evaluation of the potential for soil, groundwater, or NAPL to be a source of vapors of oil and/or hazardous material to indoor air of occupied structures as described in 310 CMR 40.0900;
- (f) Nature and Extent of Contamination, including a characterization of the nature, and vertical and horizontal extent of oil and/or hazardous material in the environment, including any and all source(s), the presence, distribution, and stability of any NAPL, tabulation of analytical testing results, and, where appropriate, a characterization of background concentrations of oil and/or hazardous material at the disposal site;
- (g) Exposure Assessment, including the identification and characterization of all potential human and environmental receptors that could be impacted by oil and/or hazardous material at or migrating from the disposal site, and, as appropriate, the quantification of exposure of oil and/or hazardous material to these receptors, under current and reasonably foreseeable site conditions, as described in 310 CMR 40.0900;
- (h) Risk Characterization, as set forth in 310 CMR 40.0900, for all appropriate human and environmental receptors identified at and near the disposal site; and
- (i) Conclusions, including a summary of the Phase II Comprehensive Site Assessment findings. The Conclusions section shall provide the disposal site Conceptual Site Model, the reasoning and results used to support the findings, and indicate and support the outcome of the Phase II Investigation as described in 310 CMR 40.0840.

40.0836: Phase II Completion Statement

- (1) A Phase II Completion Statement form, established by the Department for such purposes, shall be appended to and submitted with the final Phase II Report to the Department.
- (2) In cases where the Phase II Report is combined with other Comprehensive Response Action Reports, a Completion Statement form for the combined Reports shall be appended to the documents and submitted to the Department.
- (3) A Completion Statement submitted with a Phase II Report shall include the following:
 - (a) an Opinion from a Licensed Site Professional which states that the Phase II Comprehensive Site Assessment:
 1. conforms with applicable Phase II requirements and any approval conditions specified by the Department;
 2. meets the Phase II performance standards;
 3. does not disclose new or additional information which may affect the site's Tier Classification or permit category without the concurrent filing of an application for a Major Permit Modification; and
 4. specifies the Phase II outcome under 310 CMR 40.0840.
 - (b) the certification of the submittal required by 310 CMR 40.0009.

40.0839: Public Involvement

- (1) Public Involvement Activities shall be conducted in accordance with 310 CMR 40.1400 through 40.1406. Public Involvement Activities relevant to Phase II specifically include 310 CMR 40.1403(3)(e), and may include, but are not limited to those activities set forth at 40.1403(3)(a) and (f) and 310 CMR 40.1406.
- (2) If the disposal site where the Phase II is conducted is a Public Involvement Plan site, then a Public Involvement Plan that is consistent with 310 CMR 40.1405 shall be implemented.

40.0840: Possible Outcomes

- (1) The following outcomes are possible upon completion of a Phase II Comprehensive Site Assessment:
 - (a) Comprehensive Remedial Actions are necessary at the site to achieve a Permanent or Temporary Solution as described in 310 CMR 40.1000. A Phase III study for the identification, evaluation and selection of Comprehensive Remedial Action Alternatives as described in 310 CMR 40.0850 is necessary to select a remedial action alternative; or
 - (b) the requirements of a Permanent Solution under 310 CMR 40.1000 have been met, and a Permanent Solution Statement supported by information provided in the Phase II report shall be submitted to the Department.

40.0850: Phase III - Identification, Evaluation and Selection of Comprehensive Remedial Action Alternatives

310 CMR 40.0851 through 40.0869, cited collectively as 310 CMR 40.0850, contain the requirements and procedures for conducting Phase III Comprehensive Response Actions at disposal sites.

40.0852: General Provisions

- (1) A Phase III evaluation shall be conducted for any disposal site for which a Phase II Comprehensive Site Assessment has been completed and a Permanent Solution in accordance with 310 CMR 40.1000 has not yet been achieved.
- (2) A Phase III evaluation shall result in the selection of a remedial action alternative which is a likely Permanent Solution, except where it is demonstrated pursuant to 310 CMR 40.0850 that a Permanent Solution is not feasible or that the implementation of a Temporary Solution would be more cost-effective and timely than the implementation of a feasible Permanent Solution.
- (3) Except for any Temporary Solution achieved after providing a Downgradient Property Status Submittal to the Department in accordance with 310 CMR 40.0180, a Phase III evaluation shall be conducted before any Temporary Solution pursuant to 310 CMR 40.1000 may be achieved at a disposal site.
- (4) The feasibility of achieving or approaching background levels of oil and hazardous material shall be evaluated in accordance with 310 CMR 40.0860 for all disposal sites where remedial actions are or have been taken to achieve a Permanent Solution and background levels are not achieved.
- (5) The results and conclusions of the Phase III evaluation shall be documented in a Remedial Action Plan, as described in 310 CMR 40.0861. Where appropriate, the Remedial Action Plan may be provided in or appended to the Phase II Comprehensive Site Assessment Report described in 310 CMR 40.0835.

40.0853: Performance Standards

- (1) A Phase III evaluation shall result in:
 - (a) the identification and evaluation of remedial action alternatives which are reasonably likely to achieve a level of No Significant Risk considering the oil and hazardous material present, media contaminated, and site characteristics; and
 - (b) the recommendation of a remedial action alternative that is a Permanent or Temporary Solution, where a Permanent Solution includes measures that reduce, to the extent feasible, the concentrations of oil and hazardous material in the environment to levels that achieve or approach background.

40.0853: continued

- (2) A Phase III Remedial Action Plan shall describe and document the information, reasoning and results used to identify and evaluate remedial action alternatives in sufficient detail to support the selection of the proposed remedial action alternative.

40.0855: Identification and Evaluation of Remedial Action Alternatives

- (1) An identification and evaluation of remedial action alternatives shall be undertaken for all disposal sites where a Phase III evaluation is required.
- (2) The identification and evaluation of remedial action alternatives shall include:
 - (a) an initial screening to identify those remedial action alternatives that are reasonably likely to be feasible and achieve a level of No Significant Risk; and, where necessary
 - (b) a detailed evaluation of the remedial action alternatives identified by the initial screening to ascertain which alternatives will meet the performance standards and requirements set forth in 310 CMR 40.0850, 40.0900 and 40.1000, and whether these alternatives constitute Permanent or Temporary Solutions.
- (3) The identification and evaluation of remedial action alternatives:
 - (a) shall be based on information gathered and analyzed as part of previous assessment and remedial actions, and during the Phase III evaluation;
 - (b) may involve bench-scale tests or pilot studies as part of an evaluation of the effectiveness of an alternative; and
 - (c) may incorporate innovative technologies where appropriate.

40.0856: Initial Screening of Likely Remedial Action Alternatives

- (1) An initial screening of remedial technologies shall be conducted to identify remedial action alternatives for further evaluation which are reasonably likely to be feasible, based on the oil and hazardous material present, media contaminated, and site characteristics. For the purposes of 310 CMR 40.0856, remedial action alternatives are reasonably likely to be feasible if:
 - (a) the technologies to be employed by the alternative are reasonably likely to achieve a Permanent or Temporary Solution; and
 - (b) individuals with the expertise needed to effectively implement available solutions would be available, regardless of arrangements for securing their services.

40.0857: Detailed Evaluation of Remedial Action Alternatives

- (1) Except as provided in 310 CMR 40.0857(2), a detailed evaluation of the remedial action alternatives identified by the initial screening described in 310 CMR 40.0856 shall be conducted to provide the basis for the selection of the remedial action alternative. The detailed evaluation shall evaluate and compare different remedial alternatives using the criteria described in 310 CMR 40.0858.
- (2) A detailed evaluation is not required in those cases where a remedial action alternative identified during the initial screening:
 - (a) is proven to be effective in remediating the types of oil and hazardous material present at the disposal site, based upon experience gained at other disposal sites with similar site and contaminant conditions;
 - (b) results in the reuse, recycling, destruction, detoxification, treatment or any combination thereof of the oil and hazardous material present at the disposal site;
 - (c) can be implemented in a manner that will not pose a significant risk of harm to health, safety, public welfare or the environment, as described in 310 CMR 40.0900; and
 - (d) is likely to result in the reduction and/or control of oil and/or hazardous material at the disposal site to a degree and in a manner such that the requirements of a Permanent Solution as set forth in 310 CMR 40.1000 will be met.

40.0858: Detailed Evaluation Criteria

Except as provided in 310 CMR 40.0857(2), the remedial action alternatives identified by the initial screening shall be evaluated using the following criteria:

40.0858: continued

- (1) The comparative effectiveness of the alternatives in terms of:
 - (a) achieving a Permanent or Temporary Solution under 310 CMR 40.1000;
 - (b) reusing, recycling, destroying, detoxifying, or treating oil and hazardous material at the disposal site; and
 - (c) reducing levels of untreated oil and hazardous material at the site to concentrations that achieve or approach background.
- (2) The comparative short-term and long-term reliability of the alternatives, including:
 - (a) the degree of certainty that the alternative will be successful; and
 - (b) the effectiveness of any measures required to manage residues or remaining wastes or control emissions or discharges to the environment.
- (3) The comparative difficulty in implementing each alternative in terms of:
 - (a) technical complexity of the alternative;
 - (b) where applicable, the integration of the alternative with existing facility operations and other current or potential remedial actions;
 - (c) any necessary monitoring, operations, maintenance or site access requirements or limitations;
 - (d) the availability of necessary services, materials, equipment, or specialists;
 - (e) the availability, capacity and location of necessary off-site treatment, storage and disposal facilities; and
 - (f) whether the alternative meets regulatory requirements for any likely approvals, permits or licenses required by the Department, or other state, federal or local agencies.
- (4) The comparative costs of the alternatives, including:
 - (a) costs of implementing the alternative, including without limitation: design, construction, equipment, site preparation, labor, permits, disposal, operation, maintenance and monitoring costs;
 - (b) costs of environmental restoration, potential damages to natural resources, including consideration of impacts to surface waters, wetlands, wildlife, fish and shellfish habitat; and
 - (c) the relative total consumption of energy resources in the implementation and operation of the alternatives, and externalities associated with the use of those resources, including greenhouse gases and other air pollutants.
- (5) The comparative risks of the alternatives including without limitation:
 - (a) the short-term on-site and off-site risks posed during implementation of the alternative associated with any excavation, transport, disposal, containment, construction, operation or maintenance activities, or discharges to the environment from remedial systems;
 - (b) on-site and off-site risks posed over the period of time required for the alternative to attain applicable remedial standards, including risks associated with ongoing transport, disposal, containment, operation or maintenance activities, or discharges from remedial systems; and
 - (c) the potential risk of harm to health, safety, public welfare or the environment posed to human or environmental receptors by any oil and/or hazardous material remaining at the disposal site after the completion of the remedial action.
- (6) The comparative benefits of the alternatives including without limitation:
 - (a) the benefit of restoring natural resources;
 - (b) providing for the productive reuse of the site;
 - (c) the avoided costs of relocating people, businesses, or providing alternative water supplies; and
 - (d) the avoided lost value of the site.
- (7) The comparative timeliness of the alternatives in terms of eliminating any uncontrolled sources of oil and/or hazardous material and achieving of a level of No Significant Risk as described in 310 CMR 40.0900.
- (8) The relative effect of the alternatives upon non-pecuniary interests, such as aesthetic values.

40.0859: Selection of Remedial Action Alternative

- (1) Except as provided in 310 CMR 40.0857(2), remedial action alternatives shall be selected based on the detailed evaluation criteria contained in 310 CMR 40.0858 and in compliance with the provisions set forth in 310 CMR 40.0850, 40.0900 and 40.1000.
- (2) A remedial action alternative which is a Permanent Solution shall be selected if a feasible Permanent Solution has been identified and its implementation is found to be more cost-effective and timely than would be the implementation of a Temporary Solution. If there is no such feasible Permanent Solution, a Temporary Solution for the elimination of substantial hazard shall be selected and implemented and a plan shall be prepared pursuant to 310 40.0861(2)(h) for the identification and development of a Permanent Solution.
- (3) Any selected Permanent Solution shall, to the extent feasible, reduce the concentrations of oil and hazardous material in the environment to levels that achieve or approach background.
- (4) An Engineered Barrier, cap or other remedial action alternative that relies upon on-site disposal, isolation, or containment of oil and/or hazardous material shall not be selected unless and until a Phase III evaluation performed pursuant to the provisions of 310 CMR 40.0850 demonstrates the lack of a feasible alternative.

40.0860: Feasibility Evaluations

- (1) The criteria described in 310 CMR 40.0860 apply to:
 - (a) evaluating the feasibility of implementing a Permanent Solution;
 - (b) evaluating the feasibility of reducing the concentrations of oil and hazardous material in the environment to levels that achieve or approach Background;
 - (c) evaluating the feasibility of reducing the concentrations of oil and hazardous material in soil at a disposal site to levels at or below applicable soil Upper Concentrations Limits;
 - (d) evaluating the feasibility of eliminating, preventing or mitigating Critical Exposure Pathway(s); and
 - (e) evaluating the feasibility of eliminating or controlling each Source of OHM Contamination, controlling migration of OHM, and removing NAPL at a disposal site in support of a Permanent or Temporary Solution pursuant to 310 CMR 40.1003(5) through (7), respectively.
- (2) An evaluation of the feasibility of implementing a Permanent Solution shall be performed in all cases where the selected Comprehensive Remedial Alternative will achieve a Temporary Solution.
- (3) An evaluation of the feasibility of reducing the concentrations of oil and hazardous material in the environment at the disposal site or a portion of the disposal site to levels that achieve or approach Background shall be conducted in all cases where the Comprehensive Remedial Alternative is selected to achieve a Permanent Solution, unless the Permanent Solution selected is designed to achieve and achieves Background.
- (4) An evaluation of the feasibility of reducing the concentrations of oil and hazardous material in soil at the disposal site to levels at or below the applicable soil Upper Concentration Limits shall be conducted before a Comprehensive Remedial Alternative is selected as a Permanent Solution that would leave oil and/or hazardous material in soil at concentrations above the soil Upper Concentration Limits at a depth greater than 15 feet below the ground surface or beneath an engineered barrier, as that term is defined in 310 CMR 40.0996.
- (5) A Comprehensive Remedial Alternative that would achieve a Permanent Solution and other response actions listed in 310 CMR 40.0860(1) shall be considered feasible unless:
 - (a) the alternative is not technologically feasible, as specified in 310 CMR 40.0860(6);
 - (b) the costs of conducting, or the risks resulting from the alternative would not be justified by the benefits, considering such factors as potential damage to human health or the environment, cost of environmental restoration, long term operation and maintenance costs, and non-pecuniary values as determined by the benefit-cost analysis in 310 CMR 40.0860(7);

40.0860: continued

- (c) individuals with the expertise needed to effectively implement the alternative would not be available, regardless of arrangements for securing their services;
- (d) the alternative would necessitate land disposal other than at the site itself and no off-site facility is available in the Commonwealth or in other states that is in full compliance with all applicable federal and state regulatory requirements; or
- (e) an alternative is selected for a portion of a disposal site for which the source of the oil and/or hazardous material is not located thereon, and the elimination or control of such source cannot currently be achieved by the party conducting the response actions at that portion of the disposal site. In such instances, a Temporary Solution shall be implemented for that portion of the disposal site to which the selected alternative applies.

(6) Technological Feasibility. A Comprehensive Remedial Alternative and other response actions listed in 310 CMR 40.0860(1) shall be considered technologically feasible unless:

- (a) existing technology or reasonable modifications of existing technology cannot remediate the oil and hazardous material present at the disposal site to the extent necessary to attain a level of No Significant Risk or, when required to be considered, to levels that approach or achieve Background;
- (b) the reliability of the identified alternative has not been sufficiently proven at other sites or through pilot tests and a substantial uncertainty exists as to whether it will effectively reduce risk; or
- (c) the identified alternative cannot comply with or be modified to comply with applicable regulatory requirements.

(7) Benefit-cost Analysis. The benefits of implementing Comprehensive Remedial Alternatives to achieve a Permanent Solution or Temporary Solution or of implementing other response actions listed in 310 CMR 40.0860(1) shall justify the related costs unless:

- (a) the incremental cost of conducting the Comprehensive Remedial Alternative or other response action is substantial and disproportionate to the incremental benefit of risk reduction, environmental restoration, and monetary and non-pecuniary values;
- (b) the risk of harm to health, safety, public welfare or the environment posed by the implementation of the alternative cannot be adequately controlled; or
- (c) the alternative would destroy more than 5000 square feet of wetlands or wildlife habitat, or would otherwise result in a substantial deleterious impact to the environment and:
 - 1. other feasible Temporary or Permanent Solutions exist;
 - 2. the oil and/or hazardous materials, if any, that have come to be located in such resources do not bio-accumulate and are not likely to migrate; and
 - 3. the damage to such resources resulting from the implementation of the alternative would be permanent and irreparable.

40.0861: Remedial Action Plan

(1) The results of a Phase III evaluation shall be documented in a Remedial Action Plan. The Remedial Action Plan shall support the selection of the Comprehensive Remedial Alternative by providing information of sufficient detail on the process by which the recommended Comprehensive Remedial Alternative was developed and evaluated.

(2) A Remedial Action Plan shall contain:

- (a) a description of all remedial alternatives initially identified and the results of the initial screening;
- (b) where a detailed evaluation is required, a discussion of how the remedial alternatives remaining after initial screening compared with respect to each of the detailed criteria described in 310 CMR 40.0858, and how the criteria were weighted in the evaluation;
- (c) justification for the selection of the proposed Comprehensive Remedial Alternative with respect to its anticipated effectiveness and relative to all other evaluated alternatives, including a discussion of the results of any bench-scale tests or pilot studies performed as part of an evaluation of the effectiveness of an alternative;
- (d) where required, the results of the evaluation under 310 CMR 40.0860 of whether the implementation of a Permanent or Temporary Solution is feasible;

40.0861: continued

- (e) if a Permanent Solution is selected as the Comprehensive Remedial Alternative, a discussion of how the alternative is likely to achieve a level of No Significant Risk and the projected timeframe, based on available information, for meeting the requirements for a Permanent Solution as specified in 310 CMR 40.1000;
- (f) if a Temporary Solution is selected as the Comprehensive Remedial Alternative, a discussion of how the alternative is likely to eliminate any substantial hazards posed by the disposal site until a Permanent Solution is implemented and a plan and projected timeframe, based on available information, for meeting and maintaining the requirements for a Temporary Solution as specified in 310 CMR 40.1000;
- (g) if a Permanent Solution is selected, the results of the evaluation under 310 CMR 40.0860 of the feasibility of reducing the concentrations of oil and hazardous material in the environment at the disposal site to levels that achieve or approach background, unless the Remedial Action Plan otherwise includes a demonstration that the selected alternative is designed to achieve background;
- (h) if the selected Comprehensive Remedial Alternative is a Temporary Solution and a Permanent Solution is not currently feasible, except for those Temporary Solutions achieved after a Downgradient Property Status Submittal has been provided to the Department in accordance with 310 CMR 40.0180, a detailed description of definitive and enterprising steps pursuant to 310 CMR 40.1051 to identify and develop an alternative that is a likely Permanent Solution and a schedule for the implementation of such steps. Such steps may include, but are not limited to:
 - 1. performing pilot tests or bench-scale studies;
 - 2. investigating innovative ways to reduce the costs or the risks of implementing a specific alternative; and
 - 3. developing new technologies; and
- (i) a projected schedule for implementation of Phase IV activities, if applicable, pursuant to 310 CMR 40.0870 consistent with the projected timeframe for achievement of a Permanent or Temporary Solution pursuant to 310 CMR 40.0861(2)(e) or (f), as applicable.

40.0862: Phase III Completion Statement

- (1) A Phase III Completion Statement form, established by the Department for such purposes, shall be appended to and submitted with the Remedial Action Plan to the Department.
- (2) In cases where the Phase III Remedial Action Plan is combined with other Comprehensive Response Action Reports, a Completion Statement form for the combined Reports shall be appended to the documents and submitted to the Department.
- (3) A Completion Statement submitted with a Phase III Report shall include the following:
 - (a) an Opinion from a Licensed Site Professional indicating whether the selected Comprehensive Remedial Alternative is likely to achieve a Permanent or Temporary Solution, and stating that the Phase III conforms with applicable Phase III performance standards and requirements and any approval conditions specified by the Department; and
 - (b) a certification of the submittal required by 310 CMR 40.0009.

40.0863: Public Involvement

- (1) Public Involvement Activities shall be conducted in accordance with 310 CMR 40.1400 through 40.1406. Public Involvement Activities relevant to Phase III specifically include, but are not limited to, those activities set forth in 310 CMR 40.1403(3)(e).
- (2) If the disposal site where the Phase III is conducted is a Public Involvement Plan site, then a Public Involvement Plan that is consistent with 310 CMR 40.1405 shall be implemented.

40.0864: Possible Outcome

Upon completion of Phase III, the selected feasible Comprehensive Remedial Alternative shall be developed and implemented pursuant to Phase IV requirements under 310 CMR 40.0870.

40.0870: Phase IV Implementation of the Selected Comprehensive Remedial Alternative

310 CMR 40.0871 through 40.0889, cited collectively as 310 CMR 40.0870, contain the requirements and procedures for conducting Phase IV Comprehensive Remedial Response Actions at disposal sites.

40.0871: General Provisions

- (1) Phase IV contains requirements for the design, construction, and implementation of the Comprehensive Remedial Action Alternative selected as a result of the Phase III evaluation under 310 CMR 40.0850.
- (2) Phase IV activities shall include, without limitation, the following:
 - (a) preparation of a Remedy Implementation Plan (RIP) as set forth in 310 CMR 40.0874;
 - (b) documentation of the construction of the Comprehensive Remedial Alternative as described in 310 CMR 40.0875; and
 - (c) implementation and final inspection of the Comprehensive Remedial Alternative.
- (3) Where appropriate, reports and plans prepared required in Phase IV may be combined.
- (4) RPs, PRPs and Other Persons conducting Phase IV activities shall ensure that persons with the appropriate level of training, supervision and applicable licenses or certifications are engaged in the design, construction, operation and maintenance of the Comprehensive Remedial Alternative.
- (5) All federal, state and local permits, licenses or approvals and any agreements necessary for construction and operation of the Comprehensive Remedial Alternative shall be secured as early in Phase IV as possible in order to avoid delays in implementing the remedial action.
- (6) The Comprehensive Remedial Alternative shall not be implemented until a complete RIP, as described in 310 CMR 40.0874, has been received by the Department. Unless otherwise specified by the Department in writing, approval from the Department shall not be required to implement the Comprehensive Remedial Alternative. Any person implementing the Comprehensive Remedial Alternative shall conform with the proposals and specifications contained in the RIP and any conditions specified by the Department. Significant modifications to the RIP shall be submitted to the Department prior to implementation of the modifications.

40.0872: Performance Standards

- (1) The Phase IV Implementation of the Comprehensive Remedial Alternative selected in Phase III and documented in the Phase III RAP shall:
 - (a) ensure that the information, plans and reports related to the design, construction, and implementation of the selected remedial alternative are sufficiently developed and documented to support the implementation of the Comprehensive Remedial Alternative;
 - (b) ensure that following initial implementation, the Comprehensive Remedial Alternative meets design and performance specifications;
 - (c) meet the Response Action Performance Standard for the design, construction, and implementation of the Comprehensive Remedial Action, as described in 310 CMR 40.0191; and
 - (d) conform with all applicable requirements and deadlines set forth in 310 CMR 40.0000.

40.0874: Remedy Implementation Plan (RIP)

- (1) A Remedy Implementation Plan shall be developed for the selected Comprehensive Remedial Alternative.
- (2) Technical justification, as specified in 310 CMR 40.0193, may be used to limit or forgo assessment or evaluation elements of the RIP. When technical justification is used, a description of the site-specific conditions and characteristics which make a requirement unwarranted shall be provided in the applicable section of the RIP.

40.0874: continued

- (3) A RIP shall include, without limitation, the following elements:
- (a) a list of relevant contacts, including:
1. names, addresses, and telephone numbers of the RP, PRP or Other Persons responsible for submittal of the RIP;
 2. name, address, and telephone number of the LSP; and
 3. identification of those persons who will own, operate and/or maintain the selected Comprehensive Remedial Alternative during and following construction;
- (b) Engineering Design. The RIP shall document engineering concepts and design criteria to be used for the design and construction of the Comprehensive Remedial Alternative including as appropriate and without limitation:
1. goals of the remedial action, including performance requirements of the remedial systems, the requirements for achieving a Permanent or Temporary Solution (whichever is applicable) under 310 CMR 40.1000 and the projected timeframe, based on available information, for achieving such Permanent or Temporary Solution;
 2. any significant changes in or new information related to disposal site conditions which were not included in previous submittals;
 3. disposal site maps showing existing disposal site features and proposed locations of activities associated with the remedial action;
 4. a description of the characteristics, quantity, and location of environmental media or materials to be treated or otherwise managed;
 5. a description and conceptual plan of the activities, treatment units, facilities, and processes to be used to implement the selected remedial action alternative including flow diagrams;
 6. relevant design and operation parameters, including:
 - a. design criteria, assumptions and calculations;
 - b. expected treatment, destruction, immobilization, or containment efficiencies and documentation of how that degree of effectiveness was determined; and
 - c. demonstration that the selected Comprehensive Remedial Alternative will achieve the identified remedial goals (may include information from pilot or treatability tests, similar operations, or scientific literature);
 7. design features for control of oil and hazardous material spills and accidental discharge or system malfunction, including without limitation: containment structures, leak detection devices, run-off controls, pressure valves, bypass systems, or safety cutoffs;
 8. a description of the methods for management or disposal of any treatment residual, contaminated soils, and other waste materials containing oil and/or hazardous material generated as a result of the selected Comprehensive Remedial Alternative;
 9. identification of site-specific characteristics which may affect or be affected by the design, construction, or operation of the selected Comprehensive Remedial Alternative, including, but not limited to:
 - a. relationship of the selected Comprehensive Remedial Alternative to existing disposal site activities or operations;
 - b. drainage features;
 - c. natural resource areas, local planning and development issues; and
 - d. soil characteristics and groundwater characteristics;
 10. a discussion of measures to be incorporated into the design, construction and operation of the selected Comprehensive Remedial Alternative to avoid any deleterious impact on environmental receptors and natural resource areas (including any surface water or wetland), or where it is infeasible to avoid any such impact, a discussion of measures to minimize or mitigate any impact; and
 11. a general description of inspections and monitoring which will be performed to ensure adequate construction and performance of the selected Comprehensive Remedial Alternative;
- (c) Construction Plans and Specifications. Construction plans shall be prepared in conformance with appropriate engineering and construction standards and practices and regulations applicable to construction plans and activities. Information on the proposed plans for the construction of the selected Comprehensive Remedial Alternative shall be provided in the RIP and include, without limitation, the following:

40.0874: continued

1. as appropriate, plans, material specifications, and procedures related to the construction of the selected Comprehensive Remedial Alternative; and
 2. a schedule for the design and construction of the Comprehensive Remedial Alternative;
- (d) Operation, Maintenance and/or Monitoring (OMM). In cases where the Comprehensive Remedial Alternative for the disposal site requires operation, maintenance and/or monitoring activities to ensure the effective performance and integrity of the Comprehensive Remedial Alternative and/or the achievement of remedial goals identified pursuant to 310 CMR 40.0874(3)(b)1., an Operation, Maintenance and/or Monitoring plan shall be developed and included in the RIP. The OMM plan shall include measures necessary to assure effective operations of the Comprehensive Remedial Action under both normal and emergency conditions. The OMM plan shall include, as appropriate and without limitation, the following:
1. name and telephone number of the person(s) conducting operation, maintenance and/or monitoring activities;
 2. general operating procedures, including start-up, testing, maintenance, shutdown, and emergency or contingency procedures; and
 3. specification of the type, frequency and duration of monitoring, and testing or inspections to ensure and confirm that the remedial action is performing as designed. The frequency of monitoring and/or inspections shall be consistent with the Response Action Performance Standard, as described in 310 CMR 40.0191, and in conformance with applicable provisions of 310 CMR 40.0000, including 310 CMR 40.0040 through 40.0049, and the terms of applicable permits, approvals or licenses;
- (e) a health and safety plan, to be followed during the construction and implementation of the selected Comprehensive Remedial Alternative, that adheres to the procedures described in 310 CMR 40.0018;
- (f) a list of any necessary federal, state or local permits, licenses and/or approvals required for the design, construction and/or operation of the selected remedial action alternative and a description of any additional information needed to meet the requirements thereof; and
- (g) a discussion of any property access issues which are relevant to the implementation of the selected Comprehensive Remedial Alternative, and a plan and timetable for resolving property access problems.

40.0875: As-built Construction Report

- (1) As-built Construction plans shall be prepared and submitted to the Department in an As-built Construction Report for:
 - (a) any disposal site where an Engineered Barrier, cap or other on-site system for the containment and/or physical immobilization of oil and/or hazardous material is constructed as part of the Remedial Action Alternative; or
 - (b) any disposal site where the Comprehensive Remedial Alternative as actually constructed varies significantly from the description of the alternative provided in the RIP under 310 CMR 40.0874.
- (2) The As-built Construction Report shall include, without limitation, the following information:
 - (a) construction activities conducted, and techniques and materials used;
 - (b) tests and measurements performed;
 - (c) any significant modifications of the design or construction of the selected Comprehensive Remedial Alternative as described under 310 CMR 40.0874(3)(c) of the RIP; and
 - (d) as built drawings.
- (3) As-built plans for the Comprehensive Remedial Action shall be prepared in conformance with appropriate engineering and construction standards and practices, and regulations applicable to construction plans and activities.

40.0877: Phase IV Status Report and Remedial Monitoring Report

(1) For a disposal site where Active Operation and Maintenance of a remedial action is conducted prior to the submittal of a Final Inspection Report and Phase IV Completion Statement to test and monitor the initial implementation and operation of the Comprehensive Remedial Alternative, a Remedial Monitoring Report shall be submitted to the Department on a form established by the Department for such purposes at the following frequency:

- (a) when the selected Comprehensive Remedial Alternative involves Active Operation and Maintenance to address an Imminent Hazard or Condition of Substantial Release Migration, monthly; or
- (b) when the selected Comprehensive Remedial Alternative involves Active Operation and Maintenance to address conditions that do not pose an Imminent Hazard or Condition of Substantial Release Migration, every six months.

(2) For a disposal site where Active Operation and Maintenance of the selected Comprehensive Remedial Alternative is conducted prior to the submittal of a Final Inspection Report and Phase IV Completion Statement to test and monitor the initial implementation and operation of the Comprehensive Remedial Alternative, a Phase IV Status Report, as described in 310 CMR 40.0877(4) shall be submitted with the initial Remedial Monitoring Report and every six months thereafter.

(3) Unless otherwise specified by the Department, for a disposal site where Active Operation and Maintenance of the selected Comprehensive Remedial Alternative is not conducted prior to the submittal of a Final Inspection Report and Phase IV Completion Statement, a Phase IV Status Report shall not be required but may be submitted at the discretion of the person(s) conducting response actions.

(4) A Phase IV Status Report shall include, as appropriate, the following:

- (a) a description of the type and frequency of operation, maintenance and/or monitoring activities conducted;
- (b) a description of any significant modifications of the operation, maintenance and/or monitoring program made since the RIP or any preceding Phase IV Status Report;
- (c) an evaluation of the performance of the Comprehensive Remedial Alternative during the reporting period, including whether the initial implementation and operation of the Comprehensive Remedial Action indicates that the remedy is performing as designed to achieve the remedial goals of the Phase IV Remedy Implementation Plan described in 310 CMR 40.0874(3);
- (d) a description of any conditions or problems noted during the period that are or may be affecting the performance of the Comprehensive Remedial Action;
- (e) a description of any measures taken to correct conditions which are affecting the performance of the Comprehensive Remedial Action; and
- (f) the name, license number, signature and seal of the LSP.

(5) After the submittal of a Phase IV Completion Statement, the person(s) conducting the Comprehensive Remedial Action shall submit Status and Remedial Monitoring Reports for the continued Active Operation and Maintenance of a remedial action initiated during Phase IV pursuant to the requirements of 310 CMR 40.0892 or 40.0897 and 40.0898, as applicable.

40.0878: Final Inspection Report

(1) Upon completion of construction activities and initial implementation of the selected Comprehensive Remedial Alternative, a final inspection of the Comprehensive Remedial Action shall be conducted by the Licensed Site Professional providing the Opinion under 310 CMR 40.0879(2) regarding the construction and implementation of the selected Comprehensive Remedial Alternative.

(2) The final inspection shall be performed to ensure that:

- (a) the selected Comprehensive Remedial Alternative has been constructed in accordance with construction plans under 310 CMR 40.0874(3)(c) or appropriate modifications to such plans; and

40.0878: continued

(b) following initial implementation and operation and any modifications or adjustments necessary to optimize the performance of remedial systems, the selected Comprehensive Remedial Alternative is meeting projected design standards.

(3) A description of the final inspection activities and findings shall be provided in a Final Inspection Report and submitted to the Department along with the Phase IV Completion Statement described under 310 CMR 40.0879 and any other Phase IV documents that have not been submitted to the Department by the time the Phase IV Completion Statement is filed. A list of any federal, state or local permits, licenses and/or approvals obtained related to the design, construction and/or operation of the selected remedial action alternative shall be included in the Final Inspection Report.

40.0879: Phase IV Completion Statement

(1) A Phase IV Completion Statement form, established by the Department for such purposes, shall be appended to and submitted with the Final Inspection Report to the Department.

(2) A Completion Statement form submitted with a Final Inspection Report shall include the following:

- (a) an Opinion from a Licensed Site Professional as to whether the construction and implementation of the selected Comprehensive Remedial Alternative has been completed in accordance with applicable requirements of 310 CMR 40.0870, and the Phase IV performance standards as described in 310 CMR 40.0872 have been met;
- (b) a certification of the submittal required by 310 CMR 40.0009; and
- (c) an indication as to whether any activities under Phase V will be conducted as part of the implementation of the selected Comprehensive Remedial Alternative.

(3) Upon receipt of a Phase IV Completion Statement in accordance with 310 CMR 40.0879 which indicates that any Phase V activities pursuant to 310 CMR 40.0890 are required at a disposal site, the Department shall suspend the further assessment of Tier I or Tier II Annual Compliance Assurance Fees, whichever are applicable, and shall assess a Phase V - Operation Maintenance and/or Monitoring Compliance Assurance Fee pursuant to 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

40.0880: Public Involvement

(1) Public Involvement Activities shall be conducted in accordance with 310 CMR 40.1400 through 40.1406. Public Involvement Activities relevant to Phase IV specifically include 310 CMR 40.1403(3)(a) and (e).

(2) If the disposal site where the Phase IV is conducted is a Public Involvement Plan site, then a Public Involvement Plan that is consistent with 310 CMR 40.1405 shall be implemented.

40.0881: Possible Outcomes

Upon completion of Phase IV activities the following outcomes are possible:

- (a) the requirements of a Permanent or Temporary Solution under 310 CMR 40.1000 have been met. A Permanent or Temporary Solution Statement shall be submitted to the Department;
- (b) a Permanent or Temporary Solution has not yet been achieved, and operation, maintenance and/or monitoring of the Comprehensive Remedial Action (including Remedy Operation Status) is necessary to achieve a Permanent or Temporary Solution under 310 CMR 40.1000; or
- (c) the requirements of a Temporary Solution under 310 CMR 40.1000 have been met, and Post-temporary Solution operation, maintenance and/or monitoring of the remedial action under 310 CMR 40.0897 and 40.0898 is necessary to ensure that the conditions upon which the Temporary Solution is based are maintained and/or that further progress toward a Permanent Solution is made.

40.0890: Operation, Maintenance and/or Monitoring of Comprehensive Response Actions

310 CMR 40.0891 through 40.0899, cited collectively as 310 CMR 40.0890, contain the requirements and procedures for conducting Phase V and Post-temporary Solution Operation, Maintenance and/or Monitoring activities at disposal sites.

40.0891: Phase V General Provisions

(1) The provisions of Phase V shall apply to disposal sites where Phase IV response actions have been completed and operation, maintenance and/or monitoring of the Comprehensive Remedial Action is necessary to achieve a Permanent or Temporary Solution under 310 CMR 40.1000.

(2) Phase V activities may include the following:

- (a) operation and maintenance of the Comprehensive Remedial Action;
- (b) monitoring to evaluate the performance of the remedial systems and whether the Comprehensive Remedial Action is meeting its design specifications;
- (c) monitoring of conditions at the disposal site to evaluate the effectiveness of the Comprehensive Remedial Action in reducing, treating and/or containing oil and/or hazardous material;
- (d) efforts to correct problems if performance monitoring indicates that the Comprehensive Remedial Action is not performing as designed;
and/or
- (e) documentation and submission of the results of operation, maintenance and monitoring activities to the Department, as described in 310 CMR 40.0892.

(3) Operation, maintenance and/or monitoring activities shall follow the OMM plan developed as part of the Remedy Implementation Plan in Phase IV under 310 CMR 40.0874(3)(d). The OMM plan shall be revised and updated as warranted in response to changes in site conditions, modifications to remedial systems or programs, or as otherwise necessary to ensure that the Comprehensive Remedial Action achieves design standards and remedial goals identified in the RIP pursuant to 310 CMR 40.0874(3)(b)1.

(4) Operation, maintenance and/or monitoring activities shall be documented and submitted to the Department as described in 310 CMR 40.0892.

(5) Operation, maintenance and/or monitoring activities shall be performed at a frequency which is sufficient to ensure the effective performance and the integrity of the remedial action, consistent with the Response Action Performance Standard as described in 310 CMR 40.0191, and in conformance with the terms of applicable permits, approvals, licenses or provisions in 310 CMR 40.0000.

(6) Phase V operation, maintenance and/or monitoring activities shall be documented and submitted to the Department in Phase V Status Reports, and when required, Remedial Monitoring Reports in accordance with the requirements in 310 CMR 40.0892.

40.0892: Phase V Status and Remedial Monitoring Reports

(1) At a minimum, at a disposal site where Phase V operation, maintenance and/or monitoring of Comprehensive Response Actions is being conducted, a Phase V Status Report as described in 310 CMR 40.0892(2) shall be submitted to the Department six months from the receipt by the Department of the Phase IV Completion Statement and every six months thereafter for the duration of the operation of the remedy. Each Status Report shall document activities occurring over the period of time since the previously submitted Status Report.

(2) Phase V Status Reports shall include, without limitation, the following:

- (a) a description of the type and frequency of operation, maintenance and/or monitoring activities conducted;
- (b) a description of any significant modifications of the operation, maintenance and/or monitoring program made since the submission of the preceding Phase V Status Report;

40.0892: continued

- (c) an evaluation of the performance of the remedial action during the period of time since the last Status Report, including whether the remedial action is achieving remedial goals specified in the Phase IV Remedy Implementation Plan as described in 310 CMR 40.0874(3), and a description of any conditions or problems noted during the period that are or may be affecting the performance of the remedial action;
 - (d) a description of any measures taken to correct conditions which are affecting the performance of the remedial action; and
 - (e) the name, license number, signature and seal of the LSP.
- (3) For a disposal site where Active Operation and Maintenance of a Comprehensive Remedial Action is being conducted, in addition to and/or in conjunction with the submittal of a Phase V Status Report, a Remedial Monitoring Report shall be submitted to the Department on a form established by the Department for such purposes at the following frequency:
- (a) when Phase V activities include the Active Operation and Maintenance of a Comprehensive Remedial Action to address an Imminent Hazard or Condition of Substantial Release Migration, with the first Phase V Status Report and monthly thereafter. In such cases where the Active Operation and Maintenance of a Comprehensive Remedial Action is not initiated until after the submittal of the first Phase V Status Report, the Remedial Monitoring Report shall be submitted on the monthly anniversary of the submittal of the first Phase V Status Report;
 - (b) when Phase V activities include Active Operation and Maintenance of a Comprehensive Remedial Action to address conditions that do not pose an Imminent Hazard or Condition of Substantial Release Migration, with the first Phase V Status Report and every six months thereafter. In such cases where the Active Operation and Maintenance of the Comprehensive Remedial Action is initiated after the submittal of the first Phase V Status Report, the Remedial Monitoring Report shall be submitted concurrently with the submittal of the next Phase V Status Report;
 - (c) Notwithstanding 310 CMR 40.0892(3)(a) and (b), when activities that include the Active Operation and Maintenance of a Comprehensive Remedial Action are continued in Phase V after being initiated in a previous phase of work (*i.e.*, as an Immediate Response Action, Release Abatement Measure, or during the initial implementation and operation of a remedy in Phase IV), the Status Report submittal schedule established under the previous phase of work shall be continued into Phase V.

40.0893: Remedy Operation Status

- (1) Applicability. Remedy Operation Status applies to disposal sites in Phase V where a Comprehensive Remedial Action that relies upon Active Operation and Maintenance of a remedial system or program and meets the requirements of 310 CMR 40.0893 is being conducted for the purpose of achieving a Permanent Solution.
- (2) Performance Standard for Remedy Operation Status. To achieve and maintain Remedy Operation Status for a disposal site:
- (a) Phase III and Phase IV Comprehensive Response Actions as described in 310 CMR 40.0850 and 40.0870, respectively, shall be completed;
 - (b) the remedial system or program shall be adequately designed in accordance with 310 CMR 40.0870 to achieve a Permanent Solution;
 - (c) the remedial system or program shall be operated and maintained in accordance with the requirements of 310 CMR 40.0890 and 40.0000 and any applicable permits, approvals, or licenses;
 - (d) each Source of OHM Contamination shall be eliminated or controlled in accordance with 310 CMR 40.1003(5);
 - (e) any Substantial Hazard shall be eliminated;
 - (f) where the remedy includes one or more Active Exposure Pathway Mitigation Measure(s), the requirements at 310 CMR 40.1026 are met; and
 - (g) at a minimum, information and data on operation and maintenance or monitoring shall be documented and submitted to the Department in Status and Remedial Monitoring Reports at the frequency described in 310 CMR 40.0892.

40.0893: continued

(3) Content of Submittal. Unless otherwise specified by the Department, Remedy Operation Status shall be effective upon submission of a completed Remedy Operation Status Submittal. A complete Submittal shall include:

- (a) a completed transmittal form established by the Department for such purposes;
- (b) a Remedy Operation Status Opinion prepared in accordance with 310 CMR 40.0015 that finds that each of the performance standards described in 310 CMR 40.0893(2) are met; and
- (c) the certification required by 310 CMR 40.0009.

(4) Effect of Remedy Operation Status. At any site with Remedy Operation Status, the deadline to achieve a Permanent or Temporary Solution within five years of the effective date of a Tier Classification as described in 310 CMR 40.0560 shall not apply and a Tier Classification Extension as described in 310 CMR 40.0560(7) shall not be required provided that the Remedy Operation Status is not terminated pursuant to 310 CMR 40.0893(6).

(5) Transfer or Modification of Remedy Operation Status. Remedy Operation Status may be transferred to one or more person(s) who will assume responsibility for the ongoing operation of the Comprehensive Remedial Action under Remedy Operation Status or modified to add one or more persons to those persons conducting response actions under Remedy Operation Status. Unless otherwise specified by the Department, such transfer or modification shall take effect upon the submittal of the following to the Department:

- (a) a completed transmittal form established by the Department for such purpose;
- (b) the written consent of the RP, PRP or Other Person(s) that submitted the Remedy Operation Status submittal;
- (c) for each transferee or each person to be added to those persons conducting response actions, a statement detailing that person's history of compliance with the Department's requirements, including, but not limited to, M.G.L. c. 21E, 310 CMR 40.0000 and other laws for the protection of health, safety, public welfare and the environment administered or enforced by the Department or other federal, state or local government agencies that are material to the disposal site;
- (d) in the case of a modification to add a person(s) to those persons conducting response actions or of more than one transferee, designation of a primary representative and a certification that he or she is fully authorized to act on behalf of the persons conducting response actions under Remedy Operation Status;
- (e) a statement as to why the transfer or modification is being sought; and
- (f) the certification required by 310 CMR 40.0009 for each person to be added to those conducting response actions.

(6) Termination of Remedy Operation Status.

- (a) Remedy Operation Status shall terminate if:
 - 1. the person providing the Remedy Operation Status Opinion fails to meet the requirements of 310 CMR 40.0893(2). Mechanical failure of the system and/or the need to undertake substantial system modifications shall not terminate Remedy Operation Status if written notice is provided to the Department and the operation of the remedy is resumed in accordance with 310 CMR 40.0893(6)(b); or
 - 2. the person providing the Remedy Operation Status Opinion notifies the Department in accordance with 310 CMR 40.0893(6)(c) that such person intends to terminate Remedy Operation Status;
- (b) Any person conducting response actions at a disposal site with Remedy Operation Status who obtains knowledge that the criteria in 310 CMR 40.0893(2) are no longer being met, including knowledge of a mechanical failure and/or need to substantially modify the remedial system or program, shall provide written notice to the Department in the form of a Status Report within 30 days of obtaining such knowledge. Notice shall include plans and a timetable to correct failures and/or to implement modifications of the remedial system or program. Remedy Operation Status shall terminate unless the remedial system or program is operating in accordance with 310 CMR 40.0893(2) within 120 days of providing such written notice or within an Interim Deadline established by the Department and a Status Report is submitted to the Department that documents the resumed operation of the remedy within 120 days of the notice or the Interim Deadline, whichever is applicable;

40.0893: continued

(c) Any person who intends to discontinue operation of the remedial system or program or, where applicable, an Active Exposure Pathway Mitigation Measure, on which the Remedy Operation Status is based and/or otherwise terminate Remedy Operation Status, shall provide written notice to the Department. Remedy Operation Status shall terminate upon the Department's receipt of such notice;

(d) Notwithstanding 310 CMR 40.0893(6)(c), any person who intends to discontinue operation of the remedial system, program or Active Exposure Pathway Mitigation Measure on which the Remedy Operation Status is based in order to assess whether the remedial goals have been achieved and conditions remain stable over time may maintain Remedy Operation Status provided that he or she:

1. notifies the Department of the system shut down for the purpose of such evaluation and the plans for monitoring site conditions in the next required Status Report following system shut down;
2. continues to submit Status Reports at the frequency required in 310 CMR 40.0892; and
3. notifies the Department if operation of the system is resumed in the next required Status Report following resumed operation;

(e) Any person conducting response actions at a disposal site where Remedy Operation Status has been terminated pursuant to 310 CMR 40.0893(6)(a) shall have two years from the date of the termination to achieve a Permanent or Temporary Solution. Response actions after the termination of Remedy Operation Status shall not be conducted without a valid Tier Classification or Extension thereof.

40.0894: Phase V Completion Statement

(1) Upon achievement of a Permanent or Temporary Solution after conducting Phase V operation, maintenance and/or monitoring activities, a Phase V Completion Statement form, established by the Department for such purposes, shall be submitted with the final Phase V inspection and monitoring report to the Department.

(2) The Phase V Completion Statement form shall include:

(a) an Opinion from a Licensed Site Professional:

that:

1. specifies the Phase V outcome achieved as described in 310 CMR 40.0896;
2. except where operation, maintenance and/or monitoring are continuing under 310 CMR 40.0897 and 40.0898, provides a description of residual oil and/hazardous material at the disposal site and any measures in place, including physical barriers and/or Activity and Use Limitation for preventing or limiting the exposure of human and/or environmental receptors to residual oil and hazardous material; and
3. except where operation, maintenance and/or monitoring are continuing under 310 CMR 40.0897 and 40.0898, provides justification for terminating operation, maintenance and/or monitoring activities; and

(b) a certification of the submittal required by 310 CMR 40.0009.

40.0895: Public Involvement

(1) Public Involvement Activities shall be conducted in accordance with 310 CMR 40.1400 through 40.1406. Public Involvement Activities relevant to Phase V specifically include, but are not limited to, those activities set forth in 310 CMR 40.1403(3)(e) and (f).

(2) If the disposal site where the Phase V is conducted is a Public Involvement Plan site, then a Public Involvement Plan that is consistent with 310 CMR 40.1405 shall be implemented.

40.0896: Possible Outcomes

Upon completion of operation, maintenance and monitoring activities under Phase V the following outcomes are possible:

40.0896: continued

- (1) the requirements of a Permanent Solution under 310 CMR 40.1000 have been met and no additional operation, maintenance and/or monitoring of the remedial action alternative is necessary to ensure the integrity of the Permanent Solution. A Permanent Solution Statement shall be submitted to the Department;
- (2) the requirements of a Permanent Solution under 310 CMR 40.1000 have been met but conditions apply to maintaining the Permanent Solution. A Permanent Solution with Conditions Statement shall be submitted to the Department;
- (3) the requirements of a Temporary Solution under 310 CMR 40.1000 have been met and no additional operation, maintenance and/or monitoring of the remedial action alternative is necessary to ensure the integrity of the Temporary Solution. A Temporary Solution Statement shall be submitted to the Department; or
- (4) the requirements of a Temporary Solution under 310 CMR 40.1000 have been met, a Temporary Solution Statement has been submitted to the Department, and additional Post-temporary Solution Operation, Maintenance, and/or Monitoring of the remedial action alternative under 310 CMR 40.0897 and 40.0898 is necessary to ensure that the conditions upon which the Temporary Solution is based are maintained and/or that further progress toward a Permanent Solution is made.

40.0897: Post-temporary Solution Operation, Maintenance and/or Monitoring

- (1) 310 CMR 40.0897 shall apply to any disposal site where:
 - (a) a Temporary Solution Statement for a Temporary Solution under 310 CMR 40.1000 has been submitted to the Department; and
 - (b) the operation, maintenance and/or monitoring of the Comprehensive Remedial Action is necessary to ensure that the conditions upon which the Temporary Solution is based are maintained.
- (2) Post-temporary Solution operation, maintenance and/or monitoring activities may include the following:
 - (a) operation and maintenance of the Comprehensive Remedial Action;
 - (b) monitoring to evaluate the performance of the remedial systems and whether the remedial action is meeting its design specifications;
 - (c) monitoring of conditions at the disposal site to evaluate the effectiveness of the remedial action in reducing, treating and/or containing oil and/or hazardous material;
 - (d) efforts to correct problems if performance monitoring indicates that the remedial action is not performing as designed;
 - (e) monitoring to confirm the long-term effectiveness of the remedial action in maintaining the Temporary Solution pursuant to 310 CMR 40.1000; and
 - (f) documentation and submission of the results of operation, maintenance and monitoring activities to the Department, as described in 310 CMR 40.0898.
- (3) Post-temporary Solution operation, maintenance and/or monitoring activities shall be conducted at a frequency which is sufficient to ensure the effective performance and the integrity of the remedial action, consistent with the Response Action Performance Standard as described in 310 CMR 40.0191, and in conformance with the terms of applicable permits, approvals, licenses and remedial action plan. Such plan shall be revised and updated as warranted in response to changes in site conditions, modifications to remedial systems, or as otherwise necessary to ensure that the remedial action achieves design standards and remedial goals.
- (4) Post-temporary Solution operation, maintenance and/or monitoring activities shall be documented and submitted to the Department in a Post-temporary Solution Status Report, and when required, Remedial Monitoring Reports in accordance with the requirements in 310 CMR 40.0898.

40.0898: Post-temporary Solution Status and Remedial Monitoring Reports

- (1) At a minimum, a Post-temporary Solution Status Report as described in 310 CMR 40.0898(2) shall be submitted to the Department six months from the receipt by the Department of the original plan for Post-temporary Solution operation, maintenance and/or monitoring and every six months thereafter for the duration of the operation of the remedy. Each Status Report shall document activities occurring over the period of time since the previously submitted Status Report.
- (2) Post-temporary Solution Status Reports shall include, without limitation, the following:
 - (a) a description of the type and frequency of operation, maintenance and/or monitoring activities conducted;
 - (b) a description of any significant modifications of the operation, maintenance and/or monitoring program made since the submission of the preceding Status Report;
 - (c) an evaluation of the performance of the remedial action during the period of time since the last Status Report, including whether the remedial action is achieving remedial goals specified in the applicable remedial action plan and a description of any conditions or problems noted during the period that are or may be affecting the performance of the remedial action;
 - (d) a description of any measures taken to correct conditions which are affecting the performance of the remedial action; and
 - (e) the name, license number, signature and seal of the LSP.
- (3) For a disposal site where Active Operation and Maintenance of a remedial action is being conducted, in addition to and/or in conjunction with the submittal of Post-temporary Solution Status Reports, a Remedial Monitoring Report shall be submitted to the Department on a form established by the Department for such purposes with the first Post-temporary Solution Status Report and every six months thereafter. In such cases where the Active Operation and Maintenance of a remedial action is not initiated until after the submittal of the first Post-temporary Solution Status Report, the Remedial Monitoring Report shall be submitted concurrently with the next Post-temporary Solution Status Report.

SUBPART I: RISK CHARACTERIZATION

40.0900: Procedures and Standards for the Characterization of the Risk of Harm to Health, Safety, Public Welfare and the Environment

310 CMR 40.0901 through 40.0999, cited collectively as 310 CMR 40.0900, describes the procedures for evaluating the risks posed by oil and/or hazardous material at disposal sites.

40.0901: Applicability and General Requirements

- (1) The procedures, criteria and standards of 310 CMR 40.0900 are applicable to all disposal sites for which response actions are required by M.G.L. c. 21E and/or 310 CMR 40.0000.
- (2) The general procedures and standards which apply to all Risk Characterizations are described in 310 CMR 40.0901 through 40.0939. Requirements which are specific to the type and method of Risk Characterization being performed are described in 310 CMR 40.0940 through 310 CMR 40.0999.
- (3) The characterization of risk of harm to health, safety, public welfare, and the environment is not required for a disposal site, environmental medium, or chemical for which response actions have successfully reduced concentrations to background levels, as described in 310 CMR 40.1020.
- (4) The characterization of the risk of harm to health, safety, public welfare and the environment shall be performed in a manner consistent with scientifically acceptable risk assessment practices, and shall take into consideration guidance published by the Department.

40.0902: Purpose of the Risk Characterization

A characterization of the risk of harm to health, safety, public welfare and the environment is performed at disposal sites to provide the quantitative and qualitative information used to evaluate the need for remedial actions:

- (1) Risk Characterization is used to identify and evaluate site conditions which may pose an Imminent Hazard. The methodology used in this evaluation is described in 310 CMR 40.0950.
- (2) Risk Characterization is used to establish whether a level of No Significant Risk exists or has been achieved at a disposal site. The criteria used in this determination are described in 310 CMR 40.0900, and two basic approaches to Risk Characterization are utilized:
 - (a) A chemical-specific approach, which compares site concentrations to standards in soil and groundwater, as described in 310 CMR 40.0970 through 40.0989. For the disposal sites to which they are applicable, these standards have been developed to meet the same objectives of the cumulative risk approach described in 310 CMR 40.0902(2)(b).
 - (b) A cumulative risk approach which compares site-specific information to a Cumulative Cancer Risk Limit of an Excess Lifetime Cancer Risk of one-in-one hundred thousand, a Cumulative Noncancer Risk Limit which is a Hazard Index equal to one, promulgated health, safety, public welfare and environmental standards, and site-specific conditions, as described in 310 CMR 40.0990 through 40.0999.
- (3) If the concentration of an oil and/or hazardous material at the disposal site is at or below background levels, then that oil and/or hazardous material need not be included in the disposal site Risk Characterization. Disposal sites at which all oil and hazardous material have been reduced to background levels are eligible for a Permanent Solution, as described in 310 CMR 40.1041, even if such background levels exceed one or more of the numerical standards or risk criteria published in 310 CMR 40.0900.
- (4) The results of the Risk Characterization shall be the basis for a decision whether a remedial action is necessary and to select the appropriate Permanent or Temporary Solution for the disposal site pursuant to 310 CMR 40.1000.
- (5) "Screening" Risk Characterizations may be performed using worst-case exposure assumptions to quickly demonstrate that a condition of No Significant Risk exists or has been achieved at a disposal site. If such a conclusion cannot be reached following a screening Risk Characterization, a more detailed assessment is appropriate.

40.0903 Scope of the Risk Characterization and Supporting Documentation

- (1) The scope and level of effort of the Risk Characterization shall depend on the complexity of the disposal site and the response action being performed. The Risk Characterization shall be of sufficient scope and adequately documented to demonstrate that the Response Action Performance Standard (RAPS) has been met in accordance with 310 CMR 40.0191.
- (2) The length and complexity of the documentation of the Risk Characterization shall depend upon the nature of the site and the response action being performed, as well as the method of Risk Characterization being performed. The documentation may be written as a separate report or as one or more components of another submittal required pursuant to 310 CMR 40.0000.

40.0904: Site Information Required for Risk Characterization

An adequate characterization of the disposal site is a prerequisite to the characterization of risk of harm to health, safety, public welfare and the environment, although the appropriate type and amount of information required to complete a Risk Characterization will depend on the unique characteristics of a release and/or disposal site. Particular attention shall be paid to the following site assessment parameters:

- (1) Physical Characteristics. The physical characteristics of the disposal site, including, but not limited to, the topography, geology, hydrogeology, and surface characteristics shall be evaluated as warranted by release and site conditions and described in sufficient detail to support the Risk Characterization.

40.0904: continued

(2) Extent of Release. The documentation of the Risk Characterization shall contain a description of the source and extent of the release of the oil and/or hazardous material, including, where appropriate:

- (a) the horizontal and vertical extent and concentrations of oil and/or hazardous material in all evaluated media;
- (b) background concentrations of oil and/or hazardous material in all evaluated media; and
- (c) all existing or potential Migration Pathways, including, but not limited to: soil, groundwater, soil gas, surface water, air, sediment and the food web. The potential for oil and/or hazardous material migration along preferential pathways such as utility lines or corridors must be evaluated, where applicable. Concentrations of oil and hazardous material in the sediment and/or surface water must be measured in any of the following circumstances to determine whether such material at or from the site has been or is being transported in a manner that would result in surface water or sediment concentrations of potential ecological significance, unless the need for such measurements is obviated by a technical justification consistent with 310 CMR 40.0193:
 1. Hazardous materials at or from the site, excluding VOCs, are present in groundwater within 200 feet of a surface water body;
 2. Hazardous materials at or from the site, excluding VOCs, are present in the groundwater at concentrations higher than the GW-3 standard(s) within 500 feet of a surface water body;
 3. Nonaqueous phase liquid (NAPL) at or from the site is present within 200 feet of a surface water body;
 4. Historical evidence indicates past discharge or dumping of oil or hazardous material from the site to the surface water body, unless such discharges were permitted;
 5. Evidence indicates current or past runoff of oil or hazardous material from or with site soil into the surface water body; and
 6. Site-specific conditions indicate that oil or hazardous material from the site may reasonably be expected to be present in the sediment or surface water at concentrations of potential ecological significance.

(3) Characterization of the Oil and/or Hazardous Material. The documentation of the Risk Characterization shall describe the oil and/or hazardous material at the disposal site, including, without limitation and where appropriate:

- (a) type, volume, composition, nature, physical, chemical and toxicological characteristics; and
- (b) environmental fate and transport characteristics, including mobility, stability, volatility, ability and opportunity for bioaccumulation, and persistence in the environment.

40.0920: Receptor Information Required for Risk Characterization

The identification of receptors, Site Activities and Uses, Exposure Points and Exposure Point Concentrations shall be conducted in a manner which provides a conservative estimate of the exposure to oil and/or hazardous material which a receptor may receive within the contaminated area over a period of time.

40.0921: Identification of Human Receptors

The documentation of the Risk Characterization shall identify and describe the Human Receptors who are likely to be present at the disposal site or in the surrounding environment, and who, as a result, would likely be exposed to oil and/or hazardous material.

- (1) The identification of the Human Receptors shall consider the current and reasonably foreseeable uses of the disposal site and the surrounding environment.
- (2) The Human Receptors identified shall not be specific individuals, but shall be described as groups of individuals.
- (3) Subpopulations which may be at increased risk due to increased sensitivity, particular behavior patterns or current or past exposures to chemicals in the environment shall be identified as distinct receptors.

40.0921: continued

(4) The Human Receptors shall be described in terms such as age group, occupation or other characteristics which will distinguish them from the general population. Examples of such descriptions include, without limitation:

- (a) lifelong residents at the disposal site;
- (b) trespassers;
- (c) women of childbearing age;
- (d) construction workers; and
- (e) children, ages one to eight years.

40.0922: Identification of Environmental Receptors

The documentation of the Risk Characterization shall identify and describe the Environmental Receptors which are likely to be present at the disposal site or in the surrounding environment and which, as a result, would likely be exposed to oil and/or hazardous material.

(1) Examples of such biota may include, but are not limited to:

- (a) wildlife, such as deer, squirrel and fox;
- (b) fish and shellfish; and
- (c) plants, such as grasses and trees.

(2) Examples of such habitats may include, but are not limited to:

- (a) Areas of Critical Environmental Concern;
- (b) surface water;
- (c) fresh and saltwater fisheries and fish habitat, including, but not limited to, shellfish areas; and
- (d) wetlands.

(3) Any Species of Concern, Threatened Species, or Endangered Species which is known or likely to be located at the disposal site or in the surrounding area shall be specifically identified as an Environmental Receptor.

40.0923: Identification of Site Activities and Uses

The documentation of the Risk Characterization shall identify and describe the Site Activities and Uses associated with the disposal site and the surrounding environment. These activities shall be used in combination with the criteria described in 310 CMR 40.0930 through 40.0939 to identify applicable groundwater and soil categories and to estimate the nature and, where appropriate, quantify the magnitude of exposure pursuant to 310 CMR 40.0990.

(1) The Site Activities and Uses shall include all current and reasonably foreseeable uses and activities occurring at the disposal site or in the surrounding environment which could result in exposure to oil and/or hazardous material by Human or Environmental Receptors.

- (a) The identification of Site Activities and Uses of the groundwater shall be determined independent of the activities and uses of the land itself.
- (b) The Site Activities and Uses of the land shall be identified without regard to whether the land is currently developed or undeveloped.
- (c) The selection of site-specific exposure frequency and exposure duration should be representative of the full extent of site activities consistent with the identified Site Use.

(2) The current Site Activities and Uses associated with the land itself, with structures in and on the land, and with the groundwater, surface water, soil, sediment or other medium which could result in exposure of Human or Environmental Receptors to oil and/or hazardous material shall be identified and described. This evaluation shall include consideration of activities which actually may not be occurring at the time of the evaluation, but which are consistent with the current use of the disposal site and surrounding environment and may reasonably be expected to occur, including but not limited to emergency excavation and repair of existing subsurface utilities by workers without personal protective equipment.

40.0923: continued

(3) The reasonably foreseeable Site Activities and Uses shall include any possible activity or use that could occur in the future to the extent that such activity or use could result in exposures to Human or Environmental Receptors that are greater than the exposures associated with current Site Activities and Uses, except that:

- (a) the groundwater shall not be considered a reasonably foreseeable source of drinking water unless it is considered to be in category GW-1 pursuant to the criteria listed in 310 CMR 40.0932(4);
- (b) specific Site Activities and Uses which would be reasonably foreseeable pursuant to 310 CMR 40.0923(3) may be eliminated from further consideration through the use of Activity and Use Limitations in accordance with 310 CMR 40.1012 and 310 CMR 40.1070 through 40.1089; and
- (c) specific Site Activity and Uses which would be reasonably foreseeable pursuant to 310 CMR 40.0923(3) may be eliminated from further consideration if they are consistent with the limitations, assumptions and/or conditions at 310 CMR 40.1013 and are documented in support of a Permanent Solution with Conditions pursuant to 310 CMR 40.1056(2)(j).

(4) If the Site Activities and Uses considered in the Risk Characterization will be limited in any way as described in 310 CMR 40.0923(3)(b) or (c) or by a restriction imposed by a government agency which is or will be in place, then the documentation of the Risk Characterization must clearly and concisely state the nature of any and all explicit or implied exposure limitations and describe the Site Activities and Uses which must be controlled or prohibited.

- (a) The assessment of current Site Activities and Uses shall not be limited by Activity and Use Limitations and/or government restrictions that are not in place or not effective, nor by any assumed future practices, controls or conditions; and
- (b) The results of the Risk Characterization shall not be considered valid unless and until all necessary government restrictions are in place and/or all Activity and Use Limitations have been recorded, registered or filed in accordance with 310 CMR 40.1070 through 40.1089.

(5) If the Site Activities and Uses considered in the Risk Characterization have been limited in any way by temporary risk reduction measures (*e.g.*, fences which restrict access) employed at the disposal site, or by presumed future response actions, the documentation of the Risk Characterization shall describe clearly and concisely the nature of all such limitations. The documentation of the Risk Characterization shall clearly and concisely state that:

- (a) the conclusions presented are based upon the described temporary measures and/or the implementation of described future response actions; and
- (b) the conclusions are valid only if, and as long as, the site conditions or the temporary measures are maintained and/or the presumed response actions have been implemented as described.

(6) Examples of Site Activities and Uses associated with Human Receptors include, without limitation:

- (a) the use of a building as an office, store or residence;
- (b) the use of water as drinking water, for washing floors or watering lawns;
- (c) the cultivation of fruits and vegetables destined for human consumption (*e.g.*, gardening or farming) and the cultivation of ornamental plants;
- (d) the excavation of soil;
- (e) recreational activities, such as playing baseball, swimming, fishing and hiking;
- (f) leisure activities, such as picnicking, sunbathing and entertaining.

(7) Examples of Site Activities and Uses associated with Environmental Receptors include, without limitation:

- (a) foraging by wildlife;
- (b) the support of plant or wildlife populations; and
- (c) the seasonal use of a location for nesting or mating.

40.0924: Identification of Exposure Points

(1) All potential Exposure Points shall be identified and described in the documentation of the Risk Characterization after considering the site and receptor information described in 310 CMR 40.0904 through 40.0923.

(2) The identification of an Exposure Point shall be consistent with the type and method of Risk Characterization which is being performed.

(a) Methods 1 and 2 Risk Characterizations - The Exposure Point(s) in groundwater and soil shall be identified and documented for all current and reasonably foreseeable Site Activities and Uses.

1. For groundwater, the Exposure Point(s) shall be the groundwater resource itself, as measured at each wellhead and/or nearest tap of a well screened within the horizontal and vertical distribution of the oil and/or hazardous material in the groundwater. Existing water supply wells and monitoring wells shall be used to represent current or potential groundwater Exposure Points.

2. For soil, the Exposure Point(s) shall be defined by the horizontal and vertical distribution of the contaminated soil in combination with the soil category(ies) determined to be applicable. For a contiguous volume of contaminated soil comprised of one or more soil categories as defined in 310 CMR 40.0933, a separate and distinct Exposure Point shall be represented by the soil in each category.

(b) Method 3 Risk Characterization – The Exposure Point(s) in all environmental media shall be identified for all current and reasonably foreseeable Site Activities and Uses.

1. For comparisons to Applicable or Suitably Analogous Standards, the Exposure Point shall be identified in a manner consistent with the applicable regulations.

2. Except as provided in 310 CMR 40.0924(2)(b)3., in GW-1 groundwater areas, for the comparison to drinking water standards listed in 310 CMR 22.00: *Drinking Water* and for the calculation of current and/or potential exposure to the groundwater, the Exposure Point(s) shall be the groundwater resource itself, as measured at each wellhead and/or nearest tap of a well screened within the horizontal and vertical distribution of the oil and/or hazardous material in the groundwater. Existing water supply wells and monitoring wells shall be used to represent current or potential groundwater Exposure Points.

3. In GW-1 areas that are designated GW-1 solely on the basis of being located within a Zone II or an Aquifer Protection District that overlays or is contiguous with a Zone II and where sites meet the following criteria, the Exposure Point shall be the existing Public Water Supply well(s) for the evaluation of current and future drinking water exposures and the Exposure Point Concentration shall be identified pursuant to 310 CMR 40.0926(8)

a. Contamination is limited to Oil;

b. A Phase II Report for the disposal site pursuant to 310 CMR 40.0830 has been submitted;

c. The disposal site is located at a distance greater than 1,000 feet from a Public Water Supply well;

d. It has been demonstrated that the requirements at 310 CMR 40.1003(5) and (7)(a) have been met to address any NAPL present;

e. It has been demonstrated through adequate characterization of horizontal migration that groundwater contaminant concentrations are:

i. not detected at or above analytical limits appropriate for a GW-1 area at the downgradient edge of the plume, at least 1,000 feet from the Public Water Supply well(s); and

ii. decreasing within the boundaries of the plume. Demonstration of diminishing contaminant concentrations within the plume shall consider both the spatial and temporal distribution of the contamination and other measures indicative of biodegradation of the contaminants;

f. It has been demonstrated through adequate characterization of vertical migration that contamination has not entered bedrock including the submittal of a profile sectional map showing the following information:

i. known or inferred depth to bedrock;

ii. depths to the top and bottom of the plume throughout the length of the plume; and

iii. existing well screen depths in comparison to the plume; and

40.0924: continued

- g. It has been demonstrated that there is no potential Exposure Point Concentration in accordance with the criteria specified at 310 CMR 40.0926(8).
4. For current or potential soil exposures, the following depths shall be considered with any applicable site-specific information when determining Exposure Points:
- a. zero to three feet for exposures associated with surficial activity;
 - b. zero to six feet for exposures associated with utility installation and repair; and
 - c. zero to 15 feet for exposures associated with excavation scenarios and building construction.
5. For other exposures, the Exposure Point shall be identified considering the timing of the exposure, the nature of the potential receptors and the likely frequency of exposure.
- (3) Consideration shall be given to the identification of Exposure Points which may be located at a distance from the original source of the release, particularly when the migration of oil and/or hazardous material may result in Exposure Points in addition to those identified under current site conditions.
- (4) Hot spots shall be considered distinct Exposure Points.
- (5) Examples of typical Exposure Points for disposal sites shall include, without limitation:
- (a) an existing public or private water supply;
 - (b) a future drinking water supply;
 - (c) a hot spot of contamination in a neighborhood playground;
 - (d) a volume of subsurface soil at a potential construction site;
 - (e) a distant shellfish bed.

40.0925: Identification of Exposure Pathways

- (1) For each identified receptor at each Exposure Point, the documentation of the Risk Characterization shall identify and describe all probable Exposure Pathways, based upon the media contaminated and the Site Activities and Uses.
- (2) The Exposure Pathways considered shall be consistent with the type and method of Risk Characterization which is being performed.
- (3) Examples of typical Exposure Pathways shall include, without limitation:
- (a) ingestion of soil, produce, water, or biota;
 - (b) inhalation of air or particulate matter; and
 - (c) dermal absorption from water or soil.

40.0926: Identification of Exposure Point Concentrations and Other Data Criteria

- (1) For each oil and/or hazardous material in each medium at each Exposure Point, an Exposure Point Concentration shall be identified and documented.
- (2) Exposure Point Concentrations shall be determined or estimated in a manner consistent with the type and method of Risk Characterization which is being performed.
- (3) In estimating the Exposure Point Concentration, the objective shall be to identify a conservative estimate of the average concentration contacted by a receptor at the Exposure Point over the period of exposure.
- (a) Maximum concentrations shall be used to estimate an Exposure Point Concentration under the following conditions:
1. evaluations of acute exposures;
 2. screening assessments that evaluate maximum exposure potential to streamline the assessment process; or
 3. evaluations of exposures for which the data available to characterize temporal variability or the spatial distribution of site concentration is limited, including when there is insufficient data to adequately characterize the effects of seasonal variation on groundwater contaminant concentrations.

40.0926: continued

(b) For chronic and subchronic exposures (other than for screening evaluations), the arithmetic average of site data is acceptable as an Exposure Point Concentration, provided either of the following criteria are met:

1. for discrete or composite samples, the arithmetic average is less than or equal to the applicable standard or risk-based concentration limit, 75% of the data points used in the averaging procedure are equal to or less than the applicable standard or risk-based concentration limit, and no data point used in the averaging is ten times greater than the applicable standard or risk-based concentration limit; or
2. a valid justification is provided indicating that the sample mean is unlikely to substantially underestimate the true mean of the concentration of oil or hazardous material at the Exposure Point. Such a demonstration should include, but need not be limited to, consideration of the observed distribution of the data, sampling strategy (including frequency, density, and potential biases), graphical representation of analytical results, and/or statistical analyses.

(c) For chronic and subchronic exposures (other than for screening evaluations), the use of maximum concentrations or the 95th percentile upper confidence limit on the mean, whichever is lower, shall be used to estimate an Exposure Point Concentration when the criteria specified in 310 CMR 40.0926(3)(b) are not met. In such cases, the sample size is likely to be insufficient for the simple arithmetic average to estimate the true value with reasonable confidence and there is a considerable probability of substantially underestimating the mean.

(4) In determining the concentrations to compare to Upper Concentration Limits, the objective shall be to provide a conservative estimate of the average concentration within the site, and the average concentration within any Hot Spots within the site. A conservative estimate of the average concentration should be developed in accordance with 310 CMR 40.0926(3).

(5) In determining the concentrations to evaluate Hot Spots, the objective shall be to provide a conservative estimate of the average concentration within the Hot Spot. A conservative estimate of the average concentration should be developed in accordance with 310 CMR 40.0926(3).

(6) Except as provided in 310 CMR 40.0926(7), Exposure Point Concentrations shall be developed using analytical data gathered during the site investigation at the Exposure Point as the primary line of evidence, as described in 310 CMR 40.0924.

(7) Fate and transport models generally accepted by the environmental modeling community may be used in conjunction with other site information and data and/or in cases where direct sampling of a media of concern is not possible or appropriate.

(a) For indoor air, sub-slab soil vapor data and/or conditions may be used to:

1. estimate or aid in the estimation of Exposure Point Concentrations in the event that it is not possible to distinguish disposal site-related contamination at the Exposure Point from interior sources at ongoing commercial and/or industrial operations or interior building materials contaminated by past commercial or industrial operations; or
2. where appropriate, to rule out an indoor air Exposure Pathway.

(b) For indoor air, fate and transport models shall not be used to estimate future Exposure Point Concentrations in the indoor air of buildings that have not been constructed.

(c) For groundwater, current groundwater contaminant concentrations and site hydro-geologic conditions may be used to estimate future Exposure Point Concentrations in groundwater and/or surface water.

(d) For soil, current soil concentrations and site-specific factors such as infiltration rate of precipitation and soil characteristics may be used to estimate the future leaching potential of soil contaminants.

(e) Such models shall be clearly documented and incorporate input parameters to provide a conservative estimate of the Exposure Point Concentration pursuant to 310 CMR 40.0926(3).

(8) No exposure potential exists (the Exposure Point Concentration may be set equal to zero) for those sites described at 310 CMR 40.0924(2)(b)3. if the following conditions are met and documented based on data collected at the disposal site:

40.0926: continued

- (a) Demonstration of source elimination or control at the disposal site as described in 310 CMR 40.1003(5);
- (b) Demonstration of diminishing contaminant concentrations throughout the horizontal and vertical extent of the plume;
- (c) Demonstration that contaminant concentrations are not detected at or above analytical limits appropriate for a GW-1 area at the downgradient edge of the plume, at least 1,000 feet from the Public Water Supply well; and
- (d) The demonstrations pursuant to 310 CMR 40.0926(8)(b) and (c) are confirmed by a minimum of two years of quarterly groundwater monitoring conducted after the termination of any Active Remedial System and after the achievement of such contaminant concentrations.

40.0930: Identification of Site Groundwater and Soil Categories

40.0931: Purpose

Categories of groundwater and soil have been established by the Department for use in the characterization of risk posed by disposal sites. The documentation of a Risk Characterization shall support the categorization of the groundwater and soils at the disposal site.

- (1) The groundwater and soil categories shall be used to determine the applicability of the groundwater and soil standards listed in 310 CMR 40.0974(2), 40.0975(6)(a), (b) and (c), and 40.0985(6) when Methods 1 or 2 are used to characterize risk.
- (2) The groundwater categories shall be used to identify applicable or suitably analogous standards as described in 310 CMR 40.0993(3), when Method 3 is used to characterize risk.
- (3) The groundwater and soil categories shall be considered in determining the need for Activity and Use Limitations as part of a Permanent or Temporary Solution.

40.0932: Identification of Applicable Groundwater Categories

- (1) The groundwater categories describe the potential for three different types of exposure. More than one category may apply to a single disposal site. In such cases all applicable categories shall be identified.
- (2) Groundwater at all disposal sites shall be considered a potential source of discharge to surface water and shall be categorized, at a minimum, as category GW-3. The site, receptors, and exposure information identified in 310 CMR 40.0904 through 40.0929 shall be used in conjunction with the criteria listed below to determine if the groundwater shall also be categorized as GW-1 and/or GW-2.
- (3) The appropriate groundwater category shall be identified for both:
 - (a) groundwater currently affected by the release of oil and/or hazardous materials, and
 - (b) any area to which the groundwater affected by the release is expected to migrate.
- (4) Groundwater Category GW-1 Except as provided by 310 CMR 40.0932(5), groundwater shall be defined as GW-1 if the groundwater is located:
 - (a) within a Current Drinking Water Source Area; or
 - (b) within a Potential Drinking Water Source Area.
- (5) Notwithstanding the provisions of 310 CMR 40.0932(4):
 - (a) Interim Wellhead Protection Area. Groundwater that is categorized as a Current Drinking Water Source Area, solely due to its location within an Interim Wellhead Protection Area, need not be so categorized if it is demonstrated that there is no hydrogeologic connection between the groundwater and the public water supply well on the basis of the following:

40.0932: continued

1. the groundwater is hydrogeologically downgradient of the public water supply well based on regional groundwater flow and gradient, and beyond the stagnation point. The determination of such a stagnation point shall be based on site-specific parameters and the highest daily approved pumping rate for the public water supply well; or
 2. the disposal site is cross-gradient (perpendicular) to regional groundwater flow direction and at sufficient distance from the public water supply well such that it is outside of the zone of contribution for the public water supply well. The determination of such a zone of contribution shall be based on site-specific parameters and the highest daily approved pumping rate for the public water supply well; or
 3. a hydrogeologic barrier exists between the groundwater at the disposal site and the public water supply well.
- (b) Potential Drinking Water Source Area. Groundwater that is categorized as a Potential Drinking Water Source Area solely due to its location within an area defined as a Potentially Productive Aquifer need not be so categorized if:
1. site-specific information on the types and/or transmissivity of soils shows that the groundwater is not located within the true boundary of the medium or high yield aquifer(s) which comprise(s) the Potentially Productive Aquifer; or
 2. the groundwater within the Potentially Productive Aquifer is naturally brackish, or has naturally high levels of metals, such that the development of the aquifer as a public water supply is currently technologically or economically infeasible.
- (c) Case-specific Designation of a Non-potential Drinking Water Source Area.
1. One or more municipalities or private parties may petition the Department to change the categorization of groundwater within a Potentially Productive Aquifer from a Potential Drinking Water Source Area to a Non-potential Drinking Water Source Area because:
 - a. the groundwater is categorized as a Potential Drinking Water Source Area solely due to its location within a Potentially Productive Aquifer, and is not categorized as a Current Drinking Water Source Area;
 - b. the groundwater has been contaminated by one or more releases of oil and/or hazardous materials, and:
 1. such releases exceed the reporting thresholds established by 310 CMR 40.0300; and
 2. it is not feasible to achieve GW-1 standards for such groundwater (pursuant to 310 CMR 40.0860),
 - c. the land area overlying the groundwater does not meet the criteria established in the definition of "Non-potential Drinking Water Source Area" and is at least 100 acres in size; and
 - d. the municipality(ies) overlying the groundwater and any public water systems with existing legal authority to develop new sources of drinking water in the area affected by the petition have sufficient water from other sources to meet their needs for future drinking water supplies, and to fulfill any current contractual obligations for the provision of water to other parties.
 2. The petitioner(s) shall provide a reasonable opportunity for public comment on the proposed petition. Such opportunity shall include but not be limited to:
 - a. establishment of a specific period of time in which written public comment can be submitted to the party preparing the petition. Such comment period shall not be less than 30 calendar days;
 - b. a public meeting to be held within the public comment period for the purpose of hearing comments on the proposed petition. Such meeting shall be conducted at a time and place convenient to the public;
 - c. notice of the comment period and meeting shall be provided to:
 - i. the public using a public notice pursuant to 310 CMR 40.1403(2)(b) in a newspaper of general circulation in the municipalities in the river basin in which the aquifer is located and which are hydrologically connected and downgradient to the area affected by the petition;
 - ii. the public in the *Environmental Monitor*;
 - iii. the public by posting the notice on a publicly accessible location in the municipal office and on any local access cable television station that serves the municipalities described in 310 CMR 40.0932(5)c.1.;

40.0932: continued

- iv. the Chief Municipal Official(s) of (a) the municipality(ies) located within the boundaries of the river basin in which the groundwater is located and which are hydrologically connected and downgradient to the area affected by the petition, (b) municipalities abutting the municipality containing the area proposed to be designated as a Non-potential Drinking Water Source Area; and (c) municipalities abutting the abutters;
 - v. any party with a currently effective contract with the municipality(ies) for sale or purchase of drinking water to or from the aquifer or portion thereof subject to the petition;
 - vi. any public water system providing water or operating a drinking water well within the municipality(ies) in which the groundwater is located and in downgradient municipalities in the subject aquifer; and
 - vii. any person holding a registration or permit under the Water Management Act (M.G.L. c. 21G) for withdrawal of water from the aquifer or portion thereof subject to the petition.
- d. The notice required by 310 CMR 40.0932(5)(c)2.c. shall describe the designation sought, the area to which it would apply, the basis for the petition, how to obtain a copy of the proposed petition, the location and time of the public meeting, and how to submit comments. Such notice shall be provided no later than the first day of the comment period, and not less than 14 calendar days prior to the public meeting;
- e. a summary of all comments received shall be prepared after the close of the comment period, noting which comments have been incorporated into the petition and providing an explanation of why others have not. A copy of such summary shall be provided to each person who submitted written comments, and submitted to the Department with the petition.
3. Petitions shall include:
- a. a demonstration that the petition meets the criteria for a Case-specific Designation in 310 CMR 40.0932(5)(c)1.;
 - b. a water resource budget containing:
 - i. an inventory of current water supplies and authorized water withdrawal volumes pursuant to MGL c. 21G from the aquifer or portion thereof subject to the petition;
 - ii. forecasts of water demands for the municipality(ies) in which the groundwater is located, any municipality in which the groundwater plume may be located in the future, and abutting municipalities (such forecasts shall be prepared using the methodology accepted for implementation of 310 CMR 36.00: *Massachusetts Water Resources Management Program* for forecasting future water needs, using the most current data available);
 - iii. a description of the water resources that will be used to meet the demands identified in 310 CMR 40.0932(5)(c)3.b.2., including the role of the aquifer subject to the petition in meeting such demands, and an analysis of the impact of the development of any future water supply on stream flow, fisheries and wildlife resources, agricultural and other water users;
 - iv. supporting data describing basin hydrology, land uses, existing interconnections to serve other municipalities, interconnections that have been approved but not yet developed to serve other municipalities, and population trends;
 - c. documentation of technical and legal actions to protect existing and future drinking water sources;
 - d. a map of the aquifer showing the area proposed for exclusion from a Potential Drinking Water Source Area;
 - e. in those cases where the petition addresses a portion of the aquifer, a description of the hydrogeologic relationship between that portion and the larger aquifer (*i.e.*, in terms of groundwater flow direction, presence of hydrogeologic barriers);
 - f. documentation of the public comment period and meeting, and a copy of the summary of comments received required by 310 CMR 40.0932(5)(c)2.e.;

40.0932: continued

- g. one of the following:
 - i. a certification of concurrence by the Chief Municipal Officer of the municipality(ies) in which the groundwater subject to the petition is located and/or any public water systems with existing legal authority to develop new sources of drinking water in the area affected by the petition, stating "The [municipality(ies)] [public water system(s)] [has][have] sufficient water from other sources to meet its [their] need for future drinking water supplies, including the fulfillment of any contractual obligations for the provision of water to other parties". Such certification shall also include a statement that (a) in the event that the groundwater will be used in the future as a public drinking water supply, an assessment shall be performed to determine whether additional response actions or well-head treatment are needed to achieve GW-1 standards and such assessment shall be submitted to the Department with an application for a New Source Approval in accordance with 310 CMR 22.00: *Drinking Water*; and b) that any existing contractual obligations to provide water of potable quality from the groundwater subject to the petition to other parties will not be affected by approval of the petition; or
 - ii. a written statement describing the reasons for not supplying the certification in 310 CMR 40.0932(5)(c)3.g.1. by the municipality(ies) in which the groundwater subject to the petition is located or public water systems with existing legal authority to develop new sources of drinking water in the area affected by the petition; or
 - iii. a copy of a written request for the certification in 310 CMR 40.0932(5)(c)3.g.1.; evidence that such request was received by the appropriate entity(ies); and a certification by the petition sponsor that such certification has not been provided within a period of at least ninety days from the date of the written request.
- 4. The portions of the petition described in 310 CMR 40.0932(5)(c)3.a. through e. shall be available to the public no later than the date on which the public comment period begins.
- 5. Petitions shall be submitted to the Department, which shall review the petition and determine whether it is complete. Incomplete petitions will be returned to the applicant with a request for submittal of necessary information within a specified time period. If the requested information is not supplied within the specified time period, the application will be considered to be withdrawn.
- 6. The Commissioner shall request that the Massachusetts Water Resources Commission review complete applications. Such request shall be made at least 60 days prior to issuing a determination.
- 7. The Commissioner shall issue a determination not later than 30 days following receipt of a recommendation from the Water Resources Commission as to the disposition of the petition, based on whether the petition meets the criteria established by 310 CMR 40.0932(5)(c)1., as demonstrated by:
 - a. supporting documentation provided pursuant to 310 CMR 40.0932(5)(c)3.;
 - b. comments submitted during the public comment period pursuant to 310 CMR 40.0932(5)(c)2. and the petitioner's steps taken to address public concerns; and
 - c. any other information available to the Department and the Water Resources Commission.
- 8. The Commissioner may issue a draft determination and request additional public comment and/or review by the Water Resources Commission. Such tentative decision shall establish a timeframe for the additional public comment or Water Resources Commission review, and for issuing a final determination.
- (d) Existing Private Wells. Groundwater that is categorized as a Current Drinking Water Source Area solely due to its location within 500 feet of a private water supply well need not be categorized as GW-1 if:
 - 1. the private water supply well is removed from service as a source of drinking water and the following conditions are met:
 - a. written documentation has been submitted to the Department demonstrating that the property(ies) served by the private water supply well has been connected to a public water supply system; and

40.0932: continued

b. written documentation has been submitted to the Department demonstrating the absence of any unpermitted cross-connection between the private water supply well and public water system or that the private well has been properly abandoned; and
 c. where the private well is maintained for uses other than as a private water supply, written documentation has been submitted to the Department in the risk characterization pursuant to 310 CMR 40.0900 demonstrating that such other uses are consistent with a level of No Significant Risk and a Notice of Activity and Use Limitation implemented in accordance with 310 CMR 40.1074 which identifies the use of the private well as a drinking water source as a use which is inconsistent with maintaining a level of No Significant Risk; and

d. copies of the written documentation described in 310 CMR 40.0932(5)(d)1.a. through c. are provided to the local Board of Health; or

2. it is demonstrated that there is no hydrogeologic connection between the groundwater and the private water supply well, based on an investigation and evaluation of site-specific conditions, including, but not limited to, as appropriate, the investigation and evaluation of site stratigraphic, potentiometric, and geochemical conditions, and the depth and construction of the private well. The absence of site contaminants in the private well does not, by itself, constitute such a demonstration.

3. the private water supply did not exist at the time of notification pursuant to 310 CMR 40.0300 or was not installed in conformance with applicable laws, by-laws or regulations.

(e) Zone A. Groundwater that is categorized as a Current Drinking Water Source Area solely due to its location within a Zone A need not be categorized as GW-1 if it is demonstrated that there is no hydrogeologic connection between the groundwater and the Class A surface drinking water source, based on an investigation and evaluation of site-specific conditions, including, but not limited to, as appropriate, an investigation and evaluation of site stratigraphic, potentiometric, and geochemical conditions.

(f) The provisions of 310 CMR 40.0932(5)(a) through (d) apply to specific criteria for the inclusion of an area in the GW-1 category. Nothing in 310 CMR 40.0932(5) shall limit the applicability of any other criteria described in 310 CMR 40.0932(4)(a) or (b) to the categorization of groundwater at a disposal site.

(6) Groundwater Category GW-2. Groundwater shall be defined to be in category GW-2 if it is located within 30 feet of an existing or planned building or structure that is or will be occupied, and the average annual depth to groundwater in that area is 15 feet or less. Category GW-2 groundwater is considered to be a potential source of vapors of oil and/or hazardous material to indoor air. Construction of a building in an area in which the average annual depth to groundwater is 15 feet or less will change the groundwater category at the site to include GW-2; change the activities, uses and/or exposures at the disposal site; and may negate the notification exemption described at 310 CMR 40.0317(17).

40.0933 Identification of Applicable Soil Categories

Soil shall be classified as either category S-1, S-2 or S-3. The site, receptor and exposure information identified in 310 CMR 40.0904 through 40.0929, considering both the current and reasonably foreseeable Site Activities and Uses identified in 310 CMR 40.0923, shall be used in conjunction with the criteria listed below to categorize the soil.

(1) The soil categories shall be applicable to specific volumes of soil which shall be described in written and graphic form in the documentation of the Risk Characterization.

(2) The three soil categories describe a range of the potential for exposure to that soil: Category S-1 soils are associated with the highest potential for exposure, Category S-3 soils have the lowest potential for exposure. While one and only one category is applicable to a specified volume of soil, soils in different areas of a disposal site may be classified in different categories, depending upon their exposure potential.

(3) The Table in 310 CMR 40.0933(9) contains a matrix summarizing the criteria used to categorize soil.

40.0933: continued

(4) For the purpose of soil categorization, the potential for exposure is described by a qualitative analysis of the accessibility of the soil in combination with the information about the Site Activities and Uses determined pursuant to 310 CMR 40.0923. The following definitions shall be used to describe exposure potential for the purposes of categorizing soil:

(a) Frequency of use shall indicate how often a receptor makes use of, or has access to, the disposal site. Receptor access to and use of the areas around the disposal site are often strong indicators of potential site access and thus should be considered in determining frequency of use for the site under investigation. Frequency of use shall be described as either "High", "Low" or "Not Present", using the following criteria:

1. Children's frequency of use shall be characterized as high if:
 - a. any children reside, attend school or attend day care at the disposal site; or
 - b. large numbers of children visit the disposal site, regardless of any one child's frequency of visitation.
2. Adults' frequency of use shall be characterized as high when they reside at the disposal site, or when they work at the disposal site on a continuing basis [*i.e.*, full days or shifts of eight or more hours per day on a continuing basis].
3. Children's or adults' frequency of use shall be characterized as low when they are present at the disposal site, but only as infrequent visitors; or when workers are present at the disposal site for only short periods of time [*i.e.*, less than two hours per day on a continuing basis, or for full days or shifts on a sporadic basis].
4. It shall be presumed that children may be present at the disposal site unless it can be demonstrated that access by children age 15 and younger is specifically restricted or that such children are highly unlikely to be present, in which case children may be considered to be "Not Present". Disposal sites which are residential properties shall presume the presence of children unless there is clear and convincing evidence to the contrary.
5. The frequency of use for activities not described above shall be characterized in the documentation of the Risk Characterization as either high or low.

(b) Intensity of use shall describe the nature of the Site Activities and Uses which could potentially result in exposure to the receptor. Intensity of use shall be described as either "High" or "Low", using the following criteria:

1. Site Activities and Uses which have the potential to disturb soil and thus result in either direct contact with the soil itself or inhalation of soil-derived dust shall be characterized as high intensity use. Examples of such activities include, without limitation, gardening, digging, and recreational sports.
2. Passive activities which do not disturb the soil, such as walking, shopping, and bird watching shall be characterized as low intensity use.
3. The intensity of use for each identified Site Activity and Use shall be characterized in the documentation of the Risk Characterization as either high or low with appropriate justification.

(c) Accessibility of the soil to potential receptors shall be characterized as either "accessible," "potentially accessible," or "isolated" using the following criteria:

1. Soil shall be characterized as "accessible" if it is located less than three feet below the surface, and the surface is not completely covered by pavement. For buildings having earthen floors, the floor shall be considered as the soil surface.
2. Soil shall be characterized as "potentially accessible" if it is located at a depth of three - 15 feet below the surface (with or without pavement), or if the soil is located less than three feet from the surface in an area completely paved.
3. Soil shall be characterized as "isolated" if it is located at a depth greater than 15 feet below the surface, or if the soil is covered completely by a building or other permanent structure which does not have earthen floors, regardless of depth. Soil located at a depth greater than three feet below the earthen floor of a building or other permanent structure shall also be characterized as "isolated."

(5) Category S-1. Soil shall be classified as category S-1 if either:

- (a) the soil of concern is accessible, pursuant to 310 CMR 40.0933(4)(c)1., and either:
 1. the soil is currently used for growing fruits or vegetables for human consumption, or if it is reasonably foreseeable that the soil may be put to such use; or
 2. a child's frequency or intensity of use is considered to be high pursuant to 310 CMR 40.0933(4)(a) and (b); or

40.0933: continued

3. an adult's frequency and intensity of use are both considered to be high pursuant to 310 CMR 40.0933(4)(a) and (b); or
 - (b) the soil is potentially accessible, pursuant to 310 CMR 40.0933(4)(c)2., and a child's frequency and intensity of use are both considered to be high pursuant to 310 CMR 40.0933(4)(a) and (b).
- (6) Category S-2. Soil shall be classified as category S-2 if either:
- (a) the soil is accessible, pursuant to 310 CMR 40.0933(4)(c)1.; and
 1. a child's frequency and intensity of use are both considered to be low pursuant to 310 CMR 40.0933(4)(a) and (b); or
 2. children are not present at the disposal site and either (but not both) the adults' frequency or intensity of use is considered to be high, pursuant to 310 CMR 40.0933(4)(a) and (b); or
 - (b) the soil is potentially accessible, pursuant to 310 CMR 40.0933(4)(c)2.; and
 1. either (but not both) a child's frequency or intensity of use is considered to be high pursuant to 310 CMR 40.0933(4)(a) and (b); or
 2. children are not present at the disposal site and an adult's frequency and intensity of use are both considered to be high pursuant to 310 CMR 40.0933(4)(a) and (b).
- (7) Category S-3. Soil shall be classified as category S-3 if either:
- (a) the soil is accessible, pursuant to 310 CMR 40.0933(4)(c)1., and children are not present at the disposal site and an adult's frequency and intensity of use are both considered to be low pursuant to 310 CMR 40.0933(4)(a) and (b); or
 - (b) the soil is potentially accessible pursuant to 310 CMR 40.0933(4)(c)2.; and
 1. a child's frequency and intensity of use are both considered to be low pursuant to 310 CMR 40.0933(4)(a) and (b); or
 2. a demonstration has been made that children are not present at the disposal site, and either an adult's frequency or intensity of use is considered to be low pursuant to 310 CMR 40.0933(4)(a) and (b); or
 - (c) the soil is isolated pursuant to 310 CMR 40.0933(4)(c)3., regardless of any receptor's frequency or intensity of use.
- (8) Whenever and wherever reasonable doubts exist over the selection of the appropriate soil category, the soil category associated with the highest exposure potential (among the soil categories being considered) shall be selected.
- (9) Table listed in 310 CMR 40.0933(9) contains the Soil Category Selection Matrix.

Table 40.933(9)

SOIL CATEGORY SELECTION MATRIX - HUMAN EXPOSURE POTENTIAL

Accessibility ↓ of Soil ↓	RECEPTOR CHARACTERISTICS							
	CHILDREN PRESENT				ADULTS <u>ONLY</u> PRESENT			
	<u>HIGH FREQUENCY</u>		<u>LOW FREQUENCY</u>		<u>HIGH FREQUENCY</u>		<u>LOW FREQUENCY</u>	
	High Intensity	Low Intensity	High Intensity	Low Intensity	High Intensity	Low Intensity	High Intensity	Low Intensity
ACCESSIBLE (SURFICIAL) SOIL 0 ≤ 3' (unpaved)	CATEGORY S-1		S-2		S-1	CATEGORY S-2		
POTENTIALLY ACCESSIBLE SOIL 3 ≤ 15' (unpaved) or 0 ≤ 15' (paved)	CATEGORY S-2				S-2	CATEGORY S-3		
31 CMR - 1649 ISOLATED SUB-SURFACE SOILS > 15' or under the footprint of a building or permanent structure	CATEGORY S-3							
* - Category S-1 also applies to any accessible soil where the current or reasonably foreseeable use of the soil is for growing fruits and vegetables for human consumption.								

40.0940: Methods for Characterizing Risk of Harm

40.0941: Approaches to Characterizing Risk of Harm

Several approaches may be employed to characterize the risk of harm to health, safety, public welfare and the environment. The specific Risk Characterization approach used shall depend upon the nature of the risk being assessed, the response action being performed and the nature of the disposal site.

(1) The methodology used to evaluate site conditions which may pose an Imminent Hazard is described in 310 CMR 40.0950 through 40.0959. This methodology shall be used to determine if notification is required pursuant to 310 CMR 40.0321, and if an Immediate Response Action is required by 310 CMR 40.0411 through 40.0429 to abate, prevent, or eliminate an Imminent Hazard.

(2) The methodology used to evaluate the risk of harm to safety shall be as described in 310 CMR 40.0960. A characterization of the risk of harm to safety is required at all disposal sites to determine the need for a response action or to demonstrate that a level of no significant risk of harm to safety exists or has been achieved.

(3) One of the following three options shall be used to determine the need for a remedial action or to demonstrate that a level of no significant risk of harm to health, public welfare and the environment exists or has been achieved:

- (a) the characterization of the risk through the use of promulgated standards (hereafter referred to as Method 1), described in 310 CMR 40.0970 through 40.0979; or
- (b) the characterizations of risk through the application of promulgated standards supplemented by site-specific information, described in 310 CMR 40.0980 through 40.0989 (hereafter referred to as Method 2); or
- (c) the characterizations of risk through the application of site-specific methodologies, described in 310 CMR 40.0990 through 40.0999 (hereafter referred to as Method 3).

40.0942: Selection of Method to Characterize the Risk of Harm to Health, Public Welfare and the Environment

The three Methods for Risk Characterization described in 310 CMR 40.0941(3) have been developed to provide a range of approaches which vary in detail and circumstances of use, each of which provides equivalent levels of protection to health, public welfare and the environment. Any of the three Risk Characterization Methods may be employed at a disposal site, subject only to the following limitations:

(1) Method 1 relies upon the use of numerical standards for chemicals in groundwater and soil to characterize risk of harm to health, public welfare and the environment. These standards are referred to as "MCP Method 1 Standards," and are listed in 310 CMR 40.0970 through 40.0979. Method 1 shall only be used to characterize risk at a disposal site if there is a promulgated MCP Method 1 Standard for each oil and hazardous material of concern at the disposal site.

- (a) If no MCP Method 1 Standard has been promulgated for one or more oil or hazardous material in soil or groundwater at the disposal site, then the following options are available:
 - 1. The RP, PRP or Other Person may develop such standards under Method 2. Such standards may be used alone or in combination with other MCP Method 1 Standards to characterize risk at the disposal site. A combined Method 1 and Method 2 approach shall be considered a Method 2 Risk Characterization; or
 - 2. Method 3 alone may be used to characterize risk at the disposal site.

(b) If oil or hazardous material at the disposal site is present in, or is likely to migrate at potentially significant concentrations to an environmental medium in addition to groundwater and soil (such as in sediments, within surface water, or within ambient or indoor air), then Method 1 alone shall not be used to characterize the risk at the disposal site, and the following options are available:

40.0942: continued

1. If it is demonstrated that the current or foreseeable future human exposure to the oil and/or hazardous material would occur predominantly through contact with the groundwater or soil, then the MCP Method 1 Standards may be used to characterize the risk of harm to human health posed by the disposal site. Method 3 then would be used to characterize the risk of harm to public welfare and the environment posed by the contamination in all other affected media. Such an approach shall be considered to be a combined Method 1 and Method 3 Risk Characterization; or
 2. Method 3 alone may be used to characterize risk at the disposal site.
- (c) If Environmental Receptors have been identified for the disposal site as described in 310 CMR 40.0922, and if oil and/or hazardous material known to bioaccumulate are present within two feet of the ground surface, then Method 1 alone shall not be used to characterize the risk at the disposal site, and the following options are available:
1. The MCP Method 1 Standards may be used in combination with a Method 3 Stage I Environmental Screening to characterize the risk of harm to health, public welfare and the environment. Such an approach shall be considered to be a combined Method 1 and Method 3 Risk Characterization; or
 2. Method 3 alone may be used to characterize risk at the disposal site.
- (d) If one or more Volatile Organic Compounds is present in vadose zone soil adjacent to an occupied structure (within six feet, measured horizontally from the wall of the structure, and within ten feet, measured vertically from the basement floor or foundation slab) then the soil has the potential to result in significant indoor air concentrations of OHM and Method 1 alone cannot be used to characterize the risk at the disposal site. The following options are available:
1. The MCP Method 1 Standards may be used in combination with a demonstration that the soil concentrations of Oil and Hazardous Material are not likely to be a significant contributor to the Cumulative Receptor Risk at the site by the indoor air exposure pathway.
 2. MCP Method 3 alone may be used to characterize risk at the disposal site.
- (2) Method 2 allows the consideration of limited site-specific information to supplement the use of MCP Method 1 Standards for groundwater and soil. As a result, the limitations and options described for the use of Method 1 in 310 CMR 40.0942(1) are also applicable to the use of Method 2.
- (3) Method 3 may be used at any disposal site to characterize the risk of harm to health, public welfare and the environment.

40.0950: Imminent Hazard Evaluations and Substantial Hazard Evaluations

40.0951: Purpose and Scope of Imminent Hazard Evaluations

- (1) The site shall be evaluated to determine if an Imminent Hazard exists in accordance with 310 CMR 40.0000. The decision to conduct a quantitative Imminent Hazard Evaluation shall use the Response Action Performance Standard (RAPS) described in 310 CMR 40.0191, and consider the location and nature of the oil and/or hazardous material, the Human or Environmental Receptors which may be exposed, and appropriate guidance published by the Department.
- (2) If the results of this assessment indicate that the conditions at the site pose an Imminent Hazard based upon the criteria described in 310 CMR 40.0955, the Department shall be notified in accordance with 310 CMR 40.0311(7). Subsequent assessments performed as part of an Immediate Response Action shall consider the weight of evidence indicating the potential for an Imminent Hazard when making the evaluations described in 310 CMR 40.0426.

40.0951: continued

(3) Notwithstanding the provisions of 310 CMR 40.950, the concentration of each oil or hazardous material present in a system of water supply used by a public water system, as defined in 310 CMR 22.00: *Drinking Water*, shall not pose an Imminent Hazard or Substantial Hazard for current conditions if the public water system is in compliance with all applicable provisions of 310 CMR 22.00: *Drinking Water* and any other requirements specified by the Department pursuant to its authority under M.G.L. c. 111, § 160 and 310 CMR 22.00: *Drinking Water*.

40.0953: Exposures to be Considered in Imminent Hazard Evaluations

The focus of an Imminent Hazard Evaluation shall be on actual or likely exposures to Human and Environmental Receptors under current site conditions, considering the current use(s) of the disposal site and the surrounding environment, and considering an appropriate short period of time.

(1) The short period of time considered in the evaluation shall be five years unless site circumstances indicate that a shorter time period is appropriate. The specific time period shall be selected in consideration of the nature of the hazard under investigation and the projected time until a Comprehensive Response Action could be completed, in order to determine the need for an Immediate Response Action.

(2) For the evaluation of soil-related exposures, the levels of oil and/or hazardous material at the ground surface or within twelve inches of the ground surface shall be considered in the development of the Exposure Point Concentrations.

(3) For the evaluation of drinking water exposures, the levels of oil and/or hazardous material in the groundwater or surface water which serves as the source of the drinking water shall be considered in the development of the Exposure Point Concentrations.

(4) Hot spots shall be the primary, but not exclusive, focus of an Imminent Hazard Evaluation, provided that they are located in areas of actual or likely human exposure under current site conditions.

(5) If a small subset of oil and/or hazardous material are likely to dominate the risk estimates based upon their concentration and toxicity, then the Imminent Hazard Evaluation may be limited to those chemicals.

(6) As indicated by the site conditions, the Imminent Hazard Evaluation shall consider acute, subchronic and/or chronic exposures to the oil and/or hazardous material. The Exposure Point Concentrations shall be developed to reflect the type of exposure being evaluated. The use of upper percentile or maximum concentrations may be appropriate for certain evaluations, and shall be considered as described at 310 CMR 40.0926.

(7) The Imminent Hazard Evaluation shall be conducted in a manner which results in conservative estimates of potential exposures.

(8) The documentation of the Imminent Hazard Evaluation shall clearly identify and explain the basis for exposure parameters chosen for the Risk Characterization.

40.0955: Imminent Hazard Risk Characterization and Outcome

Risk Characterizations for Imminent Hazard Evaluations shall be conducted separately for safety, human health, and the environment, depending on the type of condition that triggered the need for the evaluation, in accordance with the following methods:

(1) The characterization of the risk of harm to safety shall be conducted as described in 310 CMR 40.0960. The conditions at the disposal site pose an Imminent Hazard based on safety concerns if a condition of no significant risk to safety has not been achieved at the disposal site under conditions which actually exist or are about to occur.

40.0955: continued

- (2) The characterization of the risk of harm to human health shall be conducted using Method 3, as described in 310 CMR 40.0993.
- (a) The toxicity information used to characterize risk shall be consistent with the type and duration of exposure under evaluation, and shall be clearly identified and documented. Primary consideration shall be given to information developed by the Massachusetts Department of Environmental Protection for the purpose of conducting such risk assessments. Examples of such toxicity information include:
1. Reference Doses and Reference Concentrations; and
 2. Carcinogenic Slope Factors and Unit Risk values.
- (b) The conditions at the disposal site pose an Imminent Hazard based upon the potential for carcinogenic health effects if, for the oil and/or hazardous material evaluated and for each receptor, the estimated Excess Lifetime Cancer Risk is greater than a cancer risk limit which is an Excess Lifetime Cancer Risk equal to one-in-100,000.
- (c) The conditions at the disposal site pose an Imminent Hazard based upon the potential for non-cancer health effects if, for the oil and/or hazardous material evaluated and for each receptor, the non-cancer risk calculated is greater than a non-cancer risk limit of:
1. a Hazard Index (or equivalent ratio of exposure) equal to one for oil or hazardous materials that have the potential to cause serious effects (including, but not limited to, lethal, developmental, or neurological effects) following short-term exposures, for example lead or cyanide; and
 2. a Hazard Index equal to ten for all other oil or hazardous materials.
- (d) A release to the environment which produces readily apparent effects to human health poses an Imminent Hazard. A quantitative evaluation of such exposures is not required.
- (e) The mathematical equations used to calculate the risk estimates shall be clearly presented and documented.
- (3) The risk of harm to the environment shall be characterized based on the data collected pursuant to the response action being performed and the site, receptor, and exposure information identified in 310 CMR 40.0995. The following conditions shall constitute an Imminent Hazard to the environment:
- (a) evidence of stressed biota attributable to the release at the disposal site including, without limitation, fish kills or abiotic conditions; or
 - (b) a release to the environment of oil or hazardous material which produces immediate or acute adverse impacts to freshwater or saltwater fish populations.
- (4) The documentation of the Imminent Hazard Evaluation shall clearly state whether the conditions at the disposal site pose an Imminent Hazard based upon the criteria described in 310 CMR 40.0955(1) through (3).

40.0956: Substantial Hazard Evaluation

- (1) The focus of a Substantial Hazard Evaluation shall be on possible exposures to Human and Environmental Receptors, considering the current use(s) of the disposal site and the surrounding environment and, where applicable, any Activity and Use Limitation for the site. A Substantial Hazard Evaluation shall not include fish consumption where a fish advisory has been put in place by the Commonwealth of Massachusetts or the federal government and the public is fully informed of the advisory by signage and/or other communication media.
- (a) A condition of No Substantial Hazard to Health would exist if, for an appropriate Exposure Period, no Cumulative Receptor Cancer Risk and no Cumulative Receptor Non-cancer Risk is greater than the Cumulative Receptor Risk Limits specified at 310 CMR 40.0993(10);
- (b) The period of exposure to be considered shall be equal to or greater than the time from Notification to the date that the Substantial Hazard evaluation is conducted, plus five years; and
- (c) A quantitative evaluation of human health risk is not required if there is no current exposure to oil and/or hazardous material at the disposal site.

40.0956: continued

(2) The focus of an Ecological Substantial Hazard Evaluation shall be on any environmental resource areas, such as wetlands, aquatic and terrestrial habitats, and fisheries that exist at a site. A condition of No Substantial Hazard to the Environment would exist if steps have been taken to eliminate or mitigate the following conditions, where applicable, affecting an environmental resource at a site:

- (a) Evidence of stressed biota attributable to the release at the disposal site including, without limitation, fish and wildlife kills or abiotic conditions;
- (b) The visible presence of oil, tar or other separate phase hazardous material in soil within three feet of the ground surface over an area equal to or greater than two acres, or over an area equal to or greater than 1000 square feet in sediment within one foot of the sediment surface;
- (c) Continuing discharge of contaminated groundwater to surface water where the levels of the oil or hazardous material attributable to the release already exceed Massachusetts Surface Water standards;
- (d) Continuing discharge of contaminated groundwater to surface water where surface water and/or sediment concentrations of Oil and/or Hazardous Material attributable to the release already pose a significant risk;
- (e) Migration of oil or hazardous material to additional environmental media or resource area where resultant exposures would have the potential to pose a significant risk of harm in the future; and
- (f) Ecological risk or harm such that recovery would be substantially more difficult or would require more time if conditions were to remain unremediated for even a short period of time.

(3) No assessment of Substantial Hazard is required if a condition of No Significant Risk exists and the site meets the requirements for a Permanent Solution.

40.0960: Characterization of Risk to Safety

(1) The risk of harm to safety shall be characterized based on the data collected pursuant to the response action being performed and the site, receptor, and exposure information identified in 310 CMR 40.0904 through 40.0933.

(2) The risk of harm to safety shall be characterized by comparing current and reasonably foreseeable conditions at the disposal site and in the surrounding environment to applicable or suitably analogous safety standards.

(3) A level of no significant risk to safety exists or has been achieved if the conditions at the disposal site which are related to a release of oil and/or hazardous material do not currently and will not in the foreseeable future pose a threat of physical harm or bodily injury to people. Such release-related conditions may include, but are not limited to:

- (a) the presence of rusted or corroded drums or containers, open pits, lagoons or other dangerous structures;
- (b) any threat of fire or explosion, including the presence of explosive vapors resulting from a release of oil and/or hazardous material; and
- (c) any uncontained materials which exhibit the characteristics of corrosivity, reactivity or flammability described at 310 CMR 40.0347.

(4) The documentation of the Risk Characterization shall clearly state whether or not a condition of no significant risk of harm to safety exists or has been achieved at the disposal site.

40.0970: Method 1 Risk Characterization

40.0971: Applicability of Method 1

(1) Method 1 may be used to characterize the risk of harm to health, public welfare and the environment at disposal sites where assessments conducted in accordance with 310 CMR 40.0000 have determined that the presence of oil and/or hazardous material is limited to soil and/or groundwater.

40.0971: continued

- (2) If contamination is present in one or more environmental media other than soil or groundwater, Method 1 shall not be used, except as described in 310 CMR 40.0942(1)(b). Persistent odors in ambient or indoor air resulting from a release of oil and/or hazardous material to the environment shall prohibit the use of Method 1, except as described in 310 CMR 40.0942(1)(b)1.
- (3) If oil or hazardous material that are known to bioaccumulate are present within two feet of the ground surface, and Environmental Receptors have been identified pursuant to 310 CMR 40.0922, then Method 1 shall not be used, except as described in 310 CMR 40.0942(1)(c).
- (4) The documentation of the Risk Characterization shall affirm and document the applicability of Method 1 to the disposal site.
- (5) A Method 1 Risk Characterization shall be conducted in combination with a separate characterization of the risk of harm to safety, as described in 310 CMR 40.0960.

40.0972: General Approach to Method 1

A Method 1 Risk Characterization compares the conditions at the disposal site to promulgated MCP Method 1 Standards. Each list of groundwater and soil standards has been developed by the Department considering a defined set of exposures considered to be a conservative estimate of the potential exposures at most sites. The exposures assumed by the Department correspond to the groundwater and soil categories described in 310 CMR 40.0932 and 40.0933. The Exposure Points and Exposure Point Concentrations shall be identified in a manner consistent with those categories, such that the concentrations of oil and/or hazardous material detected in soil and groundwater shall be compared directly to the MCP Method 1 Standards.

40.0973: Method 1 Risk Characterization

Under Method 1, the risk of harm to health, public welfare and the environment shall be characterized as follows:

- (1) The Method 1 Risk Characterization shall evaluate each current and reasonably foreseeable Site Activity and Use identified pursuant to 310 CMR 40.0923.
- (2) The groundwater and soil categories determined for the site in 310 CMR 40.0932 and 40.0933 shall be identified and documented.
- (3) The Exposure Point(s) in groundwater and soil for all current and reasonably foreseeable Site Activities and Uses shall be identified and documented as described in 310 CMR 40.0924.
- (4) The MCP Method 1 Standards assume exposure to the concentrations of oil and/or hazardous material in the soil and groundwater under current or foreseeable future conditions. For the Exposure Point Concentrations to be directly comparable to the MCP Method 1 Standards, they shall:
 - (a) be determined for each oil and/or hazardous material at each Exposure Point as described in 310 CMR 40.0926; and
 - (b) be representative of the actual concentration of oil and/or hazardous material at that Exposure Point, unmodified by other exposure assumptions.
- (5) The applicable MCP Method 1 Groundwater and Soil Standards shall be identified as described in 310 CMR 40.0974 and 40.0975, and listed in the documentation of the Risk Characterization.
- (6) The Exposure Point Concentrations identified in 310 CMR 40.0973(4) shall be compared to all applicable MCP Method 1 Standards identified in 310 CMR 40.0973(5).

40.0973: continued

(7) A condition of no significant risk of harm to health, public welfare and the environment exists if no Exposure Point Concentration is greater than the applicable MCP Method 1 Soil or Groundwater Standard. If the Method 1 Soil or Groundwater Standard for Total Petroleum Hydrocarbon is exceeded, a condition of No Significant Risk shall still be considered to exist if the Exposure Point Concentrations of the Aliphatic and Aromatic Hydrocarbon Fractions comprising the TPH are less than or equal to the applicable Method 1 Soil and Groundwater Standards.

(8) The documentation of the Method 1 Risk Characterization shall clearly state whether or not a condition of no significant risk of harm to health, public welfare and the environment exists or has been achieved at the disposal site.

40.0974: Identification of Applicable Groundwater Standards in Method 1

(1) The groundwater categories (GW-1, GW-2 and/or GW-3) identified for the disposal site per 310 CMR 40.0932 shall determine which column(s) of numerical standards listed in Table 1 are applicable to the groundwater. If multiple categories apply to the groundwater at the disposal site, the lowest of the applicable MCP Method 1 Groundwater Standards shall be used to characterize the risk of harm posed by the oil and/or hazardous material at the disposal site. The applicability of groundwater standards is independent of the classification of the soil at the disposal site.

40.0974: continued

(2) Table 1 Lists the Potentially Applicable MCP Method 1 Groundwater Standards.

310 CMR 40.0974(2): TABLE 1 ^{††}				
MCP Method 1 GROUNDWATER STANDARDS				
APPLICABLE IN AREAS WHERE THE GROUNDWATER IS CONSIDERED TO BE ONE OR MORE OF THE FOLLOWING CATEGORIES PER 310 CMR 40.0932				
Oil and/or Hazardous Material	CAS Number	GW-1 Standard µg/liter (ppb)	GW-2 Standard µg/liter (ppb)	GW-3 Standard µg/liter (ppb)
ACENAPHTHENE	83-32-9	20	NA	10,000
ACENAPHTHYLENE	208-96-8	30	10,000	40
ACETONE	67-64-1	6,300	50,000	50,000
ALDRIN	309-00-2	0.5	2	30
ALIPHATIC HYDROCARBONS (See Petroleum Hydrocarbons)				
ANTHRACENE	120-12-7	60	NA	30
ANTIMONY	7440-36-0	6	NA	8,000
AROMATIC HYDROCARBONS (See Petroleum Hydrocarbons)				
ARSENIC	7440-38-2	10	NA	900
BARIIUM	7440-39-3	2,000	NA	50,000
BENZENE	71-43-2	5	1,000	10,000
BENZO(a)ANTHRACENE	56-55-3	1	NA	1,000
BENZO(a)PYRENE	50-32-8	0.2	NA	500
BENZO(b)FLUORANTHENE	205-99-2	1	NA	400
BENZO(g,h,i)PERYLENE	191-24-2	50	NA	20
BENZO(k)FLUORANTHENE	207-08-9	1	NA	100
BERYLLIUM	7440-41-7	4	NA	200
BIPHENYL, 1,1-	92-52-4	0.9	200	50,000
BIS(2-CHLOROETHYL)ETHER	111-44-4	30	30	50,000
BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	30	100	50,000
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	6	NA	50,000
BROMODICHLOROMETHANE	75-27-4	3	6	50,000
BROMOFORM	75-25-2	4	700	50,000
BROMOMETHANE	74-83-9	10	7	800
CADMIUM	7440-43-9	5	NA	4
CARBON TETRACHLORIDE	56-23-5	5	2	5,000
CHLORDANE	12789-03-6	2	NA	2
CHLOROANILINE, p-	106-47-8	20	30,000	300
CHLOROBENZENE	108-90-7	100	200	1,000
CHLOROFORM	67-66-3	70	50	20,000
CHLOROPHENOL, 2-	95-57-8	10	20,000	7,000
CHROMIUM (TOTAL) *	7440-47-3	100	NA	300
CHROMIUM(III)	16065-83-1	100	NA	600
CHROMIUM(VI)	18540-29-9	100	NA	300
CHRYSENE	218-01-9	2	NA	70
CYANIDE **	57-12-5	200	NA	30
DIBENZO(a,h)ANTHRACENE	53-70-3	0.5	NA	40
DIBROMOCHLOROMETHANE	124-48-1	2	20	50,000
DICHLOROBENZENE, 1,2- (o-DCB)	95-50-1	600	8,000	2,000
DICHLOROBENZENE, 1,3- (m-DCB)	541-73-1	100	6,000	50,000
DICHLOROBENZENE, 1,4- (p-DCB)	106-46-7	5	60	8,000
DICHLOROBENZIDINE, 3,3'-	91-94-1	80	NA	2,000
DICHLORODIPHENYL DICHLOROETHANE, P,P'- (DDD)	72-54-8	0.2	NA	50
DICHLORODIPHENYL DICHLOROETHYLENE,P,P'- (DDE)	72-55-9	0.05	NA	400
DICHLORODIPHENYL TRICHLOROETHANE, P,P'- (DDT)	50-29-3	0.3	NA	1
DICHLOROETHANE, 1,1-	75-34-3	70	2,000	20,000
DICHLOROETHANE, 1,2-	107-06-2	5	5	20,000
DICHLOROETHYLENE, 1,1-	75-35-4	7	80	30,000
DICHLOROETHYLENE, CIS-1,2-	156-59-2	70	20	50,000
DICHLOROETHYLENE, TRANS-1,2-	156-60-5	100	80	50,000
DICHLOROMETHANE	75-09-2	5	2,000	50,000
DICHLOROPHENOL, 2,4-	120-83-2	10	30,000	2,000
DICHLOROPROPANE, 1,2-	78-87-5	5	3	50,000
DICHLOROPROPENE, 1,3-	542-75-6	0.4	10	200
DIELDRIN	60-57-1	0.1	8	0.5

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0975: continued

310 CMR 40.0974(2): TABLE 1 ^{††}				
MCP Method 1 GROUNDWATER STANDARDS				
APPLICABLE IN AREAS WHERE THE GROUNDWATER IS CONSIDERED TO BE ONE OR MORE OF THE FOLLOWING CATEGORIES PER 310 CMR 40.0932				
Oil and/or Hazardous Material	CAS Number	GW-1 Standard µg/liter (ppb)	GW-2 Standard µg/liter (ppb)	GW-3 Standard µg/liter (ppb)
DIETHYL PHTHALATE	84-66-2	2,000	50,000	9,000
DIMETHYL PHTHALATE	131-11-3	300	50,000	50,000
DIMETHYLPHENOL, 2,4-	105-67-9	60	40,000	50,000
DINITROPHENOL, 2,4-	51-28-5	200	50,000	20,000
DINITROTOLUENE, 2,4-	121-14-2	30	20,000	50,000
DIOXANE, 1,4-	123-91-1	0.3	6,000	50,000
ENDOSULFAN	115-29-7	10	NA	2
ENDRIN	72-20-8	2	NA	5
ETHYLBENZENE	100-41-4	700	20,000	5,000
ETHYLENE DIBROMIDE	106-93-4	0.02	2	50,000
FLUORANTHENE	206-44-0	90	NA	200
FLUORENE	86-73-7	30	NA	40
HEPTACHLOR	76-44-8	0.4	2	1
HEPTACHLOR EPOXIDE	1024-57-3	0.2	7	2
HEXACHLOROBENZENE	118-74-1	1	1	6,000
HEXACHLOROBUTADIENE	87-68-3	0.6	50	3,000
HEXACHLOROCYCLOHEXANE, GAMMA (gamma-HCH)	58-89-9	0.2	200	4
HEXACHLOROETHANE	67-72-1	8	100	50,000
HMX	2691-41-0	200	50,000	50,000
INDENO(1,2,3-cd)PYRENE	193-39-5	0.5	NA	100
LEAD	7439-92-1	15	NA	10
MERCURY	7439-97-6	2	NA	20
METHOXYCHLOR	72-43-5	40	NA	10
METHYL ETHYL KETONE	78-93-3	4,000	50,000	50,000
METHYL ISOBUTYL KETONE	108-10-1	350	50,000	50,000
METHYL MERCURY	22967-92-6	0.3	NA	20
METHYL TERT BUTYL ETHER	1634-04-4	70	50,000	50,000
METHYLNAPHTHALENE, 2-	91-57-6	10	2,000	20,000
NAPHTHALENE	91-20-3	140	700	20,000
NICKEL	7440-02-0	100	NA	200
PENTACHLOROPHENOL	87-86-5	1	NA	200
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) ***	-	0.02	NA	-
PERFLUORODECANOIC ACID (PFDA)	335-76-2	See PFAS	NA	40,000
PERFLUOROHEPTANOIC ACID (PFHpA)	375-85-9	See PFAS	NA	40,000
PERFLUOROHEXANESULFONIC ACID (PFHxS)	355-46-4	See PFAS	NA	500
PERFLUORONONANOIC ACID (PFNA)	375-95-1	See PFAS	NA	40,000
PERFLUOROOCETANESULFONIC ACID (PFOS)	1763-23-1	See PFAS	NA	500
PERFLUOROOCETANOIC ACID (PFOA)	335-67-1	See PFAS	NA	40,000
PERCHLORATE	-	2	NA	1,000
PETROLEUM HYDROCARBONS				
TOTAL PETROLEUM HYDROCARBON [†]	NA	200	5,000	5,000
ALIPHATIC HYDROCARBONS				
C5 through C8 Aliphatic Hydrocarbons	NA	300	3,000	50,000
C9 through C12 Aliphatic Hydrocarbons	NA	700	5,000	50,000
C9 through C18 Aliphatic Hydrocarbons	NA	700	5,000	50,000
C19 through C36 Aliphatic Hydrocarbons	NA	14,000	NA	50,000
AROMATIC HYDROCARBONS				
C9 through C10 Aromatic Hydrocarbons	NA	200	4,000	50,000
C11 through C22 Aromatic Hydrocarbons	NA	200	50,000	5,000
PHENANTHRENE	85-01-8	40	NA	10,000
PHENOL	108-95-2	1,000	50,000	2,000
POLYCHLORINATED BIPHENYLS (PCBs)	1336-36-3	0.5	5	10
PYRENE	129-00-0	60	NA	20
RDX	121-82-4	1	50,000	50,000
SELENIUM	7782-49-2	50	NA	100
SILVER	7440-22-4	100	NA	7
STYRENE	100-42-5	100	100	6,000

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0975: continued

310 CMR 40.0974(2): TABLE 1 ††				
MCP Method 1 GROUNDWATER STANDARDS				
APPLICABLE IN AREAS WHERE THE GROUNDWATER IS CONSIDERED TO BE ONE OR MORE OF THE FOLLOWING CATEGORIES PER 310 CMR 40.0932				
Oil and/or Hazardous Material	CAS Number	GW-1 Standard µg/liter (ppb)	GW-2 Standard µg/liter (ppb)	GW-3 Standard µg/liter (ppb)
TETRACHLORODIBENZO-p-DIOXIN (TCDD), 2,3,7,8-(equivalents)	1746-01-6	3.E-05	NA	4.E-02
TETRACHLOROETHANE, 1,1,1,2-	630-20-6	5	10	50,000
TETRACHLOROETHANE, 1,1,2,2-	79-34-5	2	9	50,000
TETRACHLOROETHYLENE	127-18-4	5	50	30,000
THALLIUM	7440-28-0	2	NA	3,000
TOLUENE	108-88-3	1,000	50,000	40,000
TRICHLOROBENZENE, 1,2,4-	120-82-1	70	200	50,000
TRICHLOROETHANE, 1,1,1-	71-55-6	200	4,000	20,000
TRICHLOROETHANE, 1,1,2-	79-00-5	5	900	50,000
TRICHLOROETHYLENE	79-01-6	5	5	5,000
TRICHLOROPHENOL, 2,4,5-	95-95-4	200	50,000	3,000
TRICHLOROPHENOL 2,4,6-	88-06-2	10	5,000	500
VANADIUM	7440-62-2	30	NA	4,000
VINYL CHLORIDE	75-01-4	2	2	50,000
XYLENES (Mixed Isomers)	1330-20-7	10,000	3,000	5,000
ZINC	7440-66-6	5,000	NA	900

NA - Not Applicable

* - The Total Chromium standard is applicable in the absence of species-specific data for Chromium III and Chromium VI.

** - Cyanide expressed as Physiologically Available Cyanide (PAC). In the absence of measured Physiologically Available Cyanide, the standard is applicable to Total Cyanide.

*** - The Per- and Polyfluoroalkyl Substances (PFAS) standard for GW-1 is for the sum of the concentrations of the following PFAS compounds: perfluorodecanoic acid (PFDA), perfluoroheptanoic acid (PFHpA), perfluorohexanesulfonic acid (PFHxS), perfluorononanoic acid (PFNA), perfluorooctanesulfonic acid (PFOS), and perfluorooctanoic acid (PFOA). The listed PFAS compounds and associated CAS numbers are the acid forms of these PFAS compounds. The PFAS standards presented in Table 1 also apply to the respective anionic forms of these PFAS compounds. These anions may form salts with any of a number of cations resulting in a variety of possible chemical species, each having a unique CAS number.

† - The Total Petroleum Hydrocarbon (TPH) standard may be used as an alternative to the appropriate combinations of the Aliphatic and Aromatic Hydrocarbon Fraction standards. The use of the general TPH standard is a valid option only for C9 and greater petroleum hydrocarbons; it is not appropriate for the characterization of risks associated with lighter (gasoline-range) hydrocarbons.

†† - The Department periodically reviews the scientific basis for these Standards and amends them, as appropriate, to incorporate new scientific information.

40.0975: Identification of Applicable Soil Standards in Method 1

The MCP Method 1 Soil Standards consider both the potential risk of harm resulting from direct exposure to the oil and/or hazardous material in the soil and the potential impacts on the groundwater at the disposal site. The applicability of a specific numerical Standard is thus a function of both the soil and the groundwater category identified:

- (1) The category of soil (S-1, S-2, or S-3) at each Exposure Point determines which one of the three tables of MCP Method 1 Soil Standards is applicable.
- (2) The category of groundwater (GW-1, GW-2, and/or GW-3) at or near each Exposure Point determines which column of the applicable MCP Method 1 Soil Standards table are relevant to the soil at the Exposure Point. If more than one groundwater category is applicable at the disposal site, then multiple MCP Method 1 Soil Standards may be applicable to the soil of interest, and the lowest of those identified standards shall be selected to characterize the risk of harm.
- (3) The MCP Method 1 Soil Standards listed in Table 2 in 310 CMR 40.0975(6)(a) are applicable to soil determined to be category S-1.
- (4) The MCP Method 1 Soil Standards listed in Table 3 in 310 CMR 40.0975(6)(b) are applicable to soil determined to be category S-2.
- (5) The MCP Method 1 Soil Standards listed in Table 4 in 310 CMR 40.0975(6)(c) are applicable to soil determined to be category S-3.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0975: continued

(6) Tables 2, 3 and 4 List the Potentially Applicable MCP Method 1 Soil Standards.

310 CMR 40.0975(6)(a): TABLE 2 ††				
MCP Method 1: SOIL CATEGORY S-1 STANDARDS				
APPLICABLE TO SOIL WHERE THE COMBINATION OF SOIL & GROUNDWATER CATEGORIES ARE:				
Oil and/or Hazardous Material	CAS Number	S-1 SOIL	S-1 SOIL	S-1 SOIL
		& GW-1	& GW-2	& GW-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
ACENAPHTHENE	83-32-9	4	1,000	1,000
ACENAPHTHYLENE	208-96-8	1	600	10
ACETONE	67-64-1	6	50	400
ALDRIN	309-00-2	0.08	0.08	0.08
ALIPHATIC HYDROCARBONS (See Petroleum Hydrocarbons)				
ANTHRACENE	120-12-7	1,000	1,000	1,000
ANTIMONY	7440-36-0	20	20	20
AROMATIC HYDROCARBONS (See Petroleum Hydrocarbons)				
ARSENIC	7440-38-2	20	20	20
BARIUM	7440-39-3	1,000	1,000	1,000
BENZENE	71-43-2	2	40	40
BENZO(a)ANTHRACENE	56-55-3	7	7	7
BENZO(a)PYRENE	50-32-8	2	2	2
BENZO(b)FLUORANTHENE	205-99-2	7	7	7
BENZO(g,h,i)PERYLENE	191-24-2	1,000	1,000	1,000
BENZO(k)FLUORANTHENE	207-08-9	70	70	70
BERYLLIUM	7440-41-7	90	90	90
BIPHENYL, 1,1-	92-52-4	0.05	6	1,000
BIS(2-CHLOROETHYL)ETHER	111-44-4	0.7	0.7	2
BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	0.7	0.7	30
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	90	90	90
BROMODICHLOROMETHANE	75-27-4	0.1	0.1	30
BROMOFORM	75-25-2	0.1	1	300
BROMOMETHANE	74-83-9	0.5	0.5	30
CADMIUM	7440-43-9	70	70	70
CARBON TETRACHLORIDE	56-23-5	10	5	30
CHLORDANE	12789-03-6	5	5	5
CHLOROANILINE, p-	106-47-8	1	7	3
CHLOROBENZENE	108-90-7	1	3	100
CHLOROFORM	67-66-3	0.4	0.2	500
CHLOROPHENOL, 2-	95-57-8	0.7	100	100
CHROMIUM (TOTAL) *	7440-47-3	100	100	100
CHROMIUM(III)	16065-83-1	1,000	1,000	1,000
CHROMIUM(VI)	18540-29-9	100	100	100
CHRYSENE	218-01-9	70	70	70
CYANIDE **	57-12-5	30	30	30
DIBENZO(a,h)ANTHRACENE	53-70-3	0.7	0.7	0.7
DIBROMOCHLOROMETHANE	124-48-1	0.005	0.03	20
DICHLOROBENZENE, 1,2- (o-DCB)	95-50-1	9	100	300
DICHLOROBENZENE, 1,3- (m-DCB)	541-73-1	3	100	100
DICHLOROBENZENE, 1,4- (p-DCB)	106-46-7	0.7	1	80
DICHLOROBENZIDINE, 3,3'-	91-94-1	3	3	3
DICHLORODIPHENYL DICHLOROETHANE, P,P'- (DDD)	72-54-8	8	8	8
DICHLORODIPHENYL DICHLOROETHYLENE,P,P'- (DDE)	72-55-9	6	6	6
DICHLORODIPHENYL TRICHLOROETHANE, P,P'- (DDT)	50-29-3	6	6	6

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0975: continued

310 CMR 40.0975(6)(a): TABLE 2 ††

MCP Method 1: SOIL CATEGORY S-1 STANDARDS

APPLICABLE TO SOIL WHERE THE COMBINATION OF SOIL & GROUNDWATER CATEGORIES ARE:

Oil and/or Hazardous Material	CAS Number	S-1 SOIL	S-1 SOIL	S-1 SOIL
		& GW-1	& GW-2	& GW-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
DICHLOROETHANE, 1,1-	75-34-3	0.4	9	500
DICHLOROETHANE, 1,2-	107-06-2	0.1	0.1	20
DICHLOROETHYLENE, 1,1-	75-35-4	3	40	500
DICHLOROETHYLENE, CIS-1,2-	156-59-2	0.3	0.1	100
DICHLOROETHYLENE, TRANS-1,2-	156-60-5	1	1	500
DICHLOROMETHANE	75-09-2	0.1	4	400
DICHLOROPHENOL, 2,4-	120-83-2	0.7	60	40
DICHLOROPROPANE, 1,2-	78-87-5	0.1	0.1	30
DICHLOROPROPENE, 1,3-	542-75-6	0.01	0.4	20
DIELDRIN	60-57-1	0.08	0.08	0.08
DIETHYL PHTHALATE	84-66-2	10	200	300
DIMETHYL PHTHALATE	131-11-3	0.7	50	600
DIMETHYLPHENOL, 2,4-	105-67-9	0.7	100	500
DINITROPHENOL, 2,4-	51-28-5	3	50	50
DINITROTOLUENE, 2,4-	121-14-2	0.7	2	2
DIOXANE, 1,4-	123-91-1	0.2	6	20
ENDOSULFAN	115-29-7	0.5	300	1
ENDRIN	72-20-8	10	10	10
ETHYLBENZENE	100-41-4	40	500	500
ETHYLENE DIBROMIDE	106-93-4	0.1	0.1	1
FLUORANTHENE	206-44-0	1,000	1,000	1,000
FLUORENE	86-73-7	1,000	1,000	1,000
HEPTACHLOR	76-44-8	0.3	0.3	0.3
HEPTACHLOR EPOXIDE	1024-57-3	0.1	0.1	0.1
HEXACHLOROBENZENE	118-74-1	0.7	0.7	0.7
HEXACHLOROBUTADIENE	87-68-3	30	30	30
HEXACHLOROCYCLOHEXANE, GAMMA (gamma-HCH)	58-89-9	0.003	1	0.5
HEXACHLOROETHANE	67-72-1	0.7	3	50
HMX	2691-41-0	2	100	1,000
INDENO(1,2,3-cd)PYRENE	193-39-5	7	7	7
LEAD	7439-92-1	200	200	200
MERCURY	7439-97-6	20	20	20
METHOXYCHLOR	72-43-5	200	200	200
METHYL ETHYL KETONE	78-93-3	4	50	400
METHYL ISOBUTYL KETONE	108-10-1	0.4	50	400
METHYL MERCURY	22967-92-6	4	4	4
METHYL TERT BUTYL ETHER	1634-04-4	0.1	100	100
METHYLNAPHTHALENE, 2-	91-57-6	0.7	80	300
NAPHTHALENE	91-20-3	4	20	500
NICKEL	7440-02-0	600	600	600
PENTACHLOROPHENOL	87-86-5	3	3	3
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) ***	-	-	-	-
PERFLUORODECANOIC ACID (PFDA)	335-76-2	3E-04	0.3	0.3
PERFLUOROHEPTANOIC ACID (PFHpA)	375-85-9	5E-04	0.3	0.3
PERFLUOROHEXANESULFONIC ACID (PFHxS)	355-46-4	3E-04	0.3	0.3
PERFLUORONONANOIC ACID (PFNA)	375-95-1	3.2E-04	0.3	0.3
PERFLUOROOCETANESULFONIC ACID (PFOS)	1763-23-1	2E-03	0.3	0.3
PERFLUOROOCETANOIC ACID (PFOA)	335-67-1	7.2E-04	0.3	0.3
PERCHLORATE	-	0.1	3	3

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0975: continued

310 CMR 40.0975(6)(a): TABLE 2 ††

MCP Method 1: SOIL CATEGORY S-1 STANDARDS

APPLICABLE TO SOIL WHERE THE COMBINATION OF SOIL & GROUNDWATER CATEGORIES ARE:

Oil and/or Hazardous Material	CAS Number	S-1 SOIL & GW-1	S-1 SOIL & GW-2	S-1 SOIL & GW-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
PETROLEUM HYDROCARBONS				
TOTAL PETROLEUM HYDROCARBON †	NA	1,000	1,000	1,000
ALIPHATIC HYDROCARBONS				
C5 through C8 Aliphatic Hydrocarbons	NA	100	100	100
C9 through C12 Aliphatic Hydrocarbons	NA	1,000	1,000	1,000
C9 through C18 Aliphatic Hydrocarbons	NA	1,000	1,000	1,000
C19 through C36 Aliphatic Hydrocarbons	NA	3,000	3,000	3,000
AROMATIC HYDROCARBONS				
C9 through C10 Aromatic Hydrocarbons	NA	100	100	100
C11 through C22 Aromatic Hydrocarbons	NA	1,000	1,000	1,000
PHENANTHRENE	85-01-8	10	500	500
PHENOL	108-95-2	1	50	20
POLYCHLORINATED BIPHENYLS (PCBs)	1336-36-3	1	1	1
PYRENE	129-00-0	1,000	1,000	1,000
RDX	121-82-4	1	20	20
SELENIUM	7782-49-2	400	400	400
SILVER	7440-22-4	100	100	100
STYRENE	100-42-5	3	4	70
TETRACHLORODIBENZO-p-DIOXIN (TCDD), 2,3,7,8- (equivalents)	1746-01-6	2.E-05	2.E-05	2.E-05
TETRACHLOROETHANE, 1,1,1,2-	630-20-6	0.1	0.1	80
TETRACHLOROETHANE, 1,1,2,2-	79-34-5	0.005	0.02	10
TETRACHLOROETHYLENE	127-18-4	1	10	30
THALLIUM	7440-28-0	8	8	8
TOLUENE	108-88-3	30	500	500
TRICHLOROBENZENE, 1,2,4-	120-82-1	2	6	700
TRICHLOROETHANE, 1,1,1-	71-55-6	30	500	500
TRICHLOROETHANE, 1,1,2-	79-00-5	0.1	2	40
TRICHLOROETHYLENE	79-01-6	0.3	0.3	30
TRICHLOROPHENOL, 2,4,5-	95-95-4	4	1,000	600
TRICHLOROPHENOL 2,4,6-	88-06-2	0.7	20	20
VANADIUM	7440-62-2	400	400	400
VINYL CHLORIDE	75-01-4	0.9	0.7	1
XYLENES (Mixed Isomers)	1330-20-7	400	100	500
ZINC	7440-66-6	1,000	1,000	1,000

NOTE: All concentrations of oil and/or hazardous material in soil are calculated and presented on a dry weight/dry weight basis.

NA - Not Applicable

* - The Total Chromium standard is applicable in the absence of species-specific data for Chromium III and Chromium VI.

** - Cyanide expressed as Physiologically Available Cyanide (PAC). In the absence of measured Physiologically Available Cyanide, the standard is applicable to Total Cyanide.

*** - The listed compounds and associated CAS numbers are for the acid forms of these PFAS compounds. The PFAS standards presented in Table 2 also apply to the respective anionic forms of these PFAS compounds. These anions may form salts with any of a number of cations resulting in a variety of possible chemical species, each having a unique CAS number.

† - The Total Petroleum Hydrocarbon (TPH) standard may be used as an alternative to the appropriate combinations of the Aliphatic and Aromatic Hydrocarbon Fraction standards. The use of the general TPH standard is a valid option only for C9 and greater petroleum hydrocarbons; it is not appropriate for the characterization of risks associated with lighter (gasoline-range) hydrocarbons.

†† - The Department periodically reviews the scientific basis for these Standards and amends them, as appropriate, to incorporate new scientific information.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0975: continued

310 CMR 40.0975(6)(b): TABLE 3 **

MCP Method 1: SOIL CATEGORY S-2 STANDARDS

APPLICABLE TO SOIL WHERE THE COMBINATION OF SOIL & GROUNDWATER CATEGORIES ARE:

Oil and/or Hazardous Material	CAS Number	S-2 SOIL	S-2 SOIL	S-2 SOIL
		& GW-1	& GW-2	& GW-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
ACENAPHTHENE	83-32-9	4	3,000	3,000
ACENAPHTHYLENE	208-96-8	1	600	10
ACETONE	67-64-1	6	50	400
ALDRIN	309-00-2	0.5	0.5	0.5
ALIPHATIC HYDROCARBONS (See Petroleum Hydrocarbons)				
ANTHRACENE	120-12-7	3,000	3,000	3,000
ANTIMONY	7440-36-0	30	30	30
AROMATIC HYDROCARBONS (See Petroleum Hydrocarbons)				
ARSENIC	7440-38-2	20	20	20
BARIUM	7440-39-3	3,000	3,000	3,000
BENZENE	71-43-2	2	200	200
BENZO(a)ANTHRACENE	56-55-3	40	40	40
BENZO(a)PYRENE	50-32-8	7	7	7
BENZO(b)FLUORANTHENE	205-99-2	40	40	40
BENZO(g,h,i)PERYLENE	191-24-2	3,000	3,000	3,000
BENZO(k)FLUORANTHENE	207-08-9	400	400	400
BERYLLIUM	7440-41-7	200	200	200
BIPHENYL, 1,1-	92-52-4	0.05	6	3,000
BIS(2-CHLOROETHYL)ETHER	111-44-4	0.7	0.7	8
BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	0.7	0.7	100
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	600	600	600
BROMODICHLOROMETHANE	75-27-4	0.1	0.1	100
BROMOFORM	75-25-2	0.1	1	800
BROMOMETHANE	74-83-9	0.5	0.5	30
CADMIUM	7440-43-9	100	100	100
CARBON TETRACHLORIDE	56-23-5	10	5	100
CHLORDANE	12789-03-6	30	30	30
CHLOROANILINE, p-	106-47-8	1	40	3
CHLOROBENZENE	108-90-7	1	3	100
CHLOROFORM	67-66-3	0.4	0.2	1,000
CHLOROPHENOL, 2-	95-57-8	0.7	100	300
CHROMIUM (TOTAL) *	7440-47-3	200	200	200
CHROMIUM(III)	16065-83-1	3,000	3,000	3,000
CHROMIUM(VI)	18540-29-9	200	200	200
CHRYSENE	218-01-9	400	400	400
CYANIDE **	57-12-5	100	100	100
DIBENZO(a,h)ANTHRACENE	53-70-3	4	4	4
DIBROMOCHLOROMETHANE	124-48-1	0.005	0.03	100
DICHLOROBENZENE, 1,2- (o-DCB)	95-50-1	9	100	300
DICHLOROBENZENE, 1,3- (m-DCB)	541-73-1	3	200	500
DICHLOROBENZENE, 1,4- (p-DCB)	106-46-7	0.7	1	400
DICHLOROBENZIDINE, 3,3'-	91-94-1	20	20	20
DICHLORODIPHENYL DICHLOROETHANE, P,P'- (DDD)	72-54-8	40	40	40
DICHLORODIPHENYL DICHLOROETHYLENE,P,P'- (DDE)	72-55-9	30	30	30
DICHLORODIPHENYL TRICHLOROETHANE, P,P'- (DDT)	50-29-3	30	30	30
DICHLOROETHANE, 1,1-	75-34-3	0.4	9	1,000
DICHLOROETHANE, 1,2-	107-06-2	0.1	0.1	100
DICHLOROETHYLENE, 1,1-	75-35-4	3	40	1,000
DICHLOROETHYLENE, CIS-1,2-	156-59-2	0.3	0.1	500
DICHLOROETHYLENE, TRANS-1,2-	156-60-5	1	1	1,000

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0975: continued

310 CMR 40.0975(6)(b): TABLE 3 ††

MCP Method 1: SOIL CATEGORY S-2 STANDARDS

APPLICABLE TO SOIL WHERE THE COMBINATION OF SOIL & GROUNDWATER CATEGORIES ARE:

Oil and/or Hazardous Material	CAS Number	S-2 SOIL	S-2 SOIL	S-2 SOIL
		& GW-1	& GW-2	& GW-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
DICHLOROMETHANE	75-09-2	0.1	4	700
DICHLOROPHENOL, 2,4-	120-83-2	0.7	60	40
DICHLOROPROPANE, 1,2-	78-87-5	0.1	0.1	100
DICHLOROPROPENE, 1,3-	542-75-6	0.01	0.4	90
DIELDRIN	60-57-1	0.5	0.5	0.5
DIETHYL PHTHALATE	84-66-2	10	200	300
DIMETHYL PHTHALATE	131-11-3	0.7	50	600
DIMETHYLPHENOL, 2,4-	105-67-9	0.7	100	1,000
DINITROPHENOL, 2,4-	51-28-5	3	50	100
DINITROTOLUENE, 2,4-	121-14-2	0.7	10	10
DIOXANE, 1-4-	123-91-1	0.2	6	90
ENDOSULFAN	115-29-7	0.5	500	1
ENDRIN	72-20-8	20	20	20
ETHYLBENZENE	100-41-4	40	1,000	1,000
ETHYLENE DIBROMIDE	106-93-4	0.1	0.1	5
FLUORANTHENE	206-44-0	3,000	3,000	3,000
FLUORENE	86-73-7	3,000	3,000	3,000
HEPTACHLOR	76-44-8	2	2	2
HEPTACHLOR EPOXIDE	1024-57-3	0.9	0.9	0.9
HEXACHLOROBENZENE	118-74-1	0.8	0.8	0.8
HEXACHLOROBUTADIENE	87-68-3	100	100	100
HEXACHLOROCYCLOHEXANE, GAMMA (gamma-HCH)	58-89-9	0.003	2	0.5
HEXACHLOROETHANE	67-72-1	0.7	3	200
HMX	2691-41-0	2	100	1,000
INDENO(1,2,3-cd)PYRENE	193-39-5	40	40	40
LEAD	7439-92-1	600	600	600
MERCURY	7439-97-6	30	30	30
METHOXYCHLOR	72-43-5	400	400	400
METHYL ETHYL KETONE	78-93-3	4	50	400
METHYL ISOBUTYL KETONE	108-10-1	0.4	50	400
METHYL MERCURY	22967-92-6	8	8	8
METHYL TERT BUTYL ETHER	1634-04-4	0.1	100	500
METHYLNAPHTHALENE, 2-	91-57-6	1	80	500
NAPHTHALENE	91-20-3	4	20	1,000
NICKEL	7440-02-0	1,000	1,000	1,000
PENTACHLOROPHENOL	87-86-5	3	20	10
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) ***	-	-	-	-
PERFLUORODECANOIC ACID (PFDA)	335-76-2	3E-04	0.4	0.4
PERFLUOROHEPTANOIC ACID (PFHpA)	375-85-9	5E-04	0.4	0.4
PERFLUOROHEXANESULFONIC ACID (PFHxS)	355-46-6	3E-04	0.4	0.4
PERFLUORONONANOIC ACID (PFNA)	375-95-1	3.2E-04	0.4	0.4
PERFLUOROOCETANESULFONIC ACID (PFOS)	1763-23-1	2E-03	0.4	0.4
PERFLUOROOCETANOIC ACID (PFOA)	335-67-1	7.2E-04	0.4	0.4
PERCHLORATE	-	0.1	5	5
PETROLEUM HYDROCARBONS				
TOTAL PETROLEUM HYDROCARBON †	NA	1,000	3,000	3,000
ALIPHATIC HYDROCARBONS				
C5 through C8 Aliphatic Hydrocarbons	NA	500	500	500
C9 through C12 Aliphatic Hydrocarbons	NA	3,000	3,000	3,000
C9 through C18 Aliphatic Hydrocarbons	NA	3,000	3,000	3,000

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0975: continued

310 CMR 40.0975(6)(b): TABLE 3 ††

MCP Method 1: SOIL CATEGORY S-2 STANDARDS

APPLICABLE TO SOIL WHERE THE COMBINATION OF SOIL & GROUNDWATER CATEGORIES ARE:

Oil and/or Hazardous Material	CAS Number	S-2 SOIL	S-2 SOIL	S-2 SOIL
		& GW-1	& GW-2	& GW-3
		µg/g	µg/g	µg/g
		(ppm)	(ppm)	(ppm)
C19 through C36 Aliphatic Hydrocarbons	NA	5,000	5,000	5,000
AROMATIC HYDROCARBONS				
C9 through C10 Aromatic Hydrocarbons	NA	300	500	500
C11 through C22 Aromatic Hydrocarbons	NA	1,000	3,000	3,000
PHENANTHRENE	85-01-8	20	1,000	1,000
PHENOL	108-95-2	1	50	20
POLYCHLORINATED BIPHENYLS (PCBs)	1336-36-3	4	4	4
PYRENE	129-00-0	3,000	3,000	3,000
RDX	121-82-4	1	80	80
SELENIUM	7782-49-2	700	700	700
SILVER	7440-22-4	200	200	200
STYRENE	100-42-5	3	4	300
TETRACHLORODIBENZO-p-DIOXIN (TCDD), 2,3,7,8-(equivalents)	1746-01-6	5.E-05	5.E-05	5.E-05
TETRACHLOROETHANE, 1,1,1,2-	630-20-6	0.1	0.1	400
TETRACHLOROETHANE, 1,1,2,2-	79-34-5	0.005	0.02	50
TETRACHLOROETHYLENE	127-18-4	1	10	200
THALLIUM	7440-28-0	60	60	60
TOLUENE	108-88-3	30	1,000	1,000
TRICHLOROBENZENE, 1,2,4-	120-82-1	2	6	3,000
TRICHLOROETHANE, 1,1,1-	71-55-6	30	600	1,000
TRICHLOROETHANE, 1,1,2-	79-00-5	0.1	2	200
TRICHLOROETHYLENE	79-01-6	0.3	0.3	60
TRICHLOROPHENOL, 2,4,5-	95-95-4	4	1,000	600
TRICHLOROPHENOL 2,4,6-	88-06-2	0.7	20	20
VANADIUM	7440-62-2	700	700	700
VINYL CHLORIDE	75-01-4	0.9	0.7	7
XYLENES (Mixed Isomers)	1330-20-7	400	100	1,000
ZINC	7440-66-6	3,000	3,000	3,000

NOTE: All concentrations of oil and/or hazardous material in soil are calculated and presented on a dry weight/dry weight basis.

NA- Not Applicable

* - The Total Chromium standard is applicable in the absence of species-specific data for Chromium III and Chromium VI.

** - Cyanide expressed as Physiologically Available Cyanide (PAC). In the absence of measured Physiologically Available Cyanide, the standard is applicable to Total Cyanide.

*** - The listed PFAS compounds and associated CAS numbers are for the acid forms of these PFAS compounds. The PFAS standards presented in Table 3 also apply to the respective anionic forms of these PFAS compounds. These anions may form salts with any of a number of cations resulting in a variety of possible chemical species, each having a unique CAS number.

† - The Total Petroleum Hydrocarbon (TPH) standard may be used as an alternative to the appropriate combinations of the Aliphatic and Aromatic Hydrocarbon Fraction standards. The use of the general TPH standard is a valid option only for C9 and greater petroleum hydrocarbons; it is not appropriate for the characterization of risks associated with lighter (gasoline-range) hydrocarbons.

†† - The Department periodically reviews the scientific basis for these Standards and amends them, as appropriate, to incorporate new scientific information.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0975: continued

310 CMR 40.0975(6)(c): TABLE 4 ††

MCP Method 1: SOIL CATEGORY S-3 STANDARDS

APPLICABLE TO SOIL WHERE THE COMBINATION OF SOIL & GROUNDWATER CATEGORIES ARE:

Oil and/or Hazardous Material	CAS Number	S-3 SOIL	S-3 SOIL	S-3 SOIL
		& GW-1	& GW-2	& GW-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
ACENAPHTHENE	83-32-9	4	5,000	5,000
ACENAPHTHYLENE	208-96-8	1	600	10
ACETONE	67-64-1	6	50	400
ALDRIN	309-00-2	3	3	3
ALIPHATIC HYDROCARBONS (See Petroleum Hydrocarbons)				
ANTHRACENE	120-12-7	5,000	5,000	5,000
ANTIMONY	7440-36-0	30	30	30
AROMATIC HYDROCARBONS (See Petroleum Hydrocarbons)				
ARSENIC	7440-38-2	50	50	50
BARIUM	7440-39-3	5,000	5,000	5,000
BENZENE	71-43-2	2	400	1,000
BENZO(a)ANTHRACENE	56-55-3	300	300	300
BENZO(a)PYRENE	50-32-8	30	30	30
BENZO(b)FLUORANTHENE	205-99-2	300	300	300
BENZO(g,h,i)PERYLENE	191-24-2	5,000	5,000	5,000
BENZO(k)FLUORANTHENE	207-08-9	3,000	3,000	3,000
BERYLLIUM	7440-41-7	200	200	200
BIPHENYL, 1,1-	92-52-4	0.05	6	5,000
BIS(2-CHLOROETHYL)ETHER	111-44-4	0.7	0.7	80
BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	0.7	0.7	1,000
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	2,000	2,000	2,000
BROMODICHLOROMETHANE	75-27-4	0.1	0.1	500
BROMOFORM	75-25-2	0.1	1	800
BROMOMETHANE	74-83-9	0.5	0.5	30
CADMIUM	7440-43-9	100	100	100
CARBON TETRACHLORIDE	56-23-5	10	5	1,000
CHLORDANE	12789-03-6	60	60	60
CHLOROANILINE, p-	106-47-8	1	40	3
CHLOROBENZENE	108-90-7	1	3	100
CHLOROFORM	67-66-3	0.4	0.2	1,000
CHLOROPHENOL, 2-	95-57-8	0.7	100	300
CHROMIUM (TOTAL) *	7440-47-3	200	200	200
CHROMIUM(III)	16065-83-1	5,000	5,000	5,000
CHROMIUM(VI)	18540-29-9	200	200	200
CHRYSENE	218-01-9	3,000	3,000	3,000
CYANIDE **	57-12-5	500	500	500
DIBENZO(a,h)ANTHRACENE	53-70-3	30	30	30
DIBROMOCHLOROMETHANE	124-48-1	0.005	0.03	500
DICHLOROBENZENE, 1,2- (o-DCB)	95-50-1	9	100	300
DICHLOROBENZENE, 1,3- (m-DCB)	541-73-1	3	200	500
DICHLOROBENZENE, 1,4- (p-DCB)	106-46-7	0.7	1	2,000
DICHLOROBENZIDINE, 3,3'-	91-94-1	100	100	100
DICHLORODIPHENYL DICHLOROETHANE, P,P'- (DDD)	72-54-8	60	60	60
DICHLORODIPHENYL DICHLOROETHYLENE,P,P'- (DDE)	72-55-9	60	60	60
DICHLORODIPHENYL TRICHLOROETHANE, P,P'- (DDT)	50-29-3	60	60	60
DICHLOROETHANE, 1,1-	75-34-3	0.4	9	1,000
DICHLOROETHANE, 1,2-	107-06-2	0.1	0.1	300
DICHLOROETHYLENE, 1,1-	75-35-4	3	40	3,000
DICHLOROETHYLENE, CIS-1,2-	156-59-2	0.3	0.1	500
DICHLOROETHYLENE, TRANS-1,2-	156-60-5	1	1	3,000

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0975: continued

310 CMR 40.0975(6)(c): TABLE 4 ††

MCP Method 1: SOIL CATEGORY S-3 STANDARDS

APPLICABLE TO SOIL WHERE THE COMBINATION OF SOIL & GROUNDWATER CATEGORIES ARE:

Oil and/or Hazardous Material	CAS Number	S-3 SOIL	S-3 SOIL	S-3 SOIL
		& GW-1	& GW-2	& GW-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
DICHLOROMETHANE	75-09-2	0.1	4	700
DICHLOROPHENOL, 2,4-	120-83-2	0.7	60	40
DICHLOROPROPANE, 1,2-	78-87-5	0.1	0.1	1,000
DICHLOROPROPENE, 1,3-	542-75-6	0.01	0.4	100
DIELDRIN	60-57-1	3	3	3
DIETHYL PHTHALATE	84-66-2	10	200	300
DIMETHYL PHTHALATE	131-11-3	0.7	50	600
DIMETHYLPHENOL, 2,4-	105-67-9	0.7	100	1,000
DINITROPHENOL, 2,4-	51-28-5	3	50	100
DINITROTOLUENE, 2,4-	121-14-2	0.7	50	80
DIOXANE, 1,4-	123-91-1	0.2	6	500
ENDOSULFAN	115-29-7	0.5	500	1
ENDRIN	72-20-8	20	20	20
ETHYLBENZENE	100-41-4	40	1,000	3,000
ETHYLENE DIBROMIDE	106-93-4	0.1	0.1	40
FLUORANTHENE	206-44-0	5,000	5,000	5,000
FLUORENE	86-73-7	5,000	5,000	5,000
HEPTACHLOR	76-44-8	10	10	10
HEPTACHLOR EPOXIDE	1024-57-3	1	1	1
HEXACHLOROBENZENE	118-74-1	0.8	0.8	0.8
HEXACHLOROBUTADIENE	87-68-3	100	100	100
HEXACHLOROCYCLOHEXANE, GAMMA (gamma-HCH)	58-89-9	0.003	2	0.5
HEXACHLOROETHANE	67-72-1	0.7	3	200
HMX	2691-41-0	2	100	1,000
INDENO(1,2,3-cd)PYRENE	193-39-5	300	300	300
LEAD	7439-92-1	600	600	600
MERCURY	7439-97-6	30	30	30
METHOXYCHLOR	72-43-5	400	400	400
METHYL ETHYL KETONE	78-93-3	4	50	400
METHYL ISOBUTYL KETONE	108-10-1	0.4	50	400
METHYL MERCURY	22967-92-6	8	8	8
METHYL TERT BUTYL ETHER	1634-04-4	0.1	100	500
METHYLNAPHTHALENE, 2-	91-57-6	1	80	500
NAPHTHALENE	91-20-3	4	20	3,000
NICKEL	7440-02-0	1,000	1,000	1,000
PENTACHLOROPHENOL	87-86-5	3	70	10
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) ***				
PERFLUORODECANOIC ACID (PFDA)	335-76-2	3E-04	0.4	0.4
PERFLUOROHEPTANOIC ACID (PFHpA)	375-85-9	5E-04	0.4	0.4
PERFLUOROHEXANESULFONIC ACID (PFHxS)	355-46-4	3E-04	0.4	0.4
PERFLUORONONANOIC ACID (PFNA)	375-95-1	3.2E-04	0.4	0.4
PERFLUOROOCETANESULFONIC ACID (PFOS)	1763-23-1	2E-03	0.4	0.4
PERFLUOROOCETANOIC ACID (PFOA)	335-67-1	7.2E-04	0.4	0.4
PERCHLORATE	-	0.1	5	5
PETROLEUM HYDROCARBONS				
TOTAL PETROLEUM HYDROCARBON †	NA	1,000	5,000	5,000
ALIPHATIC HYDROCARBONS				
C5 through C8 Aliphatic Hydrocarbons	NA	500	500	500
C9 through C12 Aliphatic Hydrocarbons	NA	5,000	5,000	5,000
C9 through C18 Aliphatic Hydrocarbons	NA	5,000	5,000	5,000

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0975: continued

310 CMR 40.0975(6)(c): TABLE 4 ††

MCP Method 1: SOIL CATEGORY S-3 STANDARDS

APPLICABLE TO SOIL WHERE THE COMBINATION OF SOIL & GROUNDWATER CATEGORIES ARE:

Oil and/or Hazardous Material	CAS Number	S-3 SOIL	S-3 SOIL	S-3 SOIL
		& GW-1	& GW-2	& GW-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
C19 through C36 Aliphatic Hydrocarbons AROMATIC HYDROCARBONS	NA	5,000	5,000	5,000
C9 through C10 Aromatic Hydrocarbons	NA	300	500	500
C11 through C22 Aromatic Hydrocarbons	NA	1,000	5,000	5,000
PHENANTHRENE	85-01-8	20	3,000	3,000
PHENOL	108-95-2	1	50	20
POLYCHLORINATED BIPHENYLS (PCBs)	1336-36-3	4	4	4
PYRENE	129-00-0	5,000	5,000	5,000
RDX	121-82-4	1	100	400
SELENIUM	7782-49-2	700	700	700
SILVER	7440-22-4	200	200	200
STYRENE	100-42-5	3	4	2,000
TETRACHLORODIBENZO-p-DIOXIN (TCDD), 2,3,7,8- (equivalents)	1746-01-6	5.E-05	5.E-05	5.E-05
TETRACHLOROETHANE, 1,1,1,2-	630-20-6	0.1	0.1	500
TETRACHLOROETHANE, 1,1,2,2-	79-34-5	0.005	0.02	400
TETRACHLOROETHYLENE	127-18-4	1	10	1,000
THALLIUM	7440-28-0	80	80	80
TOLUENE	108-88-3	30	2,000	3,000
TRICHLOROBENZENE, 1,2,4-	120-82-1	2	6	5,000
TRICHLOROETHANE, 1,1,1-	71-55-6	30	600	3,000
TRICHLOROETHANE, 1,1,2-	79-00-5	0.1	2	500
TRICHLOROETHYLENE	79-01-6	0.3	0.3	60
TRICHLOROPHENOL, 2,4,5-	95-95-4	4	1,000	600
TRICHLOROPHENOL 2,4,6-	88-06-2	0.7	20	20
VANADIUM	7440-62-2	700	700	700
VINYL CHLORIDE	75-01-4	0.9	0.7	60
XYLENES (Mixed Isomers)	1330-20-7	400	100	3,000
ZINC	7440-66-6	5,000	5,000	5,000

NOTE: All concentrations of oil and/or hazardous material in soil are calculated and presented on a dry weight/dry weight basis.

NA- Not Applicable

* - The Total Chromium standard is applicable in the absence of species-specific data for Chromium III and Chromium VI.

** - Cyanide expressed as Physiologically Available Cyanide (PAC). In the absence of measured Physiologically Available Cyanide, the standard is applicable to Total Cyanide.

***- The listed PFAS compounds and associated CAS numbers are for the acid forms of these PFAS compounds. The PFAS standards presented in Table 4 also apply to the respective anionic forms of these PFAS compounds. These anions may form salts with any of a number of cations resulting in a variety of possible chemical species, each having a unique CAS number.

† - The Total Petroleum Hydrocarbon (TPH) standard may be used as an alternative to the appropriate combinations of the Aliphatic and Aromatic Hydrocarbon Fraction standards. The use of the general TPH standard is a valid option only for C9 and greater petroleum hydrocarbons; it is not appropriate for the characterization of risks associated with lighter (gasoline-range) hydrocarbons.

†† - The Department periodically reviews the scientific basis for these Standards and amends them, as appropriate, to incorporate new scientific information.

40.0980: Method 2 Risk Characterization

40.0981 Applicability of Method 2

Method 2 may be used to characterize the risk of harm to health, public welfare and the environment at disposal sites where site investigations conducted in accordance with 310 CMR 40.0000 have determined that the release of oil and/or hazardous material is limited to soil and/or groundwater. If contamination is present in one or more environmental media other than soil or groundwater, Method 2 shall not be used, except as described in 310 CMR 40.0942(2). A Method 2 Risk Characterization shall be conducted in combination with a separate characterization of the risk of harm to safety, as described in 310 CMR 40.0960.

40.0982 General Approach to Method 2

A Method 2 Risk Characterization supplements and modifies the MCP Method 1 Standards with site-and chemical-specific information. For the purposes of 310 CMR 40.0000, "MCP Method 2 Standards" shall refer to the MCP Method 1 Standards which have been modified to address site-specific conditions as described in 310 CMR 40.0982. Site conditions are then compared to such MCP Method 2 Standards, in the same manner that MCP Method 1 Standards are used under 310 CMR 40.0973, to characterize the risk of harm to health, public welfare and the environment.

(1) MCP Method 1 GW-1 Standards shall not be modified in Method 2. These standards are listed in 310 CMR 40.0974(2).

(2) The component of the MCP Method 1 Soil Standards which is protective of direct contact exposures to the soil shall not be modified in Method 2. These standards are listed in 310 CMR 40.0985(6).

(3) The following information may be used under Method 2 to modify the Method 1 Standards:

(a) MCP Method 2 Groundwater and Soil Standards may be developed for chemicals for which MCP Method 1 Standards have not been promulgated by the Department. This process is described in 310 CMR 40.0983 and 40.0984.

(b) Site-specific information may be used to either modify the leaching component of the MCP Method 1 Soil Standards or to demonstrate that a contaminant will not leach to groundwater. The incorporation of such site-specific information will result in MCP Method 2 Soil Standards or a determination that the leaching component of one or more Method 1 soil standard is not applicable. These site-specific modifications are described in 310 CMR 40.0985.

(c) Site-specific information may be used to either modify the MCP Method 1 GW-2 Standards, which model potential volatilization of oil and/or hazardous material to indoor air, or to demonstrate that such vapor infiltration will not occur. The incorporation of such site-specific information will result in MCP Method 2 GW-2 Standards or a determination that one or more Method 1 GW-2 standard is not applicable at this site. These site-specific modifications are described in 310 CMR 40.0986.

(d) Site-specific information may be used to either modify the MCP Method 1 GW-3 Standards, which are set to be protective of potential discharges of oil and/or hazardous material to surface water, or to demonstrate that such discharges will not occur. The incorporation of such site-specific information will result in MCP Method 2 GW-3 Standards or a determination that one or more Method 1 GW-3 standard is not applicable. These site-specific modifications are described in 310 CMR 40.0987.

(4) If the modification of a MCP Method 1 GW-2 or GW-3 Standard results in a concentration of an oil and/or hazardous material greater than the Upper Concentration Limit in Groundwater listed in 310 CMR 40.0996(6), then the Upper Concentration Limit for that chemical shall be used to characterize the risk of harm to health, public welfare and the environment in Method 2.

(5) MCP Method 1 Standards may be used in combination with one or more MCP Method 2 Standards. A Risk Characterization which uses a combination of MCP Method 1 and 2 Standards shall be considered a Method 2 Risk Characterization.

40.0982: continued

(6) The MCP Method 2 Standards developed and used or relied upon by the LSP shall be listed and suitably documented.

(7) The Department may develop and publish sets of chemical-specific concentrations which, for specific types of disposal sites, will demonstrably meet the Risk Characterization requirements described at 40.0990. Such concentrations may be used at the RP's, PRP's or Other Person's option to characterize risk at a disposal site, and the use of these sets of concentrations shall be considered a Method 2 Risk Characterization.

40.0983: Derivation of Additional Method 1 Groundwater Standards for Use in Method 2

If an MCP Method 1 Groundwater Standard has not been promulgated by the Department, the RP, PRP or Other Person may develop an MCP Method 2 Standard for that oil and/or hazardous material on the basis of the following assumptions and procedures:

(1) A site-specific background concentration in groundwater shall be identified for the oil and/or hazardous material.

(2) GW-1 Standards shall be calculated as follows:

(a) Based on non-cancer health risk, a concentration in drinking water of the oil and/or hazardous material associated with a Hazard Quotient (HQ) of 0.2 shall be identified using the following equation:

$$[\text{OHM}]_{\text{dw, non-cancer}} = \text{HQ} \times \text{RfD} \times \text{BW} \times \text{C} / (\text{IR} \times \text{RAF}_{\text{dw-oral}}).$$

Where:

$[\text{OHM}]_{\text{dw, non-cancer}}$	=	Concentration of oil and/or hazardous material consistent with a non-cancer Hazard Quotient of 0.2, in units of micro-grams per liter ($\mu\text{g/L}$ or ppb).
HQ	=	Hazard Quotient of 0.2 (dimensionless).
RfD	=	Reference Dose, in units of milligrams per kilogram-day ($\text{mg}/(\text{kg} \times \text{d})$).
BW	=	Body weight of 70 kilograms (kg).
C	=	Conversion factor of 1000 micrograms per milligram ($\mu\text{g}/\text{mg}$).
IR	=	Intake rate of 2 liters of water per day.
$\text{RAF}_{\text{dw-oral}}$	=	Relative Absorption Factor for oral drinking water exposures (dimensionless).

(b) A concentration of the oil and/or hazardous material associated with an Excess Lifetime Cancer Risk equal to one-in-one million shall be identified using the following equation:

$$[\text{OHM}]_{\text{dw, cancer}} = \text{ELCR} \times \text{C} \times \text{BW} / (\text{IR} \times \text{RAF} \times \text{CSF}).$$

Where:

$[\text{OHM}]_{\text{dw, cancer}}$	=	The concentration of oil and/or hazardous material in groundwater consistent with a cancer risk limit of one-in-one million, in units of micrograms per liter ($\mu\text{g/L}$ or ppb).
ELCR	=	The Method 1 Excess Lifetime Cancer Risk limit of one-in-one million (10^{-6}).
C	=	Conversion factor of 1000 micrograms per milligram ($\mu\text{g}/\text{mg}$).
BW	=	Body weight of 70 kilograms (kg).
IR	=	Intake rate of 2 liters of water per day.
$\text{RAF}_{\text{dw-oral}}$	=	Relative Absorption Factor for oral drinking water exposures (dimensionless).
CSF	=	Cancer Slope Factor in units of risk per milligrams per kilogram-day ($\text{mg}/(\text{kg} \times \text{day}))^{-1}$.

40.0983: continued

- (c) The concentration in water of the oil and/or hazardous material at which 50% of the population can detect its odor is identified, if available;
- (d) The lowest non-zero concentration estimated in 310 CMR 40.0983(2)(a), (b), and (c) is identified as the risk-based concentration for the oil and/or hazardous material of concern;
- (e) The site-specific groundwater background concentration identified for the oil and/or hazardous material in 310 CMR 40.0983(1) is considered;
- (f) The Practical Quantitation Limit (PQL) applicable to the oil and/or hazardous material using an appropriately sensitive analytical method for quantifying the concentration of the oil and/or hazardous material in water shall be identified; and
- (g) The highest of the three concentrations identified in 310 CMR 40.0983(2)(d), (e) and (f) is adopted as the MCP Method 2 GW-1 Standard for that oil and/or hazardous material.

(3) GW-2 Standards shall be determined as follows:

(a) A risk-based indoor air concentration shall be identified by choosing the lowest non-zero value from the following:

1. Based on a non-cancer health risk, a concentration associated with a Hazard Quotient (HQ) of 0.2 is identified when sufficient information exists using the following equation:

$$[\text{OHM}]_{\text{air, non-cancer}} = \text{HQ} \times \text{RfC} \times \text{C}.$$

Where:

- $[\text{OHM}]_{\text{air, non-cancer}}$ = The calculated indoor air concentration associated with 20% of the reference concentration, in units of micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).
- HQ = Hazard Quotient of 0.2 (dimensionless).
- RfC = Reference Concentration, in units of milligrams per cubic meter (mg/m^3) at which adverse non-cancer health effects are unlikely to occur.
- C = Conversion factor of 1000 micrograms per milligram ($\mu\text{g}/\text{mg}$).

2. An indoor air concentration associated with an Excess Lifetime Cancer Risk of one-in-one million, using the following equation, when sufficient information exists:

$$[\text{OHM}]_{\text{air-cancer}} = \text{ELCR} / \text{UR}_{\text{air}}.$$

Where:

- $[\text{OHM}]_{\text{air}}$ = The calculated indoor air concentration in units of micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) associated with an Excess Lifetime Cancer Risk of one-in-one million (10^{-6}).
- ELCR = The Method 1 Excess Lifetime Cancer Risk limit of one-in-one million (10^{-6}).
- UR_{air} = The inhalation Unit Risk in air for the chemical, in units of risk per micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)⁻¹.

3. The concentration in air of the oil and/or hazardous material at which 50% of the population can detect its odor is identified, if available.

(b) A background indoor air concentration for the chemical shall be identified and compared to the risk-based concentration calculated in 310 CMR 40.0983(3)(a). The higher of the two values shall be chosen as the target indoor air concentration.

(c) A source attenuation factor, α , shall be determined for the oil and/or hazardous material, assuming conservative site characteristics, including: a depth to groundwater of 213 cm (seven feet), a basement floor both 183 cm (six feet) below grade and 30 cm (one foot) above the groundwater table, a soil water-filled porosity equal to $0.06 \text{ cm}^3/\text{cm}^3$, and sandy-loam soil between the groundwater and the basement.

(d) A concentration in groundwater for the oil and/or hazardous material shall be calculated using the following equation:

$$[\text{OHM}]_{\text{gw}} = [\text{OHM}]_{\text{air}} / (\alpha \times \text{H} \times \text{C}).$$

40.0983: continued

Where:

$[\text{OHM}]_{\text{gw}}$	=	The calculated GW-2 Standard, in units of micrograms per liter ($\mu\text{g/L}$ or ppb).
$[\text{OHM}]_{\text{air}}$	=	The target indoor air concentration identified in 310 CMR 40.0983(3)(b), in units of micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).
α	=	A source attenuation factor as determined at 310 CMR 40.0983(2)(c) (dimensionless).
H	=	The Henry's Law Constant for the chemical (dimensionless).
C	=	Conversion factor of 1000 liters per cubic meter (L/m^3).

(e) The site-specific groundwater background concentration shall be identified for the oil and/or hazardous material in 310 CMR 40.0983(1).

(f) The Practical Quantitation Limit (PQL) applicable to the oil and/or hazardous material using an appropriately sensitive analytical method for quantifying the concentration of the oil and/or hazardous material in water shall be identified.

(g) The highest of the three concentrations identified in 310 CMR 40.0983(2)(d), (e), and (f) shall be adopted as the MCP Method 2 GW-2 Standard for that oil and/or hazardous material.

(4) GW-3 Standards shall be determined as follows:

(a) The lowest ecologically-based Water Quality Criterion for the oil and/or hazardous material of concern shall be identified (*i.e.*, the Fresh Water Chronic Criterion, the Fresh Water Acute Criterion, the Marine Chronic Criterion, or the Marine Acute Criterion). If no such criterion exists, an analogous value from the scientific literature may be proposed.

(b) The concentration (in $\mu\text{g}/\text{liter}$, or ppb) identified in 310 CMR 40.0983(4)(a) shall be multiplied by a factor of ten.

(c) The concentration identified in 310 CMR 40.0983(4)(b) shall be multiplied by:

1. a factor of 2.5 if the Koc value for the oil or hazardous material of concern is less than 1,000;
2. a factor of 25 if the Koc value for the oil or hazardous material of concern is greater than or equal to 1,000 but less than 100,000; or
3. a factor of 100 if the Koc value for the oil or hazardous material of concern is greater than or equal to 100,000.

(d) The resulting concentration (in $\mu\text{g}/\text{L}$, or ppb) shall be the MCP Method 2 GW-3 Standard for the oil and/or hazardous material of concern.

(5) Any of the MCP Method 2 groundwater standards calculated in 310 CMR 40.0983(2) through (4) shall be adjusted to a ceiling concentration of 50,000 $\mu\text{g}/\text{liter}$ (ppb) if the calculated value is greater than 50,000 $\mu\text{g}/\text{liter}$ (ppb).

40.0984: Derivation of Additional Method 1 Soil Standards for Use in Method 2

If an MCP Method 1 Soil Standard has not been promulgated by the Department, the RP, PRP or Other Person may develop an MCP Method 2 Standard for that oil and/or hazardous material on the basis of the following assumptions and procedures:

(1) A site-specific background concentration in soil shall be identified for the oil and/or hazardous material.

(2) Based upon non-cancer health risk, a concentration of the oil and/or hazardous material associated with a Hazard Quotient (HQ) of 0.2 for each soil category shall be identified using the equations:

$$[\text{OHM}]_{\text{S1}} = (\text{HQ} \times \text{RfD}_{\text{chronic}} \times C) / ((\text{RAF}_{\text{oral}} \times \text{ADSE}_{\text{S1oral}}) + (\text{RAF}_{\text{dermal}} \times \text{ADSE}_{\text{S1dermal}}))$$

$$[\text{OHM}]_{\text{S2}} = (\text{HQ} \times \text{RfD}_{\text{chronic}} \times C) / ((\text{RAF}_{\text{oral}} \times \text{ADSE}_{\text{S2oral}}) + (\text{RAF}_{\text{dermal}} \times \text{ADSE}_{\text{S2dermal}}))$$

40.0984: continued

$$[\text{OHM}]_{\text{S3}} = (\text{HQ} \times \text{RfD}_{\text{subchronic}} \times \text{C}) / ((\text{RAF}_{\text{oral}} \times \text{ADSE}_{\text{S3oral}}) + (\text{RAF}_{\text{dermal}} \times \text{ADSE}_{\text{S3dermal}}))$$

Where:

[OHM]	=	The concentration of oil and/or hazardous material being derived, in units of milligrams per kilogram soil (mg/kg or ppm).
HQ	=	Hazard Quotient (HQ) of 0.2 (dimensionless).
RfD	=	The Reference Dose for the chemical, in units of milligrams contaminant per kilogram-day (mg/(kg x day)).
RAF _{oral}	=	The Relative Absorption Factor applicable for oral soil exposures (dimensionless).
RAF _{dermal}	=	The Relative Absorption Factor applicable for dermal soil exposures (dimensionless).
C	=	10 ⁶ mg/kg conversion factor
ADSE	=	Average daily exposure to soil by the oral or dermal pathway in units of milligrams soil per kilogram-day (mg/(kg x day)). ADSE values are: S1 oral = 2.4 mg/(kg x day) S1 dermal = 21 mg/(kg x day) S2 oral = 0.27 mg/(kg x day) S2 dermal = 0.49 mg/(kg x day) S3 oral = 1.2 mg/(kg x day) S3 dermal = 13 mg/(kg x day).

(3) A concentration of the oil and/or hazardous material associated with an Excess Lifetime Cancer Risk equal to one-in-one million shall be identified for each soil category using the following equations:

$$[\text{OHM}] = (\text{ELCR} \times \text{C}) / (\text{CSF} \times ((\text{RAF}_{\text{oral}} \times \text{LADSE}_{\text{oral}}) + (\text{RAF}_{\text{dermal}} \times \text{LADSE}_{\text{dermal}})))$$

Where:

[OHM]	=	The concentration of oil and/or hazardous material being derived, in units of milligrams OHM per kilogram soil (mg/kg or ppm).
ELCR	=	Method 1 Excess Lifetime Cancer Risk limit of one-in-one million (10 ⁻⁶).
CSF	=	The oral Carcinogenic Slope Factor in units of risk per milligram per kilogram-day (mg/(kg x day)) ⁻¹ .
RAF _{oral}	=	The Relative Absorption Factor applicable for oral soil exposures (dimensionless).
RAF _{dermal}	=	The Relative Absorption Factor applicable for dermal soil exposures (dimensionless).
C	=	10 ⁶ mg/kg conversion factor.
LADSE	=	Lifetime average daily exposure to soil by the oral or dermal pathway in units of milligrams soil per kilogram-day (mg/(kg x day)). LADSE values are: S1 oral = 0.37 mg/(kg x day) S1 dermal = 3.9 mg/(kg x day) S2 oral = 0.10 mg/(kg x day) S2 dermal = 0.19 mg/(kg x day) S3 oral = 0.0088 mg/(kg x day) S3 dermal = 0.095 mg/(kg x day).

NON-TEXT PAGE

40.0984: continued

(4) Considering the category determined for the groundwater at the disposal site per 310 CMR 40.0932 and an acceptable leaching model or test method as discussed in 310 CMR 40.0985, a concentration in soil which will not result in groundwater concentrations of the oil and/or hazardous material greater than the applicable MCP Method 2 groundwater standard derived in 310 CMR 40.0983 shall be identified.

(5) For each combination of soil and groundwater categories, the lowest non-zero concentration estimated in 310 CMR 40.0984(2) through (4) shall be the risk-based concentration for the oil and/or hazardous material of concern.

(6) The site-specific background concentration identified in 310 CMR 40.0984(1) shall be considered.

(7) The Practical Quantitation Limit (PQL) applicable to the oil and/or hazardous material using an appropriately sensitive analytical method for quantifying the concentration of the chemical in soil shall be identified.

(8) For each combination of the soil and groundwater categories, the highest of the three concentrations identified in 310 CMR 40.0984(5) through (7) shall be adopted as the MCP Method 2 soil standard for that combination of soil and groundwater categories.

(9) MCP Method 2 soil standards identified in 40.0984(8) shall be adjusted to a ceiling concentration if the calculated concentration is greater than the ceiling concentration. The ceiling concentration shall be based upon the "Odor Index" of the chemical, defined for the purposes of these regulations to be the ratio of the vapor pressure of the chemical and the 50% odor recognition level (odor threshold) for the chemical:

$$\text{Odor Index} = \text{VP} \div \text{ORL}_{50\%}$$

Where:

VP	=	The vapor pressure of the oil and/or hazardous material, in units of TORR, measured at temperatures between 20° and 30° Celsius.
ORL _{50%}	=	The concentration of the oil and/or hazardous material at which 50% of the general population would recognize its odor. In units: parts per million (ppm).

(a) S-1 Standards:

1. Chemicals having an Odor Index greater than or equal to 100 shall be assigned a ceiling concentration of 100 mg/kg (ppm).
2. Chemicals having an Odor Index greater than or equal to one but less than 100 shall be assigned a ceiling concentration of 500 mg/kg (ppm).
3. For chemicals having an Odor Index less than one or for which there is insufficient data to calculate an Odor Index, the assigned ceiling concentration shall be 1,000 mg/kg (ppm).

(b) S-2 Standards:

1. Chemicals having an Odor Index greater than or equal to 100 shall be assigned a ceiling concentration of 500 mg/kg (ppm).
2. Chemicals having an Odor Index greater than or equal to one but less than 100 shall be assigned a ceiling concentration of 1,000 mg/kg (ppm).
3. For chemicals having an Odor Index less than one or for which there is insufficient data to calculate an Odor Index, the assigned ceiling concentration shall be 2,500 mg/kg (ppm).

(c) S-3 Standards:

1. Chemicals having an Odor Index greater than or equal to 100 shall be assigned a ceiling concentration of 1,000 mg/kg (ppm).
2. Chemicals having an Odor Index greater than or equal to one but less than 100 shall be assigned a ceiling concentration of 2,500 mg/kg (ppm).
3. For chemicals having an Odor Index less than one or for which there is insufficient data to calculate an Odor Index, the assigned ceiling concentration shall be 5,000 mg/kg (ppm).

40.0985: continued

40.0985: Determination of Method 2 Soil Standards Considering Leaching Potential

MCP Method 1 Soil Standards consider both the risks associated with direct contact with the contaminated soil and the potential for the oil and/or hazardous material to leach to groundwater. The leaching component of the MCP Method 1 Soil Standards can be modified or eliminated in Method 2 considering site-specific information. The direct contact-exposure component of the standard shall not be adjusted in this Method.

(1) The development of alternative leaching-based soil concentrations or the determination that leaching-based concentrations are not applicable shall be based upon information which is scientifically justified and completely documented.

(2) When developing alternative leaching-based concentrations in soil, alternative values shall be developed for each oil and hazardous material and for each applicable groundwater category. Demonstrations that the leaching-based component of the Method 1 soil standards is not applicable may be made on a chemical-by-chemical basis or for the site as a whole, depending upon the information relevant to that determination.

(3) The following methods may be used to demonstrate that the concentrations of oil and/or hazardous material in soil at the disposal site now and in the foreseeable future will result in compliance with all applicable MCP Method 1 or 2 Groundwater Standards:

- (a) transport and fate modeling that incorporates site-specific information on source mass and subsurface hydrogeological conditions; and/or
- (b) laboratory tests that demonstrate, under site conditions, the oil and/or hazardous material in the soil will not leach to groundwater at levels which exceed the applicable MCP Method 1 or 2 Groundwater Standards.

(4) For each combination of soil category (S-1, S-2, and S-3) and groundwater category (GW-1, GW-2, and GW-3), the lower of the following is the applicable MCP Method 2 Soil Standard for the oil and/or hazardous material:

- (a) The leaching-based soil concentration identified in 310 CMR 40.0985(2) specific to the groundwater category, and
- (b) The direct contact exposure-based concentration specific to the soil category, listed in Table 5 in 310 CMR 40.0985(6). The direct contact standard is applicable when it is determined that the leaching-based component of the Method 1 standard is not applicable per 310 CMR 40.0985(2).

(5) Groundwater monitoring shall demonstrate that residual soil contamination is not and will not result in groundwater concentrations greater than the applicable MCP Method 1 or 2 Groundwater Standards. The duration of required monitoring shall depend on the source mass, the mobility of the oil and/or hazardous material, and subsurface conditions.

(6) Table 5 Lists the Direct Contact Exposure-based Soil Concentrations.

310 CMR 40.0985(6): TABLE 5 ^{††}				
MCP Method 2: DIRECT CONTACT EXPOSURE-BASED SOIL CONCENTRATIONS APPLICABLE TO THE SPECIFIED SOIL CATEGORY.				
Oil and/or Hazardous Material	CAS Number	Soil Category S-1	Soil Category S-2	Soil Category S-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
ACENAPHTHENE	83-32-9	1,000	3,000	5,000
ACENAPHTHYLENE	208-96-8	1,000	3,000	5,000
ACETONE	67-64-1	500	1,000	3,000
ALDRIN	309-00-2	0.08	0.5	3
ALIPHATIC HYDROCARBONS (See Petroleum Hydrocarbons)				
ANTHRACENE	120-12-7	1,000	3,000	5,000
ANTIMONY	7440-36-0	20	30	30
AROMATIC HYDROCARBONS (See Petroleum Hydrocarbons)				
ARSENIC	7440-38-2	20	20	50
BARIUM	7440-39-3	1,000	3,000	5,000
BENZENE	71-43-2	40	200	1,000

40.0985: continued

310 CMR 40.0985(6): TABLE 5 **

MCP Method 2: DIRECT CONTACT EXPOSURE-BASED SOIL CONCENTRATIONS APPLICABLE TO THE SPECIFIED SOIL CATEGORY.

Oil and/or Hazardous Material	CAS Number	Soil	Soil	Soil
		Category S-1	Category S-2	Category S-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
BENZO(a)ANTHRACENE	56-55-3	7	40	300
BENZO(a)PYRENE	50-32-8	2	7	30
BENZO(b)FLUORANTHENE	205-99-2	7	40	300
BENZO(g,h,i)PERYLENE	191-24-2	1,000	3,000	5,000
BENZO(k)FLUORANTHENE	207-08-9	70	400	3,000
BERYLLIUM	7440-41-7	90	200	200
BIPHENYL, 1,1-	92-52-4	1,000	3,000	5,000
BIS(2-CHLOROETHYL)ETHER	111-44-4	2	8	80
BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	30	100	1,000
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	90	600	2,000
BROMODICHLOROMETHANE	75-27-4	30	100	500
BROMOFORM	75-25-2	300	1,000	3,000
BROMOMETHANE	74-83-9	90	600	600
CADMIUM	7440-43-9	70	100	100
CARBON TETRACHLORIDE	56-23-5	30	100	1,000
CHLORDANE	12789-03-6	5	30	60
CHLOROANILINE, p-	106-47-8	7	40	40
CHLOROBENZENE	108-90-7	500	1,000	3,000
CHLOROFORM	67-66-3	500	1,000	1,000
CHLOROPHENOL, 2-	95-57-8	100	300	300
CHROMIUM (TOTAL) *	7440-47-3	100	200	200
CHROMIUM(III)	16065-83-1	1,000	3,000	5,000
CHROMIUM(VI)	18540-29-9	100	200	200
CHRYSENE	218-01-9	70	400	3,000
CYANIDE **	57-12-5	30	400	500
DIBENZO(a,h)ANTHRACENE	53-70-3	0.7	4	30
DIBROMOCHLOROMETHANE	124-48-1	20	100	500
DICHLOROBENZENE, 1,2- (o-DCB)	95-50-1	1,000	3,000	5,000
DICHLOROBENZENE, 1,3- (m-DCB)	541-73-1	100	500	500
DICHLOROBENZENE, 1,4- (p-DCB)	106-46-7	80	400	3,000
DICHLOROBENZIDINE, 3,3'-	91-94-1	3	20	100
DICHLORODIPHENYL DICHLOROETHANE, P,P'- (DDD)	72-54-8	8	40	60
DICHLORODIPHENYL DICHLOROETHYLENE,P,P'- (DDE)	72-55-9	6	30	60
DICHLORODIPHENYL TRICHLOROETHANE, P,P'- (DDT)	50-29-3	6	30	60
DICHLOROETHANE, 1,1-	75-34-3	500	1,000	3,000
DICHLOROETHANE, 1,2-	107-06-2	20	100	900
DICHLOROETHYLENE, 1,1-	75-35-4	500	1,000	3,000
DICHLOROETHYLENE, CIS-1,2-	156-59-2	100	500	500
DICHLOROETHYLENE, TRANS-1,2-	156-60-5	500	1,000	3,000
DICHLOROMETHANE	75-09-2	400	700	700
DICHLOROPHENOL, 2,4-	120-83-2	70	800	800
DICHLOROPROPANE, 1,2-	78-87-5	30	100	1,000
DICHLOROPROPENE, 1,3-	542-75-6	20	90	900
DIELDRIN	60-57-1	0.08	0.5	3
DIETHYL PHTHALATE	84-66-2	1,000	3,000	5,000
DIMETHYL PHTHALATE	131-11-3	1,000	3,000	5,000
DIMETHYLPHENOL, 2,4-	105-67-9	500	2,000	2,000
DINITROPHENOL, 2,4-	51-28-5	50	800	800
DINITROTOLUENE, 2,4-	121-14-2	2	10	80
DIOXANE, 1,4-	123-91-1	20	90	500

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0985: continued

310 CMR 40.0985(6): TABLE 5 ††

MCP Method 2: DIRECT CONTACT EXPOSURE-BASED SOIL CONCENTRATIONS APPLICABLE TO THE SPECIFIED SOIL CATEGORY.

Oil and/or Hazardous Material	CAS Number	Soil	Soil	Soil
		Category S-1	Category S-2	Category S-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
ENDOSULFAN	115-29-7	300	500	500
ENDRIN	72-20-8	10	20	20
ETHYLBENZENE	100-41-4	500	1,000	3,000
ETHYLENE DIBROMIDE	106-93-4	1	5	40
FLUORANTHENE	206-44-0	1,000	3,000	5,000
FLUORENE	86-73-7	1,000	3,000	5,000
HEPTACHLOR	76-44-8	0.3	2	10
HEPTACHLOR EPOXIDE	1024-57-3	0.1	0.9	1
HEXACHLOROBENZENE	118-74-1	0.7	0.8	0.8
HEXACHLOROBUTADIENE	87-68-3	30	100	100
HEXACHLOROCYCLOHEXANE, GAMMA (gamma-HCH)	58-89-9	1	7	60
HEXACHLOROETHANE	67-72-1	50	200	200
HMX	2691-41-0	1,000	3,000	5,000
INDENO(1,2,3-cd)PYRENE	193-39-5	7	40	300
LEAD	7439-92-1	200	600	600
MERCURY	7439-97-6	20	30	30
METHOXYCHLOR	72-43-5	200	400	400
METHYL ETHYL KETONE	78-93-3	500	1,000	3,000
METHYL ISOBUTYL KETONE	108-10-1	500	1,000	3,000
METHYL MERCURY	22967-92-6	4	8	8
METHYL TERT BUTYL ETHER	1634-04-4	100	500	500
METHYLNAPHTHALENE, 2-	91-57-6	300	500	500
NAPHTHALENE	91-20-3	500	1,000	3,000
NICKEL	7440-02-0	600	1,000	1,000
PENTACHLOROPHENOL	87-86-5	3	20	70
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)***				
PERFLUORODECANOIC ACID (PFDA)	335-76-2	0.3	0.4	0.4
PERFLUOROHEPTANOIC ACID (PFHpA)	375-85-9	0.3	0.4	0.4
PERFLUOROHXANESULFONIC ACID (PFHxS)	355-46-4	0.3	0.4	0.4
PERFLUORONONANOIC ACID (PFNA)	375-95-1	0.3	0.4	0.4
PERFLUOROOCOTANESULFONIC ACID (PFOS)	1763-23-1	0.3	0.4	0.4
PERFLUOROOCOTANOIC ACID (PFOA)	335-67-1	0.3	0.4	0.4
PERCHLORATE	NA	3	5	5
PETROLEUM HYDROCARBONS				
TOTAL PETROLEUM HYDROCARBON †	NA	1,000	3,000	5,000
ALIPHATIC HYDROCARBONS				
C5 through C8 Aliphatic Hydrocarbons	NA	100	500	500
C9 through C12 Aliphatic Hydrocarbons	NA	1,000	3,000	5,000
C9 through C18 Aliphatic Hydrocarbons	NA	1,000	3,000	5,000
C19 through C36 Aliphatic Hydrocarbons	NA	3,000	5,000	5,000
AROMATIC HYDROCARBONS				
C9 through C10 Aromatic Hydrocarbons	NA	100	500	500
C11 through C22 Aromatic Hydrocarbons	NA	1,000	3,000	5,000
PHENANTHRENE	85-01-8	500	1,000	3,000
PHENOL	108-95-2	500	1,000	3,000
POLYCHLORINATED BIPHENYLS (PCBs)	1336-36-3	1	4	4
PYRENE	129-00-0	1,000	3,000	5,000
RDX	121-82-4	20	80	400
SELENIUM	7782-49-2	400	700	700
SILVER	7440-22-4	100	200	200

40.0985: continued

310 CMR 40.0985(6): **TABLE 5** ^{††}

MCP Method 2: DIRECT CONTACT EXPOSURE-BASED SOIL CONCENTRATIONS APPLICABLE TO THE SPECIFIED SOIL CATEGORY.

Oil and/or Hazardous Material	CAS Number	Soil	Soil	Soil
		Category S-1	Category S-2	Category S-3
		µg/g (ppm)	µg/g (ppm)	µg/g (ppm)
STYRENE	100-42-5	70	300	3,000
TETRACHLORODIBENZO-p-DIOXIN (TCDD), 2,3,7,8-(equivalents)	1746-01-6	2.E-05	5.E-05	5.E-05
TETRACHLOROETHANE, 1,1,1,2-	630-20-6	80	400	500
TETRACHLOROETHANE, 1,1,2,2-	79-34-5	10	50	400
TETRACHLOROETHYLENE	127-18-4	30	200	1000
THALLIUM	7440-28-0	8	60	80
TOLUENE	108-88-3	500	1,000	3,000
TRICHLOROBENZENE, 1,2,4-	120-82-1	700	3,000	5,000
TRICHLOROETHANE, 1,1,1-	71-55-6	500	1,000	3,000
TRICHLOROETHANE, 1,1,2-	79-00-5	40	200	500
TRICHLOROETHYLENE	79-01-6	30	60	60
TRICHLOROPHENOL, 2,4,5-	95-95-4	1,000	3,000	5,000
TRICHLOROPHENOL 2,4,6-	88-06-2	20	400	400
VANADIUM	7440-62-2	400	700	700
VINYL CHLORIDE	75-01-4	1	7	60
XYLENES (Mixed Isomers)	1330-20-7	500	1,000	3,000
ZINC	7440-66-6	1,000	3,000	5,000

NOTE: All concentrations of oil and/or hazardous material in soil are calculated and presented on a dry weight/dry weight basis.

NA - Not Applicable

* - The Total Chromium standard is applicable in the absence of species-specific data for Chromium III and Chromium VI.

** - Cyanide expressed as Physiologically Available Cyanide (PAC). In the absence of measured Physiologically Available Cyanide, the standard is applicable to Total Cyanide.

*** - The listed PFAS compounds and associated CAS numbers are for the acid forms of these PFAS compounds. The PFAS standards presented in Table 5 also apply to the respective anionic forms of these PFAS compounds. These anions may form salts with any of a number of cations resulting in a variety of possible chemical species, each having a unique CAS number.

† - The Total Petroleum Hydrocarbon (TPH) standard may be used as an alternative to the appropriate combinations of the Aliphatic and Aromatic Hydrocarbon Fraction standards. The use of the general TPH standard is a valid option only for C9 and greater petroleum hydrocarbons; it is not appropriate for the characterization of risks associated with lighter (gasoline-range) hydrocarbons.

†† - The Department periodically reviews the scientific basis for these Standards and amends them, as appropriate, to incorporate new scientific information.

40.0986: Determination of Method 2 GW-2 Standards.

(1) MCP Method 1 GW-2 Standards consider the potential for oil and/or hazardous material to volatilize from the groundwater and migrate to indoor air. These standards may be modified under Method 2, or a determination may be made that one or more GW-2 standards are not applicable, based upon site-specific conditions. Modifications of a standard will result in a proposed MCP Method 2 GW-2 Standard. Proposed Method 2 standards or the determination that one or more GW-2 standards are not applicable shall be scientifically justified and sufficiently documented to demonstrate that the Response Action Performance Standard, described in 310 CMR 40.0191 has been met.

(2) An MCP Method 2 GW-2 Standard shall be protective of migration of oil and/or hazardous material into indoor air. The presence of oil and/or hazardous material in the groundwater at the proposed MCP Method 2 GW-2 Standard below or near a building shall not result in indoor air concentrations which pose a significant risk of harm to health, public welfare or the environment. The MCP Method 2 GW-2 Standard may be greater or less than the corresponding MCP Method 1 GW-2 Standard, or it may be determined that the Method 1 Standard is not applicable, based upon site-specific conditions. The development of such standards shall be documented by:

40.0986: continued

- (a) site-specific information on source, hydrogeological, and building conditions which demonstrates that the oil and/or hazardous material in the groundwater will not infiltrate to

indoor air and result in significant risk of harm to health, public welfare or the environment; and/or

(b) soil gas characterization data, indoor air characterization data, and other information and data resulting from field investigation conducted at and proximate to the disposal site.

40.0987: Determination of MCP Method 2 GW-3 Standards.

(1) MCP Method 1 GW-3 Standards consider potential migration of oil and/or hazardous material to surface water. These standards may be modified under Method 2 based upon site-specific conditions to develop MCP Method 2 GW-3 Standards or it may be determined that a discharge to surface water will not occur. The proposed Method 2 modification shall be scientifically justified and sufficiently documented to demonstrate that the Response Action Performance Standard, described in 310 CMR 40.0191, has been met.

(2) An MCP Method 2 GW-3 standard or determination shall be protective of migration of oil and/or hazardous material into surface waters and wetlands. The presence of an oil and/or hazardous material in the groundwater must not result in concentrations in a surface water or wetland which would pose a significant risk of harm to health, public welfare or the environment. The MCP Method 2 GW-3 Standard may be greater or less than the corresponding MCP Method 1 GW-3 Standard, or it may be determined that the Method 1 GW-3 standard is not applicable, considering site-specific conditions. The development of such standards or such a determination shall be documented by:

(a) transport and fate modeling that incorporates site-specific information on the source and subsurface hydrological conditions, and which demonstrates that the release will not result in concentrations of oil and/or hazardous material in the receiving surface water which exceed any applicable or suitably analogous standards described in 310 CMR 40.0993(3), and which do not otherwise result in a significant risk of harm to health, safety, public welfare or the environment; and/or

(b) long-term groundwater monitoring which demonstrates that the release will not result in concentrations of oil and/or hazardous material in the receiving surface water which exceed any applicable or suitably analogous standards described in 310 CMR 40.0993(3), and which do not otherwise result in a significant risk of harm to health, safety, public welfare or the environment. The duration of required monitoring would depend on the source mass, the mobility of the oil and/or hazardous material, and subsurface conditions.

40.0988: Method 2 Risk Characterization.

(1) When conducting a Method 2 Risk Characterization, the risk of harm to health, public welfare and the environment shall be characterized using the methodology described in 310 CMR 40.0970 (Risk Characterization Method 1), and any applicable MCP Method 1 Standards in combination with one or more MCP Method 2 Standards identified pursuant to 310 CMR 40.0980.

(2) A condition of no significant risk of harm to health, safety, public welfare and the environment exists if no Exposure Point Concentration is greater than the applicable MCP Method 1 and Method 2 Soil or Groundwater Standard. If the Method 1 or Method 2 Soil or Groundwater Standard for Total Petroleum Hydrocarbon is exceeded, a condition of No Significant Risk shall still be considered to exist if the Exposure Point Concentrations of the Aliphatic and Aromatic Hydrocarbon Fractions comprising the TPH are less than or equal to the applicable Method 1 or Method 2 Soil and Groundwater Standards.

(3) The documentation of the Method 2 Risk Characterization shall clearly state whether or not a condition of no significant risk of harm to health, public welfare or the environment exists or has been achieved at the disposal site.

40.0990: Risk Characterization Method 3

40.0991 Applicability of Method 3

Method 3 may be used to characterize the risk of harm to health, public welfare and the environment for any disposal site. In a Method 3 Risk Characterization, the risks of harm to health, public welfare and the environment are evaluated separately.

40.0992: General Approach to Method 3

Method 3 relies upon detailed information about the site, the oil and/or hazardous material, and potential exposures to Human and Environmental Receptors under all current and reasonably foreseeable Site Activities and Uses to characterize the risk of harm. The scope and level of effort of the Method 3 Risk Characterization shall reflect the site-specific nature of this Method, and the information used to characterize the risk shall be sufficiently documented to demonstrate that the Response Action Performance Standard, described in 310 CMR 40.0191, has been met.

(1) The Method 3 Risk Characterization shall be performed in a manner consistent with scientifically acceptable risk assessment practices, and consider guidance published by the Department and EPA.

(2) In performing a Method 3 Risk Characterization, the objective shall be to provide a conservative estimate of the impact that the oil and/or hazardous material may have on the Human and Environmental Receptors at the disposal site and in the surrounding environment.

(3) This Risk Characterization process makes use of existing standards, Upper Concentration Limits in Groundwater and Soil, quantitative estimates of cancer and noncancer health risks, and both quantitative and qualitative evaluations of risk to public welfare and the environment to determine the need for a remedial action or to demonstrate that a condition of No Significant Risk exists or has been achieved.

(a) The Method 3 characterization of the risk of harm to human health is described in 310 CMR 40.0993.

(b) The Method 3 characterization of the risk of harm to public welfare is described in 310 CMR 40.0994.

(c) The Method 3 characterization of the risk of harm to the environment is described in 310 CMR 40.0995.

(d) The list of Upper Concentration Limits in Groundwater and Soil is in 310 CMR 40.0996(6).

(4) The risk of harm to safety shall also be characterized, as described in 310 CMR 40.0960.

40.0993: Method 3 Human Health Risk Characterization

Under Method 3, the risk of harm to human health shall be characterized for all current and reasonably foreseeable Site Activities and Uses identified in 310 CMR 40.0923, as follows:

(1) The site, receptor and exposure information described in 310 CMR 40.0901 through 40.0920 shall be identified and documented.

(2) The groundwater and soil categories applicable to the disposal site shall be identified and documented, as described in 310 CMR 40.0930. The groundwater and soil categories shall be considered as general indicators of exposure potential in a Method 3 evaluation.

(3) All applicable or suitably analogous health standards shall be identified in the documentation of the Method 3 Risk Characterization. The MCP Method 1 Groundwater and Soil Standards listed in 310 CMR 40.0970 are not considered applicable or suitably analogous, as those standards represent an alternative approach to Method 3. The list of potentially applicable or suitably analogous standards includes, but is not limited to:

(a) Massachusetts Drinking Water Quality Standards promulgated in 310 CMR 22.00: *Drinking Water*, which are considered applicable to all category GW-1 groundwater;

(b) Massachusetts Air Quality Standards promulgated in 310 CMR 6.00: *Ambient Air Quality Standards for the Commonwealth of Massachusetts*; and

(c) Massachusetts Surface Water Quality Standards promulgated in 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*.

40.0993: continued

(4) The frequency, duration and intensity of exposure to each oil and/or hazardous material at the disposal site for each receptor at each Exposure Point shall be determined and documented, considering the current and reasonably foreseeable Site Activities and Uses identified for the disposal site. The magnitude of each receptor's total exposure to the oil and/or hazardous material at the disposal site is calculated in a manner which provides a conservative estimate of the potential exposures. Assessments conducted using a probabilistic analysis shall identify the 95th percentile estimate of each receptor's potential exposure.

(5) For each identified Human Receptor, cumulative cancer risks and cumulative non-cancer risks shall be calculated. Chemical-specific toxicity information used to estimate the cancer and non-cancer risks shall be identified and documented, and the selection of this information shall take into account standards and guidance published by the Department. Primary consideration shall be given to information developed by the Massachusetts Department of Environmental Protection for the purpose of conducting such risk assessments. Examples of such toxicity information include:

- (a) Reference Doses and Reference Concentrations; and
- (b) Carcinogenic Slope Factors and Unit Risks values.

(6) When identifying toxicity values for use in a Method 3 Risk Characterization, the following toxicity values shall be used:

- (a) For perchlorate, a chronic and subchronic reference dose of 7E-5 mg/(kg-day);
- (b) For methyl tert-butyl ether, a chronic RfD of 1E-1 mg/(kg-day);
- (c) For methyl tert-butyl ether, a subchronic RfD of 1E0 mg/(kg-day);
- (d) For tetrachloroethylene, an oral cancer slope factor of 2E-2 per mg/(kg-day);
- (e) For tetrachloroethylene, an inhalation unit risk of 3E-6 per ug/cubic meter; and
- (f) For the sum of the following per- and polyfluoroalkyl substances (PFAS), a chronic and subchronic reference dose of 5E-6 mg/(kg-day):
 1. Perfluorodecanoic acid (PFDA);
 2. Perfluoroheptanoic acid (PFHpA);
 3. Perfluorohexanesulfonic acid (PFHxS);
 4. Perfluorononanoic acid (PFNA);
 5. Perfluorooctanesulfonic acid (PFOS); and
 6. Perfluorooctanoic acid (PFOA).

(7) If an applicable toxicity value is not listed at 310 CMR 40.0993(6), technical justification for the value selected must be provided. Preferential consideration shall be given to sources of toxicity values in accordance with the following hierarchy:

- (a) Toxicity values adopted or otherwise published by MassDEP;
- (b) Toxicity values listed in EPA's Integrated Risk Information System (IRIS) database; and
- (c) Other EPA and non-EPA sources including, but not limited to, EPA Provisional Peer Reviewed Toxicity Values (PPRTVs); Minimum Risk Levels (MRLs) published by U.S. Agency for Toxic Substances and Disease Registry (ATSDR); and values published by California Environmental Protection Agency. In selecting a source for a toxicity value pursuant to 310 CMR 40.0993(7)(c), there should be a preference for toxicity assessments that are informed by current scientific information and account for the most sensitive endpoints.

(8) For receptors who may be exposed to mixtures of oil and/or hazardous material, or through multiple Exposure Pathways at the disposal site, the cumulative risk shall reflect those multiple exposures. Risk estimates are presumed to be additive unless an alternative mechanism is demonstrated to be appropriate.

(9) Risk calculations performed using a probabilistic analysis shall identify the cumulative cancer and non-cancer risks associated with the 95th percentile estimate of exposure.

(10) The Cumulative Receptor Cancer Risks shall be compared to a Cumulative Cancer Risk Limit which is an Excess Lifetime Cancer Risk equal to one-in-one hundred thousand. Cumulative Receptor Non-cancer Risks shall be compared to a Cumulative Non-cancer Risk Limit which is a Hazard Index equal to one. Estimated Exposure Point Concentrations shall be compared to any applicable or suitably analogous standards.

40.0993: continued

- (11) A condition of no significant risk of harm to human health exists or has been achieved if:
- (a) no Exposure Point Concentration of oil and/or hazardous material is greater than an applicable or suitably analogous public health standard;
 - (b) no Cumulative Receptor Cancer Risk calculated is greater than the Cumulative Cancer Risk Limit; and
 - (c) no Cumulative Receptor Non-cancer Risk is greater than the Cumulative Receptor Non-cancer Risk Limit.
- (12) The documentation of the Method 3 human health Risk Characterization shall clearly state whether or not a condition of no significant risk of harm to human health exists or has been achieved, based upon the criteria described in 310 CMR 40.0993(11).
- (13) All mathematical equations used to calculate cumulative receptor cancer and non-cancer risks shall be clearly presented and documented.

40.0994: Method 3 Public Welfare Risk Characterization

Purpose. There are two purposes for conducting a characterization of risk to public welfare: (a) to identify and evaluate nuisance conditions which may be localized, and (b) to identify and evaluate significant community effects. The characterization of risk to public welfare shall consider effects which are or may result from the presence of residual contamination or the implementation of a proposed remedial alternative.

The characterization of risk to public welfare shall be conducted for all current and reasonably foreseeable Site Activities and Uses identified in 310 CMR 40.0923, as follows:

- (1) The characterization of the risk of harm to public welfare shall consider the site, receptor, and exposure information identified in 310 CMR 40.0901 through 40.0930, as well as data collected pursuant to the response action(s) being performed.
- (2) The characterization of the risk to public welfare shall, in addition to those factors identified in 310 CMR 40.0994(1), also consider such factors as the existence of nuisance conditions, loss of active or passive property use(s), and any non-pecuniary effects not otherwise considered in the characterization of risk of harm to health, safety, and the environment, but which may accrue due to the degradation of public resources directly attributable to the release or threat of release of oil and/or hazardous material or the remedial alternative.
- (3) The risk of harm to public welfare shall also be characterized by comparing the concentration of each oil or hazardous material to the Upper Concentration Limits in Soil and Groundwater, as described at 310 CMR 40.0996.
- (4) A level of no significant risk of harm to public welfare exists or has been achieved if:
- (a) No nuisance conditions exist or will result from the release or threat of release of oil or hazardous material, or the remedial alternative, including:
 - 1. The breathing zone of ambient and indoor air are currently and will, in the reasonably foreseeable future, remain free from persistent, noxious odors,
 - 2. There is accessible drinking water that is and will, in the reasonably foreseeable future, remain free from noxious taste and odors; and
 - 3. Livestock is and will remain, in the reasonably foreseeable future, free from harmful effects. No specific evaluation of livestock is required if it is reasonable to conclude that the human health and environmental risk characterizations conducted for the site are also protective of livestock exposures.
 - (b) No community that is currently affected and/or community for which it is reasonably foreseeable to conclude that it could be affected by the release experiences significant adverse impacts as set forth as the factors to be considered in 310 CMR 40.0994(2); and
 - (c) The requirements of 310 CMR 40.0996 concerning the Upper Concentration Limits are met.
- (5) The documentation of the Method 3 public welfare Risk Characterization shall clearly state whether or not a condition of no significant risk of harm to public welfare exists or has been achieved at the current and reasonably foreseeable Site Activities and Uses.

40.0995: Method 3 Environmental Risk Characterization

The characterization of risk of harm to the environment shall be conducted for all current and reasonably foreseeable Site Activities and Uses identified in 310 CMR 40.0923. Characterization of the risk of harm to the environment shall include an assessment of chemical data, potential contaminant migration pathways, and an evaluation of biota and habitats at and in the vicinity of the disposal site, as described in 310 CMR 40.0995(2), as well as through the application of Upper Concentration Limits, as described in 310 CMR 40.0995(5).

(1) A Method 3 characterization of the risk of harm to the environment shall be based on the site, receptor and exposure information identified in 310 CMR 40.0901 through 40.0920, as well as any relevant data collected during the response action being performed.

(2) The risk of harm to the site biota and habitats shall be characterized by evaluating ecological parameters using a two-stage approach. In Stage I, the objective is to identify and document conditions which do not warrant a Stage II Risk Characterization, either because of the absence of a potentially significant exposure pathway or because environmental harm is readily apparent and therefore additional assessment would be redundant. If a potentially significant exposure pathway is indicated by the available information per 310 CMR 40.0995(3)(a) and (c), then a Stage II Environmental Risk Characterization is required to characterize the risks posed by those exposures.

(a) A Stage I Environmental Screening shall be performed as described in 310 CMR 40.0995(3) for all disposal sites evaluated using Risk Characterization Method 3, and for those disposal sites evaluated using a Method 3 Environmental Risk Characterization in combination with Method 1 or Method 2 as described in 310 CMR 40.0942.

(b) Following a Stage I Environmental Screening and based upon the criteria described in 310 CMR 40.0995(3), it may be concluded that:

1. A Stage II Environmental Risk Characterization is not required because there are no complete exposure pathways that could result in potentially significant exposures, and a condition of no significant risk of harm to site biota and habitats clearly exists, or
2. A Stage II Environmental Risk Characterization is not required because, for each contaminated medium, harm is readily apparent; therefore a condition of no significant risk of harm to the site biota and habitats clearly "does not exist", and a Stage II Environmental Risk Characterization would be redundant, or
3. A Stage II Environmental Risk Characterization is required because, for one or more contaminated media, there is not enough information to determine whether or not a condition of no significant risk of harm exists, and therefore those media are considered to present "potentially significant exposures".

(c) The scope and nature of the Stage II Environmental Risk Characterization shall depend on the nature of the disposal site, the Environmental Receptors affected or potentially affected, and the Stage I Environmental Screening criteria which indicated the need for the Stage II Environmental Risk Characterization.

(3) Stage I Environmental Screening. Exposures of site biota and habitats shall be characterized by the Stage I Environmental Screening as follows:

(a) Available evidence shall be evaluated to determine whether there is current or potential future exposure of Environmental Receptors to contamination at or from the disposal site. Sources of such evidence shall include historical records, site data, field observations, statements by present and past residents or employees, and any other relevant source.

1. Evidence of current or potential exposure shall include, but is not limited to:
 - a. Current or past visible physical evidence that oil and/or hazardous material at or from the disposal site have come to be located in surface soil, surface water, sediment or wetlands. Examples of such evidence include, without limitation, the presence of sheens from oil and/or hazardous material, NAPL, oil, tar or other solid or semisolid hazardous material in surface soil, surface water, sediment or wetlands;
 - b. Records or other evidence of current or past impacts of oil and/or hazardous material from the disposal site on wildlife, fish, shellfish or other aquatic biota. Examples of such impacts include, without limitation, fish kills and abiotic conditions;
 - c. Analytical data indicating the presence of oil and/or hazardous material attributable to the site in question in surface water or sediment (including wetlands);

40.0995: continued

- d. The potential for the transport of oil and/or hazardous material in the groundwater or surface runoff to such receptors as surface water or sediments (including wetlands) identified as Environmental Receptors; or
 - e. The presence of oil and/or hazardous material at the disposal site within two feet of the ground surface and the potential for such contamination to result in exposure to wildlife.
2. If no current or potential future exposure is identified, then a condition of "no significant risk of harm" to the site biota and habitats exists or has been achieved, and a Stage II Environmental Risk Characterization is not required.
- (b) If any current or potential future exposure is identified, then for each such exposure, site conditions shall be evaluated to determine whether significant environmental harm is "readily apparent".
- 1. The following conditions shall represent "readily apparent harm":
 - a. Visual evidence of stressed biota attributable to the release at the disposal site, including, without limitation, fish kills or abiotic conditions;
 - b. The existence of oil and/or hazardous material attributable to the disposal site in concentrations which exceed Massachusetts Surface Water Standards promulgated in 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*, which include USEPA Ambient Water Quality Criteria applied pursuant to 314 CMR 4.05(5)(e).
 - c. Visible presence of oil, tar, or other non-aqueous phase hazardous material in soil within three feet of the ground surface over an area equal to or greater than two acres, or over an area equal to or greater than 1,000 square feet in sediment within one foot of the sediment surface.
 - 2. If a condition of readily apparent harm exists in any environmental medium, then a condition of "no significant risk of harm" does not exist, and a Stage II Environmental Risk Characterization is not required to make that determination for that medium.
- (c) Each current and potential future exposure Pathway identified in 310 CMR 40.0995(3)(a) must be evaluated to determine whether it could result in potentially significant exposure.
- 1. Any potential exposure identified in 310 CMR 40.0995(3)(a) must be considered a "potentially significant exposure" unless it can be ruled out as such using:
 - a. USEPA Ambient Water Quality Criteria and Massachusetts Surface Water Standards promulgated in 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*;
 - b. environmental concentrations specifically adopted by the Department as screening criteria; or
 - c. site size, location, and/or landscape characteristics specifically adopted by the Department as screening criteria.
 - 2. If, through the application of the screening criteria identified in 310 CMR 40.0995(3)(c)1., an environmental medium (such as soil, sediment or surface water) can be screened out as a source of "potentially significant exposures", then a Stage II Environmental Risk Characterization is not required for any exposure pathway for which that medium is the contaminant source.
 - 3. If current or potential future exposures to contaminants in any media are not ruled out in Stage I Screening, those exposures are considered to be "potentially significant exposures" and a Stage II Environmental Risk Characterization is required to determine whether a condition of "no significant risk of harm" exists.
- (4) Stage II Environmental Risk Characterization: A Stage II Environmental Risk Characterization shall be used to determine whether there is significant risk of environmental harm or evidence of environmental harm.
- (a) The Stage II Environmental Risk Characterization shall be conducted under the supervision of an individual trained and knowledgeable in ecological studies.
 - (b) The Stage II Environmental Risk Characterization shall identify environmental resources associated with the disposal site, such as wetlands, aquatic and terrestrial habitat, fisheries, or rare and endangered species, and shall evaluate whether the release of oil and/or hazardous material has adversely impacted, or may adversely impact the ecological functions which support those resources.
 - 1. The evaluation shall focus on ecological functions at the spatial scale of the disposal site.
 - 2. The relevance of potential impacts shall be judged at the spatial scale of the disposal site (e.g., effects on subpopulations that use the site as habitat) rather than the proportional significance of the site to regional environmental resources.

40.0995: continued

- (c) The Stage II Risk Characterization shall include, but is not limited to, the following steps:
1. Problem Formulation. The first phase of the assessment shall establish the goals, scope and focus of the Stage II Environmental Risk Characterization. A baseline site survey to identify biota and exposures of potential concern shall be conducted. Available scientific literature shall be used to identify potential adverse effects of concern.
 - a. Assessment endpoints shall be identified. The combination of assessment endpoints selected for a site must represent the ecological entities, characteristics and functions most likely to be adversely affected by the oil and/or hazardous material in each contaminated medium at the site. The assertion that the selected assessment endpoints are representative of the exposed biota on the basis of their susceptibility to harm by the contamination of concern must be justified and documented, either on a case-by-case basis or by citing DEP guidance. Assessment endpoints shall be defined in terms of ecological entities and their characteristics and functions, as follows:
 - i. An ecological entity refers to an organism, a species, a functional group of species, a community, an ecosystem, or a habitat.
 - ii. Valued characteristics include, but are not limited to, growth, reproduction, survival, nutrient cycling, and habitat functions, health of local populations or sub-populations and community diversity.
 - b. Measures of exposure shall consider the spatial and temporal distribution of oil and hazardous material, and shall represent the co-occurrence of contamination with the assessment endpoint organisms.
 - c. Measures of effects shall be selected for each assessment endpoint, such that the results of the measures will enable the detection of adverse effects of oil and hazardous material on the assessment endpoint. The relevance and validity of the proposed measures of effects shall be documented. Measures of effects may include, but are not limited to:
 - i. Comparison of environmental concentrations to ecologically based benchmarks published in the scientific literature, technical literature or government documents;
 - ii. toxicity data reported in scientific literature;
 - iii. site-specific toxicity tests to evaluate the effects of contaminated media on survival, growth, and/or reproduction of the target organisms;
 - iv. quantitative or semi-quantitative field surveys to evaluate adverse impacts on receptor subpopulations or communities exposed to oil or hazardous materials at or from the site; and
 - v. field experiments.
 2. Analysis. The second phase of the risk assessment shall characterize any actual and potential environmental exposures and associated ecological effects.
 3. Risk Characterization. In the final phase of the risk assessment, the results of the environmental exposure and effects analysis shall be used to evaluate the likelihood of adverse ecological effects. The documentation of the Risk Characterization shall include a summary of assumptions, scientific uncertainties, strengths and weaknesses of the analyses, and justification of conclusions reached concerning the ecological significance of the risks.
- (d) The Stage II Environmental Risk Characterization may also include the development of an environmental risk-based guideline for oil and/or hazardous material for which no environmental standards exists, and to the extent sufficient information concerning the environmental risks posed by the oil and/or hazardous material is available. Such guidelines shall be developed in a manner consistent with scientifically acceptable practices, taking into account guidance published by the Department or the U.S. Environmental Protection Agency, and information from the scientific literature, laboratory studies or field studies.
- (e) Conclusions. A level of no significant risk of harm to the environment exists, or has been achieved, if:
1. there is no physical evidence of a continuing release of oil and/or hazardous material at or from the disposal site to surface waters and wetlands which significantly affects Environmental Receptors; and
 2. there is no evidence of biologically significant harm (at the subpopulation, community, or system-wide level) known or believed to be associated with current or foreseeable future exposure of wildlife, fish, shellfish or other aquatic biota to oil and/or hazardous material at or from the disposal site; and

40.0995: continued

3. concentrations of oil and/or hazardous material at or from the disposal site do not and are not likely to exceed any applicable or suitably analogous environmental standards which have been formally promulgated, including Massachusetts Surface Water Quality Standards promulgated at 314 CMR 4.00: *Massachusetts Surface Water Quality Standards* at current and reasonably foreseeable Exposure Points; and
 4. there is no indication of the potential for biologically significant harm (at the subpopulation, community, or system-wide level), either currently or for any foreseeable period of time, to Environmental Receptors considering their potential exposures to oil and/or hazardous material and the toxicity of the OHM.
- (5) The risk of harm to the environment shall also be characterized by comparing the concentration of each oil or hazardous material to the Upper Concentration Limits in Soil and Groundwater, as described in 310 CMR 40.0996.
- (6) The documentation of the Method 3 environmental Risk Characterization shall clearly state whether or not a condition of no significant risk of harm to environmental resources, biota and habitats exists or has been achieved at the disposal site.

40.0996: Method 3 Upper Concentration Limits

- (1) Upper Concentration Limits in soil and groundwater are concentrations of oil and/or hazardous material which, if exceeded under the conditions specified below, indicate the potential for significant risk of harm to public welfare and the environment under future conditions. If a condition of No Significant Risk has not been achieved for future conditions, but all substantial hazards have been eliminated, then the site may be eligible for a Temporary Solution as described in 310 CMR 40.1050.
- (2) All comparisons of soil and groundwater concentrations to Upper Concentration Limits in Soil and Groundwater required under 310 CMR 40.0000 shall be made using both:
 - (a) the arithmetic average of the concentration of oil or hazardous material at a disposal site; and
 - (b) the arithmetic average of the concentration of oil or hazardous material within any Hot Spot identified at the disposal site.
- (3) The risk of harm to public welfare and the environment shall also be characterized by comparing the concentration(s) of oil or hazardous material in soil and groundwater to the Upper Concentration Limits in Soil and Groundwater listed in 310 CMR 40.0996(6) or identified pursuant to 310 CMR 40.0996(7).
 - (a) A level of No Significant Risk of harm to public welfare and to the environment exists or has been achieved for both current and future conditions if the concentration of oil and/or hazardous material does not exceed an applicable Upper Concentration Limit, as described at 310 CMR 40.0996(2). If the Upper Concentration Limit in Soil or Groundwater for Total Petroleum Hydrocarbon is exceeded, a condition of No Significant Risk shall still be considered to exist if the concentrations of the Aliphatic and Aromatic Hydrocarbon Fractions comprising the TPH are less than or equal to the applicable Upper Concentration Limits in Soil and Groundwater.
 - (b) Except as provided in 310 CMR 40.0996(4), a level of No Significant Risk of harm to public welfare and to the environment does not yet exist for future conditions if the concentration of one or more oil and/or hazardous materials exceed an applicable Upper Concentration Limit, as described at 310 CMR 40.0996(2). The disposal site may, however, pose No Significant Risk for current conditions and meet the conditions of a Temporary Solution if all other requirements for a Temporary Solution are satisfied.
- (4) For a disposal site at which the concentration of one or more oil and/or hazardous material in Soil exceeds an Upper Concentration Limit, a level of No Significant Risk of harm to public welfare and to the environment exists or has been achieved for both current and future conditions if a finding of No Significant Risk of harm to public welfare and the environment has been made pursuant to 310 CMR 40.0994 and 40.0995, respectively, an Activity and Use Limitation is implemented as required in 310 CMR 40.1012(2), and the Soil with concentrations exceeding an Upper Concentration Limit:
 - (a) has been permanently immobilized or fixated as part of a remedial action;
 - (b) is located at a depth greater than 15 feet from the ground surface; or
 - (c) is located beneath an Engineered Barrier.

40.0996: continued

(5) An Engineered Barrier means a permanent cap with or without a liner that is designed, constructed and maintained in accordance with scientific and engineering standards to achieve a level of no significant risk for any foreseeable period of time.

(a) An Engineered Barrier shall:

1. prevent direct contact with contaminated media;
2. control any vapors or dust emanating from contaminated media;
3. prevent erosion and any infiltration of precipitation or run-off that could jeopardize the integrity of the barrier or result in the potential mobilization and migration of contaminants;
4. be comprised of materials that are resistant to degradation;
5. be consistent with the technical standards of RCRA Subpart N, 40 CFR 264.300, 310 CMR 30.600: *Technical Standards for All Hazardous Waste Facilities* or equivalent standards;
6. include a defining layer that visually identifies the beginning of the barrier; and
7. be appropriately monitored and maintained to ensure the long-term integrity and performance in accordance with a monitoring and maintenance plan that shall be submitted to the Department and shall document that one or more financial assurance mechanism(s), detailed in 310 CMR 30.906: *Financial Assurance for Post-closure Care*, have been established and adequately provide for ongoing future monitoring, maintenance and any necessary replacement of the barrier;

(b) An Engineered Barrier shall not include an existing building, structure or cover material unless it is designed and constructed to serve as an Engineered Barrier pursuant to the requirements of 310 CMR 40.0996(5).

(6) Table 6 lists the Upper Concentration Limits in Groundwater and Soil.

(7) Except as specified in 310 CMR 40.0996(7)(c) for any oil or hazardous material not listed at 310 CMR 40.0996(6), either a default or chemical-specific Upper Concentration Limit must be used.

(a) The default Upper Concentration Limit in Groundwater shall be 10,000 µg/L and the default Upper Concentration Limit in Soil shall be 1,000 µg/g.

(b) The chemical-specific Upper Concentration Limits shall be calculated using the methodology presented at 310 CMR 40.0983 and 40.0984.

1. The Upper Concentration Limit in Groundwater shall be equal to ten times the highest groundwater standard calculated at 310 CMR 40.0983 or 100,000 µg/L, whichever is lower.
2. The Upper Concentration Limit in Soil shall be equal to ten times the highest soil standard calculated at 310 CMR 40.0984, or 10,000 µg/g, whichever is lower.

(c) For the following oil and/or hazardous material, the Upper Concentration Limits in Soil and Groundwater are not applicable. As a result, the comparison of site concentrations to Upper Concentration Limits pursuant to 310 CMR 40.0996(3) is not required, and the need for an Activity and Use Limitation shall not be determined by comparison to an Upper Concentration Limit in Soil, as described in 310 CMR 40.1012(2)(a)3. and (3)(b).

1. aluminum
2. asbestos
3. calcium
4. iron
5. potassium (excluding elemental potassium)
6. sodium (excluding elemental sodium)

(8) Ongoing monitoring shall be performed as necessary to ensure that a condition of No Significant Risk is maintained at any disposal site where a Permanent Solution has been achieved and the concentration of one or more oil and/or hazardous material is greater than the Upper Concentration Limit. The results of such monitoring shall be submitted to the Department.

40.0996: continued

310 CMR 40.0996(6): TABLE 6^{††}

MCP Method 3: UPPER CONCENTRATION LIMITS (UCLs) IN GROUNDWATER AND SOIL

Oil and/or Hazardous Material	CAS Number	UCLs IN	UCLs IN
		GROUNDWATER	SOIL
		µg/L (ppb)	µg/g (ppm)
ACENAPHTHENE	83-32-9	100,000	10,000
ACENAPHTHYLENE	208-96-8	100,000	10,000
ACETONE	67-64-1	100,000	10,000
ALDRIN	309-00-2	300	30
ALIPHATIC HYDROCARBONS (See Petroleum Hydrocarbons)			
ANTHRACENE	120-12-7	600	10,000
ANTIMONY	7440-36-0	80,000	300
AROMATIC HYDROCARBONS (See Petroleum Hydrocarbons)			
ARSENIC	7440-38-2	9,000	500
BARIUM	7440-39-3	100,000	10,000
BENZENE	71-43-2	100,000	10,000
BENZO(a)ANTHRACENE	56-55-3	10,000	3,000
BENZO(a)PYRENE	50-32-8	5,000	300
BENZO(b)FLUORANTHENE	205-99-2	4,000	3,000
BENZO(g,h,i)PERYLENE	191-24-2	500	10,000
BENZO(k)FLUORANTHENE	207-08-9	1,000	10,000
BERYLLIUM	7440-41-7	2,000	2,000
BIPHENYL, 1,1-	92-52-4	100,000	10,000
BIS(2-CHLOROETHYL)ETHER	111-44-4	100,000	800
BIS(2-CHLOROISOPROPYL)ETHER	108-60-1	100,000	10,000
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	100,000	10,000
BROMODICHLOROMETHANE	75-27-4	100,000	5,000
BROMOFORM	75-25-2	100,000	10,000
BROMOMETHANE	74-83-9	8,000	6,000
CADMIUM	7440-43-9	50	1,000
CARBON TETRACHLORIDE	56-23-5	50,000	10,000
CHLORDANE	12789-03-6	20	600
CHLOROANILINE, p-	106-47-8	100,000	400
CHLOROBENZENE	108-90-7	10,000	10,000
CHLOROFORM	67-66-3	100,000	10,000
CHLOROPHENOL, 2-	95-57-8	100,000	3,000
CHROMIUM (TOTAL) *	7440-47-3	3,000	2,000
CHROMIUM(III)	16065-83-1	6,000	10,000
CHROMIUM(VI)	18540-29-9	3,000	2,000
CHRYSENE	218-01-9	700	10,000
CYANIDE **	57-12-5	2,000	5,000
DIBENZO(a,h)ANTHRACENE	53-70-3	400	300
DIBROMOCHLOROMETHANE	124-48-1	100,000	5,000
DICHLOROBENZENE, 1,2- (o-DCB)	95-50-1	80,000	10,000
DICHLOROBENZENE, 1,3- (m-DCB)	541-73-1	100,000	5,000
DICHLOROBENZENE, 1,4- (p-DCB)	106-46-7	80,000	10,000
DICHLOROBENZIDINE, 3,3'-	91-94-1	20,000	1,000
DICHLORODIPHENYL DICHLOROETHANE, P,P'- (DDD)	72-54-8	500	600
DICHLORODIPHENYL DICHLOROETHYLENE,P,P'- (DDE)	72-55-9	4,000	600
DICHLORODIPHENYL TRICHLOROETHANE, P,P'- (DDT)	50-29-3	10	600
DICHLOROETHANE, 1,1-	75-34-3	100,000	10,000
DICHLOROETHANE, 1,2-	107-06-2	100,000	9,000
DICHLOROETHYLENE, 1,1-	75-35-4	100,000	10,000
DICHLOROETHYLENE, CIS-1,2-	156-59-2	100,000	5,000
DICHLOROETHYLENE, TRANS-1,2-	156-60-5	100,000	10,000

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

40.0996: continued

310 CMR 40.0996(6): TABLE 6^{††}

MCP Method 3: UPPER CONCENTRATION LIMITS (UCLs) IN GROUNDWATER AND SOIL

Oil and/or Hazardous Material	CAS Number	UCLs IN	UCLs IN
		GROUNDWATER	SOIL
		µg/L (ppb)	µg/g (ppm)
DICHLOROMETHANE	75-09-2	100,000	7,000
DICHLOROPHENOL, 2,4-	120-83-2	100,000	8,000
DICHLOROPROPANE, 1,2-	78-87-5	100,000	10,000
DICHLOROPROPENE, 1,3-	542-75-6	2,000	9,000
DIELDRIN	60-57-1	80	30
DIETHYL PHTHALATE	84-66-2	100,000	10,000
DIMETHYL PHTHALATE	131-11-3	100,000	10,000
DIMETHYLPHENOL, 2,4-	105-67-9	100,000	10,000
DINITROPHENOL, 2,4-	51-28-5	100,000	8,000
DINITROTOLUENE, 2,4-	121-14-2	100,000	800
DIOXANE, 1,4-	123-91-1	100,000	5,000
ENDOSULFAN	115-29-7	100	5,000
ENDRIN	72-20-8	50	200
ETHYLBENZENE	100-41-4	100,000	10,000
ETHYLENE DIBROMIDE	106-93-4	100,000	400
FLUORANTHENE	206-44-0	2,000	10,000
FLUORENE	86-73-7	400	10,000
HEPTACHLOR	76-44-8	20	100
HEPTACHLOR EPOXIDE	1024-57-3	70	10
HEXACHLOROBENZENE	118-74-1	60,000	8
HEXACHLOROBUTADIENE	87-68-3	30,000	1,000
HEXACHLOROCYCLOHEXANE, GAMMA (gamma-HCH)	58-89-9	2,000	600
HEXACHLOROETHANE	67-72-1	100,000	2,000
HMX	2691-41-0	100,000	10,000
INDENO(1,2,3-cd)PYRENE	193-39-5	1,000	3,000
LEAD	7439-92-1	150	6,000
MERCURY	7439-97-6	200	300
METHOXYCHLOR	72-43-5	400	4,000
METHYL ETHYL KETONE	78-93-3	100,000	10,000
METHYL ISOBUTYL KETONE	108-10-1	100,000	10,000
METHYL MERCURY	22967-92-6	200	80
METHYL TERT BUTYL ETHER	1634-04-4	100,000	5,000
METHYLNAPHTHALENE, 2-	91-57-6	100,000	5,000
NAPHTHALENE	91-20-3	100,000	10,000
NICKEL	7440-02-0	2,000	10,000
PENTACHLOROPHENOL	87-86-5	2,000	700
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)***			
PERFLUORODECANOIC ACID (PFDA)	335-76-2	100,000	4
PERFLUOROHEPTANOIC ACID (PFHpA)	375-85-9	100,000	4
PERFLUOROHEXANESULFONIC ACID (PFHxS)	355-46-4	5,000	4
PERFLUORONONANOIC ACID (PFNA)	375-95-1	100,000	4
PERFLUOROOCETANESULFONIC ACID (PFOS)	1763-23-1	5,000	4
PERFLUOROOCETANOIC ACID (PFOA)	335-67-1	100,000	4
PERCHLORATE	-	10,000	50
PETROLEUM HYDROCARBONS			
TOTAL PETROLEUM HYDROCARBON †	NA	50,000	10,000
ALIPHATIC HYDROCARBONS			
C5 through C8 Aliphatic Hydrocarbons	NA	100,000	5,000
C9 through C12 Aliphatic Hydrocarbons	NA	100,000	20,000
C9 through C18 Aliphatic Hydrocarbons	NA	100,000	20,000
C19 through C36 Aliphatic Hydrocarbons	NA	100,000	20,000
AROMATIC HYDROCARBONS			
C9 through C10 Aromatic Hydrocarbons	NA	100,000	5,000
C11 through C22 Aromatic Hydrocarbons	NA	100,000	10,000
PHENANTHRENE	85-01-8	100,000	10,000

40.0996: continued

310 CMR 40.0996(6): TABLE 6 ††

MCP Method 3: UPPER CONCENTRATION LIMITS (UCLs) IN GROUNDWATER AND SOIL

Oil and/or Hazardous Material	CAS Number	UCLs IN	UCLs IN
		GROUNDWATER	SOIL
		µg/L (ppb)	µg/g (ppm)
PHENOL	108-95-2	100,000	10,000
POLYCHLORINATED BIPHENYLS (PCBs)	1336-36-3	100	100
PYRENE	129-00-0	600	10,000
RDX	121-82-4	100,000	4,000
SELENIUM	7782-49-2	1,000	7,000
SILVER	7440-22-4	1,000	2,000
STYRENE	100-42-5	60,000	10,000
TETRACHLORODIBENZO-p-DIOXIN (TCDD), 2,3,7,8-(equivalents)	1746-01-6	4.E-01	5.E-04
TETRACHLOROETHANE, 1,1,1,2-	630-20-6	100,000	5,000
TETRACHLOROETHANE, 1,1,2,2-	79-34-5	100,000	4,000
TETRACHLOROETHYLENE	127-18-4	100,000	10,000
THALLIUM	7440-28-0	30,000	800
TOLUENE	108-88-3	100,000	10,000
TRICHLOROBENZENE, 1,2,4-	120-82-1	100,000	10,000
TRICHLOROETHANE, 1,1,1-	71-55-6	100,000	10,000
TRICHLOROETHANE, 1,1,2-	79-00-5	100,000	5,000
TRICHLOROETHYLENE	79-01-6	50,000	600
TRICHLOROPHENOL, 2,4,5-	95-95-4	100,000	10,000
TRICHLOROPHENOL 2,4,6-	88-06-2	50,000	4,000
VANADIUM	7440-62-2	40,000	7,000
VINYL CHLORIDE	75-01-4	100,000	600
XYLENES (Mixed Isomers)	1330-20-7	100,000	10,000
ZINC	7440-66-6	50,000	10,000

NOTE: All concentrations of oil and/or hazardous material in soil are calculated and presented on a dry weight/dry weight basis.

NA - Not Applicable

* - The Total Chromium standard is applicable in the absence of species-specific data for Chromium III and Chromium VI.

** - Cyanide expressed as Physiologically Available Cyanide (PAC). In the absence of measured Physiologically Available Cyanide, the standard is applicable to Total Cyanide.

*** - The listed compounds and associated CAS numbers are for the acid forms of these PFAS compounds. The PFAS standards presented in Table 6 are also applicable to the respective anionic forms of these PFAS compounds. These anions may form salts with any of a number of cations resulting in a variety of possible chemical species, each having a unique CAS number.

† - The Total Petroleum Hydrocarbon (TPH) standard may be used as an alternative to the appropriate combinations of the Aliphatic and Aromatic Hydrocarbon Fraction standards. The use of the general TPH standard is a valid option only for C9 and greater petroleum hydrocarbons; it is not appropriate for the characterization of risks associated with lighter (gasoline-range) hydrocarbons.

†† - The Department periodically reviews the scientific basis for these Standards and amends them, as appropriate, to incorporate new scientific information.

SUBPART J: PERMANENT AND TEMPORARY SOLUTIONS

40.1000: Permanent and Temporary Solutions

310 CMR 40.1001 through 40.1099 shall be cited collectively as 310 CMR 40.1000.

40.1001: Purpose

- (1) 310 CMR 40.1000 establishes requirements and procedures for:
 - (a) determining when the response actions taken at a site where there has been a release or threat of release of oil and/or hazardous material to the environment are sufficient to meet the requirements of a Permanent or Temporary Solution;

40.1001: continued

- (b) implementing Activity and Use Limitations;
- (c) identifying any conditions that apply to maintaining the Permanent or Temporary Solution; and
- (d) documenting and supporting the Permanent or Temporary Solution in a Permanent Solution Statement or Temporary Solution Statement.

40.1002: Applicability

The requirements contained in 310 CMR 40.1000 are applicable to all releases and threats of release of oil and/or hazardous material which require notification to the Department under the provisions of 310 CMR 40.0300, except as specifically provided in 310 CMR 40.0110 for a site or disposal site that is adequately regulated.

40.1003: General Provisions for Permanent and Temporary Solutions

- (1) All necessary and required response actions under 310 CMR 40.0000 shall not have been conducted at a site or disposal site, unless and until a level of No Significant Risk exists or has been achieved and a Permanent Solution has been achieved in accordance with 310 CMR 40.1000.
- (2) RPs, PRPs and Other Persons conducting response actions at any site for which notification of a release or threat of release of oil and/or hazardous material is required pursuant to 310 CMR 40.0300 shall achieve a Permanent or Temporary Solution and submit a Permanent or Temporary Solution Statement to the Department in accordance with the requirements of 310 CMR 40.1000 within the deadlines established in 310 CMR 40.0500, or any other deadline established under 310 CMR 40.0000 or any determination or order issued by the Department. In such cases where a Temporary Solution is achieved, a Permanent Solution must eventually be achieved when such Permanent Solution becomes feasible.
- (3) A Permanent or Temporary Solution may be achieved, and a Permanent or Temporary Solution Statement may be submitted for an entire site, disposal site, or a portion of a disposal site.
- (4) The location of a site for which a Permanent or Temporary Solution applies shall be clearly and accurately identified in the Permanent or Temporary Solution Statement. The boundaries of a disposal site or portion of a disposal site for which a Permanent or Temporary Solution applies shall be clearly and accurately delineated and provided in documentation submitted with the Permanent or Temporary Solution Statement.
- (5) Source Elimination or Control. A Permanent or Temporary Solution shall not be achieved unless and until response actions are taken to adequately identify and address Sources of OHM Contamination at the disposal site. Such response actions shall ensure:
 - (a) for a Permanent or Temporary Solution, all unpermitted releases of OHM to the environment are eliminated;
 - (b) for a Permanent Solution, all Sources of OHM Contamination are eliminated, or if they are not eliminated, they are eliminated to the extent feasible and they are controlled;
 - (c) for a Temporary Solution, all Sources of OHM Contamination are eliminated or controlled, to the extent feasible.
- (6) Migration Control. A Permanent or Temporary Solution shall not be achieved, unless and until response actions are taken to adequately assess and control the subsurface migration of OHM remaining at a disposal site. Such response actions shall ensure:
 - (a) for a Permanent Solution, plumes of dissolved OHM in groundwater and vapor-phase OHM in the Vadose Zone are stable or contracting; and
 - (b) for a Temporary Solution, plumes of dissolved OHM in groundwater and vapor-phase OHM in the Vadose Zone are stable or contracting or otherwise controlled or mitigated to the extent feasible.

40.1003: continued

(7) NAPL. A Permanent or Temporary Solution shall not be achieved at a disposal site where NAPL is or was visibly present at levels requiring notification under the provisions of 310 CMR 40.0300 unless and until response actions are taken to adequately assess the nature, extent, and mobility of the NAPL, and, where necessary, remedial actions are taken to adequately contain or remove such NAPL. Such response actions shall ensure:

(a) for a Permanent Solution:

1. Non-stable NAPL is not present under current site conditions and for the foreseeable future; and
2. all NAPL with Micro-scale Mobility is removed if and to the extent feasible based upon consideration of CSM principles;

(b) for a Temporary Solution, all Non-Stable NAPL and NAPL with Micro-scale Mobility is removed and/or controlled if and to the extent feasible.

(8) The evaluation of feasibility referenced in 310 CMR 40.1003(5) through (7) shall be conducted using the criteria described in 310 CMR 40.0860.

40.1004: Performance Standards for Permanent and Temporary Solutions

(1) A Permanent or Temporary Solution shall be supported by assessments and evaluations conducted pursuant to 310 CMR 40.0000 which:

- (a) are of sufficient scope, detail, and level of effort to characterize the risk of harm to health, safety, public welfare and the environment posed by the site or disposal site pursuant to 310 CMR 40.0900;
- (b) are consistent with the Response Action Performance Standard described in 310 CMR 40.0191;
- (c) are commensurate with the nature and extent of the release or threat of release and complexity of site conditions;
- (d) demonstrate that all requirements of the applicable Permanent or Temporary Solution pursuant to 310 CMR 40.1000 have been met; and
- (e) conform with applicable requirements and procedures for conducting response actions specified in 310 CMR 40.0000.

40.1005: Defining "Foreseeable Period of Time" for Purposes of a Permanent Solution

(1) A Permanent Solution shall ensure a level of control of each identified substance of concern at a site or in the surrounding environment such that no such substance of concern shall present a significant risk of harm to health, safety, public welfare or the environment during any foreseeable period of time.

(2) "Any foreseeable period of time" shall mean the period of time during which the conditions for achieving and maintaining a level of No Significant Risk upon which a Permanent Solution is based will remain in effect.

(a) For Permanent Solutions with No Conditions, "any foreseeable period of time" shall be an unlimited period of time;

(b) For Permanent Solutions with Conditions, "any foreseeable period of time" shall be the shortest period of time, as applicable, that:

1. Activity and Use Limitations, where required to maintain a Permanent Solution, remain in effect;
2. Exposure Pathway Mitigation Measures, where required to maintain a Permanent Solution, remain in effect; or
3. other conditions on which the Permanent Solution with Conditions is based for which an Activity and Use Limitation is not required, as specified at 310 CMR 40.1013, remain in effect.

40.1012: Application of Activity and Use Limitations

(1) The purpose of an Activity and Use Limitation is to narrow the scope of exposure assumptions used to characterize risks to human health from a release pursuant to 310 CMR 40.0900, by specifying activities and uses that are prohibited and allowed at the disposal site in the future. 310 CMR 40.1012 establishes rules for determining when an Activity and Use Limitation must be used, when one cannot be used, and when one may be a factor to be considered in appropriately characterizing soil and groundwater at a disposal site, pursuant to 310 CMR 40.0923(3).

(2) Except as provided in 310 CMR 40.1012(3) and 40.1013, Activity and Use Limitations shall be required:

(a) at all disposal sites or portions of disposal sites for which a Permanent Solution and the risk characterization pursuant to 310 CMR 40.0900 used to support the Permanent Solution are based upon the restriction or limitation of Site Activities and Uses to achieve or maintain a level of No Significant Risk including:

1. any disposal site or portion of a disposal site for which a Permanent Solution is based on MCP Method 1 or 2 Soil Standards and the Exposure Point Concentrations of oil and/or hazardous material exceed the S-1 standards, but meet applicable S-2 or S-3 standards;
2. any disposal site or portion of a disposal site where a Method 3 Risk Characterization performed pursuant to 310 CMR 40.0990 relies on reduced exposure potential due to the assumption of limited site use; and
3. any disposal site or portion of a disposal site at which the oil and/or hazardous material in soil located at a depth greater than 15 feet from the ground surface exceeds an applicable Upper Concentration Limit in Soil listed at 310 CMR 40.0996(6) or determined at 310 CMR 40.0996(7).

(b) at all disposal sites for which a Permanent Solution relies upon an Exposure Pathway Mitigation Measure to prevent exposure to levels of oil and/or hazardous material that would otherwise pose a significant risk of harm to health, safety, public welfare or the environment, including:

1. one or more Passive Exposure Pathway Mitigation Measures; or
2. one or more Active Exposure Pathway Mitigation Measures implemented pursuant to the requirements at 310 CMR 40.1025;

(c) at all disposal sites where an existing private water supply well(s) is removed from service as a source of drinking water and maintained for uses other than as a private water supply in accordance with the provisions of 310 CMR 40.0932(5)(d); and

(d) at disposal sites for which a Permanent Solution is achieved and NAPL with Micro-scale Mobility is present.

(3) Activity and Use Limitations shall not be required, but may be used to provide notice of the existence of residual contamination to future holders of an interest(s) in property that is located within:

(a) disposal sites or portions of disposal sites where the concentrations of oil and/or hazardous material have been reduced to background or where the requirements described in 310 CMR 40.0923(3)(b) have been met;

(b) disposal sites or portions of disposal sites at which residual contamination at levels at or below the applicable Upper Concentration Limits for Soil listed or determined in 310 CMR 40.0996 is located at a depth greater than 15 feet from the ground surface;

(c) any disposal site or portion of a disposal site for which all applicable requirements of a Permanent Solution have been met based upon one or more of the limitations, assumptions or conditions specified at 310 CMR 40.1013;

(d) disposal sites or portions of a disposal site for which potential risks are characterized using Method 1 (310 CMR 40.0970) if the levels of oil and/or hazardous material in soil are at or below the applicable Method 1 category S-1 soil standards listed in 310 CMR 40.0975(6);

(e) at disposal sites or portions of a disposal site for which potential risks are characterized using Method 2 (310 CMR 40.0980) if the levels of oil and/or hazardous material are at or below the applicable category S-1 soil standards identified in 310 CMR 40.0984 and 40.0985;

40.1012: continued

(f) disposal sites or portions of a disposal site for which potential risks are characterized using Method 3 (310 CMR 40.0990) if the levels of oil and/or hazardous material pose No Significant Risk pursuant to 310 CMR 40.0990, including comparison to any applicable or suitably analogous standards, and no limitations on-site use were assumed or implied in the Risk Characterization;

(g) any disposal site or portion of a disposal site where all substantial hazards have been eliminated and where all applicable requirements for a Temporary Solution have been met pursuant to 310 CMR 40.1050; or

(h) any other disposal site or portion of a disposal site where an Activity and Use Limitation is not expressly prohibited by 310 CMR 40.1012.

(4) Activity and Use Limitations shall not be used:

(a) to change the groundwater category of groundwater categorized as GW-1 or GW-2 pursuant to 310 CMR 40.0932; or

(b) to justify a conclusion that a condition of No Significant Risk exists or has been achieved at sites characterized using Method 1 or Method 2 if an identified Exposure Point Concentration exceeds an applicable Method 1 or Method 2 standard.

(5) Activity and Use Limitations shall:

(a) provide notice to holders of any interest(s) in a property or a portion thereof (including, without limitation, owners, lessees, tenants, mortgagees, and holders of easement rights) of the existence and location of oil and/or hazardous material at such property and the Activity and Use Limitations that have been implemented in response thereto; and

(b) establish a duty to evaluate risks associated with proposed changes in Site Activities and Uses on the subject property that could increase the risk of harm to health, safety, public welfare or the environment pursuant to the requirements of 310 CMR 40.1080, to perform additional response actions prior to any such change in Site Activities and Uses, as required by 310 CMR 40.0000, and to notify the Department of any reportable condition created by a change in Site Activity and Use.

(6) Any Activity and Use Limitations applied at a disposal site pursuant to 310 CMR 40.0000 shall be instituted and maintained in accordance with 310 CMR 40.1070 through 40.1099.

40.1013: Limitations, Assumptions and Conditions on Site Activities and Uses That Do Not Require an AUL

(1) An Activity and Use Limitation may be used, but shall not be required if the Permanent Solution is based solely upon one or more of the following limitations, assumptions or conditions on Site Activities and Uses:

(a) the recommendation of Best Management Practices for non-commercial gardening in a residential setting to minimize and control potential risk qualitatively evaluated pursuant to 310 CMR 40.0923(3)(c);

(b) the concentrations of OHM at the disposal site are consistent with Anthropogenic Background levels;

(c) the location of residual contamination within a public way or within a rail right-of-way; or

(d) the absence of an occupied building or structure in an area in which the groundwater would otherwise be classified as GW-2 pursuant to 310 CMR 40.0932(6), and where the residual concentrations of OHM in the groundwater exceed the GW-2 standards published in 310 CMR 40.0974(2).

40.1020: Background Levels of Oil and Hazardous Material

(1) At any disposal site or portion of a disposal site where one or more remedial actions are undertaken to achieve a Permanent Solution, those remedial actions shall include, where feasible, one or more measures designed to reduce to the extent possible the concentrations of oil and hazardous material to levels that would exist in the absence of the disposal site of concern. Such measures shall, to the extent feasible, achieve or approach Background levels of oil and hazardous material in the environment as Background is defined in 310 CMR 40.0006.

40.1020: continued

(2) No further response actions are required at any disposal site where the concentrations of oil and hazardous material in the environment have been reduced to Background levels.

(3) The feasibility of reducing the concentrations of oil and hazardous material in the environment at a disposal site or portion of a disposal site to levels that achieve or approach Background levels shall be evaluated using the criteria described in 310 CMR 40.0860, except where it can be demonstrated that Background levels have been met.

40.1025: Requirements for Active Exposure Pathway Mitigation Measures Implemented as a Permanent Solution with Conditions

(1) Purpose and Scope. 310 CMR 40.1025 specifies requirements for an Active Exposure Pathway Mitigation Measure Implemented as part of a Permanent Solution with Conditions.

(2) Demonstration of Effectiveness. An Active Exposure Pathway Mitigation Measure implemented as part of a Permanent Solution with Conditions shall be designed and demonstrated to eliminate exposure to OHM to the extent feasible and ensure, at a minimum, that a condition of No Significant Risk is achieved and maintained for the Receptor(s) of concern. Demonstration of the effectiveness of Active Exposure Pathway Mitigation Measure shall be made prior to the achievement of a Permanent Solution with Conditions and shall be based on the measurement of Exposure Point Concentrations representative of exposures for the Receptor(s) of concern during operation of the Active Exposure Pathway Mitigation Measure under normal operating conditions and over a period of time sufficient to account for temporal variability.

(3) Operation of an Active Exposure Pathway Mitigation Measure Implemented as part of a Permanent Solution with Conditions.

(a) The necessity of operating and maintaining the Active Exposure Pathway Mitigation Measure according to the operating regimen documented in the Permanent Solution Statement shall be specified in an Activity and Use Limitation that is recorded on the deed of the property where the Active Exposure Pathway Mitigation Measure is located that includes the requirements of 310 CMR 40.1025 as terms and conditions for maintaining a Permanent Solution;

(b) The operating regimen for the Active Exposure Pathway Mitigation Measure documented in the Permanent Solution Statement shall be designed to ensure a level of No Significant Risk is maintained for the Receptor(s) of concern under normal operating conditions;

(c) The operating regimen shall document the parameters for operating the Active Exposure Pathway Mitigation Measure and the methods and frequency for monitoring such Measure to ensure that it is operating consistently within such parameters;

(d) An Active Exposure Pathway Mitigation Measure implemented as part of a Permanent Solution with Conditions shall employ remote monitoring technology that will alert the owner and operator of the building protected by the Active Exposure Pathway Mitigation Measure and the Department immediately upon failure of the system, such as loss of power, mechanical failure or other significant disruption of the effectiveness of the system;

(e) The operating regimen shall document the longest duration of a shutdown that would be consistent with:

1. a level of exposure that does not pose an Imminent Hazard; and
2. a level of exposure that poses No Significant Risk; and

(f) Following submittal of a Permanent Solution Statement, the Active Exposure Pathway Mitigation Measure shall be consistently operated and maintained at a level of effectiveness that ensures a level of No Significant Risk is maintained for the Receptor(s) of concern and in accordance with the provisions of 310 CMR 40.1025.

(4) An Active Exposure Pathway Mitigation Measure shall not be used to support a Permanent Solution with Conditions if suspension or failure of such measure lasting 60 consecutive days would result in a Receptor exposure to OHM that would pose an Imminent Hazard.

40.1025: continued

(5) An Active Exposure Pathway Mitigation Measure shall not be used to support a Permanent Solution with Conditions unless the owner of the property where the Active Exposure Pathway Mitigation Measure is located certifies at the time that the Permanent Solution with Conditions is implemented that financial resources have been made available for the immediate repair and/or replacement of components of the Active Exposure Pathway Mitigation Measure in the event that the Measure experiences failure.

(6) In the event of any suspension or failure of an Active Exposure Pathway Mitigation Measure implemented as part of a Permanent Solution with Conditions, the owner of the property where the Active Exposure Pathway Mitigation Measure is located shall undertake immediate steps to return the Active Exposure Pathway Mitigation Measure to full operating condition. If such suspension or failure of the system lasts 30 consecutive days, the owner of the property where such Measure is located shall notify both the Department and any non-transient occupants of the building protected by such Measure who may have experienced exposure to oil and/or hazardous material as the result of the system suspension or failure on the 30th day from the start of the suspension or failure period. This notice shall document the reason for the suspension or failure of the Active Exposure Pathway Mitigation Measure, any efforts made or steps to be taken to resume operation of such Measure, and the expected timeframe for resuming operation of such Measure.

(7) The owner of the property where an Active Exposure Pathway Mitigation Measure is implemented as part of a Permanent Solution with Conditions shall annually certify in response to receipt of a form provided by the Department that:

- (a) the property owner is aware of his or her obligation to operate and maintain the Active Exposure Pathway Mitigation Measure, including repairing or replacing components of the Measure to resume operation in the event the Measure experiences suspension or failure;
- (b) the property owner is aware that the Department may upon reasonable notice inspect the Active Exposure Pathway Mitigation Measure to ensure that it is operating pursuant to the regimen established at 310 CMR 40.1025;
- (c) financial resources are available to the property owner for the immediate repair and/or replacement of components of the Active Exposure Pathway Mitigation Measure in the event that the Measure experiences failure; and
- (d) the Active Exposure Pathway Mitigation Measure is operating pursuant to the regimen established at 310 CMR 40.1025.

(8) Where a Permanent Solution with Conditions is based upon the operation of an Active Exposure Pathway Mitigation Measure, the operation of such a measure may be terminated following documentation provided in a revised Permanent Solution Statement pursuant to 310 CMR 40.1000 that the measure is no longer necessary to maintain a Permanent Solution. Such documentation shall include a Risk Characterization conducted pursuant to 310 CMR 40.0900 that evaluates and documents exposure to OHM for Receptor(s) of concern in the absence of the Active Exposure Pathway Mitigation Measure over a period of time sufficient to account for temporal variability and supports a conclusion that a condition of No Significant Risk exists in the absence of such Measure.

40.1026: Requirements for Active Exposure Pathway Mitigation Measures Implemented as Part of a Temporary Solution or Remedy Operation Status

(1) Purpose and Scope. 310 CMR 40.1026 specifies requirements for an Active Exposure Pathway Mitigation Measure implemented as part of a Temporary Solution or Remedy Operation Status.

(2) Demonstration of Effectiveness. An Active Exposure Pathway Mitigation Measure implemented as part of a Temporary Solution or Remedy Operation Status shall be designed and demonstrated to eliminate exposure to OHM to the extent feasible and ensure, at a minimum, that a condition of No Significant Risk is achieved and maintained for the Receptor(s) of concern. Demonstration of the effectiveness of Active Exposure Pathway Mitigation Measure shall be based on the measurement of Exposure Point Concentrations representative of exposures for the Receptor(s) of concern during operation of the Active Exposure Pathway Mitigation Measure under normal operating conditions and over a period of time sufficient to account for temporal variability.

40.1026: continued

(3) Operation of an Active Exposure Pathway Mitigation Measure implemented as part of a Temporary Solution or Remedy Operation Status.

(a) The operating regimen for the Active Exposure Pathway Mitigation Measure implemented as part of a Temporary Solution or Remedy Operation Status shall be specified in Temporary Solution Statement or Phase IV Operation, Maintenance and Monitoring Plan developed as part of the Remedy Implementation Plan, respectively;

(b) The operating regimen for the Active Exposure Pathway Mitigation Measure shall be designed to ensure a level of No Significant Risk is maintained for the Receptor(s) of concern under normal operating conditions;

(c) The operating regimen shall document the parameters for operating the Active Exposure Pathway Mitigation Measure and the methods and frequency for monitoring such Measure to ensure that it is operating consistently within such parameters;

(d) An Active Exposure Pathway Mitigation Measure implemented as part of a Temporary Solution or Remedy Operation Status shall employ remote monitoring technology that will alert the owner and operator of the building protected by the Active Exposure Pathway Mitigation Measure and the Department immediately upon failure of the system, such as loss of power, mechanical failure or other significant disruption of the effectiveness of the system;

(e) The operating regimen shall document the longest duration of a shutdown that would be consistent with:

1. a level of exposure that does not pose an Imminent Hazard; and
2. a level of exposure that poses No Significant Risk; and

(f) Following submittal of a Temporary Solution Statement or Remedy Operation Status, the Active Exposure Pathway Mitigation Measure shall be consistently operated and maintained at a level of effectiveness that ensures a level of No Significant Risk is maintained for the Receptors of concern and in accordance with the provisions of 310 CMR 40.1026.

(4) In the event of any suspension or failure of an Active Exposure Pathway Mitigation Measure implemented as part of a Temporary Solution or Remedy Operation Status, the owner of the property where the Active Exposure Pathway Mitigation Measure is located shall undertake immediate steps to return the Active Exposure Pathway Mitigation Measure to full operating condition. If such suspension or failure of the system lasts 30 consecutive days, the owner of the property where such Measure is located shall notify both the Department and any non-transient occupants of the building protected by such Measure who may have experienced exposure to oil and/or hazardous material as the result of the system suspension or failure on the 30th day from the start of the suspension or failure period. This notice shall document the reason for the suspension or failure of the Active Exposure Pathway Mitigation Measure, any efforts made or steps to be taken to resume operation of such Measure, and the expected timeframe for resuming operation of such Measure.

40.1030: Categories of Permanent and Temporary Solutions

(1) Permanent or Temporary Solutions are categorized under 310 CMR 40.1030 through 40.1051 as Permanent Solutions with No Conditions, Permanent Solutions with Conditions and Temporary Solutions.

(2) The specific category of Permanent or Temporary Solution applicable to a site, disposal site or portion of a disposal site shall be established based upon the following factors:

(a) whether the site or disposal site poses No Significant Risk;

(b) whether all Substantial Hazards posed by the disposal site have been eliminated;

(c) whether the risk characterization depends upon assumed limitations on current or future conditions, activities or uses, including the implementation of Active or Passive Exposure Pathway Mitigation Measures;

(d) whether one or more Activity and Use Limitations are required under the provisions of 310 CMR 40.1012 to maintain a level of No Significant Risk;

(e) whether concentrations of oil and/or hazardous material at a site exceed Upper Concentration Limits in Soil and Groundwater listed at 310 CMR 40.0996(6); and

(f) whether site conditions are consistent with Natural Background or Anthropogenic Background.

40.1040: Permanent Solutions

- (1) Permanent Solutions shall apply where:
 - (a) a level of No Significant Risk, as specified in 310 CMR 40.0900, exists or has been achieved;
 - (b) all Sources of OHM Contamination have been eliminated or controlled, as specified in 310 CMR 40.1003(5)(a) and (b);
 - (c) control of plumes of dissolved OHM in groundwater and vapor-phase OHM in the Vadose Zone has been achieved as specified in 310 CMR 40.1003(6)(a);
 - (d) NAPL, if present, has been addressed as specified in 310 CMR 40.1003(7)(a);
 - (e) all threats of release have been eliminated; and
 - (f) the level of oil and/or hazardous material concentrations in the environment have been reduced to as close to Background levels as feasible as specified at 310 CMR 40.1020.
- (2) Permanent Solutions shall not apply to:
 - (a) except as provided at 310 CMR 40.1025, any disposal site or portion of a disposal site where Active Operation and Maintenance of a remedial action is required; or
 - (b) any disposal site or portion of a disposal site where groundwater or soil concentrations of oil and/or hazardous material exceed Upper Concentration Limits specified in 310 CMR 40.0996, except in those cases where the concentrations are shown to be consistent with Background, or the soil is located at a depth greater than 15 feet from the ground surface or beneath an engineered barrier, and it is not feasible pursuant to the criteria listed at 310 CMR 40.0860 to reduce such soil concentrations to less than or equal to the applicable Upper Concentration Limits in Soil listed in 310 CMR 40.0996(6); or
 - (c) any disposal site or portion of a disposal site where groundwater concentrations exceed an applicable or suitably analogous standard listed in 310 CMR 40.0993(3) where the groundwater is categorized as GW-1 pursuant to 310 CMR 40.0932.
- (3) Permanent Solutions may be achieved at any point in the response action process where the requirements of a Permanent Solution have been achieved and documented.

40.1041: Categories of Permanent Solutions

There are two categories of Permanent Solution: Permanent Solution with No Conditions and Permanent Solution with Conditions.

- (1) Permanent Solution with No Conditions shall apply to:
 - (a) disposal sites or portions of a disposal site where the requirements of 310 CMR 40.1040(1) have been achieved;
 - (b) disposal sites or portions of a disposal site where oil and/or hazardous material concentrations do not exceed an applicable Upper Concentration Limit in Soil or Groundwater listed at 310 CMR 40.0996(6), unless such levels are consistent with Natural Background;
 - (c) disposal sites or portions of a disposal site where a level of No Significant Risk exists and will be maintained for all current and foreseeable future use of the site without relying upon:
 1. assumed limitations on current or future site activities, uses or conditions, that require an Activity and Use Limitation, as specified in 310 CMR 40.1012(2); or
 2. assumed limitations on current or future site activities, uses or conditions, that do not require an Activity and Use Limitations pursuant to 310 CMR 40.1013; and
 - (d) sites where response actions have eliminated all threats of release and no release of oil and/or hazardous material to the environment has occurred.
- (2) Permanent Solution with Conditions shall apply to disposal sites or portions of a disposal site where:
 - (a) the requirements of 310 CMR 40.1040(1) have been achieved;
 - (b) oil or hazardous material concentrations do not exceed an applicable Upper Concentration Limit in soil or groundwater listed at 310 CMR 40.0996(6), unless such levels are consistent with Anthropogenic Background or oil and/or hazardous material in soil is located at a depth greater than 15 feet from the ground surface or beneath an Engineered Barrier and an evaluation conducted pursuant to 310 CMR 40.0860 indicates that it is not feasible to reduce the concentrations of oil and/or hazardous material in soil located at a depth greater than 15 feet from the ground surface or in the area beneath the Engineered Barrier to less than or equal to the applicable Upper Concentration Limits in soil; and

40.1041: continued

- (c) a level of No Significant Risk exists and will be maintained for all current and foreseeable future use of the site, relying on one or more of the following:
1. assumed limitations on future site activities or uses that require Activity and Use Limitations, as specified in 310 CMR 40.1012; or
 2. assumed limitations on current or future site activities, uses or conditions that do not require an Activity and Use Limitations pursuant to 310 CMR 40.1013.

40.1050: Temporary Solutions

- (1) Temporary Solutions shall apply to disposal sites or portions of a disposal site where:
- (a) a condition of No Substantial Hazard exists and has been documented pursuant to 310 CMR 40.0956;
 - (b) all Sources of OHM Contamination have been identified, characterized, and to the extent feasible, eliminated or controlled as specified in 310 CMR 40.1003(5)(a) and (c);
 - (c) control of plumes of dissolved OHM in groundwater and vapor-phase OHM in the Vadose Zone has been achieved to the extent feasible as specified in 310 CMR 40.1003(6)(b);
 - (d) NAPL, if present, has been addressed as specified in 310 CMR 40.1003(7)(b); and
 - (e) it is concluded, after completion of a Phase III evaluation pursuant to 310 CMR 40.0850, that:
 1. response actions to achieve a Permanent Solution are not currently feasible; or
 2. response actions to achieve a Permanent Solution are feasible and shall be continued toward a Permanent Solution.
- (2) Temporary Solutions may be achieved regardless of whether one or more remedial actions have been taken at a disposal site, but only after:
- (a) a Phase II Comprehensive Site Assessment and a Phase III Identification, Evaluation and Selection of Comprehensive Remedial Alternatives, as specified in 310 CMR 40.0830 and 310 CMR 40.0850, respectively, have been completed; or
 - (b) a Downgradient Property Status Submittal has been provided to the Department in accordance with 310 CMR 40.0180.
- (3) A Temporary Solution may be reached:
- (a) after completion of a Phase III evaluation pursuant to 310 CMR 40.0850;
 - (b) after implementation of a Phase IV Comprehensive Remedial Alternative pursuant to 310 CMR 40.0870; or
 - (c) after implementation of Phase V or Post-temporary Solution operation, maintenance and/or monitoring pursuant to 310 CMR 40.0890 or 310 CMR 40.0897, respectively.
- (4) For all Temporary Solutions where achievement of a Permanent Solution is not currently feasible as described at 310 CMR 40.1050(1)(e)1., except those achieved after a Downgradient Property Status Submittal has been provided to the Department in accordance with 310 CMR 40.0180:
- (a) a copy of the plan as specified in 310 CMR 40.0861(2)(h) that presents definitive and enterprising steps to be taken toward achieving a Permanent Solution at the disposal site or portion of a disposal site shall be submitted with the Temporary Solution Statement; and
 - (b) a Periodic Review of the Temporary Solution shall be conducted every fifth year after the date of filing the Temporary Solution Statement, until such time that a Permanent Solution Statement is submitted. Such Periodic Review Opinion shall address the following:
 1. the feasibility of implementing one or more Permanent Solutions for the disposal site pursuant to 310 CMR 40.0861(2)(h) at the time of the Periodic Review;
 2. the effectiveness of the Temporary Solution(s);
 3. the definitive and/or enterprising steps taken to identify, develop and implement a feasible permanent solution at the site;
 4. any changes in activities, uses and/or exposures that may cause an actual or potential increase in exposure for human or environmental receptors to oil and/or hazardous material;

40.1050: continued

5. if applicable, an evaluation of any Activity and Use Limitation implemented as part of the Temporary Solution, including compliance with the terms of the Activity and Use Limitation, its effectiveness in maintaining a condition of No Substantial Hazard, and identification of any response actions pursuant to 310 CMR 40.1067 necessary to maintain a condition of No Substantial Hazard;
 6. any necessary and required response actions to maintain the Temporary Solution, including a description of the type and frequency of monitoring to be conducting during the period prior to the next Periodic Review; and
 7. the certification required in 310 CMR 40.0009.
- (5) For all Temporary Solutions where achievement of a Permanent Solution is feasible and response actions toward a Permanent Solution are continuing as described in 310 CMR 40.1050(1)(e)2.:
- (a) a copy of the plan as specified in 310 CMR 40.0861(2)(h) that presents definitive and enterprising steps to be taken toward achieving a Permanent Solution at the disposal site or portion of a disposal site shall be submitted with the Temporary Solution Statement; and
 - (b) a valid Tier Classification shall be in effect at the time the Temporary Solution Statement is submitted to the Department and further response actions shall be conducted in accordance with 310 CMR40.0800.

NON-TEXT PAGE

40.1055: Transition Provisions

- (1) As of June 20, 2014, all Class A-1, A-2 and B-1 Response Action Outcomes submitted to the Department prior to June 20, 2014 shall be Permanent Solutions with No Conditions.
- (2) As of June 20, 2014, all Class A-3, A-4, B-2 and B-3 Response Action Outcomes submitted to the Department prior to June 20, 2014 shall be Permanent Solutions with Conditions.
- (3) As of June 20, 2014, all Class C-1 Response Action Outcomes submitted to the Department prior to June 20, 2014 shall be Temporary Solutions as described in 310 CMR 40.1050(1)(e)1.
- (4) As of June 20, 2014, all Class C-2 Response Action Outcomes submitted to the Department prior to June 20, 2014 shall be Temporary Solution as described in 310 CMR 40.1050(1)(e)2.

40.1056: Content of Permanent Solution Statements

- (1) A Permanent Solution Statement shall be submitted by a RP, PRP or Other Person, on a form established by the Department for such purposes, and shall include, at a minimum, the following:
 - (a) the site or disposal site name, address and DEP Release Tracking Number(s);
 - (b) whether it is a Permanent Solution with No Conditions or a Permanent Solution with Conditions;
 - (c) except where the concentrations of oil and/or hazardous material are consistent with or have been reduced to Background or where a threat of release has been abated, the Method(s) (Methods 1, 2 or 3) used to characterize the risk of harm posed by the disposal site to health, safety, public welfare and the environment, pursuant to 310 CMR 40.0900;
 - (d) the relationship of the Permanent Solution Statement to any other Permanent or Temporary Solution Statements that have been filed for the disposal site, if applicable, together with a statement as to whether any additional response actions are needed for any other portions of the disposal site;
 - (e) indication as to whether the Permanent Solution includes the implementation of an Activity and Use Limitation, and if so, the type of Activity and Use Limitation implemented at the disposal site;
 - (f) indication as to whether the Permanent Solution is based upon assumptions about the current or future site activities, uses or conditions that do not require an Activity and Use Limitation pursuant to 310 CMR 40.1013 and a description of those assumptions;
 - (g) indication as to whether the Permanent Solution is based upon the effective operation of one or more Active Exposure Pathway Mitigation Measures pursuant to 310 CMR 40.1025;
 - (h) except where specifically exempted by the Department based upon the Department's level of involvement in the oversight of response actions at the site or disposal site, an Opinion from a Licensed Site Professional as to whether the requirements of the applicable category of Permanent Solution specified in 310 CMR 40.1000 have been met;
 - (i) a certification of the Permanent Solution Statement and all documents submitted with the Permanent Solution Statement as required by 310 CMR 40.0009;
 - (j) indication as to whether oil and/or hazardous material exceed one or more applicable Upper Concentration Limits in Soil or Groundwater, as described at 310 CMR 40.0996; and
 - (k) indication as to whether the analytical data used to support the Permanent Solution was generated pursuant to the Department's Compendium of Analytical Methods.
- (2) Except where previously submitted, all documentation, plans and/or reports necessary to support the Permanent Solution shall be submitted to the Department, including, without limitation, the following:

40.1056: continued

- (a) as specified in 310 CMR 40.1003(4), a clear and accurate description of the location of the site, in the case of a threat of release, or the location and boundaries of the disposal site or portion of disposal site to which the Permanent Solution applies that includes the location of areas characterized as Background relative to the disposal site boundaries. Such description shall reference, to the extent practicable, the location of the site, or location and boundaries of the disposal site or portion thereof relative to permanent or semi-permanent landmarks, location coordinates, and/or surveyed boundaries;
- (b) a succinct summary of the Conceptual Site Model;
- (c) a demonstration that all Sources of OHM Contamination have been eliminated or controlled as specified in 310 CMR 40.1003(5)(a) and (b);
- (d) a demonstration that response actions have been taken to adequately assess and, if necessary, control the subsurface migration of OHM remaining at the disposal site as specified in 310 CMR 40.1003(6)(a);
- (e) where NAPL is or has been present, a demonstration that response actions have been taken to adequately assess and if necessary control NAPL mobility and meet the requirements of 310 CMR 40.1003(7)(a);
- (f) information supporting the conclusion that a level of No Significant Risk has been achieved or exists;
- (g) information documenting the extent to which levels of oil and/or hazardous material in the environment have been reduced to Background, and/or the results of the feasibility evaluation conducted pursuant to 310 CMR 40.0860 demonstrating that the achievement of Background is not feasible;
- (h) a copy of any and all Activity and Use Limitations which have been implemented under 310 CMR 40.1070;
- (i) for Permanent Solutions with Conditions where concentrations in Soil exceed Upper Concentration Limits in Soil at a depth greater than 15 feet from the ground surface or in an area beneath an engineered barrier, the results of the evaluation conducted pursuant to 310 CMR 40.0860 demonstrating that the achievement of Upper Concentration Limits in Soil located at a depth greater than 15 feet from the ground surface or in the area beneath an engineered barrier is not feasible;
- (j) for a Permanent Solution with Conditions based upon assumptions about the current or future site activities, uses or conditions that do not require an Activity and Use Limitation pursuant to 310 CMR 40.1013, documentation related to such assumptions and conditions, including, as applicable:
 - 1. the recommendation and description of Best Management Practices for Non-commercial Gardening in a residential setting to minimize and control potential risk qualitatively evaluated pursuant to 310 CMR 40.0923(3)(c);
 - 2. the location of OHM that are consistent with Anthropogenic Background levels;
 - 3. the location of residual contamination within a public way or within a rail right-of-way; or
 - 4. where the residual concentrations of OHM in the groundwater exceed the GW-2 standards published in 310 CMR 40.0974(2) at a disposal site or portion thereof where no occupied building or structure is present, information related to the presence of groundwater contamination and the obligation to ensure any future construction at the disposal site does not result in OHM impacts to indoor air in newly constructed buildings or structures;
- (k) a Data Usability Assessment documenting that the data relied upon is scientifically valid and defensible, and of a sufficient level of precision, accuracy, and completeness to support the Permanent Solution, and a Data Representativeness Evaluation, documenting the adequacy of the spatial and temporal data sets to support the Permanent Solution; and
- (l) a description of any operation, maintenance, and/or monitoring that will be required to confirm and/or maintain those conditions at the disposal site upon which the Permanent Solution is based.

(3) The Permanent Solution shall not be considered complete until all applicable fees are paid in accordance with 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

40.1057: Content of Temporary Solution Statements

(1) A Temporary Solution Statement shall be submitted by a RP, PRP or Other Person on a form established by the Department for such purposes, and shall include, at a minimum, the following:

- (a) the site or disposal site name, address and DEP Release Tracking Number(s);
- (b) the Method(s) (Methods 1, 2 or 3) used to characterize the risk of harm posed by the disposal site to health, public welfare and the environment, pursuant to 310 CMR 40.0900;
- (c) the relationship of the Temporary Solution Statement to any other Permanent or Temporary Solution Statements that have been filed for the disposal site, if applicable, together with a statement as to whether any additional response actions are needed for any other portions of the disposal site;
- (d) indication as to whether achievement of a Permanent Solution is feasible at the disposal site or portion of the disposal site and whether response actions toward a Permanent Solution are continuing;
- (e) indication as to whether the Temporary Solution includes the implementation of an Activity and Use Limitation, and if so, the type of Activity and Use Limitation implemented at the disposal site;
- (f) indication as to whether the Temporary Solution includes the operation of one or more Active Exposure Pathway Mitigation Measures pursuant to 310 CMR 40.1026;
- (g) except where specifically exempted by the Department based upon the Department's level of involvement in the oversight of response actions at the site or disposal site, an Opinion from a Licensed Site Professional as to whether the requirements of the Temporary Solution specified in 310 CMR 40.1000 have been met;
- (h) a certification of the Temporary Solution Statement and all documents submitted with the Temporary Solution Statement as required by 310 CMR 40.0009;
- (i) indication as to whether oil and/or hazardous material exceed one or more applicable Upper Concentration Limits in Soil or Groundwater, as described at 310 CMR 40.0996; and
- (j) indication as to whether the analytical data used to support the Temporary Solution was generated pursuant to the Department's Compendium of Analytical Methods.

(2) Except where previously submitted, all documentation, plans and/or reports necessary to support the Temporary Solution shall be submitted to the Department, including, without limitation, the following:

- (a) as specified in 310 CMR 40.1003(4), a clear and accurate description of the location of the site or the location and boundaries of the disposal site or portion of disposal site to which the Temporary Solution applies that includes the location of areas characterized as Background relative to the disposal site boundaries. Such description shall reference, to the extent practicable, the location of the site, and location and boundaries of the disposal site or portion thereof relative to permanent or semi-permanent landmarks, location coordinates, and/or surveyed boundaries;
- (b) a succinct summary of the Conceptual Site Model;
- (c) a demonstration that all Sources of OHM Contamination have been eliminated or controlled, to the extent feasible as specified in 310 CMR 40.1003(5)(a) and (c);
- (d) a demonstration that response actions have been taken to adequately assess and control the subsurface migration of OHM remaining at the disposal site as specified in 310 CMR 40.1003(6)(b);
- (e) where NAPL is or has been present, a demonstration that response actions have been taken to adequately assess NAPL mobility and meet the requirements of 310 CMR 40.1003(7)(b);
- (f) a copy of the plan as specified in 310 CMR 40.0861(2)(h);
- (g) information supporting the conclusion that no substantial hazards remain at the disposal site;
- (h) a copy of any and all Activity and Use Limitations which have been implemented under 310 CMR 40.1070;
- (i) a description of any operation, maintenance, and/or monitoring that will be required to confirm and/or maintain those conditions at the disposal site upon which the Temporary Solution is based;
- (j) a copy of the plan, as specified in 310 CMR 40.0861(2)(h), which presents definitive and enterprising steps to be taken toward achieving a Permanent Solution at the disposal site; and

40.1057: continued

(k) a Data Usability Assessment documenting that the data relied upon is scientifically valid and defensible, and of a sufficient level of precision, accuracy, and completeness to support the Temporary Solution, and a Data Representativeness Evaluation, documenting the adequacy of the spatial and temporal data sets to support the Temporary Solution.

40.1066: Effect of Permanent or Temporary Solutions on Fees

(1) Upon receipt of a Permanent Solution Statement, the Department shall suspend the further assessment of Annual Compliance Assurance Fees; provided, however, that payment of such fees shall be required for the billable year in which the Permanent Solution is provided to the Department.

(2) Upon receipt of a Temporary Solution Statement filed in accordance with 310 CMR 40.1000, the Department shall suspend the further assessment of Tier I or Tier II Annual Compliance Assurance Fees, whichever are applicable, and shall assess a Temporary Solution Annual Compliance Assurance Fee pursuant to 310 CMR 4.03: *Annual Compliance Assurance Fee*.

40.1067: Remedial Actions After a Permanent or Temporary Solution Statement has been Submitted to the Department

(1) 310 CMR 40.1067 applies to remedial actions conducted at a disposal site after a Permanent or Temporary Solution Statement has been submitted to the Department.

(2) Nothing in 310 CMR 40.1067 shall affect any person's duty to notify the Department of a release(s) or threat of release(s) in accordance with M.G.L. c. 21E and 310 CMR 40.0000 or limit the Department's authority to establish site-specific requirements for response actions, including response actions to address a violation(s) or deficiency(ies).

(3) For remedial actions conducted after the submittal of a Permanent Solution with No Conditions the following requirements shall apply:

- (a) a Tier Classification or Extension thereof is not required;
- (b) unless otherwise specified by the Department, no documentation, including a revised Permanent Solution Statement, is required to be maintained by the person conducting response actions or submitted to the Department, but may be maintained or submitted voluntarily;
- (c) all excavated Remediation Waste is managed in accordance with the provisions of 310 CMR 40.0030; and
- (d) unless otherwise specified by the Department, public involvement activities pursuant to 310 CMR 40.1400 are not required.

(4) For remedial actions conducted within an area subject to an Activity and Use Limitation after the submittal of a Permanent Solution with Conditions to the Department, the following requirements shall apply:

- (a) Limited soil excavation may be undertaken without the need to notify the Department and public involvement activities pursuant to 310 CMR 40.1400 are not required, provided:
 1. such soil excavation is not prohibited by the Activity and Use Limitation;
 2. except as provided in 310 CMR 40.1067(4)(b), such soil excavation does not result in the excavation of more than 100 cubic yards of Remediation Waste contaminated solely by oil or waste oil, or 20 cubic yards of Remediation Waste contaminated by hazardous material or mixture of oil or waste oil and hazardous material; and
 3. all excavated Remediation Waste is managed in accordance with the provisions of 310 CMR 40.0030;
- (b) Remedial actions that exceed the scope of the limited soil excavation activities outlined in 310 CMR 40.1067(4)(a), or are being conducted to allow a change in Site Activities and Uses pursuant to 310 CMR 40.1080, shall be conducted as Release Abatement Measures, provided such remedial actions do not exceed the scope of a Release Abatement Measure as described in 310 CMR 40.0442. Such remedial actions shall not require a Tier Classification or Extension thereof, provided:

40.1067: continued

1. such remedial actions are conducted in accordance with the requirements set forth in 310 CMR 40.0440, including requirements at 40.0442 that limit the scope of Release Abatement Measures, all requirements for submittal of Plans, Status Reports, and Completion Statements;
 2. notice to local officials is provided as specified in 310 CMR 40.1403(3); and
 3. if such remedial actions are being conducted to allow a change in Site Use and/or Activities, the requirements in 310 CMR 40.1080 are met;
- (c) Remedial actions that exceed the scope of a Release Abatement Measure as described in 310 CMR 40.0442 shall be conducted as a Phase IV Comprehensive Remedial Action, as specified at 310 CMR 40.0870, provided:
1. such remedial actions are conducted under a valid Tier Classification or Extension thereof;
 2. public involvement applicable to Phase IV Comprehensive Remedial Action is conducted; and
 3. if such remedial actions are being conducted to allow a change in Site Use and Activities, the requirements in 310 CMR 40.1080 are met;
- (d) A revised Permanent Solution Statement shall be submitted upon completion of remedial actions when the terms and conditions of an Activity and Use Limitation are changed through an amendment, termination, or partial termination in accordance with 310 CMR 40.1080 and 40.1081. A revised Permanent Solution Statement, whenever submitted, may be limited to the area in which the response actions were conducted.
- (5) For remedial actions conducted after a Permanent Solution with Conditions Statement has been submitted to the Department where an Activity and Use Limitation is not required pursuant to 310 CMR 40.1013, the following requirements shall apply:
- (a) Limited soil excavation may be undertaken without the need to notify the Department or conduct public involvement activities pursuant to 310 CMR 40.1400, provided:
1. except as provided in 310 CMR 40.1067(5)(b), such soil excavation does not result in the excavation of more than 100 cubic yards of Remediation Waste contaminated solely by oil or waste oil, or 20 cubic yards of Remediation Waste contaminated by hazardous material or mixture of oil or waste oil and hazardous material; and
 2. all excavated Remediation Waste is managed in accordance with the provisions of 310 CMR 40.0030;
- (b) Remedial actions that exceed the scope of the limited soil excavation activities outlined in 310 CMR 40.1067(5)(a) shall be conducted as Release Abatement Measures and shall not require a Tier Classification or Extension thereof, provided:
1. such remedial actions are conducted in accordance with the requirements set forth in 310 CMR 40.0440, including requirements at 40.0442 that limit the scope of Release Abatement Measures; and
 2. notice to local officials is provided as specified in 310 CMR 40.1403(3);
- (c) Remedial actions that exceed the scope of a Release Abatement Measure as described in 310 CMR 40.0442 shall be conducted as a Phase IV Comprehensive Remedial Action, as specified at 310 CMR 40.0870, provided:
1. such remedial actions are conducted under a valid Tier Classification or Extension thereof; and
 2. public involvement applicable to Phase IV Comprehensive Remedial Action is conducted;
- (d) A revised Permanent Solution Statement shall be submitted upon completion of remedial actions where such remedial actions result in the elimination of one or more of the conditions associated with the Permanent Solution with Conditions specified in 310 CMR 40.1013. A revised Permanent Solution Statement, whenever submitted, may be limited to the area in which the response actions were conducted;
- (e) Notwithstanding the provisions of 310 CMR 40.1067(5), where a Permanent Solution with Conditions Statement has been submitted based upon assumptions pursuant to 310 CMR 40.1013(1)(d), future construction of a building that results in exposure to OHM from the disposal site in indoor air in the new building shall be subject to notification requirements of 310 CMR 40.0300 and, if necessary, the performance of response actions to ensure that the requirements of a Permanent Solution are met for the change in conditions and exposure that resulted from the building construction.

40.1067: continued

(6) Remedial actions conducted after a Permanent Solution with Conditions Statement has been submitted to the Department that are in or affect the area where an Engineered Barrier is located shall be conducted as a Phase IV Comprehensive Remedial Action, as specified at 310 CMR 40.0870 and shall include public involvement applicable to Phase IV Comprehensive Remedial Actions. In such cases, the person conducting response actions shall have a valid Tier Classification, or an Extension thereof. Where such remedial actions are outside of and do not affect the integrity of the Engineered Barrier or the area where an Engineered Barrier is located, the procedures at 310 CMR 40.1067(4) shall apply.

(7) Remedial actions conducted after a Temporary Solution Statement has been submitted to the Department shall be conducted as a Phase IV Comprehensive Remedial Action, as specified at 310 CMR 40.0870 or Release Abatement Measure as specified in 310 CMR 40.0440, provided:

- (a) such remedial actions are conducted under a valid Tier Classification or Extension thereof; and
- (b) public involvement applicable to Phase IV Comprehensive Remedial Action or Release Abatement Measure is conducted.

(8) The Department may specify in a Notice of Audit Findings that remedial actions are necessary at a disposal site after a Permanent Solution Statement has been submitted to the Department pursuant to 310 CMR 40.1067. Notwithstanding the provisions of 310 CMR 40.1067 to the contrary, all remedial actions conducted in response to a Notice of Audit Findings pursuant to 310 CMR 40.1067 shall be documented in the Post-Audit Completion Statement as described at 310 CMR 40.1170.

40.1070: Implementation of Activity and Use Limitations

(1) One or more of the following Activity and Use Limitations shall be implemented at each disposal site or portion of a disposal site where the Activity and Use Limitation is necessary and appropriate to meet the requirements of 310 CMR 40.1012 or 310 CMR 40.0111(8):

- (a) a Grant of Environmental Restriction, implemented in accordance with 310 CMR 40.1071;
- (b) an Environmental Restriction implemented by the Department, in accordance with 310 CMR 40.1073; or
- (c) a Notice of Activity and Use Limitation, implemented in accordance with 310 CMR 40.1074.

(2) Activity and Use Limitations imposed pursuant to 310 CMR 40.1012 shall be implemented and adhered to by the owner and holders of interest(s) in the property and/or a license to use the property subject to the Activity and Use Limitation, and/or the RP, PRP or Other Person conducting response actions at the disposal site or portion of a disposal site in accordance with the procedures established in 310 CMR 40.1070 through 310 CMR 40.1099.

(3) An Activity and Use Limitation shall be deemed implemented and shall be in effect upon its being duly recorded and/or registered with the appropriate registry of deeds and/or land registration office.

(4) Notice of Activity and Use Limitations implemented at disposal sites subject to CERCLA pursuant to 310 CMR 40.0111(8), shall be subject to the general requirements of 310 CMR 40.1074, except for the following:

- (a) the requirement to prepare a Notice of Activity and Use Limitation, Amendment of a Notice of Activity and Use Limitation, or Termination of a Notice of Activity and Use Limitation, on the specific forms set forth in 310 CMR 40.1099, and as required in 310 CMR 40.1074(1)(a), 40.1075, 40.1081(4)(a), and 40.1083(1)(e), and (3)(b);
- (b) the requirement of 310 CMR 40.1074(1)(b);
- (c) the requirement of 310 CMR 40.1074(2)(m) for a notarized signature of a Licensed Site Professional on a Notice of Activity and Use Limitation, Amendment of a Notice of Activity and Use Limitation, or Termination of a Notice of Activity and Use Limitation;

40.1070: continued

- (d) the requirements of 310 CMR 40.1080; and
- (e) the Public Involvement Activities set forth in 310 CMR 40.1400 through 40.1406, including those requirements specific to Activity and Use Limitations pursuant to 310 CMR 40.1403(7).

40.1071: Grants of Environmental Restrictions for Disposal Sites Where a RP, PRP or Other Person Conducts Response Actions

(1) General Requirements At any disposal site or portion of a disposal site where a RP, PRP or Other Person is conducting a response action(s) for which a Grant of Environmental Restriction has been selected as a form of Activity and Use Limitation pursuant to 310 CMR 40.1070, the following requirements shall be met:

- (a) the Grant of Environmental Restriction shall be prepared using Form 1072A set forth in 310 CMR 40.1099;
- (b) an Activity and Use Limitation Opinion from a Licensed Site Professional shall be submitted on a form prescribed by the Department with each Grant of Environmental Restriction as an exhibit of the Restriction and shall specify:
 - 1. why the Grant of Environmental Restriction is appropriate to:
 - a. achieve and/or maintain a level of No Significant Risk for a Permanent Solution; or
 - b. achieve a condition of No Substantial Hazard for a Temporary Solution;
 - 2. Site Activities and Uses to be prohibited and/or restricted;
 - 3. Site Activities and Uses to be permitted; and
 - 4. obligations and conditions necessary to meet the objectives of the Grant of Environmental Restriction;
- (c) the Grant of Environmental Restriction shall be submitted to the Department for the Commissioner's signature with the applicable fee pursuant to 310 CMR 4.00; and
- (d) the Grant of Environmental Restriction, signed by the Commissioner, shall be recorded and/or registered as specified in 310 CMR 40.1071(3). Acceptance of any such Restriction shall not be construed or deemed to imply Department approval of the adequacy of any response actions performed at the disposal site.

(2) Contents of a Grant of Environmental Restriction A Grant of Environmental Restriction shall contain the following information:

- (a) a description of the property and disposal site, including:
 - 1. the location of the property and its street address;
 - 2. a metes and bounds description of the parcel(s) of land which contain(s) the area that is subject to the Grant of Environmental Restriction;
 - 3. a reference to a survey plan of such parcel(s) of land, prepared by a Massachusetts Registered Land Surveyor, that has been recorded as a plan with the appropriate registry of deeds and/or to a Land Court Plan;
 - 4. if the area subject to the Grant of Environmental Restriction (*i.e.* "the Restricted Area") comprises only a portion of the property described in 310 CMR 40.1071(2)(a)2, a metes and bounds description of the Restricted Area; and:
 - a. (for registered land only) an 8½" x 11" survey plan, prepared by a Massachusetts Registered Land Surveyor, which shows the metes and bounds of the Restricted Area, attached as an exhibit to the Grant of Environmental Restriction; or
 - b. (for unregistered land only) a reference to a survey plan of the Restricted Area, prepared by a Massachusetts Registered Land Surveyor, that has been recorded as a plan with the appropriate registry of deeds;
 - 5. an 8½" x 11" sketch plan showing the location of the Restricted Area in relation to the boundaries of the disposal site to the extent that the boundaries of the disposal site have been established.
- (b) name(s) of the property owner(s);

40.1071: continued

- (c) if a person(s) signing the Grant of Environmental Restriction is not an individual signing on his or her own behalf, but rather on behalf of an entity (LLC, LLP, limited partnership, *etc.*), or as trustee, executor, or attorney in fact, documentation consistent with conveyancing standards and practices verifying that the person(s) signing the Grant of Environmental Restriction has the authority to sign such document shall be submitted as an exhibit to the Grant of Environmental Restriction verifying that the person(s) signing the grant is authorized to do so. If the property owner is a corporation, such documentation shall consist of:
1. a Clerk's Certificate of Incumbency from the clerk of the corporation certifying that the person(s) signing the Grant of Environmental Restriction on behalf of the corporation held his or her position as of the date of the Grant of Environmental Restriction; and
 2. unless the corporate person(s) signing the Grant of Environmental Restriction holds the position of both president or vice president and treasurer or assistant treasurer, a Clerk's Certificate from the clerk or secretary of the corporation certifying a corporate vote, resolution, or by-law authorizing the person(s) to do so;
- (d) the disposal site name and DEP Release Tracking Number(s);
- (e) a statement that the Grant of Environmental Restriction is a gift to the Department pursuant to M.G.L. c. 21E, § 6;
- (f) a statement that the Grant of Environmental Restriction shall be binding upon the property owner and any parties claiming by, through, or under said owner, and shall inure to the benefit of all parties claiming by, through or under the Department;
- (g) an Activity and Use Limitation Opinion that meets the requirements of 310 CMR 40.1071(1)(b);
- (h) a statement that the Grant of Environmental Restriction shall run in perpetuity or for a specified number of years, and that the Environmental Restriction conforms to M.G.L. c. 184, § 26;
- (i) a precise description of the Site Activities and Uses which in accordance with the Activity and Use Limitation Opinion are restricted on the property such as:
1. construction or placement of buildings, utilities, roadways, parking lots or other structures;
 2. excavating, dredging or otherwise removing sediments, soils, loam, peat, sand, gravel, rock or other mineral substance;
 3. planting, removal or destruction of trees, shrubs, or other vegetation;
 4. using a private well to supply groundwater for human consumption; or
 5. other Site Activities and Uses which would likely result in significant risk or a substantial hazard from exposures to oil and/or hazardous material if the Site Activity and Use were to take place on the property;
- (j) a precise description of the obligations and conditions which, in accordance with the Activity and Use Limitation Opinion, are necessary to meet the objectives of the Grant of Environmental Restriction. Such obligations may include the continued proper operation of remedial actions, specific procedures governing excavation activities to protect workers and disposal site neighbors, and the erection and maintenance of fences to prohibit access of unauthorized persons to the disposal site;
- (k) a precise description of Site Activities and Uses, which, in accordance with the Activity and Use Limitation Opinion, may be permitted on the subject property, including without limitation specific provisions for purposes of maintenance, alteration, or repair of utilities, or specific types of land uses;
- (l) except where the property to be restricted is not part of a disposal site, procedures to be followed when an emergency requires immediate excavation of contaminated soil to repair utility lines or other infrastructure on the disposal site, or to respond to other types of emergencies (*e.g.*, fire or floods) that may result in a significant risk of harm from exposure to oil and/or hazardous material at the disposal site, including:
1. notifying the Department within two hours of obtaining knowledge of such emergency condition;
 2. limiting disturbance of contaminated media to the minimum reasonably necessary to adequately respond to the emergency; and

40.1071: continued

3. undertaking specified precautions to minimize exposure of workers and neighbors of the disposal site to contaminated media (*e.g.*, the need for specific types of protective clothing for workers conducting the excavation, and procedures for minimizing the liberation of contaminated dust); and
 4. engaging the services of an LSP to prepare or supervise preparation and implementation of a written plan for restoring the site to a condition consistent with the Grant of Environmental Restriction, and to review and evaluate response actions to ensure minimal disturbance of contaminated media. A copy of such plan shall be submitted to the Department within ten days of its execution, with an Opinion that establishes whether the property subject to the Grant of Environmental Restriction has been restored to a condition consistent with the Grant of Environmental Restriction.
- (m) easements for the term of the Grant of Environmental Restriction to the Department, its agents, contractors, subcontractors, and employees for purposes of providing access to the subject property to inspect the area subject to the Grant of Environmental Restriction to ensure compliance with its terms, and to conduct response actions consistent with M.G.L. c. 21E and 310 CMR 40.0000;
 - (n) a provision that the Grant of Environmental Restriction shall run with the land;
 - (o) an agreement to incorporate either in full or by reference the Grant of Environmental Restriction into all future deeds, easements, mortgages, leases, licenses, occupancy agreements, or any other instruments conveying an interest in and/or a right to use the property;
 - (p) the procedures for amending and releasing the Grant of Environmental Restriction as described in 310 CMR 40.1080 and 40.1083;
 - (q) title reference by which the property owner(s) acquired title to the property; and
 - (r) the notarized signature(s) of the property owner(s), the notarized signature and seal of the LSP who signed the Activity and Use Limitation Opinion, and the signature of the Commissioner.
- (3) Recording/Registering Grants of Environmental Restriction. The Grant of Environmental Restriction shall be recorded and/or registered in accordance with the following:
- (a) the Grant of Environmental Restriction shall be duly recorded and/or registered by the property owner in the appropriate Registry of Deeds and/or Land Registration Office within 30 days of the property owner's receipt from the Department of the Grant of Environmental Restriction as approved; and
 - (b) within 30 days of recording and/or registering any Grant of Environmental Restriction, the property owner shall submit to the Department:
 1. a certified Registry copy of the Grant of Environmental Restriction bearing the book and page/instrument number and/or document number; and
 2. a Registry copy of the required survey plan(s) referenced in the Grant of Environmental Restriction, bearing the plan book/plan number(s);
- (4) Subordination Agreement The property owner shall obtain and record one or more Subordination Agreements, using Form 1072B set forth in 310 CMR 40.1099, to ensure that the respective interests in the property are subordinated to the Grant of Environmental Restriction. Any Subordination Agreement(s) shall be recorded and/or registered in the appropriate Registry of Deeds and/or Land Registration Office immediately after the recording and/or registration of the Grant of Environmental Restriction. Subordination Agreements shall be obtained from:
- (a) any and all holders of a prior interest in the Restricted Area, and
 - (b) from any and all holders of a prior interest in the Property insofar as such interest affects those interests created under the Grant of Environmental Restriction.

40.1072: Process for Applying for a Grant of Environmental Restriction

- (1) The Department shall review each application for a Grant of Environmental Restriction to ensure that it conforms to all requirements established herein for such instrument.
- (2) An application for a Grant of Environmental Restriction shall consist of:
 - (a) a completed Form 1072A and, if applicable, Form 1072B, set forth in 310 CMR 40.1099;

40.1072: continued

- (b) all other applicable documents set forth in 310 CMR 40.1071; and
 - (c) a certification of title issued to the Department by an insured title examiner certifying title in the Grantor, and including all encumbrances of record.
- (3) An application for a Grant of Environmental Restriction shall not be deemed complete if the Department determines that a Grant of Environmental Restriction application:
- (a) fails to contain all required information listed in 310 CMR 40.1071;
 - (b) fails to include the applicable fee established by 310 CMR 4.10(10)(g)4.; or
 - (c) is incorrectly filled out.
- (4) The Department has no obligation to accept or review an incomplete Grant of Environmental Restriction application.
- (5) Processing a Grant of Environmental Restriction Application. For purposes of 310 CMR 4.10(10)(g), the computation of time periods shall commence on the day following the day a Grant of Environmental Restriction application is received at the appropriate Department office or on the day following the day the Grant of Environmental Restriction application fee is received, whichever occurs later.
- (a) The applicant and the Department may, by written agreement, extend any schedule for timely action or individual portion thereof for a Grant of Environmental Restriction application pursuant to 310 CMR 4.00: *Timely Action Schedule and Fee Provisions* and 40.1072.
 - (b) Administrative Completeness Review. The Department shall conduct an Administrative Completeness Review of a Grant of Environmental Restriction Application in accordance with 310 CMR 4.00: *Timely Action Schedule and Fee Provisions* and 310 CMR 40.1072. The Administrative Completeness Review shall determine whether all required elements of the application have been submitted by the applicant.
 - 1. Initial Administrative Completeness Review (AC-1). The initial AC-1 review shall comply with the following requirements:
 - a. The AC-1 Review shall result in a written determination of administrative completeness or a statement of administrative deficiencies.
 - b. A determination of administrative completeness shall mean that the permit application may proceed to Technical Review.
 - c. A statement of administrative deficiencies shall end the AC-1 review period.
 - d. The Department shall send a determination of administrative completeness or a statement of administrative deficiencies to the applicant in writing within 31 days of the date a Grant of Environmental Restriction application is received at the appropriate Department office or on the day following the day the Grant of Environmental Restriction application fee is received, whichever occurs later. If the application is not complete, the Department shall identify the information necessary to complete the application in the statement of administrative deficiencies.
 - 2. Second Administrative Completeness Review (AC-2). If the Department issues a statement of administrative deficiencies, a second Administrative Completeness Review, AC-2, shall be conducted upon submittal of additional information by the applicant. Such AC-2 review shall be conducted in accordance with the following requirements:
 - a. If the Department issues a statement of administrative deficiencies, the Department shall have an additional 30 days for a second Administrative Completeness Review, AC-2, beginning the day after receipt of material submitted by the applicant in response to the statement of administrative deficiencies issued in AC-1
 - b. The Department may request additional information during the course of AC-2 review.
 - c. The AC-2 review shall result in a determination of administrative completeness or a denial of the permit application.
 - d. A denial of the permit application shall be subject to appeal in accordance with 310 CMR 40.0050, provided that in any adjudicatory hearing the issues shall be limited to the question of whether or not the application submitted was administratively complete. If the applicant prevails in such proceeding, the Department shall begin the next step of its review pursuant to the schedule for timely action.

40.1072: continued

3. Effect of Determination. A determination of administrative completeness shall not constitute any finding with respect to the technical suitability, adequacy or accuracy of the materials submitted, and shall be no bar to a request to amend, revise, replace, or supplement such materials based on technical suitability, adequacy or accuracy.
- (c) Technical Review of Grant of Environmental Restriction Applications. The Department shall conduct a Technical Review of each Grant of Environmental Restriction application to ensure that it conforms to the requirements established herein for such instruments. This review shall ensure that:
 1. the instrument provides adequate and appropriate identification of property subject to the Grant of Environmental Restriction;
 2. the person granting the Grant of Environmental Restriction is the owner of record;
 3. all prior interests in the Restricted Area have been subordinated; and
 4. the activities to be restricted, permitted, performed, and conditioned are clearly specified.
- (d) Procedures for Initial Technical Review (T-1).
 1. An Initial Technical Review shall result in a decision to approve the Grant of Environmental Restriction, or in a statement of technical deficiencies in the application and supporting materials. The Department's decision to issue a statement of deficiencies shall not be deemed to give rise to any right to an adjudicatory hearing.
 2. An initial T-1 review shall be conducted in accordance with the following requirements:
 - a. The Department may request additional information during the course of T-1 review.
 - b. A statement of technical deficiencies shall end the T-1 review period.
 - c. An applicant shall respond within 30 days of the date of issuance of a statement of technical deficiencies by submitting any additional material to support the application and address deficiencies.
 3. If the applicant fails to respond to a statement of technical deficiencies, the application shall be reviewed on the record.
 4. As established in 310 CMR 4.10(10)(g), and except as agreed pursuant to 310 CMR 40.1072(5)(a), the Department shall have 60 days to complete its T-1 review from the date of the Department's determination of administrative completeness.
- (e) Supplemental Technical Review (T-2).
 1. The purpose of a supplemental technical review (T-2) is to allow the Department to review technical information submitted by the applicant in response to a statement of technical deficiencies issued in T-1.
 2. A T-2 review shall result in a decision to approve or disapprove a Grant of Environmental Restriction.
 3. Except as agreed pursuant to 310 CMR 40.1072(5)(a), the Department shall have an additional 45 days for a T-2 review from the day after the receipt of material submitted by the applicant in response to a statement of technical deficiency.
 4. The Department may request more information at any time during the T-2 review.
- (6) Approvals of Grants of Environmental Restrictions.
 - (a) For each application for a Grant of Environmental Restriction, the Department shall prepare a statement specifying that the application is approvable, or, as appropriate, a statement describing the basis for disapproving the application.
 - (b) The Department's review shall be limited to determining whether the proposed Grant of Environmental Restriction meets the requirements of 310 CMR 40.1071.
 - (c) The Department's review shall not encompass issues concerning the adequacy of response actions at the subject disposal site (including whether the release and any associated risks have been adequately characterized, and whether the Activity and Use Limitation Opinion provides an adequate basis for a finding that a level of No Significant Risk exists or has been achieved) or that substantial hazards have been eliminated.
 - (d) The Department may disapprove an application for a Grant of Environmental Restriction if it determines that:
 1. the application does not provide adequate and appropriate identification of the property to be subject to the Grant of Environmental Restriction;

40.1072: continued

2. the person granting the Grant of Environmental Restriction is not the owner of record;
3. all prior interests in the Restricted Area have not been subordinated;
4. the activities to be restricted, permitted, performed, and conditioned are not clearly specified; or
5. the application is not completed by an applicable deadline, or contains information which the applicant reasonably knew or should have known was false or misleading.

40.1073: Environmental Restrictions for Disposal Sites Where the Department Conducts Response Actions

(1) The Department may impose Environmental Restrictions upon any disposal site for which the Department conducts a response action. Any Environmental Restriction imposed by the Department shall be recorded and/or registered in the appropriate Registry of Deeds and/or Land Registration Office.

(2) The Department may impose and record and/or register an Environmental Restriction if the property owner fails to record or register an Environmental Restriction in accordance with 310 CMR 40.1071, and may seek to recover the Costs thereof.

(3) In the event that the Department establishes an administrative record pursuant to 310 CMR 40.1300 for a response action that consists, in whole or in part, of the imposition of an Environmental Restriction by the Department, the Department shall include the Environmental Restriction in the administrative record.

(4) In the event that the Department does not establish an administrative record pursuant to 310 CMR 40.1300 for a response action that consists, in whole or in part, of the imposition of an Environmental Restriction by the Department, the Department shall provide to the following persons notice of such intent to impose an Environmental Restriction:

- (a) any owner of the property whose name and address is known to the Department;
- (b) any other person having a recorded or registered ownership interest in the property whose name and/or address is known to the Department;
- (c) any person having an unrecorded or unregistered ownership interest in the property whose interest, name and address is known to the Department; and
- (d) any person having an unrecorded or unregistered ownership interest in the property whose interest, name, and address is unknown to the Department.

(5) The notice required by 310 CMR 40.1073(4) shall include all of the following:

- (a) a statement of the Department's statutory and regulatory authority to record, register or file the Environmental Restriction;
- (b) a concise statement of the alleged factual and legal basis for the Environmental Restriction;
- (c) a statement that a person having an ownership interest in the property has a right to an adjudicatory hearing on such Environmental Restriction; and
- (d) a statement of the requirements that must be complied with by a person having an ownership interest in the property in order to avoid being deemed to have waived his or her right to an adjudicatory hearing.

(6) Each notice required by 310 CMR 40.1073(4)(a) shall be served by one or more of the following methods:

- (a) service in hand at the person's last known address or at the last known address of any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service;
- (b) service in hand personally to the person, or to any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service;
- (c) by certified mail, return receipt requested, addressed to the person's last known address, or to the last known address of any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service; or
- (d) with respect to any person having an unrecorded or unregistered ownership interest in the property whose interest, name, or address is unknown to the Department, by publication in a newspaper of general circulation serving the community where the property is located.

40.1073: continued

(7) Subject to the provisions of 310 CMR 40.1073(8), in the event that the Department does not establish an administrative record pursuant to 310 CMR 40.1300, the following person's shall have the right to an adjudicatory hearing whenever the Department seeks to record and/or register an Environmental Restriction:

- (a) any owner of the property;
- (b) any other person having a recorded or registered ownership interest in the property; and
- (c) any person having an unrecorded or unregistered ownership interest in the property.

(8) Any person who has a right to an adjudicatory hearing pursuant to 310 CMR 40.1073(7) shall be deemed to have waived the right to an adjudicatory hearing unless the Department receives from such person a written statement that denies that the Department has a basis to record and/or register the Environmental Restriction, and does so subject to and in compliance with applicable provisions of 310 CMR 1.00: *Adjudicatory Proceedings*, within 21 days of the following:

- (a) with respect to the notice required by 310 CMR 40.1073(4)(a), (b) or (c), the date of issuance of the notice in accordance with 310 CMR 40.1073(6)(a), (b) or (c); or
- (b) with respect to the notice required by 310 CMR 40.1073(4)(d), the date of publication of the notice in accordance with 310 CMR 40.1073(6)(d).

(9) The Department shall not be required to prove any facts alleged by the Department in the notice required by 310 CMR 40.1073(4) unless such facts are expressly denied in the statement filed pursuant to 310 CMR 40.1073(8).

40.1074: Notice of Activity and Use Limitation

(1) General Requirements. At any disposal site or portion of a disposal site where a RP, PRP or Other Person is conducting a response action(s) for which a Notice of Activity and Use Limitation has been selected as a form of Activity and Use Limitation pursuant to 310 CMR 40.1070, the following requirements shall be met:

- (a) a Notice of Activity and Use Limitation shall include all of the information specified in 310 CMR 40.1074(2) and be fully documented using Form 1075 set forth in 310 CMR 40.1099;
- (b) the Activities and Uses, and obligations and conditions specified in a Notice of Activity and Use Limitation to maintain a level of No Significant Risk or No Substantial Hazard, shall be established in accordance with 310 CMR 40.0900 and 40.1012;
- (c) a Notice of Activity and Use Limitation shall be recorded and/or registered as specified in 310 CMR 40.1074(3);
- (d) Prior to the recording and/or registration of a Notice of Activity and Use Limitation pursuant to 310 CMR 40.1074(3), current holders of any record interest(s) in the area subject to the proposed Notice (including without limitation, owners, lessees, tenants, mortgagees, and holders of easements or licenses) shall be notified by certified mail, return receipt requested, of the existence and location of oil and/or hazardous material within such area and the terms of such proposed Notice. Such proposed Notice of Activity and Use Limitation shall not be recorded and/or registered until at least 30 days after such notification of current record interest holders has occurred, unless all parties receiving such notification provide a written waiver of the 30-day waiting period to the property owner;
- (e) the person(s) signing the Notice of Activity and Use Limitation shall submit a statement, on a form prescribed by the Department, certifying that:
 1. the person(s) or entity identified as the property owner(s) on the Notice owned the property at the time the Notice was recorded and/or registered pursuant to 310 CMR 40.1074(3); and
 2. record interest-holders were notified of the proposed Notice pursuant to 310 CMR 40.1074(1)(d);

(2) Contents of a Notice of Activity and Use Limitation. A Notice of Activity and Use Limitation shall be documented on Form 1075 or, in the case of CERCLA sites, on a form developed and approved by the Department, and shall contain the following information:

- (a) the location of the property, including:
 1. the property's street address;

40.1074: continued

2. a metes and bounds description of the parcel(s) of land which contain(s) the area that is subject to the Notice of Activity and Use Limitation;
 3. a reference to a survey plan of the parcel(s) of land which contain(s) the area that is subject to the Notice of Activity and Use Limitation, prepared by a Massachusetts Registered Land Surveyor, that has been recorded as a plan with the appropriate registry of deeds and/or a Land Court Plan;
 4. if the area subject to the Notice of Activity and Use Limitation comprises only a portion of the property described in 310 CMR 40.1074(2)(a)2., a metes and bounds description of the portion subject to the Notice of Activity and Use Limitation; and
 - a. (for registered land only) an 8½" x 11" survey plan, prepared by a Massachusetts Registered Land Surveyor, which shows the metes and bounds of the portion subject to the Notice of Activity and Use Limitation, attached as an exhibit to the Notice of Activity and Use Limitation; or
 - b. (for unregistered land only) a reference to a survey plan of the portion subject to the Notice of Activity and Use Limitation, prepared by a Massachusetts Registered Land Surveyor, that has been recorded as a plan with the appropriate registry of deeds; and
 5. an 8½" x 11" sketch plan, attached as an exhibit to the Notice of Activity and Use Limitation, showing the location of the portion subject to the Notice of Activity and Use Limitation in relation to the boundaries of the disposal site to the extent that the boundaries of the disposal site have been established;
- (b) name(s) of the property owner(s);
- (c) if a person(s) signing the Notice of Activity and Use Limitation is not an individual signing on his/her own behalf, but rather on behalf of an entity (LLC, LLP, limited partnership, *etc.*), or as trustee, executor, or attorney in fact, documentation consistent with conveyancing standards and practices verifying that the person(s) signing the Notice of Activity and Use Limitation has the authority to sign such document shall be attached as an exhibit to the Notice of Activity and Use Limitation. If the property owner is a corporation, such documentation shall consist of:
1. a Clerk's Certificate of Incumbency from the clerk of the corporation certifying that the person(s) signing the Notice of Activity and Use Limitation on behalf of the corporation held his or her position as of the date of the Notice of Activity and Use Limitation; or
 2. unless the person(s) signing the Notice of Activity and Use Limitation holds the position of both president or vice president and treasurer or assistant treasurer, a Clerk's Certificate from the clerk or secretary of the corporation certifying a corporate vote, resolution, or by-law authorizing the person(s) to do so;
- (d) the disposal site name and DEP Release Tracking Number(s);
- (e) a statement that specifies why the Notice of Activity and Use Limitation is appropriate to maintain a Permanent Solution and condition of No Significant Risk or maintain a Temporary Solution and condition of No Substantial Hazard;
- (f) a concise summary of the oil and/or hazardous material release event(s) or site history (*i.e.*, date of the release(s), to the extent known, release volumes(s), and response actions taken to address the release(s)) that resulted in the contaminated media subject to the Notice of Activity and Use Limitation;
- (g) a description of the contaminated media (*i.e.*, media type(s), contaminant type(s), approximate vertical and horizontal extent) subject to the Notice of Activity and Use Limitation;
- (h) a description of the Site Activities and Uses that are consistent with maintaining a Permanent Solution and condition of No Significant Risk or maintaining a Temporary Solution and condition of No Substantial Hazard with respect to exposures to oil and/or hazardous material, including but not limited to emergency excavation and repair of existing subsurface utilities, specific provisions for non-emergency excavation, and specific types of land uses and activities;
- (i) a description of the Site Activities and Uses that are inconsistent with maintaining a Permanent Solution and condition of No Significant Risk or maintaining a Temporary Solution and condition of No Substantial Hazard with respect to exposures to oil and/or hazardous material;

40.1074: continued

- (j) a description of the obligations and/or conditions that are necessary to meet the objectives of the Notice of Activity and Use Limitation, including, but not limited to the type and frequency of activities for the inspection and maintenance of, as applicable, barriers, Engineered Barriers, and Exposure Pathway Mitigation Measures, and, pursuant to 310 CMR 40.1025, the type and frequency of activities for the inspection, operation, maintenance of an Active Exposure Pathway Mitigation Measure and the requirements for remote monitoring and notification;
- (k) an agreement to reference this Notice in all future deeds, easements, mortgages, leases, licenses, occupancy agreements, or any other instruments which convey an interest in and/or a right to use the property subject to the Notice of Activity and Use Limitation;
- (l) reference to procedures to be followed to ensure that changes in the inconsistent and/or consistent activities and/or uses meet the objectives of the Notice of Activity and Use Limitation; and
- (m) the notarized signature(s) of the property owner(s), and the notarized signature and seal of the LSP of Record who certifies that in [his][her] Opinion the Notice of Activity and Use Limitation is consistent with a Permanent Solution or a Temporary Solution.

(3) Recording/Registering Notices. The property owner shall record and/or register any Notice of Activity and Use Limitation in the appropriate Registry of Deeds and/or Land Registration Office.

(4) Filing with the Department. Within 30 days of recording and/or registering any Notice of Activity and Use Limitation, the property owner shall submit the following to the Department:

- (a) a Registry copy of the Notice bearing the book and page/instrument number and/or document number; and
- (b) a Registry copy of the required survey plan(s) referenced in the Notice, bearing the plan book/plan number(s).

(5) Incorporation into Instruments of Transfer. Upon transfer of any interest in and/or a right to use the property or a portion thereof that is subject to a Notice of Activity and Use Limitation, the Notice of Activity and Use Limitation shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer. Within 30 days of recording or registering a deed conveying record title for a property which is subject in whole or in part to a Notice of Activity and Use Limitation, a copy of such deed containing said reference shall be submitted to the Department. This obligation shall attach both to the grantor and the grantee on such deed, provided that submission of such copy to the Department by either the grantor or the grantee shall satisfy this obligation for both of them.

40.1075: Form of Notice of Activity and Use Limitation

Any person who intends to limit the Site Activities and Uses of property through a Notice of Activity and Use Limitation shall complete Form 1075 set forth in 310 CMR 40.1099 in accordance with 310 CMR 40.1074, or, in the case of CERCLA sites, a form developed and approved by the Department.

40.1080: Changes in Site Activities and/or Uses or Other Site Conditions After an Activity and Use Limitation Has Been Filed

(1) Evaluation of Contemplated Site Activity and/or Use Changes. Where a Permanent or Temporary Solution is based upon certain restrictions, limitations and/or conditions on Site Activities and/or Uses, any contemplated Site Activity and/or Use that is not specifically permitted by an Activity and Use Limitation and that may invalidate the condition of No Significant Risk or No Substantial Hazard, whichever is applicable were it to occur, shall be evaluated by an LSP before such Site Activity and/or Use is implemented. Such evaluation shall be submitted to the Department using a transmittal form provided for such purpose and shall include:

40.1080: continued

- (a) an LSP Opinion on a form prescribed by the Department as to whether, based on an evaluation of the contemplated Site Activity and/or Use pursuant to the risk characterization process in 310 CMR 40.0900, a condition of No Significant Risk or No Substantial Hazard, whichever is applicable, will continue to exist if the contemplated changes in Site Activity and/or Use were to occur;
- (b) the risk characterization conducted pursuant to 310 CMR 40.0900 evaluating the contemplated Site Activity and/or Use on which the LSP Opinion in 310 CMR 40.1080(1)(a) is based; and
- (c) a response action plan in accordance with 310 CMR 40.1067 and 310 CMR 40.0000 that specifies any additional response actions necessary to maintain or achieve a condition of No Significant Risk or No Substantial Hazard for the contemplated Site Activity and/or Use and the objectives of the Activity and Use Limitation, if any such LSP Opinion indicates that a condition of No Significant Risk or No Substantial Hazard, whichever is applicable, would no longer be met as a result of the contemplated changes in Site Activity and/or Use.

(2) Procedures for Additional Response Actions. Additional response actions required to maintain a level of No Significant Risk or No Substantial Hazard, for the contemplated changes in Site Activities or Uses, shall be completed before the new or altered activities or uses commence in accordance with the following:

- (a) any additional response actions shall be conducted pursuant to 310 CMR 40.0000 and specifically 310 CMR 40.1067;
- (b) such response actions shall achieve a level of No Significant Risk or No Substantial Hazard, for the new/altered Site Activities or Uses contemplated for the disposal site;
- (c) the Activity and Use Limitation shall be amended or released as appropriate pursuant to 310 CMR 40.1081 to include the new or altered Site Activities or Uses identified in the LSP Opinion under 310 CMR 40.1080(1) before the new or altered Site Activities or Uses commence; and
- (d) a revised Permanent or Temporary Solution Statement, where applicable, shall be submitted to the Department to reflect any changes in conditions from the previous Permanent or Temporary Solution Statement within 60 days from completion of response actions.

(3) At any disposal site which relies, in whole or in part, upon a Grant of Environmental Restriction to maintain a level of No Significant Risk or No Substantial Hazard and where such Environmental Restriction is not granted in perpetuity, the RPs, PRPs and Other Persons liable and/or responsible for such site shall upon expiration of the Grant of Environmental Restriction either comply with the procedures set forth in 310 CMR 40.1080(1) and (2), or take any response actions required by 310 CMR 40.0000 to meet the objectives of the Grant of Environmental Restriction.

40.1081: Amendment of Activity and Use Limitations

(1) An Activity and Use Limitation shall be amended where pursuant to the LSP Opinion required by 310 CMR 40.1080 such amendment of an Activity and Use Limitation is deemed necessary to meet the objectives of the Activity and Use Limitation (*e.g.*, either to maintain a level of No Significant Risk, or No Substantial Hazard for the new or altered Site Activities and Uses).

(2) An Activity and Use Limitation may also be amended to expand or reduce the list(s) of restricted and/or permitted Site Activities and Uses, and obligations and/or conditions listed therein based on changed circumstances or other grounds.

(3) Amending a Grant of Environmental Restriction. Grant of Environmental Restriction shall be amended in accordance with the following:

- (a) an Amendment to Grant of Environmental Restriction shall be prepared using Form 1082A set forth in 310 CMR 40.1099;
- (b) if a person(s) signing the Amendment to Grant of Environmental Restriction is not an individual signing on his/her own behalf, but rather on behalf of an entity (LLC, LLP, limited partnership, etc.), or as trustee, executor, or attorney in fact, documentation of the person(s) signatory authority, as described in 310 CMR 40.1071(2)(c), shall be submitted as an exhibit to the Amendment to Grant of Environmental Restriction;

40.1081: continued

- (c) the Amendment to Grant of Environmental Restriction shall be submitted to the Department for the Commissioner's signature, with a certification of title issued to the Department certifying title in the Grantor and including all encumbrances of record, any necessary subordination agreements, the Activity and Use Limitation Opinion required by 310 CMR 40.1081(1) and the applicable fee pursuant to 310 CMR 4.00;
- (d) the Amendment to Grant of Environmental Restriction shall be recorded and/or registered by the property owner at the appropriate Registry(ies) of Deeds and/or Land Registration Office(s) within 30 days of the property owner's receipt from the Department of the amendment as approved by the Commissioner;
- (e) local officials and the public shall be informed of the Amendment to Grant of Environmental Restriction pursuant to 310 CMR 40.1403(7); and
- (f) within 30 days of recording and/or registering any Amendment to Grant of Environmental Restriction, the property owner shall submit to the Department:
 1. a certified Registry copy of the Amendment to Grant of Environmental Restriction bearing the book and page/instrument number and/or document number; and
 2. If the property subject to the Grant of Environmental Restriction is unregistered land, a Registry copy of the Grant of Environmental Restriction being amended.

(4) Amending a Notice of Activity and Use Limitation. A Notice of Activity and Use Limitation shall be amended in accordance with the following:

- (a) an Amendment to Notice of Activity and Use Limitation shall be prepared using the Form 1082B set forth in 310 CMR 40.1099;
- (b) if a person(s) signing the Amendment to Notice of Activity and Use Limitation is not an individual signing on his or her own behalf, but rather on behalf of an entity (LLC, LLP, limited partnership, *etc.*), or as trustee, executor, or attorney in fact, documentation of the person(s) signatory authority, as described in 310 CMR 40.1074(2)(c), shall be submitted as an exhibit to the Amendment to Notice of Activity and Use Limitation;
- (c) prior to the recording and/or registration of an Amendment to Notice of Activity and Use Limitation pursuant to 310 CMR 40.1081(4)(d), current holders of any record interest(s) in the area subject to the proposed Amendment to Notice of Activity and Use Limitation (including without limitation, owners, lessees, tenants, mortgagees, and holders of easements or licenses) shall be notified by the property owner by certified mail, return receipt requested, of the existence and location of oil and/or hazardous material within such area and the terms of such proposed Amendment to Notice of Activity and Use Limitation. Such proposed Amendment to Notice of Activity and Use Limitation shall not be recorded and/or registered until at least 30 days after such notification of current record interest holders has occurred, unless all parties receiving such notification provide a written waiver of the 30-day waiting period to the property owner;
- (d) the property owner shall record and/or register any Amendment to Notice of Activity and Use Limitation in the appropriate Registry of Deeds and/or Land Registration Office;
- (e) a Registry copy of the Amendment to Notice of Activity and Use Limitation shall be submitted to the Department with the LSP Opinion described in 310 CMR 40.1081(1);
- (f) the person(s) signing the Amendment to Notice of Activity and Use Limitation shall submit a statement, on a form prescribed by the Department, certifying that:
 1. the person(s) or entity identified as the property owner(s) on the Amendment to Notice of Activity and Use Limitation owned the property at the time the Amendment to Notice of Activity and Use Limitation was recorded and/or registered pursuant to 310 CMR 40.1081(4)(d); and
 2. record interest-holders were notified of the proposed Amendment to Notice of Activity and Use Limitation pursuant to 310 CMR 40.1081(4)(c);
- (g) local officials and the public shall be informed of the Amendment to Notice of Activity and Use Limitation pursuant to 310 CMR 40.1403(7); and
- (h) no later than 30 days after the recording and/or registration of the Amendment to Notice of Activity and Use Limitation, the following shall be submitted to the Department:
 1. a Registry copy of the Amendment to Notice of Activity and Use Limitation bearing the book and page/instrument number and/or document number;
 2. a Registry copy of the required survey plan(s) referenced in the Amendment to Notice of Activity and Use Limitation, bearing the plan book/plan number(s); and

40.1081: continued

3. if the property subject to the Activity and Use Limitation is unregistered land, a Registry copy of the Notice of Activity and Use Limitation being amended.

40.1082: Process for Amending Grant of Environmental Restriction

- (1) The Department shall review each application for an Amendment to a Grant of Environmental Restriction to ensure that it conforms to all requirements established herein for such instruments.
- (2) An application for an Amendment to Grant of Environmental Restriction shall consist of:
 - (a) a completed Form 1082A, set forth in 310 CMR 40.1099;
 - (b) all other applicable documents set forth in 310 CMR 40.1081; and
 - (c) a certification of title that meets the requirements of 310 CMR 40.1072(2).
- (3) An application for an Amendment to Grant of Environmental Restriction shall not be deemed complete if the Department determines that the application:
 - (a) fails to contain all required information listed in 310 CMR 40.1081;
 - (b) fails to include the applicable fee established by 310 CMR 4.10(10)(h)(4); or
 - (c) is incorrectly filled out.
- (4) The Department has no obligation to accept or review an incomplete Amendment to a Grant of Environmental Restriction application.
- (5) Processing an Application for an Amendment to Grant of Environmental Restriction. For purposes of 310 CMR 4.10(10)(h), the provisions of 310 CMR 40.1072 for computing time for reviews, conducting Administrative Completeness (AC-1 and AC-2) and Technical Reviews (T-1 and T-2), and for approving or disapproving an application shall apply to the Department's review of a proposed Amendment to Grant of Environmental Restriction.
- (6) An Amendment to Grant of Environmental Restriction shall become effective upon recording and/or registering with the appropriate Registry of Deeds and/or Land Registration Office.

40.1083: Release or Termination of Activity and Use Limitations

- (1) Release of Activity and Use Limitation.
 - (a) In cases where, as a result of additional response actions pursuant to 310 CMR 40.0000 conducted at a disposal site or a portion of a disposal site, a recorded and/or registered Activity and Use Limitation is no longer necessary to maintain a level of No Significant Risk, or No Substantial Hazard, such Activity and Use Limitation shall be released as follows:
 1. an LSP Opinion shall be provided on a form prescribed by the Department which explains why the Activity and Use Limitation is no longer necessary to maintain a level of No Significant Risk or No Substantial Hazard;
 2. the Activity and Use Limitation shall be released in accordance with 310 CMR 40.1083(1)(d) or (e), whichever is appropriate; and
 3. a revised Permanent or Temporary Solution Statement and supporting documentation pursuant to 310 CMR 40.1056 reflecting any changes in the category of Permanent or Temporary Solution as the result of additional response actions and the release or termination shall be submitted to the Department.
 - (b) In cases where the termination of a Notice of Activity and Use Limitation is required pursuant to 310 CMR 40.1085, the Notice of Activity and Use Limitation shall be terminated in accordance with 310 CMR 40.1083(1)(e). No LSP Opinion shall be required to terminate the Notice of Activity and Use Limitation, provided that the provisions of 310 CMR 40.1085 are satisfied.
 - (c) In cases where the Activity and Use Limitation is being released because additional response actions are necessary to support the conclusion that a condition of No Significant Risk or a condition of No Substantial Hazard has been achieved, the Activity and Use Limitation shall be released in accordance with 310 CMR 40.1083(1)(d) or (e), whichever is applicable.

40.1083: continued

(d) Releasing a Grant of Environmental Restriction. A Grant of Environmental Restriction shall be released in accordance with the following procedures:

1. a Release of Grant of Environmental Restriction shall be prepared using Form 1084A or form 1084E set forth in 310 CMR 40.1099, whichever is applicable, and submitted to the Department for the Commissioner's signature and accompanied by the appropriate fee as established in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*;
2. within 30 days of the date of the property owner's receipt from the Department of the approved Release of Grant of Environmental Restriction, the Release of Grant of Environmental Restriction shall be recorded and/or registered at the appropriate Registry of Deeds and/or Land Registration Office;
3. local officials and the public shall be informed of the Release of Grant of Environmental Restriction pursuant to 310 CMR 40.1403(7); and
4. within 30 days of recording and/or registering any Release of Grant of Environmental Restriction, the property owner shall submit to the Department:
 - a. a certified Registry copy of the Release of Grant of Environmental Restriction bearing the book and page/instrument number and/or document number; and
 - b. if the property subject to the Grant of Environmental Restriction is unregistered land, a Registry copy of the Grant of Environmental Restriction being released.

(e) A Notice of Activity and Use Limitation shall be terminated in accordance with the following procedures:

1. a Termination of Notice of Activity and Use Limitation shall be prepared using the appropriate form set forth in 310 CMR 40.1099;
2. if a person(s) signing the Termination of Notice of Activity and Use Limitation is not an individual signing on his or her own behalf, but rather on behalf of an entity (LLC, LLP, limited partnership, *etc.*), or as trustee, executor, or attorney in fact, documentation of the person(s) signatory authority, as described in 310 CMR 40.1074(2)(c), shall be submitted as an exhibit to the Termination of Notice of Activity and Use Limitation;
3. the Termination of Notice of Activity and Use Limitation shall be recorded and/or registered at the appropriate Registry of Deeds and/or Land Registration Office;
4. the person(s) signing the Termination of Notice of Activity and Use Limitation shall submit a statement, on a form prescribed by the Department, certifying that the person(s) or entity identified as the property owner(s) on the termination owned the property at the time the termination was recorded and/or registered pursuant to 310 CMR 40.1083(1)(e)3.;
5. local officials and the public shall be informed of the Termination of Notice of Activity and Use Limitation pursuant to 310 CMR 40.1403(7); and
6. within 30 days of recording and/or registering any Termination of Notice of Activity and Use Limitation, the property owner shall submit to the Department a certified Registry copy of the Termination of Notice of Activity and Use Limitation bearing the book and page/instrument number and/or document number.

(2) Partial Release of Grant of Environmental Restriction. In cases where, as a result of additional response actions pursuant to 310 CMR 40.0000 conducted at a disposal site or a portion of a disposal site, a recorded and/or registered Grant of Environmental Restriction is no longer necessary to maintain a level of No Significant Risk or to eliminate a substantial hazard at a portion of the property subject to the Grant of Environmental Restriction, such Grant of Environmental Restriction shall be partially released as to such portion of the property pursuant to the following procedures:

- (a) an LSP Opinion shall be provided on a form prescribed by the Department which explains why the Grant of Environmental Restriction is no longer necessary to maintain a level of No Significant Risk or to eliminate a substantial hazard at the portion of the property;
- (b) a Partial Release of Grant of Environmental Restriction shall be prepared using Form 1083A set forth in 310 CMR 40.1099 and submitted to the Department for the Commissioner's signature, accompanied by the LSP Opinion described in 310 CMR 40.1083(2)(a) and the appropriate fee established in 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*;
- (c) a Partial Release of Grant of Environmental Restriction shall include a metes and bounds description of the portion of the property being released from the Grant of Environmental Restriction, and:

40.1083: continued

1. (registered land only) an 8½" x 11" survey plan, attached as an exhibit to the Partial Release of Grant of Environmental Restriction, prepared by a Massachusetts Registered Land Surveyor, which shows the metes and bounds of the portion of the property being released; or
 2. (registered land only) a reference to the Land Court Plan which shows the boundaries of the portion of the property being released; or
 3. (unregistered land only) reference to a survey plan of the portion of the property being released, prepared by a Massachusetts Registered Land Surveyor, meeting registry plan recording requirements, and recorded as a plan with the appropriate registry of deeds.
- (d) within 30 days of the date of the property owner's receipt from the Department of the approved Partial Release of Grant of Environmental Restriction, the Partial Release of Grant of Environmental Restriction shall be recorded and/or registered at the appropriate Registry of Deeds and/or Land Registration Office.
- (e) local officials and the public shall be informed of the Partial Release of Grant of Environmental Restriction pursuant to 310 CMR 40.1403(7);
- (f) a revised Response Action Outcome Statement and supporting documentation pursuant to 310 CMR 40.1056 reflecting any changes in the class of Response Action Outcome as the result of additional response actions and the Partial Release of Grant of Environmental Restriction shall be submitted to the Department; and
- (g) within 30 days of recording and/or registering any Partial Release of Grant of Environmental Restriction, the property owner shall submit to the Department:
1. a certified Registry copy of the Partial Release of Grant of Environmental Restriction bearing the book and page/instrument number and/or document number;
 2. if the property subject to the Grant of Environmental Restriction is unregistered land, a Registry copy of the Grant of Environmental Restriction being partially released; and
 3. a Registry copy of the required survey plan(s) referenced in the Partial Release of Grant of Environmental Restriction bearing the plan book/plan number(s).

(3) Partial Termination of a Notice of Activity and Use Limitation. In cases where, as a result of additional response actions pursuant to 310 CMR 40.0000 conducted at a disposal site or a portion of a disposal site, a recorded and/or registered Notice of Activity and Use Limitation is no longer necessary to maintain a level of No Significant Risk or No Substantial Hazard at a portion of the property subject to the Notice of Activity and Use Limitation, such Notice of Activity and Use Limitation shall be partially terminated as to such portion of the property pursuant to the following procedures:

- (a) an LSP Opinion shall be provided on a form prescribed by the Department which explains why the Notice of Activity and Use Limitation is no longer necessary to maintain a level of No Significant Risk or No Substantial Hazard at the portion of the property;
- (b) a Partial Termination of Notice of Activity and Use Limitation shall be prepared using Form 1083B set forth at 310 CMR 40.1099;
- (c) if a person(s) signing the Partial Termination of Notice of Activity and Use Limitation is not an individual signing on his or her own behalf, but rather on behalf of an entity (LLC, LLP, limited partnership, *etc.*), or as trustee, executor, or attorney in fact, documentation of the person(s) signatory authority, as described in 310 CMR 40.1074(2)(c), shall be submitted as an exhibit to the Partial Termination of Notice of Activity and Use Limitation;
- (d) the Partial Termination of Notice of Activity and Use Limitation shall include a metes and bounds description of the portion of the property for which the Notice of Activity and Use Limitation is no longer required, and:
 1. (registered land only) an 8½" x 11" survey plan, prepared by a Massachusetts Registered Land Surveyor, which shows the metes and bounds of the portion of the property; or
 2. (registered land only) a reference to the Land Court Plan which shows the boundaries of the portion of the property; or
 3. (unregistered land only) reference to a survey plan of the portion of the property, prepared by a Massachusetts Registered Land Surveyor, meeting registry plan recording requirements, and recorded as a plan with the appropriate registry of deeds.

40.1083: continued

- (e) the Partial Termination of Notice of Activity and Use Limitation shall be recorded and/or registered by the property owner at the appropriate Registry of Deeds and/or Land Registration Office;
- (f) the person(s) signing the Partial Termination of Notice of Activity and Use Limitation shall submit a statement, on a form prescribed by the Department, certifying that the person(s) or entity identified as the property owner(s) on the Partial Termination of Notice of Activity and Use Limitation owned the property at the time the Partial Termination of Notice of Activity and Use Limitation was recorded and/or registered pursuant to 310 CMR 40.1083(3)(e);
- (g) local officials and the public shall be informed of the Partial Termination of Notice of Activity and Use Limitation pursuant to 310 CMR 40.1403(7);
- (h) a revised Permanent or Temporary Solution Statement and supporting documentation pursuant to 310 CMR 40.1056 reflecting any changes in the category of Permanent or Temporary Solution as the result of additional response actions and the Partial Termination of Notice of Activity and Use Limitation shall be submitted to the Department; and
- (i) within 30 days of recording and/or registering any Partial Termination of Notice of Activity and Use Limitation, the property owner shall submit to the Department:
 - 1. a Registry copy of the Partial Termination of Notice of Activity and Use Limitation bearing the book and page/instrument number and/or document number;
 - 2. if the property subject to the Notice of Activity and Use Limitation is unregistered land, a Registry copy of the Notice of Activity and Use Limitation being partially terminated; and
 - 3. a Registry copy of the required survey plan(s) referenced in the Partial Termination of Notice of Activity and Use Limitation bearing the plan book/plan number(s).

40.1084: Process for Implementing a Release of Grant of Environmental Restriction or Partial Release of Grant of Environmental Restriction

- (1) The Department shall conduct a review of each application for a Release of Grant of Environmental Restriction or Partial Release of Grant of Environmental Restriction to ensure that it conforms to all legal requirements for such instruments.
- (2) An application for a Release of Grant of Environmental Restriction shall consist of a completed Form 1084A, set forth in 310 CMR 40.1099, in addition to all other applicable documents set forth in 310 CMR 40.1083.
- (3) An application for a Partial Release of Grant of Environmental Restriction shall consist of a completed Form 1083A, set forth in 310 CMR 40.1099, in addition to all other applicable documents set forth in 310 CMR 40.1083.
- (4) An application for a Release of Grant of Environmental Restriction or Partial Release of Grant of Environmental Restriction shall not be deemed complete if the Department determines that the application:
 - (a) fails to contain all required information listed in 310 CMR 40.1083;
 - (b) fails to include the applicable fee established by 310 CMR 4.10(10)(i)4.; or
 - (c) is incorrectly filled out.
- (5) The Department has no obligation to accept or review an incomplete application for a Release of Grant of Environmental Restriction or Partial Release of Grant of Environmental Restriction.
- (6) Processing a Release of Grant of Environmental Restriction Application or Partial Release of Grant of Environmental Restriction Application. For purposes of 310 CMR 4.10(10)(i), the provisions of 310 CMR 40.1072 for computing time for reviews, conducting Administrative Completeness (AC-1 and AC-2) and Technical Reviews (T-1 and T-2), and approving or disapproving of an application shall apply to the Department's review of a proposed Release of Grant of Environmental Restriction or Partial Release of Grant of Environmental Restriction.

40.1084: continued

(7) A Release of Grant of Environmental Restriction or Partial Release of Grant of Environmental Restriction shall become effective upon recordation and/or registration with the appropriate Registry of Deeds and/or Land Registration Office.

40.1085: Correction of Notices of Activity and Use Limitation

(1) Except as provided by 310 CMR 40.1085(2), scrivener's errors and other non-substantive errors or omissions in a recorded Notice of Activity and Use Limitation, or in any Amendment, Partial Termination or Termination thereof, may be corrected by implementing a Confirmatory Activity and Use Limitation in accordance with this section;

(2) A Confirmatory Activity and Use Limitation may not be used if the property subject to the Notice of Activity and Use Limitation is registered land. In such cases, the errors must be corrected by either:

- (a) terminating the Notice of Activity and Use Limitation in accordance with 310 CMR 40.1083(1)(b) and immediately implementing a new Notice of Activity and Use Limitation in substitution thereof, in accordance with 310 CMR 40.1074; or
- (b) if the instrument being corrected is an Amendment to Notice of Activity and Use Limitation, implementing a new amendment in accordance with 310 CMR 40.1081.

(3) Confirmatory Activity and Use Limitations may include any of the following:

- (a) Confirmatory Notice of Activity and Use Limitation;
- (b) Confirmatory Amendment to Notice of Activity and Use Limitation;
- (c) Confirmatory Partial Termination of Notice of Activity and Use Limitation; and
- (d) Confirmatory Termination of Notice of Activity and Use Limitation.

(4) Confirmatory Activity and Use Limitations shall be implemented in accordance with the following:

- (a) a Confirmatory Activity and Use Limitation shall be prepared using the appropriate form set forth in 310 CMR 40.1099;
- (b) if a person(s) signing the Confirmatory Activity and Use Limitation is not an individual signing on his/her own behalf, but rather on behalf of an entity (LLC, LLP, limited partnership, *etc.*), or as trustee, executor, or attorney in fact, documentation of the person(s) signatory authority, as described in 310 CMR 40.1074(2)(c), shall be submitted as an exhibit to the Confirmatory Activity and Use Limitation;
- (c) the Confirmatory Activity and Use Limitation shall be recorded in the appropriate Registry of Deeds;
- (d) the person(s) signing the Confirmatory Activity and Use Limitation shall submit a statement, on a form prescribed by the Department, certifying that the person(s) or entity identified as the property owner(s) on the Confirmatory Activity and Use Limitation owned the property at the time the Confirmatory Activity and Use Limitation was recorded and/or registered pursuant to 310 CMR 40.1085(4)(c); and
- (e) no later than 30 days after the recording of the Confirmatory Activity and Use Limitation, the following shall be submitted to the Department:
 - 1. a Registry copy of the Confirmatory Activity and Use Limitation; and
 - 2. a Registry copy of any required survey plan(s) referenced in the Confirmatory Activity and Use Limitation bearing the plan book/plan number(s).

40.1090: Public Involvement Requirements

(1) Public Involvement Activities shall be conducted in accordance with 310 CMR 40.1400 through 40.1406. Public Involvement Activities relevant to Permanent or Temporary Solution Opinions specifically include 310 CMR 40.1403(3)(f) and may include, but are not limited to, those activities set forth at 310 CMR 40.1403(7) and (8) and 40.1406.

(2) If the disposal site for which a Permanent or Temporary Solution Opinion is rendered is a Public Involvement Plan Site, then a Public Involvement Plan that is consistent with 310 CMR 40.1405 shall be implemented.

40.1099: Forms for Activity and Use Limitations

- Form 1072A: Grant of Environmental Restriction
- Form 1072B: Subordination Agreement
- Form 1075: Notice of Activity and Use Limitation
- Form 1082A: Amendment to Grant of Environmental Restriction
- Form 1082B: Amendment to Notice of Activity and Use Limitation
- Form 1083A: Partial Release of Grant of Environmental Restriction
- Form 1083B: Partial Termination of Notice of Activity and Use Limitation
- Form 1084A: Release of Grant of Environmental Restriction (pursuant to 310 CMR 40.1083(1)(a))
- Form 1084B: Termination of Notice of Activity and Use Limitation (pursuant to 310 CMR 40.1083(1)(a))
- Form 1084C: Termination of Notice of Activity and Use Limitation (pursuant to 310 CMR 40.1083(1)(b))
- Form 1084D: Termination of Notice of Activity and Use Limitation (pursuant to 310 CMR 40.1083(1)(c))
- Form 1084E: Release of Grant of Environmental Restriction (pursuant to 310 CMR 40.1083(1)(d))

Form 1072A

GRANT OF ENVIRONMENTAL RESTRICTION
M.G.L. c. 21E, § 6 and 310 CMR 40.0000

DEP Site Name: _____
DEP Release Tracking No.(s) _____

This GRANT OF ENVIRONMENTAL RESTRICTION is made as of this ____ day of _____, 20____, by _____, of _____ (Town/City), _____ County, _____ (State) ("Grantor").

W I T N E S S E T H

WHEREAS, _____ is the owner(s) in fee simple of that [those] certain parcel(s) of [vacant] land located in _____ (Town/City), _____ County, Massachusetts [with the buildings and improvements thereon], pursuant to [a deed recorded with the _____ Registry of Deeds in Book _____, Page _____]; [source of title other than by deed]; and/or [Certificate of Title No. _____ issued by the Land Registration Office of the _____ Registry District];

WHEREAS, said parcel(s) of land, which is more particularly bounded and described in Exhibit A, attached hereto and made a part hereof ("Property") is subject to this Grant of Environmental Restriction. The Property is shown on [a plan recorded with the _____ County Registry of Deeds in Plan Book _____, Plan _____], and/or on [Land Court Plan No. _____];

[WHEREAS, a portion of the Property ("Portion of the Property") is subject to this Grant of Environmental Restriction. The Portion of the Property is more particularly bounded and described in Exhibit A-1, attached hereto and made a part hereof. The Portion of the Property is shown on [a plan recorded with the _____ Registry of Deeds in Plan Book _____, Plan _____] and/or on [a sketch plan attached hereto and filed herewith for registration];

WHEREAS, the [Property] ["Portion of the Property"] comprises [all][part of] a disposal site as the result of a release of oil and/or hazardous material. Exhibit B is a sketch plan showing the location of the [Property][Portion of the Property] subject to this Grant of Environmental Restriction in relation to the boundaries of said disposal site existing within the limits of the Property and to the extent such boundaries have been established. Exhibit B is attached hereto and made a part hereof; and

WHEREAS, one or more response actions have been selected for [the Disposal Site][Portion of the Disposal Site] in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil [and/or groundwater] and/or (b) the restriction of certain activities occurring in, on, through, over or under the [Property] [Portion of the Property]. The basis for such restrictions is set forth in an Activity and Use Limitation Opinion ("AUL Opinion") dated _____, (which is attached hereto as Exhibit C and made a part hereof);

NOW, THEREFORE, in accordance with the provisions of M.G.L. c. 21E, § 6 and the MCP, I, _____ ("Grantor") hereby GRANT to the DEPARTMENT OF ENVIRONMENTAL PROTECTION, an agency established under the laws of the Commonwealth of Massachusetts, having its principal office at One Winter Street, Boston, Massachusetts 02108 ("DEP"), as a gift, with QUITCLAIM COVENANTS, an ENVIRONMENTAL RESTRICTION, ("Restriction") in, on, through, over and under the [Property] [Portion of the Property] ("Restricted Area").

Said Restriction is subject to the following terms and conditions:

1. Restricted Uses and Activities. Grantor shall not perform, suffer, allow or cause any person to perform any of the following activities in, on, upon, through, over or under the Restricted Area, or any of the following uses to be made of the Restricted Area:

(i) [List restricted uses]; and/or

Form 1072A: continued

(ii) [List restricted activities];

(iii) Except as provided in Paragraphs (2) and (4) of this Grant, there shall be no excavation or removal of any loam, peat, gravel, sand, rock or other mineral or natural resource; and

(iv) Any action or inaction which, in the Opinion of a person licensed by the Board of Registration of Waste Cleanup Professionals, or any successor agency (a holder of such license hereinafter referred to as "LSP"), is reasonably likely to:

(a) (select one) [Create a significant risk of harm to health, safety, public welfare or the environment] [Create a substantial hazard];

(b) [Where remedial action includes a surface cover, cap or sealant designed to contain or reduce exposure to the oil and/or hazardous material, disturb the structural integrity of such cover, without first obtaining the express written consent of an LSP].

2. Permitted Uses and Activities. Grantor expressly reserves the right to perform, suffer, allow or to cause any person to perform any of the following activities in, on, through, over or under the Restricted Area or any of the following uses to be made of the Restricted Area:

(i) _____;

(ii) _____;

(iii) Such other activities or uses which, in the Opinion of an LSP, shall present no greater risk of harm to health, safety, public welfare or the environment than the activities and uses set forth in this Paragraph; and

(iv) Such other activities and uses not identified in Paragraph 1 as being Restricted Uses and Activities.

3. Obligations and Conditions. Grantor affirmatively agrees to perform the following activities [and][or] to maintain the following conditions at the Restricted Area in order to (select one) [maintain a condition of No Significant Risk] [eliminate a substantial hazard] (such conditions and terms defined in 310 CMR 40.0000) as set forth in the AUL Opinion.

[Insert specific activities and conditions set forth in the AUL Opinion, if any.]

4. Emergency Excavation. If it becomes necessary to excavate as part of a response to an emergency (*e.g.*, repairing utility lines or responding to a fire or flood), and such excavation could result in a significant risk of harm from exposure to oil and/or hazardous material at the Restricted Area, the requirements of Paragraph (1) (iii) of this Grant may be suspended, provided Grantor complies with the requirements set forth in 310 CMR 40.0320, and:

(i) Notifies DEP of such emergency as soon as possible but no more than two hours after having learned of such emergency;

(ii) Limits the actual disturbance involved in such excavation to the minimum reasonably necessary to adequately respond to the emergency;

(iii) Implements all measures necessary to limit actual or potential risk to health, safety, public welfare or the environment, including the following:

1. _____;

2. _____;

3. _____; and

Form 1072A: continued

(iv) Engages an LSP to oversee the implementation of this Paragraph, and to prepare and oversee the implementation of a written plan which, in the LSP's Opinion, will restore the Restricted Area to a condition(s) that meets the objectives of the Grant of Environmental Restriction in accordance with 310 CMR 40.1071(2)(1)

5. Easements. In establishing this Restriction, Grantor hereby grants the following easements for the term of this Grant to DEP, its agents, contractors, subcontractors, and employees:

(i) To pass and repass over [the Property] [the Restricted Area] for purposes of inspecting the Restricted Area to insure compliance with the terms of this Restriction; and

(ii) In, on, through, over and under the Restricted Area for purposes of conducting subsurface investigations, installing groundwater monitoring wells, and conducting other investigations of the Restricted Area and/or remediation activities consistent with M.G.L. c. 21E and the MCP.

6. Severability. Grantor hereby agrees, in the event that a court or other tribunal determines that any provision of this instrument is invalid or unenforceable:

(i) That any such provision shall be deemed automatically modified to conform to the requirements for validity and enforceability as determined by such court or tribunal; or

(ii) That any such provision that, by its nature, cannot be so modified, shall be deemed deleted from this instrument as though it had never been included.

In either case, the remaining provisions of this instrument shall remain in full force and effect.

7. Enforcement. Grantor expressly acknowledges that a violation of the terms of this instrument could result in the following:

(i) the assessment of penalties and other action by DEP to enforce the terms of this Restriction, pursuant to M.G.L. c. 21E and the MCP; and/or

(ii) upon a determination by a court of competent jurisdiction, the issuance of criminal and civil penalties, and/or equitable remedies which could include the issuance of an order to modify or remove any improvements constructed in violation of the terms of this Restriction.

8. Provisions to Run with the Land. This Restriction establishes certain rights, liabilities, agreements and obligations for the [Property] [Restricted Area], or any portion thereof, which shall run with the [Property] [Restricted Area], or any portion thereof, for the term of this Restriction. Grantor hereby covenants for himself/herself/itself and his/her/its executors, administrators, heirs, successors and assigns, to stand seized and hold title to the [Property] [Restricted Area], or any portion thereof, subject to this Restriction.

The rights granted to DEP, its successors and assigns, do not provide, however, that a violation of this Restriction shall result in a forfeiture or reversion of Grantor's title to the Restricted Area.

9. Concurrence Presumed. It is agreed that:

(i) Grantor and all parties claiming by, through or under Grantor shall be deemed to be in accord with the provisions of this document; and

(ii) all such parties and any party claiming by, through or under them, and their respective agents, contractors, sub-contractors and employees, also agree that the Restriction herein established shall not be violated and that their respective interests in the [Property] [Restricted Area] shall be subject to the provisions herein set forth.

Form 1072A: continued

10. Incorporation into Deeds, Mortgages, Leases and Instruments of Transfer. Grantor hereby agrees to incorporate this Restriction, in full or by reference, into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer by which an interest in and/or a right to use the [Property] [Restricted Area], or any portion thereof, is conveyed.

11. Amendment and Release. This Restriction may be amended or released in accordance with M.G.L. c. 21E and the MCP (310 CMR 40.1080 *et seq.*).

12. No Dedication Intended. Nothing herein shall be construed to be a gift or dedication of the [Property] [Restricted Area] to DEP or to the general public for any purpose whatsoever.

13. Term. This Restriction shall run [in perpetuity] [for a period of ____ years] and is intended to conform to M.G.L. c. 184, § 26.

14. Rights Reserved. It is expressly agreed that acceptance of this Restriction by DEP shall not express nor imply DEP approval of the adequacy of this or any other response action affecting the [Disposal Site][Portion of Disposal Site]. Acceptance of this Restriction shall not operate to bar, diminish, nor in any way affect any legal or equitable right of DEP to issue any future order with respect to the (select one) [Disposal Site][Portion of the Disposal Site] or in any way affect any other claim, action, suit, cause of action, or demand which DEP may have with respect to the [Disposal Site][Portion of the Disposal Site].

This Restriction shall become effective upon its recordation and/or registration with the appropriate Registry of Deeds and/or Land Registration Office.

As this Restriction is a gift, no Massachusetts deed excise stamps are affixed hereto, none being required by law.

WITNESS the execution hereof under seal this ____ day of _____, 20__.

[Name of Grantor]

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss _____, 20__

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

The undersigned Waste Site Cleanup Professional hereby certifies that [he][she] executed the AUL Opinion, dated ____, filed with the Department of Environmental Protection under Release Tracking No(s). ____, and attached hereto as Exhibit C and made a part hereof, and that in [his][her] Opinion this Restriction is consistent with the terms of said AUL Opinion.

Date: _____

[Name of LSP]
[LSP SEAL]

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Form 1072A: continued

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss _____, 20__

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

In accordance with M.G.L. c. 21E, § 6, and the Massachusetts Contingency Plan (310 CMR 40.0000), the Commissioner of the Department of Environmental Protection hereby approves this Grant of Environmental Restriction (as to form only).

Date: _____

Commissioner
Department of Environmental Protection

Upon recording, return to:

Office of General Counsel
Department of Environmental Protection
One Winter Street
Boston, MA 02108

Form 1072B

SUBORDINATION AGREEMENT

Disposal Site Name: _____
DEP Release Tracking No.(s) _____

County, _____, of _____ (Town/City), _____
_____ (State), is the holder of a _____ granted by
_____ to _____, dated _____, recorded with
_____ Registry of Deeds in Book _____, Page _____ and/or registered with the Land Registration
Office of _____ Registry District as Document No. _____.

_____ hereby assents to the Grant of Environmental Restriction granted by
_____ to the Department of Environmental Protection dated _____ and
recorded with the _____ Registry of Deeds in Book _____, Page _____, and/or registered with the
Land Registration Office of _____ Registry District as Document No. _____, and agrees
that the _____ shall be subject to said Grant and to the rights created by and under said Grant
insofar as the interests created under the _____ affect the [Property] [Restricted Area] identified in
the Grant and as if for all purposes said Grant had been executed, delivered and recorded prior to the
execution, delivery and recordation and/or registration of the _____.

WITNESS the execution hereof under seal this _____ day of _____, 20____.

Holder

COMMONWEALTH OF MASSACHUSETTS

_____, ss _____, 20__

On this ____ day of _____, 20__, before me, the undersigned notary public, personally
appeared _____ (name of document signer), proved to me through
satisfactory evidence of identification, which were _____, to be the person
whose name is signed on the preceding or attached document, and acknowledged to me that (he)
(she) signed it voluntarily for its stated purpose.

- (as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

[The execution of this Subordination Agreement by a secured lender and/or a fiduciary (as
defined in M.G.L. c. 21E, § 2) for the purpose of subordinating its lien to said Grant shall not render such
secured lender or fiduciary an "owner" or "operator", provided such secured lender and/or fiduciary shall not
otherwise be an "owner" or "operator" within the meaning of § 2.]

Upon recording, return to:

Department of Environmental Protection
One Winter Street
Boston, MA 02108

Form 1075

Note: Pursuant to 310 CMR 40.1074(5), upon transfer of any interest in or a right to use the property or a portion thereof that is subject to this Notice of Activity and Use Limitation, the Notice of Activity and Use Limitation shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer. Within 30 days of so incorporating the Notice of Activity and Use Limitation in a deed that is recorded or registered, a copy of such deed shall be submitted to the Department of Environmental Protection.

[CONFIRMATORY] NOTICE OF ACTIVITY AND USE LIMITATION

M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: _____
DEP Release Tracking No.(s): _____

This [Confirmatory] Notice of Activity and Use Limitation ("Notice") is made as of this _____ day of _____, 20____, by _____ [Name and address of property owner(s)], together with his/her/its/their successors and assigns (collectively "Owner").

W I T N E S S E T H:

WHEREAS, _____ (Name of Owner(s)), [is][are] the owner(s) in fee simple of [that][those] certain parcel(s) of [vacant] land located in _____ (Town/City), _____ County, Massachusetts [with the buildings and improvements thereon], pursuant to [a deed recorded with the _____ Registry of Deeds in Book _____, Page _____]; [source of title other than by deed]; and/or [Certificate of Title No. _____ issued by the Land Registration Office of the _____ Registry District];

WHEREAS, said parcel(s) of land, which is more particularly bounded and described in Exhibit A, attached hereto and made a part hereof ("Property") is subject to this Notice of Activity and Use Limitation. The Property is shown on [a plan recorded in the _____ Registry of Deeds in Plan Book _____, Plan _____], and/or on [Land Court Plan No. _____];

[WHEREAS, a portion of the Property ("Portion of the Property") is subject to this [Notice of Activity and Use Limitation]. The Portion of the Property is more particularly bounded and described in Exhibit A-1, attached hereto and made a part hereof. The Portion of the Property is shown on [a plan recorded with the _____ Registry of Deeds in Plan Book _____, Plan _____], and/or on [a sketch plan attached hereto and filed herewith for registration];

WHEREAS, the [Property] [Portion of the Property] comprises [all][part of] a disposal site as the result of [a] release[(s)] of oil and/or hazardous material.

Exhibit B is a sketch plan showing the relationship of the [Property][Portion of the Property] subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Property and to the extent such boundaries have been established. Exhibit B is attached hereto and made a part hereof; and

WHEREAS, one or more response actions have been selected for the [Disposal Site][Portion of the Disposal Site] in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil [and/or groundwater] and/or (b) the restriction of certain activities occurring in, on, through, over or under the [Property] [Portion of the Property]. A description of the basis for such restrictions, and the oil and/or hazardous material release event(s) or site history that resulted in the contaminated media subject to the Notice of Activity and Use Limitation is attached hereto as Exhibit C and made a part hereof (Provide the following information in Exhibit C: (a) a statement that specifies why the Notice of Activity and Use Limitation is appropriate to maintain a Permanent Solution and condition of No Significant Risk or maintain a Temporary Solution and condition of No Substantial Hazard; (b) a description of the oil and/or hazardous material release event(s) or site history that resulted in the contaminated media subject to the Notice of Activity and Use Limitation (*i.e.*, date of the release(s), to the extent known, release volumes(s), and response actions taken to address the release(s); and (c) a description of the contaminated media (*i.e.*, media type(s), approximate vertical and horizontal extent) subject to the Notice of Activity and Use Limitation.);

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Form 1075: continued

NOW, THEREFORE, notice is hereby given that the activity and use limitations set forth in this Notice of Activity and Use Limitation are as follows:

1. Activities and Uses Consistent with Maintaining (select one) [No Significant Risk] [No Substantial Hazard] Conditions. The following Activities and Uses are consistent with maintaining (select one) [a Permanent Solution and a condition of No Significant Risk][a Temporary Solution and a condition of No Substantial Hazard] and, as such, may occur on the [Property][Portion of the Property] pursuant to 310 CMR 40.0000:

(i) ;

(ii) ;

(iii) Such other activities or uses which, in the Opinion of a Licensed Site Professional, shall present no greater risk of harm to health, safety, public welfare or the environment than the activities and uses set forth in this Paragraph; and

(iv) Such other activities and uses not identified in Paragraph 2 as being Activities and Uses Inconsistent with (select one)[maintaining No Significant Risk][No Substantial Hazard]Conditions.

2. Activities and Uses Inconsistent with (select one)[Maintaining No Significant Risk][No Substantial Hazard] Conditions. The following Activities and Uses are inconsistent with maintaining (select one) [a Permanent Solution and a condition of No Significant Risk][a Temporary Solution and a condition of No Substantial Hazard] pursuant to 310 CMR 40.0000, and, as such, may not occur on the[Property][Portion of the Property]:

(i) ;

(ii) ; and

(iii) .

3. Obligations and Conditions. The following obligations and/or conditions are necessary and shall be undertaken and/or maintained at the [Property] [Portion of the Property] to (select one) [maintain a Permanent Solution and a condition of No Significant Risk] [maintain a Temporary Solution and a condition of No Substantial Hazard] :

(i) ;

(ii) ; and

(iii) .

(For a Permanent Solution with Conditions that relies upon the operation and maintenance of an Active Exposure Pathway Mitigation Measure pursuant to 310 CMR 40.1025, include the following in the listed Obligations and Conditions:

[(i) The Active Exposure Pathway Mitigation Measure comprised of (insert description of the system type) located (specify where on the property the system is located) shall be operated according to the operating regimen specified in the Permanent Solution Statement submitted to the Department of Environmental Protection to ensure a level of No Significant Risk is maintained for the Receptor(s) of concern under normal operating conditions;

(ii) The Active Exposure Pathway Mitigation Measure shall employ remote monitoring technology that alerts the property owner and operator and the Department of Environmental Protection immediately upon loss of power, mechanical failure or other significant disruption of the effectiveness of the system;

(iii) In the event of any suspension or failure of the Active Exposure Pathway Mitigation Measure, immediate steps shall be taken to return the Active Exposure Pathway Mitigation Measure to full operating condition;

Form 1075: continued

- (iv) If such suspension or failure of the system lasts 30 consecutive days, written notice shall be provided to both Department of Environmental Protection and any non-transient building occupant who may have experienced exposure to oil and/or hazardous material as the result of the system failure or suspension on the 30th day from the start of the suspension or failure period; this notice shall document the reason for the suspension or failure of the system, any efforts taken to resume operation of such Measures, and the expected timeframe for resuming operation of such Measure; and
- (v) .])

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the [Property] [Portion of the Property] which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by a Licensed Site Professional who shall render an Opinion, in accordance with 310 CMR 40.1080, as to whether the proposed changes (select one) [are inconsistent with maintaining a Permanent Solution and a condition of No Significant Risk] [are inconsistent with maintaining a Temporary Solution and a condition of No Substantial Hazard]. Any and all requirements set forth in the Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of a Permanent or Temporary Solution. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by a Licensed Site Professional in accordance with 310 CMR 40.1080, and without additional response actions, if necessary, to maintain a condition of (select one) [No Significant Risk] [No Substantial Hazard].

If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by a Licensed Site Professional in accordance with 310 CMR 40.1080, the owner or operator of the [Property] [Portion of the Property] subject to this Notice at the time that the activities, uses and/or exposures change, shall comply with the requirements set forth in 310 CMR 40.0020.

6. Incorporation Into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property or a portion thereof is conveyed in accordance with 310 CMR 40.1074(5).

Owner hereby authorizes and consents to the filing and recordation and/or registration of this [Confirmatory] Notice, said [Confirmatory] Notice to become effective when executed under seal by the undersigned Licensed Site Professional, and recorded and/or registered with the appropriate Registry(ies) of Deeds and/or Land Registration Office(s).

[This Confirmatory Notice of Activity and Use Limitation is given to correct the inadvertent error(s) made in the Notice of Activity and Use Limitation dated _____, and recorded with the _____ Registry of Deeds in Book _____, Page _____, said error(s) being as follows:

- (i) ;
- (ii) ; and
- (iii) .

In all other respects the terms of the Notice of Activity and Use Limitation remain unchanged.]

WITNESS the execution hereof under seal this _____ day of _____, 20____.

[Name of Owner]

Form 1075: continued

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss _____, 20__

On this ___ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

The undersigned Licensed Site Professional hereby certifies that in [his][her] Opinion this [Confirmatory] Notice of Activity and Use Limitation is consistent with (select one) [a Permanent Solution and maintaining a condition of No Significant Risk][a Temporary Solution and maintaining a condition of No Substantial Hazard].

Date: _____

_____[Name of Licensed Site Professional]
_____[Licensed Site Professional SEAL]

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss _____, 20__

On this ___ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

Upon recording, return to:

(Name and Address of Owner)

[FIRST] AMENDMENT TO GRANT OF ENVIRONMENTAL RESTRICTION
M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: _____
DEP Release Tracking No.(s): _____

WHEREAS, a Grant of Environmental Restriction from _____ of _____ (Town/City), _____ County, _____ (State), to the Department of Environmental Protection, an agency established under the laws of the Commonwealth of Massachusetts, having its principal office at One Winter Street, Boston, Massachusetts 02108 ("DEP"), dated _____, has been recorded with the _____ Registry of Deeds in Book _____, Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____; [Said Grant was previously amended by an Amendment to Grant of Environmental Restriction dated _____, recorded with the _____ Registry of Deeds in Book _____ Page _____ and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____] (said Grant of Environmental Restriction and any amendments thereto are collectively referred to herein as "Grant");

WHEREAS, said Grant imposes certain restrictions on activities and uses, conditions, obligations and easements upon that certain parcel(s) of [vacant] land situated in _____ (Town/City), _____ County, Massachusetts [with the buildings and improvements thereon];

WHEREAS, said parcel of land is more particularly bounded and described in Exhibit A attached hereto and made a part hereof ("Property");

WHEREAS, said restrictions, conditions, obligations and easements are imposed upon the Property to maintain a condition of No Significant Risk (said condition being defined in 310 CMR 40.0000) in accordance with the terms of an Activity and Use Limitation Opinion ("AUL Opinion") dated _____, issued and signed by _____, holder of a valid license issued by the Board of Registration of Waste Site Cleanup Professionals pursuant to Massachusetts General Laws Chapter 21A, Sections 19-19J (the holder of such a license referred to as an "LSP") attached to said Grant of Environmental Restriction as Exhibit C and made a part thereof, in order to (select one) [maintain at the Property a condition of No Significant Risk] [eliminate a substantial hazard] (such conditions and terms being defined in 310 CMR 40.0000); and

(Select one of the following paragraphs)

[WHEREAS, the undersigned LSP, in accordance with Chapter 21E and the MCP, has issued and signed an AUL Opinion, dated _____, attached hereto as Exhibit B and made a part hereof. Said AUL Opinion explains that the implementation of the following proposed changes in Site Activity and Use at the Property will maintain a condition of No Significant Risk, as all response actions necessary to achieve such condition have been performed;]

[WHEREAS, the undersigned LSP, in accordance with Chapter 21E and the MCP, has issued and signed an AUL Opinion, dated _____, attached hereto as Exhibit B and made a part hereof. Said AUL Opinion explains that the implementation of the following proposed changes in Site Activity and Use at the Property will: (1) (select one) [maintain a condition of No Significant Risk at the Property][eliminate a substantial hazard]; and (2) that no additional response actions are necessary at the Property in connection with the implementation of said proposed changes;]

NOW, THEREFORE, in accordance with Chapter 21E and the MCP, the undersigned _____, of _____ (Town/City), _____ County, _____ (State), being the owner of the Property pursuant to [a deed recorded with the _____ Registry of Deeds in Book _____, Page _____]; [source of title other than by deed]; and/or [Certificate of Title No. _____ issued by the Land Registration Office of the _____ Registry District], hereby amends said Grant as follows:

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Form 1082A: continued

(Select as appropriate)

[Paragraph 1, "Restricted Uses and Activities", is amended to read as follows:]

[Paragraph 2, "Permitted Uses and Activities", is amended to read as follows:]

[Paragraph 3, "Obligations and Conditions", is amended to read as follows:]

In all other respects the provisions of said Grant remain unchanged.

This [First] Amendment to the said Grant shall become effective when executed under seal by the undersigned LSP, approved (as to its form) by the Commissioner of the Department of Environmental Protection, and recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office.

WITNESS the execution hereof under seal this _____ day of _____, 20____.

[Name of Owner]

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss

_____, 20____

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

The undersigned Waste Site Cleanup Professional hereby certifies that [he][she] executed the AUL Opinion dated ____ and filed with the Department of Environmental Protection under Release Tracking No.(s) _____, attached hereto as Exhibit B and made a part hereof, and that in [his][her] Opinion this [First] Amendment to said Grant is consistent with the terms of said AUL Opinion.

Date: _____

[Name of LSP]
[LSP SEAL]

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Form 1082A: continued

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss _____, 20__

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

In accordance with Massachusetts General Laws Chapter 21E, § 6, and the Massachusetts Contingency Plan, 310 CMR 40.0000, the Commissioner of the Department of Environmental Protection hereby approves this [First] Amendment to said Grant (as to form only).

Date: _____

Commissioner
Department of Environmental
Protection

Upon recording, return to:
Department of Environmental Protection
One Winter Street
Boston, MA 02108

Form 1082B

[CONFIRMATORY] [FIRST] AMENDMENT TO NOTICE OF ACTIVITY AND USE LIMITATION
M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: _____
DEP Release Tracking No.(s): _____

WHEREAS, a Notice of Activity and Use Limitation has been recorded with the _____ Registry of Deeds in Book _____ Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____. [Said Notice of Activity and Use Limitation was previously amended by an Amendment to a Notice of Activity and Use Limitation dated _____, recorded with the _____ Registry of Deeds in Book _____ Page _____ and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____] (said Notice of Activity and Use Limitation and any amendments thereto are collectively referred to herein as "Notice");

WHEREAS, said Notice sets forth limitations on use and activities, conditions and obligations affecting certain [vacant] parcel(s) of land situated in _____ (Town/City), _____ County, Massachusetts [with the buildings and improvements thereon], said land being more particularly bounded and described in Exhibit A attached hereto and made a part hereof ("Property"). Said limitations on use and activities are consistent with the terms of (select one) [maintaining a Permanent Solution and a condition of No Significant Risk] [maintaining a Temporary Solution and a condition of No Substantial Hazard] (such conditions and terms being defined in 310 CMR 40.0000); and

[WHEREAS, the undersigned Licensed Site Professional, in accordance with M.G.L. c. 21E and the MCP opines that the implementation of the following proposed changes in Site Activities and Uses at the Property will (select one)[maintain a Permanent Solution and condition of No Significant Risk][maintain a Temporary Solution and condition of No Substantial Hazard]];

(Select as appropriate the paragraph or paragraphs that are amended from the original Notice of Activity and Use Limitation)

[Paragraph 1, "Activities and Uses Consistent with (select one)[Maintaining No Significant Risk] [No Substantial Hazard Conditions]", is amended to read as follows:]

[Paragraph 2, "Activities and Uses Inconsistent with (select one)[Maintaining No Significant Risk][No Substantial Hazard Conditions]", is amended to read as follows:]

[Paragraph 3, "Obligations and Conditions", is amended to read as follows:]

NOW THEREFORE, in accordance with M.G.L. c. 21E and the MCP, the undersigned _____, of _____ (Town/City), _____ County, _____ (State), being the owner of the Property pursuant to [a deed recorded with the _____ Registry of Deeds in Book _____, Page _____]; [source of title other than by deed]; and/or [Certificate of Title No. _____, issued by the Land Registration Office of the _____ Registry District], hereby amends said Notice as follows:

(In Paragraphs 4, 5 and 6, provide complete list that includes both amended conditions and conditions that remain unchanged from the original Notice of Activity and Use Limitation.)

[Paragraph 4, "Activities and Uses Consistent with Maintaining No Significant Risk or No Substantial Hazard Conditions" :]

[Paragraph 5, " Activities and Uses Inconsistent with Maintaining No Significant Risk or No Substantial Hazard Conditions " :]

[Paragraph 6, "Obligations and Conditions" :]

In all other respects the provisions of said Notice remain unchanged.

(Owner) authorizes and consents to the filing and recordation/and or registration of this [Confirmatory] [First] Amendment to Notice of Activity and Use Limitation, said [Confirmatory] [First] Amendment to become effective when executed under seal by the undersigned Licensed Site Professional and recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Form 1082B: continued

[This Confirmatory [First] Amendment to Notice of Activity and Use Limitation is given to correct the inadvertent error(s) made in the [First] Amendment to Notice of Activity and Use Limitation dated _____, and recorded with the _____ Registry of Deeds in Book _____, Page _____, said error(s) being as follows:

- (i) ;
- (ii) ; and
- (iii) .

In all other respects the terms of the [First] Amendment to Notice of Activity and Use Limitation remain unchanged.]

WITNESS the execution hereof under seal this ____ day of _____, 20__.

[Name of Owner]

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss _____, 20__

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

- (as partner for _____, a partnership)
- (as _____ for _____, a corporation)
- (as attorney in fact for _____, the principal)
- (as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

The undersigned Licensed Site Professional hereby certifies that in [his][her] Opinion, this [Confirmatory] [First] Amendment to Notice of Activity and Use Limitation is consistent with (select one) [a Permanent Solution and maintaining a condition of No Significant Risk][a Temporary Solution and maintaining a condition of No Substantial Hazard] .

Date: _____

[Name of Licensed Site Professional]
[Licensed Site Professional SEAL]

Form 1082B: continued

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss _____, 20__

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

Upon recording, return to:

(Name and Address of Owner)

Form 1083A

PARTIAL RELEASE OF GRANT OF ENVIRONMENTAL RESTRICTION
M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: _____
DEP Release Tracking No.(s) _____

WHEREAS, a Grant of Environmental Restriction from _____ of _____ (Town/City), _____ County, _____ (State), to the Department of Environmental Protection, an agency established under the laws of the Commonwealth of Massachusetts, having its principal office at One Winter Street, Boston, Massachusetts 02108 ("DEP"), dated _____, has been recorded with the _____ Registry of Deeds in Book _____, Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____; [as amended by an Amendment to Grant of Environmental Restriction dated _____, recorded with the _____ Registry of Deeds in Book _____, Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____;] (said Grant of Environmental Restriction and any amendments thereto are collectively referred to herein as "Grant");

WHEREAS, said Grant imposes certain restrictions on activities and uses, conditions, obligations and easements upon certain [vacant] land situated in _____, _____ County, Massachusetts [with the buildings and improvements thereon], said land being more particularly bounded and described in Exhibit A attached hereto and made a part hereof ("Property");

WHEREAS, said restrictions, conditions, obligations and easements are imposed upon the Property to (select one) [maintain a condition of No Significant Risk] [eliminate a substantial hazard] (said conditions and terms being defined in 310 CMR 40.0000) in accordance with the terms of an Activity and Use Limitation Opinion ("AUL Opinion") dated _____, issued and signed by _____, holder of a valid license issued by the Board of Registration of Waste Site Cleanup Professionals pursuant to M.G.L. c. 21A, §§ 19 through 19J (said holder being referred to as an "LSP"). Said AUL Opinion was issued and filed with DEP at its _____ Regional Office under Release Tracking No.(s) _____, a copy of which is attached to said Grant of Environmental Restriction as Exhibit C, and made a part thereof;

WHEREAS, the undersigned, _____, being an LSP, has issued an AUL Opinion in accordance with 310 CMR 40.0000, dated _____, a copy of which is attached hereto as Exhibit B and made a part hereof. Said AUL Opinion explains why the restrictions, conditions, obligations and easements created under said Grant are no longer necessary (select one) [to maintain a condition of No Significant Risk] [to eliminate a substantial hazard] at a portion of said Property, said portion being more particularly bounded and described in Exhibit C, attached hereto and made a part hereof, and being shown on [a plan recorded with the _____ Registry of Deeds in Plan Book _____, Plan _____], and/or on [a sketch plan attached hereto and filed herewith for registration] ("Portion of the Property"), and accordingly, said Grant may be released as to said Portion of the Property; and

WHEREAS, said [Name of LSP], has certified that [he][she] executed the AUL Opinion attached hereto as Exhibit B, and that in [his][her] Opinion, this Partial Release of Grant of Environmental Restriction is consistent with said AUL Opinion.

NOW THEREFORE, in accordance with M.G.L. c. 21E, § 6 and 310 CMR 40.0000, the undersigned _____, being the Commissioner of DEP, does hereby release, abandon and forever discharge the restrictions on activity and use, conditions, obligations and easements imposed upon said Portion of the Property under said Grant.

This Partial Release of Grant of Environmental Restriction shall become effective upon its recordation and/or registration with the appropriate Registry of Deeds and/or Land Registration Office.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Form 1083A: continued

WITNESS the execution hereof under seal this _____ day of _____, 20__.

Commissioner
Department of Environmental Protection

The undersigned LSP hereby certifies that [he][she] executed the AUL Opinion dated _____, attached hereto as Exhibit B and made a part hereof, and that in [his][her] Opinion, this Partial Release of Grant of Environmental Restriction is consistent with said AUL Opinion.

Date: _____

[Name of LSP]
[LSP SEAL]

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss

_____, 20 __

On this ____ day of _____, 20 __, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

Upon recording, return to:

(Name and Address of Owner)

[CONFIRMATORY] PARTIAL TERMINATION OF NOTICE OF ACTIVITY AND USE LIMITATION
M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: _____
DEP Release Tracking No.(s) _____

WHEREAS, a Notice of Activity and Use Limitation has been recorded with the _____ Registry of Deeds in Book _____ Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____ [as amended by an Amendment to Notice of Activity and Use Limitation dated _____, recorded with the _____ Registry of Deeds in Book _____ Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____] (said Notice of Activity and Use Limitation and any amendments thereto are collectively referred to herein as "Notice");

WHEREAS, said Notice sets forth limitations on use and activities, conditions and obligations affecting certain [vacant] land situated in _____ (Town/City), _____ County, Massachusetts [with the buildings and improvements thereon], said land being more particularly bounded and described in Exhibit A attached hereto and made a part hereof ("Property");

WHEREAS, the undersigned, _____, being a Licensed Site Professional, opines that the limitations on activities and uses, conditions and obligations set forth in said Notice are no longer necessary to (select one) [maintain a condition of No Significant Risk] [maintain a condition of No Substantial Hazard] at a portion of said Property, said portion being more particularly bounded and described in Exhibit A-1, attached hereto and made a part hereof, and being shown on [a plan recorded with the _____ Registry of Deeds in Plan Book _____, Plan _____]; and/or on [a sketch plan attached hereto and filed herewith for registration] ("Portion of the Property"), and accordingly, said Notice may be terminated as to said Portion of the Property;

WHEREAS, said Notice is being partially terminated because the limitations on activities and uses, conditions and obligations set forth in said Notice are no longer necessary to meet the requirements of 310 CMR 40.0000 as to said Portion of the Property.

NOW, THEREFORE, I/We of _____ (City/Town) _____ County, _____ (State), being the owner(s) of said Property, do hereby partially terminate said Notice.

[This Confirmatory Partial Termination of Notice of Activity and Use Limitation is given to correct the inadvertent error(s) made in the Partial Termination of Notice of Activity and Use Limitation dated _____, and recorded with the _____ Registry of Deeds in Book _____, Page _____, said error(s) being as follows:

- (i) _____ ;
- (ii) _____ ; and
- (iii) _____ .]

In all other respects the terms of the Partial Termination of Notice of Activity and Use Limitation remain unchanged.

[(Owner) authorizes and consents to the filing and recordation of this Confirmatory Partial Termination of Notice of Activity and Use Limitation, said Confirmatory Partial Termination to become effective when executed under seal by the undersigned Licensed Site Professional and recorded with the appropriate Registry of Deeds.]

[(Owner) authorizes and consents to the filing and recordation/and or registration of this Partial Termination of Notice of Activity and Use Limitation, said Partial Termination to become effective when executed under seal by the undersigned Licensed Site Professional and recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office.]

Form 1083B: continued

WITNESS the execution hereof under seal this ____ day of _____, 20__.

[Name of Owner]

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss _____, 20__

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

[The undersigned Licensed Site Professional hereby certifies that this [Confirmatory] Partial Termination of Notice of Activity and Use Limitation is consistent with (select one) [a Permanent Solution and maintaining a condition of No Significant Risk][a Temporary Solution and maintaining a condition of No Substantial Hazard].

Date: _____

[Name of Licensed Site Professional]
[Licensed Site Professional SEAL]

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss _____, 20__

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

Upon recording, return to:

(Name and Address of Owner)

RELEASE OF GRANT OF ENVIRONMENTAL RESTRICTION
M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: _____
DEP Release Tracking No.(s) _____

WHEREAS, a Grant of Environmental Restriction from _____ of _____ (Town/City), _____ County, _____ (State), to the Department of Environmental Protection, an agency established under the laws of the Commonwealth of Massachusetts, having its principal office at One Winter Street, Boston, Massachusetts 02108 ("DEP"), dated _____, has been recorded with the _____ Registry of Deeds in Book _____, Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____; [as amended by an Amendment to Grant of Environmental Restriction dated _____, recorded with the _____ Registry of Deeds in Book _____, Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____;] (said Grant of Environmental Restriction and any amendments thereto are collectively referred to herein as "Grant");

WHEREAS, said Grant imposes certain restrictions on activities and uses, conditions, obligations and easements upon certain [vacant] land situated in _____, _____ County, Massachusetts [with the buildings and improvements thereon], said land being more particularly bounded and described in Exhibit A attached hereto and made a part hereof ("Property");

WHEREAS, said restrictions, conditions, obligations and easements were imposed upon the Property to (select one) [maintain a condition of No Significant Risk] [eliminate a substantial hazard] (said conditions and terms being defined in 310 CMR 40.0000) in accordance with the terms of an Activity and Use Limitation Opinion ("AUL Opinion") dated _____, issued and signed by _____, holder of a valid license issued by the Board of Registration of Waste Site Cleanup Professionals pursuant to M.G.L. c. 21A, §§ 19 through 19J (said holder being referred to as an "LSP"). Said AUL Opinion was issued and filed with DEP at its _____ Regional Office under Release Tracking No.(s) _____, a copy of which is attached to said Grant of Environmental Restriction as Exhibit C, and made a part thereof;

WHEREAS, the undersigned, _____, being an LSP, has issued an AUL Opinion in accordance with 310 CMR 40.0000, dated _____, a copy of which is attached hereto as Exhibit B and made a part hereof. Said AUL Opinion explains why the restrictions, conditions, obligations and easements created under said Grant are no longer necessary (select one) [to maintain a condition of No Significant Risk at the Property] [to eliminate a substantial hazard] and accordingly, said Grant may be released; and

NOW THEREFORE, in accordance with M.G.L. c. 21E, § 6 and 310 CMR 40.0000, the undersigned _____, being the Commissioner of DEP, does hereby release, abandon and forever discharge the restrictions on activity and use, conditions, obligations and easements imposed upon the Property under said Grant.

This Release of Grant of Environmental Restriction shall become effective upon its recordation and/or registration with the appropriate Registry of Deeds and/or Land Registration Office.

WITNESS the execution hereof under seal this _____ day of _____, 20__.

Commissioner
Department of Environmental
Protection

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Form 1084A: continued

The undersigned LSP hereby certifies that [he][she] executed the AUL Opinion dated _____, attached hereto as Exhibit B and made a part hereof, and that in [his][her] Opinion, this Release of Grant of Environmental Restriction is consistent with said AUL Opinion.

Date: _____

[Name of LSP]
[LSP SEAL]

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss

_____, 20__

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

Upon recording, return to:

(Name and Address of Owner)

Form 1084B

[CONFIRMATORY] TERMINATION OF NOTICE OF ACTIVITY AND USE LIMITATION

M.G.L. c. 21E, § 6 and 310 CMR 40.0000 (310 CMR 40.1083(1)(a))
Form 1084B Is Used When the Notice of Activity and Use Limitation Is No Longer
Required to Meet the Requirements of 310 CMR 40.0000

Disposal Site Name: _____
DEP Release Tracking No.(s) _____

WHEREAS, a Notice of Activity and Use Limitation has been recorded with the _____ Registry of Deeds in Book _____ Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____ [as amended by Amendment to a Notice of Activity and Use Limitation dated _____, recorded with the _____ Registry of Deeds in Book _____ Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____] (said Notice of Activity and Use Limitation and any amendments thereto are collectively referred to herein as "Notice");

WHEREAS, said Notice sets forth limitations on use and activities, conditions and obligations affecting certain [vacant] land situated in _____ (Town/City), _____ County, Massachusetts [with the buildings and improvements thereon], said land being more particularly bounded and described in Exhibit A attached hereto and made a part hereof ("Property");

WHEREAS, the undersigned, _____, being a Licensed Site Professional, opines that the limitations on activities and uses, conditions and obligations set forth in said Notice are no longer necessary to (select one) [maintain a condition of No Significant Risk] [maintain a condition of No Substantial Hazard] at the Property, and accordingly, said Notice may be terminated;

WHEREAS, said Notice is being terminated because the limitations on activities and uses, conditions and obligations set forth in said Notice are no longer necessary to meet the requirements of 310 CMR 40.0000 at the Property.

NOW, THEREFORE, I/We of _____ (City/Town) _____ County, _____ (State), being the owner(s) of said Property, do hereby terminate said Notice.

[This Confirmatory Termination of Notice of Activity and Use Limitation is given to correct the inadvertent error(s) made in the Termination of Notice of Activity and Use Limitation dated _____, and recorded with the _____ Registry of Deeds in Book _____, Page _____, said error(s) being as follows:

- (i) _____ ;
- (ii) _____ ; and
- (iii) _____ .]

In all other respects the terms of the Termination of Notice of Activity and Use Limitation remain unchanged.

(Owner) authorizes and consents to the filing and recordation of this Confirmatory Termination of Notice of Activity and Use Limitation, said Confirmatory Termination to become effective when executed under seal by the undersigned Licensed Site Professional and recorded with the appropriate Registry of Deeds.]

[(Owner) authorizes and consents to the filing and recordation and/or registration of this Termination of Notice of Activity and Use Limitation, said Termination to become effective when executed under seal by the undersigned Licensed Site Professional and recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office.]

WITNESS the execution hereof under seal this ____ day of _____, 20__.

Name of Owner]

Form 1084B: continued

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss _____, 20__

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

The undersigned Licensed Site Professional hereby certifies that this [Confirmatory] Termination of Notice of Activity and Use Limitation is consistent with [a Permanent Solution and maintaining a condition of No Significant Risk][a Temporary Solution and maintaining a condition of No Substantial Hazard].

Date: _____

[Name of Licensed Site Professional]
[Licensed Site Professional SEAL]

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss _____, 19__

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as _____ for _____, a corporation)
(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

Upon recording, return to:

(Name and Address of Owner)

Form 1084C

[CONFIRMATORY] TERMINATION OF NOTICE OF ACTIVITY AND USE LIMITATION

M.G.L. c. 21E, § 6 and 310 CMR 40.0000 (310 CMR 40.1083(1)(b))

Form 1084C Is Used When the Notice of Activity and Use Limitation Is Being Substituted
by a New Notice of Activity and Use Limitation

Disposal Site Name: _____

DEP Release Tracking No.(s) _____

WHEREAS, a Notice of Activity and Use Limitation has been recorded with the _____ Registry of Deeds in Book _____ Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____ [as amended by Amendment to a Notice of Activity and Use Limitation dated _____, recorded with the _____ Registry of Deeds in Book _____ Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____] (said Notice of Activity and Use Limitation and any amendments thereto are collectively referred to herein as "Notice");

WHEREAS, said Notice sets forth limitations on use and activities, conditions and obligations affecting certain [vacant] land situated in _____ (Town/City), _____ County, Massachusetts [with the buildings and improvements thereon], said land being more particularly bounded and described in Exhibit A attached hereto and made a part hereof ("Property");

WHEREAS, said Notice is being terminated so that it may be substituted with the Notice of Activity and Use Limitation given by _____, dated _____, and recorded and/or registered immediately hereinafter;

NOW, THEREFORE, I/We, of _____ of _____ (City/Town) _____ County, _____ (State), being the owner(s) of said Property, do hereby terminate said Notice and substitute the same with the Notice of Activity and Use Limitation given by _____, dated _____, and recorded and/or registered immediately hereinafter.

[This Confirmatory Termination of Notice of Activity and Use Limitation is given to correct the inadvertent error(s) made in the Termination of Notice of Activity and Use Limitation dated _____, and recorded with the _____ Registry of Deeds in Book _____, Page _____, said error(s) being as follows:

- (i) _____ ;
- (ii) _____ ; and
- (iii) _____ .

In all other respects the terms of the Termination of Notice of Activity and Use Limitation remain unchanged.

[(Owner) authorizes and consents to the filing and recordation of this Confirmatory Termination of Notice of Activity and Use Limitation, said Confirmatory Termination to become effective when recorded with the appropriate Registry of Deeds.]

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Form 1084C: continued

[(Owner)] authorizes and consents to the filing and recordation/and or registration of this Termination of Notice of Activity and Use Limitation, said Termination to become effective when recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office.]

WITNESS the execution hereof under seal this ___ day of _____, 20__.

[Name of Owner]

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss

_____, 20__

On this ___ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)

(as _____ for _____, a corporation)

(as attorney in fact for _____, the principal)

(as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

Upon recording, return to:

(Name and Address of Owner)

Form 1084D

TERMINATION OF NOTICE OF ACTIVITY AND USE LIMITATION

M.G.L. c. 21E, § 6, 310 CMR 40.0000

Form 1084D Is Used When Additional Response Actions Are Necessary
to Support a Permanent or Temporary Solution

Disposal Site Name: _____
DEP Release Tracking No.(s) _____

WHEREAS, a Notice of Activity and Use Limitation has been recorded with the _____ Registry of Deeds in Book _____ Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____ [as amended by an Amendment to a Notice of Activity and Use Limitation dated _____, recorded with the _____ Registry of Deeds in Book _____ Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____] (said Notice of Activity and Use Limitation and any amendments thereto are collectively referred to herein as "Notice");

WHEREAS, said Notice sets forth limitations on use and activities, conditions, and obligations affecting certain [vacant] land situated in _____ (Town/City), _____ County, Massachusetts [with the buildings and improvements thereon], said land being more particularly bounded and described in Exhibit A attached hereto and made a part hereof ("Property");

WHEREAS, said Notice is being terminated because additional response actions are necessary to support the conclusion that [a condition of No Significant Risk has been achieved at the Property][a condition of No Substantial Hazard has been achieved at the Property].

NOW, THEREFORE, I/We of _____ (City/Town) _____ County, _____ (State), being the owner(s) of said Property, do hereby terminate said Notice.

(Owner) authorizes and consents to the filing and recordation and/or registration of this Termination of Notice of Activity and Use Limitation, said Termination to become effective when recorded and/or registered with the appropriate Registry of Deeds and/or Land Registration Office.]

WITNESS the execution hereof under seal this ____ day of _____, 20__.

[Name of Owner]

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss

_____, 20__

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

- (as partner for _____, a partnership)
- (as _____ for _____, a corporation)
- (as attorney in fact for _____, the principal)
- (as _____ for _____, (a) (the) _____)

(official signature and seal of notary)

Upon recording, return to:

(Name and Address of Owner)

Form 1084E

RELEASE OF GRANT OF ENVIRONMENTAL RESTRICTION
M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: _____
DEP Release Tracking No.(s) _____

WHEREAS, a Grant of Environmental Restriction from _____ of _____ (Town/City), _____ (County), _____ (State), to the Department of Environmental Protection, an agency established under the laws of the Commonwealth of Massachusetts, having its principal office at One Winter Street, Boston, Massachusetts 02108 ("DEP"), dated _____, has been recorded with the _____ Registry of Deeds in Book _____ Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____ [as amended by Amendment to a Notice of Activity and Use Limitation dated _____, recorded with the _____ Registry of Deeds in Book _____ Page _____, and/or registered with the Land Registration Office of the _____ Registry District as Document No. _____] (said Grant of Environmental Restriction and any amendments thereto are collectively referred to herein as "Grant");

WHEREAS, said Grant imposes certain restrictions on activities and uses, conditions, obligations and easements upon certain [vacant] land situated in _____ (Town/City), _____ County, Massachusetts [with the buildings and improvements thereon], said land being more particularly bounded and described in Exhibit A attached hereto and made a part hereof ("Property");

WHEREAS, said restrictions, conditions, obligations and easements were imposed upon the Property in order to [maintain a condition of No Significant Risk] [eliminate a Substantial Hazard] (said conditions and terms being defined in 310 CMR 40.0000) in accordance with the terms of an Activity and Use Limitation Opinion ("AUL Opinion") dated _____, signed and sealed by _____, holder of a valid license issued by the Board of Registration of Waste Site Cleanup Professionals, pursuant to M.G.L. c. 21A, §§ 19 through 19J (the holder being referred to as "LSP") attached to said Grant as Exhibit C and made a part thereof; and

WHEREAS, said Grant is being released because additional response actions are necessary to support the conclusion that [a condition of No Significant Risk has been achieved at the Property][all Substantial Hazards have been eliminated at the Property].

NOW, THEREFORE, in accordance with M.G.L. c. 21E, § 6 and 310 CMR 40.0000, the undersigned _____, being the Commissioner of DEP, does hereby release, abandon and forever discharge the restrictions on activity and use, conditions, obligations and easements imposed upon the Property under said Grant. This Release of Grant of Environmental Restriction shall become effective upon its recordation and/or registration with the appropriate Registry of Deeds and/or Land Registration Office.

WITNESS the execution hereof under seal this ____ day of _____, 20__.

[Commissioner, Department
of Environmental Protection]

Form 1084E: continued

[COMMONWEALTH OF MASSACHUSETTS]
[STATE OF _____]

_____, ss

_____, 20__

On this ____ day of _____, 20__, before me, the undersigned notary public, personally appeared _____ (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

- (as partner for _____, a partnership)
- (as _____ for _____, a corporation)
- (as attorney in fact for _____, the principal)
- (as _____ for _____, (a) (the) _____)

_____ (official signature and seal of notary)

Upon recording, return to:

(Name and Address of Owner)

SUBPART K: AUDITS

40.1101: Purpose, Scope and Applicability

- (1) The regulations published at 310 CMR 40.1101 through 40.1199, collectively referred to as 310 CMR 40.1100, establish procedures for the Department to audit a sufficient number of response actions not overseen or conducted by the Department to ensure that those response actions are performed in compliance with M.G.L. c. 21E, 310 CMR 40.0000, and any other requirement applicable to such response actions.
- (2) During each fiscal year, the Department shall audit a statistically significant number of all sites, as determined by the Department, for which annual compliance assurance fees are required to be paid pursuant to M.G.L. c. 21E, § 3B. The Department may establish additional audit targets for categories of persons, response actions or sites based on the level of Department oversight provided to each category.
- (3) In its audit of any response action submittal, the Department shall base its finding of any violation or assessment of a penalty on the Massachusetts Contingency Plan and Response Action Performance Standard in effect at the time of its receipt of the submittal.

40.1110: Selection of Persons, Response Actions and Sites for Audit

- (1) The Department may conduct an audit of any RP, PRP, Other Person, response action or site in accordance with 310 CMR 40.1100. The Department selects persons, response actions and sites for audit randomly (Random Audits) and by criteria-specific methods (Targeted Audits).
- (2) Except as provided in 310 CMR 40.1110(3) and (4), the Department may initiate an audit of any specific RP, PRP, Other Person, response action or site without any limitation as to time.
- (3) Except as provided in 310 CMR 40.1110(5), the Department shall not initiate a Random Audit with respect to any specific person, response action or site after two years has passed since the date of the Department's receipt of:
 - (a) a Permanent Solution Statement; or
 - (b) an LSP Evaluation Opinion stating that the requirements for a Permanent Solution have been achieved from such person and/or pertinent to such response action and/or site. Except as expressly provided by 310 CMR 40.1110(4), (3) shall not be construed to limit the Department's authority to initiate a Targeted Audit of any person, response action or site.
- (4) Except as provided in 310 CMR 40.1110(5), the Department shall not initiate a Targeted Audit of any RP, PRP, Other Person, response action or site after five years has passed since the date of the Department's receipt of a Permanent Solution Statement from such person and/or pertinent to such response action and/or site, unless the Department has reason to believe that:
 - (a) response actions taken at a site may have failed to achieve or maintain a level of No Significant Risk;
 - (b) a significant risk of harm to health, safety, public welfare or the environment may exist at a site, or in the vicinity of a site, for which a Permanent Solution Statement has been submitted to the Department;
 - (c) a response action has been taken at a site in noncompliance with M.G.L. c. 21E, 310 CMR 40.0000 or any other applicable requirement;
 - (d) the Permanent Solution Statement has failed to identify material facts, data, or other information known by the LSP who rendered the Permanent Solution Statement or by the person who undertook response actions at a site;
 - (e) the person responsible for undertaking response actions at a site has failed to fully respond to a Request for Information;
 - (f) the activities, uses and/or exposures upon which a Permanent Solution Statement is based have changed to cause human or ecological exposure, or cause an increased potential for human or environmental exposure, to oil and/or hazardous material;
 - (g) any person required by 310 CMR 40.0014 to retain documents pertinent to the Permanent Solution Statement has failed to do so;

40.1110: continued

- (h) any person required by 310 CMR 40.0800 to perform operation and maintenance and monitoring activities at the site has failed to do so;
- (i) any person undertaking, performing, managing, supervising or overseeing response actions at the site has engaged in a pattern of noncompliance, considering the criteria set forth in 310 CMR 5.13: *Pattern of Noncompliance*;
- (j) any person responsible for undertaking response actions at a disposal site has violated, suffered, allowed or caused any person to violate an Environmental Restriction; or
- (k) any change in activity, use and/or exposure upon which a Permanent Solution Statement is based occurred at a disposal site without an evaluation by an LSP in accordance with 310 CMR 40.1080 and without additional response actions, if necessary.

(5) Notwithstanding any provision in 310 CMR 40.1110(3) or (4), the Department may initiate, at any time, a Random or Targeted Audit of any site subject to an Activity and Use Limitation.

40.1120 Audit Activities

- (1) During an audit, the Department may do the following:
 - (a) examine documents within the Department's records;
 - (b) request that the person who has performed the response action provide a written explanation, or other supporting evidence, to demonstrate compliance with M.G.L. c. 21E, 310 CMR 40.0000, and other applicable requirements;
 - (c) request that the person who has performed the response action that is the subject of the audit appear at one of the Department's offices to discuss response actions and provide supporting evidence to demonstrate compliance with M.G.L. c. 21E, 310 CMR 40.0000, and other applicable requirements;
 - (d) enter and inspect a site or other location to determine whether an RP, PRP, Other Person, response action or site is in compliance with M.G.L. c. 21E, 310 CMR 40.0000, and other applicable requirements;
 - (e) investigate, take samples at a site and inspect records, conditions, equipment or practices material to the response action or property related to the site; and
 - (f) take any other actions the Department deems necessary to determine whether response actions have been performed in compliance with M.G.L. c. 21E, 310 CMR 40.0000, and other applicable requirements.
- (2) Any person requested to appear for an interview may be represented by an attorney, Licensed Site Professional or other representative.

40.1130: Initiation of Audit

Prior to undertaking an audit activity other than an examination of documents within the Department's records, or within other public records, the Department shall provide reasonable Notice of Audit to the person who has performed response actions at the site that the site has been selected for audit. Such notice shall include the following information:

- (1) the name and location of the site;
- (2) the Release Tracking Number(s);
- (3) the scope of the audit and the type of audit activities to be performed;
- (4) the location at which the audit will be conducted; and
- (5) any other notice, information or request the Department deems appropriate.

40.1131: Response Actions During Audits

Persons who have been notified of the initiation of an audit may continue to conduct response actions during the course of an audit unless otherwise ordered by the Department.

40.1140: Notice of Audit Findings

- (1) Except with respect to an audit that consists solely of an examination of documents within the Department's records or in other public records, the Department shall issue a Notice of Audit Findings at the conclusion of an audit. Such notice shall include the following information:
 - (a) the name and location of the site;
 - (b) the Release Tracking Number(s);
 - (c) a statement as to the type of audit performed;
 - (d) a statement as to whether the Department, on the basis of the information reviewed during the audit and in reliance upon the accuracy of that information, identified any violations or deficiencies;
 - (e) an Interim Deadline by which violations and/or deficiencies shall be corrected;
 - (f) an Interim Deadline by which an Audit Follow-up Plan, if such a plan is required, shall be submitted; and
 - (g) any other information or request the Department deems appropriate.
- (2) In the event the Department identifies violations of M.G.L. c. 21E, 310 CMR 40.0000 or any other applicable requirement during an audit, the Department may issue any of the following with a Notice of Audit Findings:
 - (a) a Notice of Noncompliance;
 - (b) a Notice of Intent to Assess a Civil Administrative Penalty;
 - (c) a Notice of Responsibility;
 - (d) a Notice of Response Action; and/or
 - (e) an order.
- (3) The Department shall not be required to issue a Notice of Audit Findings to any person if the Department determines that such notice could jeopardize an enforcement action.

40.1160: Audit Follow-up Plans

- (1) At or prior to the issuance of a Notice of Audit Findings, the Department may require that a RP, PRP or Other Person submit for its approval a written Audit Follow-up Plan setting forth how and when such person proposes to confirm, demonstrate or achieve compliance with M.G.L. c. 21E, 310 CMR 40.0000 and/or any applicable requirements.
- (2) Each Audit Follow-up Plan shall be submitted to the Department using a form established by the Department for such purpose, and shall include, at a minimum, the following information:
 - (a) a description of the activities that will be taken;
 - (b) the objective of, and proposed schedule for, each element of the plan;
 - (c) the name, registration number, signature and seal of the Licensed Site Professional who prepared the Audit Follow-up Plan; and
 - (d) the certification set forth in 310 CMR 40.0009.
- (3) In approving an Audit Follow-up Plan, the Department may do the following:
 - (a) establish conditions, including, but not limited to, conditions setting forth the Department's role in overseeing elements of the plan;
 - (b) establish Interim Deadlines;
 - (c) establish requirements for documentation and/or submittal of information; and
 - (d) take any other action authorized by M.G.L. c. 21E, 310 CMR 40.0000 or any other applicable law.
- (4) If the Department does not approve or disapprove of an Audit Follow-up Plan within 90 days of its receipt of such plan, an RP, PRP or Other Person shall proceed to implement such plan.
- (5) Any person who is required to comply with an Audit Follow-up Plan may request, in writing, a modification thereof prior to the running of any applicable deadline. Modifications shall be approved, conditionally approved, or denied by the Department in writing within 21 days of receipt. Approval of such modification shall be presumed if the Department does not issue a written approval or denial of said modification within 21 days of receipt.

40.1160: continued

(6) Public Involvement Activities required for Audit Follow-up Plans shall be conducted in accordance with 310 CMR 40.1400. If the disposal site where an Audit Follow-up Plan is being implemented is a designated Public Involvement Plan site, then a Public Involvement Plan shall be implemented by the person conducting response actions at that site pursuant to 310 CMR 40.1405.

40.1170: Post-audit Completion Statements

(1) Upon completion of the activities required by the Department in a Notice of Audit Findings or any approved Audit Follow-up Plan, the RP, PRP or Other Person undertaking such activities shall submit a Post-audit Completion Statement to the Department using a form established by the Department for such purpose.

(2) Each Post-Audit Completion Statement shall include the following information:

- (a) an LSP Opinion as to whether the response actions required by the Notice of Audit Findings and any approved Audit Follow-up Plan have been completed in accordance with M.G.L. c. 21E, 310 CMR 40.0000, the terms of any Department approval, and any other applicable laws and requirements;
- (b) a description of the response actions completed pursuant to the Notice of Audit Findings and any approved Audit Follow-up Plan;
- (c) the investigatory and monitoring data obtained, if any, during the implementation of such response actions;
- (d) any other information required by the Department in the Notice of Audit Findings or any approved Audit Follow-up Plan; and
- (e) a description of additional response activities, if any, necessary to confirm, demonstrate or achieve compliance with the requirements stated in the Notice of Audit Findings or any approved Audit Follow-up Plan.

40.1190: Reservation of Rights

(1) No provision of 310 CMR 40.1100 shall be construed to relieve any person from any obligation for Response Action Costs or damages related to a site or disposal site for which that person is liable under M.G.L. c. 21E or from any obligation for any administrative, civil or criminal penalty, fine, settlement, or other damages.

(2) No provision of 310 CMR 40.1100 shall be construed to limit the Department's authority to take or arrange, or to require any RP or PRP to perform, any response action authorized by M.G.L. c. 21E which the Department deems necessary to protect health, safety, public welfare or the environment.

SUBPART L: COST RECOVERY, LIEN HEARINGS AND
PETITIONS FOR REIMBURSEMENT OF INCURRED COSTS

40.1200: Cost Recovery

(1) The regulations published at 310 CMR 40.1201 through 40.1249, cited collectively as 310 CMR 40.1200, set forth procedures for recovery of Response Action Costs by or on behalf of the Commonwealth.

40.1201: Purpose, Scope and Applicability

(1) 310 CMR 40.1200 does not apply to any other compensation, recovery or reimbursement to which the Commonwealth may be entitled, or to any compensation, recovery or reimbursement to which any person other than the Commonwealth may be entitled, except as provided by M.G.L. c. 21E, § 3A(j)(2) or M.G.L. c. 21E, § 3B.

(2) The provisions of 310 CMR 40.1200 shall apply to Response Action Costs incurred on or after October 1, 1993. Nothing in 310 CMR 40.1200 shall prevent the Commonwealth from recovering Response Action Costs incurred prior to October 1, 1993.

40.1201: continued

- (3) Neither 310 CMR 40.1200 nor any other provision of this Contingency Plan is intended to provide procedures for the recovery of costs or damages by private persons.
- (4) These provisions shall not apply to a RP, PRP or Other Person who:
 - (a) has paid in full annual compliance assurance fees, including interest if and when applicable, in accordance with 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*, if the Response Action Costs were incurred during the period for which such annual compliance assurance fees were required to be paid for the response action(s) at or for the site; and
 - (b) is performing response actions at the site.

40.1202: General Provisions

The Department shall collect and maintain documentation of response actions and Response Action Costs. The documentation shall form the basis for recovery of Response Action Costs. The circumstances of every release or threat of release of oil and/or hazardous material which is the subject of a response action shall be compiled and maintained in records. Such records shall contain a description of response actions taken, any RPs or PRPs identified, and an accounting of costs incurred by the Department.

40.1220: Recovery of Response Action Costs Incurred in Response Actions

The provisions set forth in 310 CMR 40.1220 and 40.1221 shall govern the Commonwealth's recovery of Response Action Costs incurred pursuant to this Contingency Plan.

- (1) Response Action Costs. Response Action Costs with regard to a specific site shall be calculated so as to reflect the actual cost of the Department's response actions. Such Costs shall be calculated as follows:
 - (a) The total number of Direct Hours expended by each employee of the Department with regard to a specific site shall be multiplied by the employee's hourly rate, and then the figures derived for each Department employee shall be added together;
 - (b) To the figure derived in 310 CMR 40.1220(1)(a) shall be added a figure derived by multiplying the total number of Direct Hours expended by all employees of the Department with regard to a specific site by the current Indirect Rate, which shall be calculated in accordance with 310 CMR 40.1221; and
 - (c) All payments made by the Department to its Contractors, grantees or agents to plan, manage, direct or perform response actions with regard to a specific site shall be added to the figure derived pursuant to 310 CMR 40.1220(1)(a) and (b).
- (2) Recovery and Demand.
 - (a) The Department may seek to recover Response Action Costs calculated pursuant to 310 CMR 40.1220(1), using any of the means described in M.G.L. c. 21E, 310 CMR 40.0000, or other applicable law. Any recovery of Costs by the Department shall not prevent the Department from incurring and recovering additional Response Action Costs.
 - (b) The Department may make written demand for Response Action Costs with regard to a specific site to all RPs, PRPs and Other Persons after such costs have been calculated pursuant to 310 CMR 40.1220(1), and periodically thereafter.
- (3) Administrative Review.
 - (a) The Department may, in its sole discretion, provide an opportunity for an informal conference to any person to whom the Department has made a demand for payment of Response Action Costs and who disputes the calculation or reasonableness of those Costs. Such review may provide an opportunity to present, at a minimum, written information regarding a disputed demand to the Department for its consideration.
 - (b) The Department may impose reasonable time limits within which any person to whom the Department has made a demand for payment may request such administrative review.

40.1220: continued

(c) An administrative review pursuant to 310 CMR 40.1220(3) shall not be construed to be an "adjudicatory proceeding" as defined by M.G.L. c. 21E or M.G.L. c. 30A and shall not be subject to 310 CMR 1.00: *Adjudicatory Proceedings*. Any conclusions reached by the Department as part of such review shall not be construed to be an order pursuant to M.G.L. c. 21E, §§ 9 or 10, unless the Department specifically and in writing states otherwise.

(4) Interest Calculation. The Department shall seek to recover interest accrued on uncollected Response Action Costs at a rate of 1% per month, or 12% per year, commencing 45 days after the Department has made written request for payment of Costs. The Department shall compound the interest annually until the debt is paid or otherwise resolved. The Department may elect not to seek interest that accrues during an administrative review pursuant to 310 CMR 40.1220(3).

(5) Treble Costs.

(a) The Department may seek to recover from RPs and/or PRPs up to three times the Response Action Costs calculated pursuant to 310 CMR 40.1220(1), in accordance with M.G.L. c. 21E, § 5(e).

(b) The Department, in its sole discretion, may elect not to seek treble costs from RPs and/or PRPs who pay Response Action Costs after demand is made pursuant to 310 CMR 40.1220(2)(b).

(6) Using Consent Orders to Set a Maximum for Response Action Costs to be Recovered. The Department may enter into an administrative consent order with RPs, PRPs or Other Persons governing response actions at a site pursuant to M.G.L. c. 21E, §§ 9 or 10. If the Department is able to estimate future Response Action Costs at a disposal site with a reasonable degree of certainty, the Department may, in its sole discretion and subject to terms and conditions, agree as a part of such consent order upon an amount which shall be the maximum Response Action Cost the Department will seek to recover from such RPs, PRPs or Other Persons for work to be performed pursuant to the provisions of that consent order.

40.1221: Calculation of Indirect Rate

(1) The Indirect Rate shall be recalculated in conformance with and on the same schedule as that utilized by 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.

(2) Commencing October 1, 1993, and continuing until the Indirect Rate is changed pursuant to 310 CMR 40.1221(1), the Indirect Rate shall be \$27.31 per Direct Hour.

40.1250: Procedures for Liens

The regulations published at 310 CMR 40.1250 through 310 CMR 40.1259, cited collectively as 310 CMR 40.1250, set forth procedures for recording, registering and filing liens authorized by M.G.L. c. 21E, § 13.

40.1251: Notice of Intent to Perfect a Lien

Whenever the Department intends to record, register or file a lien on real or personal property pursuant to M.G.L. c. 21E, § 13, the Department shall provide a notice of such intent to any owner of the property whose name and address is known to the Department as of 21 days prior to the date the Department provides such notice of intent, and also to the following persons who have a Property Interest in the property over which the Department's lien will have priority pursuant to M.G.L. c. 21E, §13:

(1) persons having a recorded or registered Property Interest in the property whose name and address is known to the Department as of 21 days prior to the date the Department provides such notice of intent;

(2) persons having an unrecorded or unregistered Property Interest in the property whose interest, name and address is known to the Department as of 21 days prior to the date the Department provides such notice of intent; and

40.1251: continued

- (3) persons having an unrecorded or unregistered Property Interest in the property whose interest, name and/or address is unknown to the Department.

40.1252: Content of Notice of Intent to Perfect a Lien

Each Lien Notice shall include all of the following:

- (1) a statement of the Department's statutory and regulatory authority to record, register or file the lien;
- (2) a concise statement of the alleged factual and legal basis for the lien, including a description of the property and any debt to the Commonwealth;
- (3) a statement that any owner of the property and any person having a Property Interest in the property over which the lien will have priority pursuant to M.G.L. c. 21E, § 13 has a right to an adjudicatory hearing on such perfection;
- (4) a statement of the requirements that must be complied with by a person having a right to an adjudicatory proceeding pursuant to 310 CMR 40.1254 in order to avoid being deemed to have waived his or her right to such adjudicatory hearing; and
- (5) a statement of how and when the debt owed must be paid to avoid perfection of the lien.

40.1253: Service of Notice of Intent to Perfect a Lien

Each Lien Notice shall be served by one or more of the following methods:

- (1) Service in hand at the person's last known address or at the last known address of any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service.
- (2) Service in hand personally to the person, or to any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service.
- (3) By certified mail, return receipt requested, addressed to the person's last known address, or to the last known address of any officer, employee, or agent of the person authorized by appointment of the person or by law to accept service.
- (4) With respect to any person having an unrecorded or unregistered Property Interest in the property whose name and/or address is unknown to the Department, by publication in a newspaper of general circulation serving the community where the property is located.

40.1254: Right to Adjudicatory Hearing

Subject to the provisions of 310 CMR 40.1255, whenever the Department seeks to perfect a lien on any real or personal property, the following persons shall have the right to an adjudicatory hearing:

- (1) any owner of the property;
- (2) any other person having a recorded or registered Property Interest in the property over which the lien will have priority pursuant to M.G.L. c. 21E, § 13; and/or
- (3) any person having an unrecorded or unregistered Property Interest in the property over which the lien will have priority pursuant to M.G.L. c. 21E, § 13.

40.1255: Waiver of Right to Adjudicatory Hearing

Any person who has a right to an adjudicatory hearing pursuant to 310 CMR 40.1254 shall be deemed to have waived the right to an adjudicatory hearing unless the Department receives from such person a written statement that denies that the Department has a basis to perfect the lien, and does so subject to and in compliance with applicable provisions of 310 CMR 1.00: *Adjudicatory Proceedings*, within 21 days of the following:

- (a) with respect to the notice required by 310 CMR 40.1251(1) or (2), the date of issuance of the notice in accordance with 310 CMR 40.1253(1), (2) or (3); or
- (b) with respect to the notice required by 310 CMR 40.1251(3), the date of publication of the notice in accordance with 310 CMR 40.1253(4).

40.1256: Conducting the Adjudicatory Hearing

(1) Every adjudicatory hearing conducted pursuant to M.G.L. c. 21E and 310 CMR 40.1250 shall be conducted in accordance with all applicable provisions of M.G.L. c. 30A and 310 CMR 1.00: *Adjudicatory Proceedings*, provided, however, that to the extent such provisions are inconsistent with M.G.L. c. 21E and 310 CMR 40.1250, the provisions of M.G.L. c. 21E and 310 CMR 40.1250 shall apply.

(2) The Department shall not be required to prove any facts alleged by the Department in the Lien Notice unless such facts are expressly denied in the statement filed pursuant to 310 CMR 40.1255.

(3) If, in the statement filed pursuant to 310 CMR 40.1255, the person filing such statement denies one or more facts, the Department shall demonstrate a reasonable likelihood that such fact or facts is true or exists.

(4) Damage to the environment, as defined in M.G.L. c. 214A, § 7, will not be at issue during the conduct of hearings pursuant to 310 CMR 40.1250.

40.1257: Reservation of Rights

No provision of 310 CMR 40.1250 shall be construed to limit or waive the Department's rights to commence a civil action for the purposes of obtaining an order or decree authorizing the recording, registering or filing of a lien pursuant to M.G.L. c. 21E, § 13, including, but not limited to, the commencement of an *ex parte* proceeding in the event of exigent or other circumstance that would render real or personal property unavailable to satisfy an eventual judgment.

40.1260: Petitions for Reimbursement of Incurred Costs

The regulations published at 310 CMR 40.1260 through 40.1269, cited collectively herein as 310 CMR 40.1260, set forth procedures for petitioning the Department for reimbursement for the reasonable costs of compliance with an order issued pursuant to M.G.L. c. 21E, § 10(b).

40.1261: Right to Petition for Reimbursement

Any person to whom the Department has issued an order pursuant to M.G.L. c. 21E, § 10(b), who either (1) disputes his or her liability under M.G.L. c. 21E, § 5, or (2) claims he or she was entitled to the benefits of an affirmative defense or limitation on liability set forth in M.G.L. c. 21E or in any other applicable law may petition the Department for reimbursement for the reasonable costs of compliance with such order. No order or determination issued by the Department shall be construed to be an order issued pursuant to M.G.L. c. 21E, § 10(b), unless the Department specifically and in writing provides to that effect.

40.1262: Content of Petition

Each petition for reimbursement pursuant to M.G.L. c. 21E, § 10(b)(2), and 310 CMR 40.1261 shall be in writing and shall state clearly and concisely the facts upon which the petitioner claims are grounds for reimbursement, the costs for which reimbursement is sought, the location and Release Tracking Number(s) of the disposal site, and the file number as it appears in the caption on such order.

40.1263: Timing of Petition

Each petition for reimbursement pursuant to M.G.L. c. 21E, § 10(b)(2) and 310 CMR 40.1261 shall be submitted to the Department within 90 days of the date of completion of compliance with such order.

40.1264: Grounds for Reimbursement

The Department may grant the petition, or a portion thereof, if the Department is persuaded that the person to whom the Department has issued such order has complied with the terms thereof, and:

- (1) either was not liable under M.G.L. c. 21E or was entitled to the benefits of an affirmative defense or limitation on liability set forth in M.G.L. c. 21E or in any other applicable law; and
- (2) the costs for which reimbursement are sought are for compliance with the order and were incurred reasonably and in good faith.

40.1265: Petitions not Subject to M.G.L. c. 30A

The refusal by the Department to grant all or part of a petition for reimbursement filed pursuant to M.G.L. c. 21E, § 10(b)(2), and 310 CMR 40.1261 shall not be an adjudicatory proceeding and shall not be subject to those provisions of M.G.L. c. 30A, 310 CMR 1.00: *Adjudicatory Proceedings* or any other law governing adjudicatory proceedings.

SUBPART M: ADMINISTRATIVE RECORD

40.1301: Purpose, Scope and Applicability

- (1) The regulations published at 310 CMR 40.1301 through 310 CMR 40.1399, collectively referred to as 310 CMR 40.1300, set forth procedures for the establishment of an administrative record pursuant to M.G.L. c. 21E, § 5A.
- (2) The regulations published at 310 CMR 40.1300 shall apply when the Department elects to establish an administrative record pursuant to M.G.L. c. 21E, § 5A, for any Release Abatement Measure under 310 CMR 40.0440, Comprehensive Response Action under 310 CMR 40.0800 or any other response action.
- (3) 310 CMR 40.1300 does not apply to response actions selected prior to April 25, 2014 or to Immediate Response Actions under 310 CMR 40.0410.
- (4) With respect to those response actions for which the Department does not elect to establish an administrative record in accordance with 310 CMR 40.1300, the administrative record shall consist of all items developed, relied upon, and received pursuant to procedures used by the Department for the selection of the response action, including procedures for the participation of interested parties and the public.

40.1301: continued

(5) 310 CMR 40.1300 describes when the Department may establish an administrative record pursuant to M.G.L. c. 21E, § 5A; the standards for the content of such an administrative record; the procedures by which the public, RPs and PRPs may participate in the establishment of such an administrative record; and where the Department shall locate such an administrative record.

(6) The Department's decision to establish or certify an administrative record in accordance with 310 CMR 40.1300, and the Department's selection of a response action pursuant to M.G.L. c. 21E and 310 CMR 40.0000, shall not be an adjudicatory proceeding and shall not be subject to those provisions of M.G.L. c. 30A, or any other law, governing adjudicatory proceedings.

40.1302: When the Department May Establish an Administrative Record

The Department may establish an administrative record in accordance with M.G.L. c. 21E, § 5A, and 310 CMR 40.1300, upon which the Department shall base its selection of a response action, with respect to any site at which:

- (1) the Department itself, or acting through its agents or contractors, carries out a response action; or
- (2) the Department issues an order pursuant to M.G.L. c. 21E, § 10(b).

40.1303: Participation by the Public, RPs and PRPs

(1) After the Department decides to establish an administrative record pursuant to 310 CMR 40.1300, and prior to the selection of a response action, the Department shall give notice and afford interested persons a reasonable opportunity to comment. Unless response actions must be taken earlier to control the potential for health damage, human exposure, safety hazards or environmental harm through appropriate short term measures, the Department shall give notice at least 21 days prior to its selection of a response action as follows:

- (a) by publication thereof in a newspaper(s) of general circulation in the community(ies) that the Department reasonably believes are affected by the disposal site;
- (b) by certified mail, return receipt requested, to any person who the Department reasonably believes:
 1. is an RP or a PRP; or
 2. holds title to, or an ownership interest in, any real property which comprises the disposal site or which may be affected by the response action and whose name and address is known by the Department at the time the Department elects to establish such an administrative record;
- (c) if the disposal site is a Public Involvement Plan (PIP) Site, by first-class mail or hand-delivery to each person whose name and address appears on the PIP mailing list established in accordance with 310 CMR 40.1400; and
- (d) by first-class mail or hand delivery to the Chief Municipal Official and local board of health of each community in which the disposal site is known to be located.

(2) Content of Notice. The notice required by 310 CMR 40.1303(1) shall include the following information:

- (a) a description of the location of the disposal site and activities proposed for such site;
- (b) the Department's authority to establish an administrative record for the disposal site upon which the Department will base its selection of a response action;
- (c) the times when, and location where, interested persons may inspect the administrative record, including, without limitation, remedial action alternatives under consideration;
- (d) a description of the procedure by which persons interested in commenting may submit data, views and arguments to the Department;
- (e) the deadline established by the Department for receipt of public comments; and
- (f) any additional information determined by the Department to be pertinent.

40.1303: continued

(3) Procedure.

(a) Within 21 days, or within such other time period determined by the Department in accordance with 310 CMR 40.1303(1), after providing notice as required by 310 CMR 40.1303(1)(c), (d), and (e), any interested person may submit written comments in the form of a signed letter, brief or other memorandum stating his or her views or arguments, including data in support thereof, concerning the remedial action alternatives proposed for the disposal site. Such written comments shall be submitted to the Department by first-class mail or hand-delivery during normal business hours. If the Department has expedited response actions in accordance with 310 CMR 40.1303(1) to control the potential for health damage, human exposure, safety hazards or environmental harm through appropriate short term measures, the Department may request written comments to be submitted after providing notice as required by 310 CMR 40.1303(1)(c) through (e). If such response actions have not been taken, the Department may request written comments to be submitted to the Department within 21 days of the later date of publication or notice required by 310 CMR 40.1303(1).

(b) The Department may, at its sole discretion, afford any interested person or his or her duly appointed representative an opportunity to present data, views or arguments orally before the Department during a meeting at which the remedial action alternatives will be presented.

(c) The Department shall consider and respond as it deems appropriate to significant public comments. The Department shall place a written response to any significant comments submitted in the administrative record.

(d) Upon reasonable request or on its own initiative, the Department may extend the period for submission of public comments.

(e) After the comment period, and any extension thereof, has terminated, the Department shall place written documentation in the administrative record of the basis for the Department's selection of a response action and provide written notice thereof to all persons who have submitted significant comments pursuant to 310 CMR 40.1303(1)(c) and any other persons submitting comments during the period established for public comment.

(4) The Department shall certify that the administrative record is complete:

(a) after the termination of the public comment period;

(b) after the Department's response to significant comments has been placed in the administrative record; and

(c) after the Department has issued a report documenting the basis for the Department's selection of a response action for the disposal site.

40.1304: Administrative Record Requirements After Certification

(1) The Department may reopen the administrative record after the administrative record has been certified complete in accordance with 310 CMR 40.1303(4) if:

(a) the Department intends to carry out or arrange a response action in addition to those response actions selected at the time the Department certified the administrative record complete; or

(b) the Department carries out or arranges a response action significantly different from the response action selected in the report required by 310 CMR 40.1303(3)(e).

(2) If the Department reopens the administrative record pursuant to 310 CMR 40.1304(1), the Department shall give notice thereof and afford interested persons an opportunity to present data, views or arguments, in accordance with 310 CMR 40.1303(1) through (4).

40.1305: Content of the Administrative Record

(1) The administrative record shall include those documents that form the basis for the Department's selection of a response action.

40.1305: continued

- (2) The administrative record shall contain the following types of documents when such documents are material to the Department's selection of a response action:
- (a) documents containing factual information and data, including documents containing analyses of such information and data;
 - (b) guidance documents, technical literature, and site-specific policy memoranda;
 - (c) documents received, published or made available to the public pursuant to 310 CMR 40.1400;
 - (d) documents setting forth and/or supporting determinations by the Department, including scopes of work, plans and reports; and
 - (e) copies of enforcement orders, including, but not limited to, consent orders, and Notices of Noncompliance, Notices of Responsibility and Notices of Response Action.
- (3) If the Department issues an administrative order pursuant to M.G.L. c. 21E, § 10(b)(1)(B), with respect to a disposal site for which the Department has elected to establish an administrative record in accordance with 310 CMR 40.1300, the Department shall include in the administrative record evidence of the following:
- (a) that the disposal site has been listed in accordance with M.G.L. c. 21E, § 3A(b), and 310 CMR 40.0168;
 - (b) that the Department has given the person in question the opportunity to apply voluntarily for a permit or to carry out response actions at the disposal site; and
 - (c) that the Department has determined that it would be contrary to the public interest to defer necessary response actions, or to publicly fund response actions to avoid any such deferral, with respect to the disposal site.
- (4) Documents not included in the administrative record. The Department is not required to include in the administrative record documents which do not form the basis for the selection of the response action.
- (5) Information protected from disclosure.
- (a) Any document, information or other thing which the Department determines to be a trade secret in accordance with 310 CMR 3.00: *Access to and Confidentiality of Department Records and Files* shall be maintained in the Confidential File of the administrative record and shall not be made available for public inspection, except as provided by 310 CMR 3.21: *When Trade Secrets May Be Disclosed By the Department*.
 - (b) Any document protected from disclosure under the Massachusetts Public Records Law, M.G.L. c. 66, § 10, or other applicable federal or state law may be maintained in the Confidential File of the administrative record and shall not be made available for public inspection, except as provided by 310 CMR 40.1305(6).
 - (c) Any document, or part thereof, containing privileged information, including documents subject to the attorney-client privilege, attorney work product and any other document to which a privilege attaches under applicable law, may be maintained in the Confidential File of the administrative record and shall not be made available for public inspection, except as provided by 310 CMR 40.1305(6).
- (6) Confidential File. Except as provided by 310 CMR 40.1305(5)(a), if any document, or part thereof, that forms the basis for the selection of a response action is protected from disclosure pursuant to 310 CMR 40.1305(5), such document, to the extent practicable, shall be summarized in such a way as to render the document, or the material information included therein, available to the public. The summary document shall be placed in the publicly available portion of the administrative record. If the Department determines that it is not practicable to summarize the information protected from disclosure, and any other information in such a document forms the basis or a portion of the basis for the Department's selection of a response action, the information protected from disclosure shall be deleted therefrom, and the remaining portions of the document shall be included in the publicly available portion of the administrative record. Those parts of the document determined by the Department to be impracticable to summarize shall be placed in the Confidential File of the administrative record. Information in the Confidential File shall not be disclosed to any RP, PRP or the public, unless the Department expressly waives an applicable privilege or disclosure is otherwise authorized or required by applicable law or court order.

40.1305: continued

(7) General Index. The administrative record shall contain an index describing the various files included within the administrative record, including, but not limited to, the Confidential File. The Department shall list separately each file included in the administrative record and shall include in such list a description of the documents within each file. Such files may include, without limitation, an Environmental Analyses File containing copies of the results of environmental sampling and analyses; a Correspondence File containing copies of pertinent letters and other correspondence; a Public Involvement File documenting Public Involvement Activities undertaken with respect to the disposal site; a Response Action File containing scopes of work, plans and reports regarding response actions at the disposal site; and a Contractor File containing copies of pertinent contracts, invoices and payments.

40.1306: Location of the Administrative Record

(1) Except as provided by 310 CMR 40.1306(2) and (3), the Department shall make the administrative record, and the index for the administrative record, reasonably available to RPs, PRPs and the public at the Department regional office that serves the area where the disposal site is located. The Department may keep additional copies of the administrative record and the index for the administrative record at other locations.

(2) The Department shall not be required to keep the following documents in the office of the Department to which the site is assigned, provided that the index to the administrative record indicates the locations where such documents are kept:

- (a) sampling and testing data, quality control and quality assurance documentation and chain of custody forms;
- (b) guidance and policy documents not generated specifically for the disposal site at issue;
- (c) publicly available technical literature not generated for the disposal site at issue, such as engineering textbooks, articles from technical journals and toxicological profiles; and
- (d) documents included in the Confidential File of the administrative record.

(3) If any document, or part thereof, listed in the index to the administrative record is not kept in the Department office described in 310 CMR 40.1306(1), the Department shall make such documents, or photocopies thereof, excluding documents from the Confidential File, reasonably available for public review at the location described in 310 CMR 40.1305(1), upon request.

(4) The Department may make any document included in the administrative record available in microform, microfilm or any other suitable form.

SUBPART N: PUBLIC INVOLVEMENT AND TECHNICAL ASSISTANCE GRANTS

40.1400: Public Involvement - General Approach for Response Actions

310 CMR 40.1400 through 40.1449, cited collectively as 310 CMR 40.1400, contain requirements and procedures for the conduct of Public Involvement Activities in connection with response actions.

40.1401: General Principles for Public Involvement in Response Actions

(1) Activities undertaken to foster public involvement during response actions shall serve two objectives:

- (a) for all disposal sites, Public Involvement Activities shall inform the public about the risks posed by the disposal site, the status of response actions, the availability of Technical Assistance Grants, and opportunities for public involvement; and
- (b) for Public Involvement Plan sites, Public Involvement Activities shall also solicit the concerns of the public about the disposal site and response actions, and shall consider, address and, where relevant and material to the response action, incorporate these concerns in planning response actions.

40.1401: continued

(2) Concerns, information, and comments raised during the implementation of Public Involvement Activities conducted pursuant to 310 CMR 40.1400 through 40.1449 shall be considered when making decisions regarding response actions.

40.1402: Responsibility for Performing Public Involvement Activities in Response Actions

(1) Public Involvement Activities required by this Contingency Plan shall be performed at all disposal sites regardless of whether the Department, RP, PRP or Other Person is conducting the response action.

(2) At any disposal site where the Department is performing a response action, the Department shall be responsible for all Public Involvement Activities pursuant to M.G.L. c. 21E and 310 CMR 40.0000.

(3) At any disposal site at which a RP, PRP or Other Person is conducting a response action, that RP, PRP or Other Person shall be responsible for all Public Involvement Activities pursuant to M.G.L. c. 21E and 310 CMR 40.0000.

(4) Nothing shall prohibit the Department from conducting Public Involvement Activities at any disposal site where the Department deems it is appropriate.

40.1403: Minimum Public Involvement Activities in Response Actions

(1) Public Involvement Activities undertaken at all disposal sites are those designed primarily to provide the public with information regarding the risks posed by the disposal site, status of response actions, availability of technical assistance grants, and opportunities for public involvement.

(2) At a minimum, the following procedures shall be followed for written and public notices required under 310 CMR 40.1400:

(a) written notices shall be made either by hand-delivery or first-class mail, and the date of notification shall be:

1. if served by hand, the date when delivered:
 - a. personally to the intended recipient;
 - b. personally to any officer, employee, or agent of the intended recipient authorized by appointment of the intended recipient or by law to accept service; or
 - c. to an adult member of the intended recipient's household; or
2. if served by mail, the date of the postmark;

(b) public notices shall be made in a newspaper of general circulation in the community(ies) in which the disposal site is located and in newspapers of general circulation in other communities which are, or are likely to be, affected by the disposal sites by:

1. publishing an advertisement in the local news section; or
2. publishing a legal notice, if the cost of an advertisement of comparable size in the local news section exceeds the cost of a legal notice by 20% or more, or if the newspaper refuses to publish the notices as an advertisement; and

(c) written and public notices shall be documented to the Department according to the following:

1. a copy of each written notice shall be concurrently submitted to the Department; and
2. except as provided in 310 CMR 40.0062(5), a copy of the public notice as published in each newspaper containing the date of publication and name of the newspaper, shall be submitted to the Department within 30 days of the date of publication.

(3) At any time after the Department has been notified of a release or threat of release pursuant to 310 CMR 40.0300, the Chief Municipal Officer and Board of Health in the community(ies) in which the disposal site is located and in any other communities which are, or are likely to be, affected by the disposal site shall be provided written notice by the person conducting response actions of:

40.1403: continued

- (a) the purpose, nature and expected duration of any field work related to the response action involving the implementation of Phase IV remedial actions pursuant to 310 CMR 40.0870; the use of respirators and other protective clothing (Level A, B or C as defined by "Standard Operating Safety Guides" published by the U.S. Environmental Protection Agency); or any sampling involving private drinking water supply wells, indoor air or surficial soils at any residential property at, adjacent to, or down-gradient from any contamination or suspected contamination from a release or threat of release.
 - 1. Notification shall be made at least three days prior to the commencement of such field work.
 - 2. Notification shall be based on plans for the field work, including the expected level of protection for site workers. If the level of protection for site workers is upgraded during the course of the work to Level C or above, the Chief Municipal Officer and Board of Health shall be notified of the upgrade as soon as is practicable.
 - 3. Notification of field work is not required for Immediate Response Actions undertaken to address releases of oil and/or hazardous material as defined in 310 CMR 40.0311(1) through (9), or when advance notice for these actions is provided pursuant to 310 CMR 40.1403(3)(b) and (d);
- (b) the implementation of any Immediate Response Action taken to prevent, control, abate or eliminate an Imminent Hazard as required in 310 CMR 40.0322 and 40.0426 or to address a Critical Exposure Pathway as defined in 310 CMR 40.0006.
 - 1. Notification shall include information about the purpose, nature and expected duration of the Immediate Response Action.
 - 2. Notification shall be made as soon as feasible, but in all cases notification shall be made no later than 48 hours following implementation of the Immediate Response Action;
- (c) the availability of all Completion Statements required for Immediate Response Actions taken to prevent, control, abate or eliminate Imminent Hazards pursuant to 310 CMR 40.0427.
 - 1. Notification may take the form of copies of correspondence which contain or summarize the Completion Statement, or a notice of the availability of the Completion Statement.
 - 2. Notification shall include information about how local officials may obtain a copy of the Completion Statement from the person(s) conducting response actions.
- (d) the implementation of any Release Abatement Measure.
 - 1. Notification shall include information about the purpose, nature and expected duration of the Release Abatement Measure.
 - 2. Except as provided at 310 CMR 40.1403(3)(d)3., notification shall be made within the 20 days prior to the implementation of the Release Abatement Measure Plan.
 - 3. In the event that a removal action initiated as a Limited Removal Action is continued as a Release Abatement Measure pursuant to 310 CMR 40.0318(9)(b), notification shall be made on the same date that the complete RAM Plan is submitted to the Department pursuant to 310 CMR 40.0443.
- (e) the availability of the Phase I Initial Site Investigation Report required pursuant to 310 CMR 40.0480, and each subsequent Phase Report required pursuant to 310 CMR 40.0800. Notification shall take the form of a copy of the summary of findings and statement of conclusions, as provided in 310 CMR 40.0483(h), 40.0835(4)(i), 40.0852(5), or for Phase IV, a copy of the description of the Comprehensive Remedial Action provided in the Remedy Implementation Plan pursuant to 310 CMR 40.0874(3)(b)5. and 40.0874(3)(b)10., or for Phase V, a copy of the Phase V Completion Statement Form, and shall include information about how local officials may obtain a copy of the Report from the person(s) conducting response actions.
- (f) the availability of any Permanent or Temporary Solution Statements filed pursuant to 310 CMR 40.1000.
 - 1. Notification may take the form of copies of correspondence which contain or summarize decisions regarding the Statement or a notice of the availability of the Statement.
 - 2. Notification shall include information about how local officials may obtain a copy of the Statement from the person(s) conducting response actions.

40.1403: continued

(g) the availability of any Downgradient Property Status Submittal and/or modification of Downgradient Property Status Submittal provided to the Department pursuant to 310 CMR 40.0180. Notification shall include information about how local officials may obtain a full copy of the Downgradient Property Status Submittal and/or Modification of Downgradient Property Status Submittal from the person(s) conducting response actions.

(h) the submittal of a Release Notification Form to the Department pursuant to 310 CMR 40.0371.

1. Notification shall consist of a written notice pursuant to 310 CMR 40.1403(2)(a) that includes:

- a. a copy of the Release Notification Form; and
- b. a statement of the local officials' right to request additional Public Involvement Activities under 310 CMR 40.1403(9) and upon tier classification under 310 CMR 40.1404.

2. Notification shall be provided no later than seven days after sending the Release Notification Form to the Department pursuant to 310 CMR 40.0371.

(i) additional remedial actions conducted as part of an Audit Follow-up Plan pursuant to 310 CMR 40.1160.

(4) Notifications required by 310 CMR 40.1403(3)(a), (b), and (d) may be made orally or in writing. Notifications required by 310 CMR 40.1403(3)(c), (e), (f), and (g) shall be made in writing.

(a) Oral notifications shall be followed by written notice within seven days of the oral notification.

(b) A copy of each written notice shall be submitted to the Department concurrently with its filing with the Chief Municipal Officer and Board of Health.

(5) When issues of public safety are involved at a disposal site, the Fire and Police Chief in the community(ies) in which the disposal site is located and in any other communities which are, or are likely to be, affected by the disposal site shall be notified about any threat to public safety prior to the implementation of remedial actions, unless prior notification is impracticable.

(6) Following Tier Classification or reclassification pursuant to 310 CMR 40.0510 or 310 CMR 40.0530, respectively, the person(s) conducting response actions shall undertake the following actions to inform the public about the status of the disposal site's classification:

(a) within seven days of filing a Tier Classification Submittal, a public notice pursuant to 310 CMR 40.1403(2)(b) which indicates the classification or reclassification of the disposal site shall be published in a form established by the Department for such purpose and shall include:

1. a statement of the Public Involvement Activities available under 310 CMR 40.1403(9) and 40.1404; and
2. contact information for the person(s) conducting response actions, including the person's name, address, and telephone number;

(b) at least three days prior to publication of the public notice specified in 310 CMR 40.1403(6)(a), a written notice pursuant to 310 CMR 40.1403(2)(a) shall be sent to the Chief Municipal Officer(s) and the Board(s) of Health in the community(ies) in which the disposal site is located and in any other communities which are, or are likely to be, affected by the disposal site, and shall include:

1. a copy of the public notice;
2. a copy of the disposal site map included in the Phase I Report pursuant to 310 CMR 40.0483(1)(b); and
3. information regarding the availability of the Phase I Report pursuant to 310 CMR 40.1403(3)(e).

(7) Within 30 days after recording and/or registering any original, amended, released or terminated Activity and Use Limitation pursuant to 310 CMR 40.1070 through 40.1080, the following requirements shall be met to inform local officials and the public of the limitations which apply to activities and/or uses of the property subject to the Activity and Use Limitation:

40.1403: continued

(a) a copy of the recorded and/or registered Activity and Use Limitation shall be provided to:

1. the Chief Municipal Officer;
2. the Board of Health;
3. the Zoning Official; and
4. the Building Code Enforcement Official in the community(ies) in which the property subject to such Activity and Use Restriction is located.

(b) a public notice pursuant to 310 CMR 40.1403(2)(b) which indicates the recording and/or registering of the original, amended, released or terminated Activity and Use Limitation shall be published in a newspaper that circulates in the community(ies) in which the property subject to the Activity and Use Limitation is located.

1. This notice shall be in a form established by the Department for such purpose and shall include, but not be limited to:
 - a. the name, address, and Release Tracking Number(s) of the disposal site associated with the Activity and Use Limitation;
 - b. the type of Activity and Use Limitation;
 - c. information about where the Activity and Use Limitation instrument and disposal site file can be reviewed; and
 - d. the name, address and telephone number of the person recording and/or registering the Activity and Use Limitation from whom the public can obtain additional information.
2. A copy of this public notice shall be submitted to the Department within seven days of its publication.

(8) For any disposal site where the Permanent Solution relies on the exception provided by 310 CMR 40.1013(1)(c) from requirements for an Activity and Use Limitation, a copy of the Permanent Solution Statement shall be filed with the following offices:

- (a) where a public way is part of the disposal site, the public agency(ies) owning and operating that public way;
- (b) where a rail right-of-way is part of the disposal site, the owner and operator of the rail line. For rail rights-of-way subject to the requirements of M.G.L. c. 161C, a copy of the Permanent Solution Statement shall also be filed with the Massachusetts Department of Transportation; and
- (c) the notifications required by 310 CMR 40.1403(8)(a) and (b) shall be made concurrently with the notification to local officials of the availability of Permanent Solution Statements pursuant to 310 CMR 40.1403(3)(f).

(9) Local officials or ten or more residents of a community(ies) in which a disposal site is located or in any other communities which are, or are likely to be, affected by a disposal site may request an opportunity for Public Involvement Activities related to any Immediate Response Action conducted pursuant to 310 CMR 40.0410 or Release Abatement Measure conducted pursuant to 310 CMR 40.0440. Such request shall be made in writing to the person(s) conducting the response actions and copied concurrently to the Department.

- (a) Following the receipt of such written request, the person(s) conducting response actions shall, at a minimum:
 1. contact the people making the request and appropriate local officials to identify their concerns about the response action;
 2. provide information to those making the request about the nature and extent of contamination (to the extent known at the time) and about implemented and planned response actions;
 3. provide appropriate opportunities for public comment, which may include but are not limited to, holding a public meeting or providing an opportunity for the public to submit written comments to the person(s) conducting response actions; and
 4. establish a public information repository in the community(ies) in which the disposal site is located or in any other community(ies) that is, or is likely to be, affected by the disposal site;

40.1403: continued

(b) when holding a public meeting in response to a request for Public Involvement Activities, the person(s) conducting response actions shall hold such meeting at a time and place convenient to the people requesting the opportunity for comment, and shall publicize the meeting in advance in such community and by providing written notice pursuant to 310 CMR 40.1403(2)(a) to the persons requesting the Public Involvement Activities and appropriate local officials.

(c) when providing the opportunity to the public to submit written comments, the person(s) conducting response actions shall:

1. notify the persons requesting the Public Involvement Activities and appropriate local officials using a written notice pursuant to 310 CMR 40.1403(2)(a);
2. provide a public comment period of a minimum of 20 days from the date of notification of the Immediate Response Actions or Release Abatement Measures;
3. consider and, where relevant and appropriate, incorporate comments into plans for response actions;
4. prepare a written summary of and response to relevant comments within 30 days of the last day of the public comment period, unless an alternative procedure for summarizing comments is agreed to by the person(s) conducting response action(s) and the persons requesting Public Involvement Activities; and
5. include the written summary of and response to comments in the next related response action submittal to the Department and place it in the public information repository;

(d) Notwithstanding the provisions of 310 CMR 40.1403(9), nothing shall prohibit:

1. person(s) conducting response actions and the persons who requested Public Involvement Activities from agreeing to Public Involvement Activities or procedures for providing public comment on response action submittals in addition to or in *lieu* of those specified in 310 CMR 40.1403(9)(b) or (c); or
2. persons from petitioning for the designation of the disposal site where Public Involvement Activities are being conducted pursuant to 310 CMR 40.1403(9) as a Public Involvement Plan Site pursuant to 310 CMR 40.1404;

(e) The public involvement opportunities provided pursuant to 310 CMR 40.1400 shall not unreasonably delay implementation of response actions at the disposal site;

(f) Assessment may proceed during the public comment period;

(g) Except as provided in 310 CMR 40.1403(9)(h), remedial actions that are the subject of the public comment period shall not proceed until the close of the public comment period;

(h) Time critical elements of an Immediate Response Action Plan may be conducted prior to the close of the public comment period if delaying the remedial actions would exacerbate release or site conditions or endanger health, safety, public welfare or the environment; and

(i) Unless otherwise specified by the Department, the public involvement provisions of 310 CMR 40.1403(9) shall not apply to Release Abatement Measures conducted pursuant to 310 CMR 40.1067(4) after a valid Permanent Solution Statement has been submitted to the Department.

(10) Any time environmental samples are taken at a property in the course of investigating a release for which a notification to the Department pursuant to 310 CMR 40.0300 has been made on behalf of someone other than the owner of the property, the person(s) conducting the response actions shall:

(a) provide the property owner with a written notice pursuant to 310 CMR 40.1403(2)(a) on a form established by the Department for such purpose which explains that the property owner will be provided the results of the sample analyses; such written notice shall be provided to the property owner :

1. as soon as possible, but no more than seven days after the date of sampling, when conducted as part of an Immediate Response Action to address releases defined at 310 CMR 40.0311; or
2. prior to the date of sampling when conducted as part of any other response action;

(b) within 30 days of the date the sample results are issued by the laboratory, provide the property owner with:

40.1403: continued

1. the results of the sample analyses of samples from the property owner's property and a written notice that additional documentation associated with the samples, such as that listed at 310 CMR 40.0017(3), will be provided to the property owner within 30 days of receipt of a request for such documentation. The person providing written notice shall provide such additional documentation to the property owner within 30 days of receipt of a request;
 2. a statement that public involvement opportunities are available under 310 CMR 40.1403(9) and, if the site is tier classified, under 310 CMR 40.1404;
- (c) provide to the Department with the next required MCP submittal the results of and additional documentation associated with any sampling subject to the notice requirements of 310 CMR 40.1403(10), a copy of the written notice required by 310 CMR 40.1403(10)(a), and a copy of any alternative schedule for providing sampling results established pursuant to 310 CMR 40.1403(10)(d); and
- (d) Notwithstanding the provisions at 310 CMR 40.1403(10)(b), when sampling at a property will occur on an ongoing basis, an alternative schedule may be established for providing the results of multiple sampling events to a property owner, provided that such schedule is established in writing and agreed to by the property owner. The person(s) conducting the response actions shall include with the results of the sample analyses a written notice that additional documentation associated with the samples, such as that listed at 310 CMR 40.0017(3), will be provided to the property owner within 30 days of receipt of a request for such documentation. The person providing written notice shall provide such additional documentation to the property owner within 30 days of receipt of a request.
- (11) Any person conducting a remedial action as part of an Immediate Response Action to prevent, control, or eliminate an Imminent Hazard pursuant to 310 CMR 40.0322 and 40.0426 or to address a Critical Exposure Pathway pursuant to 310 CMR 40.0414(3) through (4) shall provide notice of such remedial actions to owners and/or operators, and to other persons who may experience significant health or safety impacts from the disposal site that is being addressed by the Immediate Response Action (*i.e.*, Affected Individuals as defined in 310 CMR 40.0006).
- (a) Unless otherwise specified by the Department, notification shall be made orally or in writing as soon as possible but not later than 72 hours after commencement of the remedial action;
 - (b) Oral notifications shall be followed by a written notice pursuant to 310 CMR 40.1403(2)(a) within seven days of the oral notification;
 - (c) Written notices shall be provided on a form established by the Department for such purpose that includes information about the purpose, nature and expected duration of the remedial action, and a statement of the Public Involvement Activities available under 310 CMR 40.1403(9) and, if applicable, 310 CMR 40.1404;
 - (d) For multi-unit or industrial or commercial buildings, the person conducting the Immediate Response Action shall, in addition to notifying Affected Individuals, request that the owners and/or operators of the buildings post the notice where it will be visible to individuals who are routinely present in such building(s);
 - (e) Upon completion of the Immediate Response Action where a remedial action was conducted to prevent, control, or eliminate an Imminent Hazard or to address a Critical Exposure Pathway, the person conducting the Immediate Response Action shall, concurrently with submitting the Immediate Response Action Completion Statement to the Department, provide those same Affected Individuals for whom notification pursuant to 310 CMR 40.1403(11)(a) through (d) was required with a written notice pursuant to 310 CMR 40.1403(2)(a) that includes a copy of the Immediate Response Action Completion Statement; and
 - (f) A copy of all written notices required by 310 CMR 40.1403(11) shall be submitted to the Department with the Immediate Response Action Completion Statement.

40.1404: Public Involvement Plan Site Designation

- (1) The following disposal sites shall be eligible for PIP Site Designation:
 - (a) any disposal site that has been tier classified pursuant to 310 CMR 40.0500;
 - (b) any disposal site that is deemed a default Tier ID site pursuant to 310 CMR 40.0502;

40.1404: continued

- (c) any disposal site at which response actions are being conducted in accordance with 310 CMR 40.0112 and for which a RCRA Facility Assessment has been completed;
 - (d) any disposal site at which response actions are being conducted in accordance with 310 CMR 40.0113 and for which either a RCRA Facility Assessment or equivalent assessment in accordance with 310 CMR 30.000: *Hazardous Waste* has been completed; or
 - (e) any disposal site at which response actions are being conducted in accordance with 310 CMR 40.0114 and for which an Initial Site Assessment or equivalent assessment in accordance with 310 CMR 19.00: *Solid Waste Management* has been completed.
- (2) Except as provided in 310 CMR 40.1404(3), a disposal site shall not be eligible for designation as a PIP Site if the Department issued or received any of the following:
- (a) a No Further Action determination letter issued by the Department pursuant to 310 CMR 40.000;
 - (b) a determination by the Department that the site is exempt from the transition requirements pursuant to 310 CMR 40.0637;
 - (c) a Permanent Solution Statement pursuant to 310 CMR 40.1000;
 - (d) an LSP Evaluation Opinion, Consultant of Record No Further Action Statement or PRP No Further Action Statement pursuant to 310 CMR 40.0600; or
 - (e) a Waiver Completion Statement pursuant to 310 CMR 40.537.
- (3) Notwithstanding 310 CMR 40.1404(2), a disposal may be subject to PIP Site Designation or the continuation of PIP activities under an existing PIP Site Designation if the Department:
- (a) specifies that a new or continued PIP Designation is appropriate for remedial actions conducted pursuant to 310 CMR 40.1067; or
 - (b) finds that a determination or submittal listed in 310 CMR 40.1404(2)(a) through (e) is invalid and that further response actions are required at the disposal site to which the determination or submittal applied.
- (4) Petitions shall be submitted to the party responsible for conducting response actions at the disposal site. For disposal sites where a RP, PRP or Other Person is conducting response actions, a copy of the petition shall also be sent concurrently to the Department.
- (5) Petitions submitted shall:
- (a) identify the disposal site to be designated, by name, address, and Release Tracking Number(s) if known;
 - (b) include a request to designate the disposal site as a PIP Site pursuant to M.G.L. c. 21E, § 14(a) and the Massachusetts Contingency Plan, 310 CMR 40.1404; and
 - (c) include the signatures and addresses of at least ten persons signing the petition. These names and addresses shall also be legibly printed so that they can be used to respond to the petition.
- (6) Upon receipt of a petition for a disposal site eligible for PIP Site Designation pursuant to 310 CMR 40.1404(1) through (3) signed by ten or more residents of a municipality in which the disposal site is located, or of a municipality potentially affected by the disposal site, the disposal site shall be designated a PIP Site. Following PIP Site Designation, the person(s) conducting response action shall inform the petitioners of such Designation pursuant to 310 CMR 40.1404(7).
- (7) All petitioners shall be informed in writing by the person(s) conducting response actions as to whether or not the disposal site has been designated as a PIP Site within 20 days of receipt of such a petition. If the disposal site is ineligible for PIP Site Designation pursuant to 310 CMR 40.1404(1) through (3), then the reason why the site is ineligible for PIP Site Designation shall be stated in the response letter to the petitioners. If the Department is not conducting response actions at the disposal site, a copy of the response letter shall be concurrently sent to the Department.
- (8) While petitions to designate a disposal site as a PIP Site shall be accepted for any Tier I, Tier II or Tier ID disposal site, the submission of such a petition by itself shall not alter the classification of a disposal site pursuant to 310 CMR 40.0500.

40.1404: continued

(9) The submittal of a PIP petition shall not alter the order in which the Department initiates response actions at a disposal site.

(10) When PIP Site Designation is terminated pursuant to 310 CMR 40.1405(7), a new PIP Site Designation petition shall be required to re-designate the disposal site as a PIP Site.

(11) A new PIP Site Designation petition is not required for a disposal site that is currently a PIP Site at which a new release or threat of release for which notification is required pursuant to 310 CMR 40.0300 occurs. The person(s) conducting response actions at the disposal site shall inform the individuals on the mailing list established for the PIP Site of any such new release or threat of release using a written notice pursuant to 310 CMR 40.1403(2)(a).

(12) A PIP petition may be withdrawn prior to the development of a draft Public Involvement Plan. Withdrawals shall be submitted in writing to the person(s) conducting response actions and shall include the site name, Release Tracking Number, an explanation for the withdrawal, and the signatures of a majority of the original petitioners. Within 14 days of the date of receipt of the withdrawal request, the person(s) conducting response actions shall provide a copy of the request to the Department.

40.1405: Additional Public Involvement Activities Required for Public Involvement Plan Sites

(1) Public Involvement Activities undertaken at PIP Sites are those taken in addition to the Public Involvement Activities required for all disposal sites and are designed to involve the public in decisions regarding response actions.

(2) Public Involvement Activities conducted at PIP Sites shall focus on the community(ies) in which the disposal site is located and shall include other communities which are, or are likely to be, affected by the disposal site.

(3) Concerns, information, and comments from the public about the disposal site shall be solicited, considered, addressed and, where relevant and material to response actions, incorporated into decisions regarding response actions at the disposal site.

(4) Public Involvement Activities required at PIP Sites shall pertain to those response actions conducted after the submission of the PIP petition, except at disposal sites where response actions beyond Phase I are conducted prior to Tier Classification. At disposal sites where response actions beyond Phase I are conducted prior to Tier Classification, Public Involvement Activities shall pertain to all response actions conducted, provided that the PIP petition is received within 30 days of publication of the public notice required in 310 CMR 40.1403(6) or 40.0510(3).

(5) Upon designation of a disposal site as a PIP Site:

(a) within 80 days of receiving a PIP petition for an eligible disposal site a draft site-specific Public Involvement Plan shall be prepared, and a public meeting shall be held to present the draft Public Involvement Plan, solicit public comment on the draft Public Involvement Plan, and provide information about disposal site conditions. This public meeting shall be held at a time and location convenient to the affected public. Residents of the potentially affected community(ies) shall be informed of the public meeting by the following activities:

1. a public notice pursuant to 310 CMR 40.1403(2)(b) shall be published at least 14 days prior to the meeting; and
2. a copy of the public notice announcing the public meeting shall be mailed to each petitioner, and the Chief Municipal Officer(s) and Board(s) of Health in the community(ies) in which disposal site is located and in any other community(ies) that is, or is likely to be, affected by the disposal site;

(b) the draft Public Involvement Plan shall be made available for public review on the date of the public meeting to present it and a public comment period that runs for a minimum of 20 days from the date of the public meeting shall be provided;

40.1405: continued

- (c) the Public Involvement Plan shall be finalized within 30 days of the close of the public comment period on the draft Public Involvement Plan;
 - (d) a summary of comments received on the draft Public Involvement Plan shall be developed that contains the comments received, identifies comments that have been incorporated and provides an explanation for comments that were not incorporated into the final Public Involvement Plan. The copy of the response to comments and the final Public Involvement Plan shall be made available in the information repository(ies) established for the disposal site pursuant to 310 CMR 40.1405(6)(j);
 - (e) if the Department is not conducting response actions at the disposal site, copies of all the documents related to the public involvement process shall be submitted to the Department upon their availability; and
 - (f) the Public Involvement Plan shall be implemented throughout the response action process.
- (6) A Public Involvement Plan shall, without limitation:
- (a) identify local concerns and sources of information through interviews and other appropriate measures and ensure that the implementation of the Public Involvement Plan reflects such concerns and information and the nature and level of relevant public interest;
 - (b) inform the public about the response action(s) and public involvement processes by methods including, but not limited to, providing notification of the public of a public meeting a minimum of 14 days in advance of the meeting;
 - (c) provide the name, address and phone number of a contact person for the person(s) conducting response actions;
 - (d) provide disposal site background information, including, but not limited to, a site description and history, material environmental assessment history, and relevant public involvement history;
 - (e) provide opportunities to comment on response actions by holding a minimum 20 day comment period on all submittals for response actions occurring following PIP designation, with the following qualifications:
 1. any public comment period may be extended, if requested by the public, for a minimum of an additional 20 days;
 2. a modified Phase II Scope of Work, IRA Plan, RAM Plan, or sampling plan shall be subject to an additional comment period if such modifications substantially alter or expand the previous Phase II Scope(s) of Work, IRA Plan(s), RAM Plan(s), or previous sampling plan(s);
 3. except as provided in 310 CMR 40.1405(6)(e)4., remedial actions that are the subject of the public comment period shall not proceed until the close of the public comment period;
 4. time critical elements of an Immediate Response Action Plan may be conducted prior to the close of the public comment period if delaying the remedial actions would exacerbate release or site conditions or endanger health, safety, public welfare or the environment;
 5. a comment period is not required for a remedial action inspection and monitoring report or status report; and
 6. assessment may proceed during the public comment period;
 - (f) incorporate relevant and material public comments into the planning and implementation of response actions;
 - (g) provide a summary of all public comments received during any comment period within 60 days of the close of the comment period that contains the comments received, identifies comments that have been incorporated and provides an explanation for comments that were not incorporated into the applicable plan;
 - (h) ensure that Public Involvement Activities are undertaken throughout the response action process and that a schedule is developed for conducting these activities;
 - (i) establish a public information repository(ies) in the community(ies) in which the disposal site is located and in any other communities which are, or are likely to be, affected by the disposal site, with a location and hours that are convenient to the public; and

40.1405: continued

- (j) maintain a mailing list that includes at a minimum:
 1. all individuals who ask to receive information about the disposal site;
 2. the Chief Municipal Officer(s);
 3. the Board (s) of Health; and
 4. the Department;

(7) Public Involvement Activities shall be terminated, modified, expanded or reduced as provided below:

(a) Unless otherwise provided in a Public Involvement Plan or specified by the Department, a designation of a disposal site as a PIP Site pursuant to 310 CMR 40.1404 shall terminate following the implementation of the PIP activities applicable to the Permanent Solution Statement for the disposal site pursuant to 310 CMR 40.1000;

(b) The person(s) conducting response actions, ten or more residents of a community(ies) in which a disposal site is located or in any other community(ies) which are, or are likely to be, affected by a disposal site may propose to terminate the designation of a disposal site as a PIP Site, or to modify, expand or reduce Public Involvement Activities in a Public Involvement Plan. If such a proposal is made to terminate, expand or reduce Public Involvement Activities or terminate designation of a disposal site as a PIP Site, the person(s) conducting response actions shall provide a written notice pursuant to 310 CMR 40.1403(2)(a) to the parties on the mailing list for the disposal site, the local Board(s) of Health and Chief Municipal Officer(s) in the community(ies) in which the disposal site is located and in any other communities that are, or are likely to be, affected by the disposal site and publish a public notice pursuant to 310 CMR 40.1403(2)(b). Such written and public notices shall:

1. identify the proposed changes to the Public Involvement Activities;
2. provide a 20 day comment period for the proposed modification, expansion, reduction or termination of the Public Involvement Activities or termination of the PIP Site Designation, whichever is applicable; and
3. identify the location of the public information repository where the proposed changes have been made available for review;

(c) The person(s) conducting response actions shall review any comments received and if applicable, revise the Public Involvement Plan developed pursuant to 310 CMR 40.1404 to incorporate as appropriate proposed revisions as well as any comments received on the proposed revisions;

(d) A letter that sets forth the revised Public Involvement Activities or termination of the PIP Site Designation shall be placed in the information repository and concurrently sent to any person(s) who responded to written notice made pursuant to 310 CMR 40.1405(7)(b).

(e) Upon termination of a PIP Site Designation, the person(s) conducting response actions at the disposal site shall no longer be required to conduct Public Involvement Activities pursuant to the Public Involvement Plan or 310 CMR 40.1405.

40.1406: Notification to Owners of Property within the Boundaries of a Disposal Site

(1) Any person(s) conducting response action(s) at a disposal site shall provide written notice on a form established by the Department for such purpose and in accordance with the requirements of 310 CMR 40.1403(2)(a) to the owner(s) of property(ies) within the boundaries of the disposal site as depicted and/or described pursuant to 310 CMR 40.0835(4)(b) and/or 310 CMR 40.1056(2)(a) that said property(ies) (or a portion of the property(ies)) is within the disposal site boundaries. The person(s) conducting response actions at the disposal site shall:

(a) provide the following information in or with the written notice:

1. a copy of the disposal site map or description of disposal site boundaries prepared pursuant to 310 CMR 40.0835(4)(b) and/or 310 CMR 40.1056(2)(a) showing or describing the boundaries of the disposal site;
2. a copy of the conclusions prepared pursuant to 310 CMR 40.0835(4)(i) or 310 CMR 40.1056;
3. a statement that Public Involvement Activities are available under 310 CMR 40.1400; and

40.1406: continued

4. the name, address and telephone number of a contact person representing the person(s) conducting response actions who may be contacted for additional information on the disposal site;
 - (b) provide such written notice concurrently with submitting the Phase II Report, pursuant to 310 CMR 40.0835, or the Permanent or Temporary Solution Statement for the disposal site, pursuant to 310 CMR 40.1000, to the Department, whichever is submitted sooner:
 1. for written notice provided concurrently with submitting the Phase II Report to the Department, additional written notice of the Permanent or Temporary Solution for the disposal site shall be subsequently provided pursuant to 310 CMR 40.1406(3);
 2. for written notice provided concurrently with submitting the Permanent or Temporary Solution Statement for the disposal site to the Department, such written notice shall also include a statement explaining how to obtain additional documentation of the Permanent or Temporary Solution.
 - (c) if the number of property owners to receive the written notices exceeds 50, provide a written notice pursuant to 310 CMR 40.1403(2)(a) to property owners only after the Board(s) of Health in the community(ies) in which the properties are located and the Department receive written notice.
- (2) Any person(s) conducting response actions who provided written notice to a property owner(s) pursuant to 310 CMR 40.1406(1) who later determines as the result of an additional response action(s) that a property is not within the boundaries of the disposal site shall make written notice to said property owner(s) within 30 days of receiving the additional information upon which such a determination is based. Such written notice shall include:
- (a) the basis of the determination;
 - (b) an updated copy of the disposal site map prepared pursuant to 310 CMR 40.0835(4)(b) or 40.1056(2)(a) showing the revised boundaries of the disposal site; and
 - (c) a statement explaining how to obtain additional documentation that supports the determination.
- (3) Any person(s) conducting response action(s) who provided written notice to a property owner(s) upon submission of the Phase II Report pursuant to 310 CMR 40.1406(1) shall subsequently upon achievement of a Permanent or Temporary Solution for the disposal site provide a written notice pursuant to 310 CMR 40.1403(2)(a) of the Permanent or Temporary Solution to the owners of those properties for which notice was previously provided concurrently with submitting the Permanent or Temporary Solution to the Department. Such written notice shall include:
- (a) a copy of the conclusions prepared pursuant to 310 CMR 40.1056;
 - (b) an updated copy of the disposal site map, if the identified disposal site boundaries have changed since the previous notice;
 - (c) the name, address and telephone number of a contact person representing the person(s) conducting response actions who may be contacted for additional information on the disposal site; and
 - (d) a statement explaining how to obtain additional documentation of the Permanent or Temporary Solution.
- (4) If the number of property owners that would receive written notices pursuant to 310 CMR 40.1406 exceeds 50, alternative means of providing notice to property owners (*e.g.*, use of a public notice published in the local newspaper) may, upon approval by the Department, be used to fulfill the requirements of 310 CMR 40.1406. In such case, written notice to the Board(s) of Health in the community(ies) in which the properties are located shall be provided pursuant to 310 CMR 40.1406(1)(c) prior to providing notice to the property owners, and such written notice shall also inform the Board(s) of Health of the alternative means by which notice will be provided to the property owners.
- (5) A copy of all written notices required by 310 CMR 40.1406 shall be submitted to the Department with the corresponding Phase II Report or Permanent or Temporary Solution Statement.

(40.1407: Community Site Inspection: Reserved)

40.1450: Technical Assistance Grants

310 CMR 40.1450 through 40.1499, cited collectively as 310 CMR 40.1450, specifies terms and conditions of eligibility for, and use of, technical assistance grants.

40.1451: Purpose and Scope of Technical Assistance Grants

- (1) The Department may provide for limited grants in order to:
 - (a) provide access to expert advice and technical assistance;
 - (b) encourage more effective participation in the response action process by promoting access to and use of information; and
 - (c) allow issues of concern related to the disposal site to be addressed.

40.1452: Grant Availability

- (1) Grants shall be made available to affected persons described in 310 CMR 40.1453, subject to the provisions of 310 CMR 40.1451 through 40.1462 and to the availability of funding.
- (2) For each disposal site, there shall be no more than one grant available per funding round.
- (3) Grants may be made to single organizations for technical assistance activities at more than one disposal site. However, no applicant shall receive more than one grant in a funding round.
- (4) Grant Amounts.
 - (a) At the start of each funding round, the Department shall designate a maximum amount for any single grant.
 - (b) Any other source of funding obtained by an applicant for expert advice or technical assistance shall not be subtracted from any specified grant maximum designated by the Department provided the total of grant funds received by the grantee from all sources shall not exceed 100% of the total cost of the proposed project.
 - (c) The maximum grant amount(s) shall be set forth in the notice to be published by the Department pursuant to 310 CMR 40.1455.
- (5) Disposal sites that are eligible for Technical Assistance Grants are:
 - (a) any disposal site classified as Tier I or Tier II pursuant to 310 CMR 40.0500;
 - (b) any Massachusetts disposal site listed on the National Priority List; and
 - (c) any site deemed by the Department to be Adequately Regulated pursuant to 310 CMR 40.0110 *et. seq.*, and for which response actions have not been completed.
- (6) No Technical Assistance Grant Agreement shall be made available to a Grantee for any site for which:
 - (a) a valid Permanent Solution Statement has been submitted to the Department by the party(ies) conducting response actions at a tier classified site; or
 - (b) a Waiver Completion Statement has been submitted to the Department by the party(ies) conducting response actions.

40.1453: Eligible Applicants

- (1) The Department may provide for limited grants to be given to the following affected persons:
 - (a) any group of individuals who may be affected by oil and/or hazardous material from any eligible disposal site, or
 - (b) any city, town or agency thereof which may be affected by oil and/or hazardous material from any eligible disposal site, or
 - (c) any district or other body politic that owns or operates a public water supply system which may be affected by oil and/or hazardous material from any eligible disposal site.
- (2) Applicants who do not exist as a legal entity with legal authority to receive, disburse, and be responsible for funds at the time the grant is awarded shall be ineligible.

40.1453: continued

- (3) Any applicant which unreasonably restricts the meaningful participation and involvement of affected individuals shall be ineligible to receive a grant.
- (4) Any person liable or potentially liable pursuant to M.G.L. c. 21E, § 5 and any Other Person taking a response action at a disposal site pursuant to M.G.L. c. 21E, § 4 shall be ineligible to receive a grant for that disposal site.

40.1454: Eligible Activities

- (1) Eligible activities for grants may include, but are not limited to:
 - (a) interpretation, review or critique of technical analyses related to a disposal site as presented in reports developed by or on behalf of the Department, RPs, PRPs, Other Persons, or by other public or private entities. Such reports may include, but are not limited to:
 1. the scope of work for Phase II; the Phase II Report; the Phase III - Remedial Action Plan; the Phase IV - Remedy Implementation Plan, As-Built Construction Report, and the Final Inspection Report; the Phase V - Inspection and Monitoring Report; and
 2. sampling and analysis plans;
 - (b) observation of assessment, sampling or response action activities conducted by the Department, RP, PRP or Other Person. Such observation shall be conducted in accordance with 310 CMR 40.1454(3);
 - (c) analysis of split samples taken by the Department, RP, PRP or Other Person, provided that the grantee's consultant performs testing and analysis which is identical to that performed by the Department, RP, PRP or Other Person;
 - (d) health surveys to gather existing information through interviews with, and questionnaires answered by, individuals who may be affected by the disposal site;
 - (e) legal advice concerning the public's involvement in response actions;
 - (f) public education activities; and
 - (g) a reasonable share of funding for voluntary mediation concerning response actions for the disposal site.
- (2) The following activities shall be ineligible for grants:
 - (a) development of new environmental data;
 - (b) development of new medical data;
 - (c) organizational development or membership building, except such activities that are incidental to performance of eligible activities;
 - (d) litigation or any other adversarial legal proceeding;
 - (e) partisan political activity or any activity to further the election or defeat of any candidate for public office; and
 - (f) taking or arranging for any response actions at the disposal site.
- (3) The following conditions shall be met before initiating eligible activities:
 - (a) grantees shall obtain approval from the person(s) responsible for the conduct of the response action at the disposal site and from the owner or operator of the disposal site prior to conducting activities at the disposal site under 310 CMR 40.1454(1)(b) and (c);
 - (b) grantees shall comply with the health and safety plan and all operational protocols established for the disposal site; and
 - (c) grantees shall not interfere with the efficient, expeditious, and safe conduct of response actions at the disposal site.

40.1455: Notice Provisions

- (1) For each funding round, the Department shall publish a notice in the *Environmental Monitor* and on the Department's web site announcing the availability of grants, application procedures and deadlines. The availability of grants shall also be announced by the Department with any List of Disposal Sites published pursuant to 310 CMR 40.0168.
- (2) Information about the availability of technical assistance grants shall also be published by the person(s) responsible for the conduct of the response action at the disposal site as part of other public notices published pursuant to this Contingency Plan.

40.1456: Grant Application Process

Grant applications shall be received and evaluated by the Department in accordance with the following procedures:

- (1) The Department may establish one or more funding rounds and application periods each year. The Department may extend any application period at its discretion. Should an application period be extended, the Department shall publish notice thereof in the *Environmental Monitor* and on the Department's web site.
- (2) Applications received after the close of the application period shall not be considered for a grant in that funding round.
- (3) Grant applications shall be submitted on a Technical Assistant Grant Application Form provided by the Department, together with any other documentation required by the Department.
- (4) Any applicant applying for a grant shall submit a Technical Assistance Grant Application Form which shall include the following types of information:
 - (a) a detailed description of the applicant's proposed project and a schedule for completing the project;
 - (b) a description of the applicant's efforts to identify and include affected individuals, including the applicant's efforts to publicize its interest in applying for the grant and in soliciting interest by others in joining its efforts;
 - (c) a description of the impacts of the disposal site on health, safety, public welfare, and the environment;
 - (d) a description of the applicant's history and experience, if any, in conducting activities similar to those proposed in the application;
 - (e) a copy of the applicant's by-laws, if any;
 - (f) documentation that the applicant will meet the requirements set forth in 310 CMR 40.1453;
 - (g) information and documentation describing the background and qualifications of the types of consultants to be employed by the applicant;
 - (h) a description of the applicant's procedures for supervision and accountability of experts and for management of grant-funded activities;
 - (i) a description of the applicant's procedures for financial management and accounting of grant funds;
 - (j) an explanation and schedule indicating how the requirements of 310 CMR 40.1453(2) shall be met if a grant is awarded to the applicant;
 - (k) a description of how the grantee will measure the project's success in meeting its goals and objectives, including a list of specific performance standards that will be used in that evaluation process; and
 - (l) if the applicant has ever received a technical assistance grant or grants pursuant to this Contingency Plan, a description of the relationship between any incomplete or unfinished project or projects for which said grant funds were received and the project for which the applicant is currently applying for a grant.
- (5) Within each funding round, the Department shall designate a date by which all Applications shall be submitted to the Department.

40.1457: Grant Selection Process

- (1) Grant Applications shall be evaluated based upon the criteria set forth in the application package which shall consider without limitation: the proposal's potential to address a balance between technical education, and community outreach and participation; and the relative impact of the disposal site location on health, safety, public welfare and the environment (including consideration of whether the disposal site location is within an Economic Target Area or area designated as an Environmental Justice Community).

40.1457: continued

(2) In each funding round, the Department shall rank the applications according to a weighted value assigned for the criteria set forth in the application package. This ranking shall be used by the Department to establish a grant funding priority list that shall indicate which grants are likely to be funded during that funding round. The Department may determine the number of grants on the grant funding priority list based on the following considerations:

- (a) the Department's administrative capacity to manage the technical assistant grant program at the time the grant funding priority list is established; and
- (b) the total amount of funding available for the grant program in a given round.

(3) Upon final determination of the Department's grant funding priority list, the Department shall publish the list in the *Environmental Monitor* and on the Department's web site.

(4) Following publication of the Department's funding priority list, a copy of the applicant's evaluation sheet will be made available upon written request.

(5) Any applicant on the grant funding priority list may be bypassed for an award if the Department determines that the applicant is for any reason unable to accept or receive the grant during that funding cycle. Any application that is bypassed shall not retain its priority rating for future funding rounds. The next highest ranked application which was otherwise not likely to be funded shall be added to the grant funding priority list for each bypassed application. Each grant funding priority list shall be in effect only during the funding round in which it was established.

(6) Once the grant is awarded, the applicant shall be referred to as the grantee. A grant shall be deemed awarded when a Grant Agreement is entered into by the Department and the grantee, and the Grant Agreement has been accepted by the Office of the Comptroller. The Grant Agreement shall consist of the grant offer as executed by the Department and the grant acceptance as executed by the grantee as well as any and all terms and conditions under which the grant is being awarded to the grantee.

40.1458: Payment Method

Payment of a grant award to a grantee shall be made as reimbursement for costs incurred by the grantee and shall be subject to 310 CMR 40.1450 through 40.1462. The terms and conditions of payment, and all required supporting documentation to be submitted by the grantee prior to payment shall be set forth in the Grant Agreement.

40.1459: Fiscal Management of Grants

(1) The grantee is responsible for complying with 310 CMR 40.1451 through 40.1462 and the terms and conditions contained in the Grant Agreement. This responsibility shall not be delegated, transferred, or assigned by the grantee.

(2) The grantee shall establish for its project a separate account in a bank with insurance coverage by the Federal Deposit Insurance Corporation (FDIC). Project funds and all interest earned on such funds shall be credited to said account and all project payments shall be made from said account.

(3) The grantee shall maintain a financial management system which shall provide for effective control over and accountability for all project funds. Grantees shall safeguard all such funds and ensure that they are used solely as authorized by the Grant Agreement.

40.1460: Records to be Maintained by Grantees

(1) The grantee shall maintain books, records, documents, and supporting evidence which shall fully explain the source, amount, and disposition of all grant funds.

(2) The grantee shall require its contractors, including contractors for professional services, to maintain accurate books, documents, papers, and records which are pertinent to the project.

40.1460: continued

- (3) The grantee and contractors of the grantee shall retain all records for a period of at least three years from the date of the final grant payment, and longer if required pursuant to 310 CMR 40.1460(5).
- (4) The grantee and its contractors shall make records available to the Department at all reasonable times for inspection, copying, and auditing.
- (5) The grantee and its contractors shall retain all records relating to disputes until all appeals, litigation, claims, or exceptions arising out of the grantee's project have been fully resolved.

40.1461: Inspection of Projects

The Department may, at a reasonable time and upon reasonable notice, conduct an inspection at any location where a grantee's project is being carried out.

40.1462: Honest Practices

- (1) The award and administration of grants shall be accomplished free from bribery, graft, kickbacks and other corrupt or illegal practices. The grantee bears the primary responsibility for the prevention, detection and cooperation in the prosecution of any such conduct. State administrative or other legally available remedies shall be pursued to the extent appropriate.
- (2) The grantee shall take appropriate actions with respect to any allegations or evidence of such illegality or corrupt practices which are brought to its attention. The grantee shall advise the Department immediately when such allegations or evidence comes to the grantee's attention, and shall periodically report to the Department the status and ultimate disposition of any such matter.
- (3) The grantee shall notify the Department of any material changes to the information provided in the Technical Assistance Grant Application, established in 310 CMR 40.1456(4) and 40.1456(6), at any point after the grant is awarded.
- (4) The Department may suspend or terminate grant payments or may revoke a grant at any time if the Department becomes aware of any allegations, evidence or appearance of illegality, corruption, or fraud associated with the award of the grant, compliance or noncompliance with 310 CMR 40.1451 through 40.1462 or the Grant Agreement between the Department and the grantee, or expenditure of funds for the project. In the event that a grant is revoked, the grantee shall be responsible for returning to the Commonwealth all grant funds.
- (5) The Department may make a factual determination at any time that a project is not being carried out in accordance with 310 CMR 40.0000, M.G.L. c. 21E, or any other law or regulation. If the Department makes such a determination, then the Department shall notify the grantee of the withdrawal of all grant funds, and may demand the return of the entire amount of the grant, or at the election of the Department, the unused portion of the grant funds, which shall be due immediately, or within five days of receipt of the notice by the grantee. Failure of the grantee to comply with 310 CMR 40.1462 shall subject the grantee to all civil, criminal and administrative remedies of the Commonwealth, including interest in the amount of 12% annum which shall accrue beginning on the fifth day after notice was received by the grantee.
- (6) If the Department makes a determination that any of the grant funds are not used in accordance with the terms of the grant or any of the provisions of this Contingency Plan, M.G.L. c. 21E, or any other law or regulation, then the grantee shall be held liable to the Commonwealth for the return of the entire amount of the grant, including interest at a rate of 12% per annum from the date of such determination.
- (7) If the Department has made a determination pursuant to 310 CMR 40.1462(4), and the grantee has not returned the amount of the grant upon demand plus any accrued interest, then at the Department's election, the demanded amount shall be deducted, plus any accrued interest, from the local aid appropriation to be made to any grantee that is a city, town, agency, or any district or other body politic that owns or operates a public water supply system pursuant to M.G.L. c. 58, § 20.

40.1462: continued

(8) The grantee shall include the following provisions in all contracts with its contractors which are funded, in full or in part, by a grant award:

(a) The contractor shall not accept compensation, financial or otherwise, for his or her services pertaining to the disposal site from any person having significant conflicting or adverse interests to those of the grantee unless the circumstances are fully disclosed to, and agreed to, by the grantee and all other persons engaging the contractor with regard to the disposal site; and

(b) In the event that the contractor has, develops or acquires any business association, direct or indirect financial interest, or other circumstances which is substantial enough to create an impression of influencing his or her judgement in connection with his or her performance of services provided to the grantee, the contractor shall fully disclose in writing to the grantee the nature of the business association, financial interest or circumstance. If the grantee objects to such business association, financial interest or circumstance, the contractor shall offer to terminate, at his or her discretion, either the business association, financial interest or circumstance, or his or her engagement with regard to the grantee.

REGULATORY AUTHORITY

310 CMR 40.0000: M.G.L. c. 21E.

(PAGES 1783 THROUGH 1794 ARE RESERVED FOR FUTURE USE.)

SUBPART P: MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE OF CONTENTS

TABLE 1 - MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST (ALPHABETICAL LISTING)

NOTES:

The Massachusetts Oil and Hazardous Materials List (MOHML) contains oils and hazardous materials subject to 310 CMR 40.0000 and their reportable quantities (RQs) and reportable concentrations (RCs). These values are referred to in the notification requirements (310 CMR 40.0300). The MOHML is organized alphabetically by chemical name and includes the unique Chemical Abstracts Service Number (CAS Number) assigned to a substance. The MOHML refers to other lists on which a substance appears, each such other list identified by the following name source codes:

- ▶ Name Source 1 - The Department of Transportation (DOT) Hazardous Materials List (49 CFR Part 172.101 Hazardous Materials Table)
- ▶ Name Source 2 - The Resource Conservation and Recovery Act Appendix VIII List (40 CFR Part 261 - Appendix VIII Hazardous Constituents)
- ▶ Name Source 3 - The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance and Waste Stream Lists (40 CFR Part 302 - Table 302.4)
- ▶ Name Source 4 - The Extremely Hazardous Substance List as mandated by Superfund Amendments and Reauthorization Act, Title III, Section 302 (40 CFR Part 355 Appendices A and B)
- ▶ Name Source 5 - DEP Allowable Ambient Limits (AALs) and Drinking Water Guidelines
- ▶ Name Source 6 - The Massachusetts Substance List (MSL)(105 CMR 670.000: *Right to Know* Appendix A)
- ▶ Name Source 7 - The Chemical Abstracts name, 9th collective period, 1972-1976
- ▶ Name Source 8 - The EPA Right to Know list, Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (40 CFR Part 372.65).

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	GW1 (mg/l)	Reportable Concentrations		
		RQ (Pounds)			GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
5/23/14 (Effective 4/25/19) - corrected	03383-96-8	10	6,1	1	10	100	1000
ACENAPHTHENE	83-32-9	10	3,6	0.02	10	4	3000
ACENAPHTHYLENE	208-96-8	100	3,7,6	0.03	0.04	1	10
ACENAPHTHYLENE, 1,2-DIHYDRO	83-32-9	10	3,6	0.02	6	4	3000
ACEPHATE	30560-19-1	10	5	1	10	100	1000
ACETAL	00105-57-7	10	1,6	1	10	100	1000
ACETALDEHYDE	00075-07-0	50	1,3,5,6,7,8	5	50	500	5000
ACETALDEHYDE, CHLORO-	00107-20-0	50	2,3,1,6	5	50	500	5000
ACETALDEHYDE, TRICHLORO-	00075-87-6	100	2,3,7,6	10	100	1000	10000
ACETAMIDE, 2-FLUORO	00640-19-7	10	3,7,2,1,4,6	1	10	100	1000
ACETAMIDE, N,N-DIMETHYL-	00127-19-5	10	7,6	1	10	100	1000
ACETAMIDE, N-(4-ETHOXYPHENYL)-	00062-44-2	10	2,3,7,6	1	10	100	1000
ACETAMIDE, N-(5,6,7,9-TETRAHYDRO-1,2,3,10-TETRAM..	00064-86-8	1	7,4	0.1	1	10	100
ACETAMIDE, N-(9H-FLUOREN-2-YL)-	00053-96-3	1	2,7,3,6,8	0.1	1	10	100
ACETAMIDE, N-(AMINOTHIOXOMETHYL)	00591-08-2	50	7,2,3,1,6	5	50	500	5000
ACETIC ACID	00064-19-7	100	3,6,7,1	10	100	1000	10000
ACETIC ACID (2,4,5-TRICHLOROPHENOXY)- COMPD. WI...	01319-72-8	100	7,3	10	100	1000	10000
ACETIC ACID GLACIAL	00064-19-7	100	1,6,3	10	100	1000	10000
ACETIC ACID, (2,4,5-TRICHLOROPENOXY)-, BUTYL ESTER	00093-79-8	50	7,3,6	5	50	500	5000
ACETIC ACID, (2,4,5-TRICHLOROPHENOXY)-	00093-76-5	10	2,7,1,3,6	1	10	100	1000
ACETIC ACID, (2,4,5-TRICHLOROPHENOXY)-, 1-METHYL..	61792-07-2	50	7,3,6	5	50	500	5000
ACETIC ACID, (2,4,5-TRICHLOROPHENOXY)-, 2-BUTOXY..	02545-59-7	50	7,3,6	5	50	500	5000
ACETIC ACID, (2,4,5-TRICHLOROPHENOXY)-, 2-EHTYLH..	310284-8796	50	7,3,6	5	50	500	5000
ACETIC ACID, (2,4,5-TRICHLOROPHENOXY)-, COMPD. ...	02008-46-0	100	7,3,6	10	100	1000	10000
ACETIC ACID, (2,4,5-TRICHLOROPHENOXY)-, COMPD. W..	03813-14-7	100	7,3,6	10	100	1000	10000
ACETIC ACID, (2,4,5-TRICHLOROPHENOXY)-, COMPD. W..	06369-96-6	100	7,3,6	10	100	1000	10000
ACETIC ACID, (2,4,5-TRICHLOROPHENOXY)-, COMPD. W..	06369-97-7	100	7,3,6	10	100	1000	10000
ACETIC ACID, (2,4,5-TRICHLOROPHENOXY)-, ISOCTYL..	25168-15-4	50	7,3,6	5	50	500	5000
ACETIC ACID, (2,4,5-TRICHLOROPHENOXY)-, SODIUM ...	13560-99-1	50	3	(See RCs of any listed constituents)			

310 C

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
ACETIC ACID, (2,4-DICHLOROPHENOXY)-	00094-75-7	10	7,1,2,3,6,8	1	10	100	1000
ACETIC ACID, (2,4-DICHLOROPHENOXY)-, 1-METHYLETH..	00094-11-1	10	7,3,6	1	10	100	1000
ACETIC ACID, (2,4-DICHLOROPHENOXY)-, 1-METHYLPRO..	00094-79-1	10	7,3	1	10	100	1000
ACETIC ACID, (2,4-DICHLOROPHENOXY)-, 2-BUTOXYMET..	01320-18-9	10	7,3,6	1	10	100	1000
ACETIC ACID, (2,4-DICHLOROPHENOXY)-, ISOOCTYL ES..	25168-26-7	10	7,3,6	1	10	100	1000
ACETIC ACID, (2,4-DICHLOROPHENOXY)-, ISOPROPYL ...	00094-11-1	10	6	1	10	100	1000
ACETIC ACID, (2,4-DICHLOROPHENOXY)-, METHYL ESTER	01928-38-7	10	7,3,6	1	10	100	1000
ACETIC ACID, (2,4-DICHLOROPHENOXY)-, PROPYL ESTER	01928-61-6	10	7,3,6	1	10	100	1000
ACETIC ACID, (2,4-DICHLOROPHENOXY)-,2-BUTOXYETHY..	01929-73-3	10	7,3,6	1	10	100	1000
ACETIC ACID, (2,4-DICHLOROPHENOXY)-,4-CHLORO-2-B..	02971-38-2	10	7,3,6	1	10	100	1000
ACETIC ACID, (2,4-DICHLOROPHEONOXY)-, BUTYL ESTER	00094-80-4	10	7,3,6	1	10	100	1000
ACETIC ACID, 1,1-DIMETHYLETHYL ESTER	00540-88-5	100	7,3,6	10	100	1000	10000
ACETIC ACID, 1-METHYLETHYL ESTER	00108-21-4	10	7,1,5,6	1	10	100	1000
ACETIC ACID, 1-METHYLPROPYL ESTER	00105-46-4	100	1,3,6	10	100	1000	10000
ACETIC ACID, 2,4-DICHLOROPHENOXY-, SALTS AND EST..	00094-75-7	10	2,1,3,6,8	1	10	100	1000
ACETIC ACID, 2-ETHYLHEXYL ESTER	00103-09-3	10	7,6	1	10	100	1000
ACETIC ACID, 2-METHYLPROPYL ESTER	00110-19-0	100	3,1,5,6	10	100	1000	10000
ACETIC ACID, 2-PROPENYL ESTER	00591-87-7	10	7,6	1	10	100	1000
ACETIC ACID, AMMONIUM SALT	00631-61-8	100	7,1,3	(See RCs of any listed constituents)			
ACETIC ACID, ANHYDRIDE	00108-24-7	100	1,3,6	10	100	1000	10000
ACETIC ACID, BUTYL ESTER	00123-86-4	100	3,6	10	100	1000	10000
ACETIC ACID, CADMIUM SALT	00543-90-8	5	7,1,3	(See RCs of any listed constituents)			
ACETIC ACID, CHLORO-	00079-11-8	1	7,1,4,6,8	0.1	1	10	100
ACETIC ACID, CHLORO-, ETHYL ESTER	00105-39-5	10	7,1,6	1	10	100	1000
ACETIC ACID, CHLORO-, METHYL ESTER	00096-34-4	100	7,6	10	100	1000	10000
ACETIC ACID, CHROMIUM (3) SALT	01066-30-4	50	1,3	(See RCs of any listed constituents)			
ACETIC ACID, COPPER(2+) SALT	00142-71-2	10	7,1,3	(See RCs of any listed constituents)			
ACETIC ACID, ETHYL ESTER	00141-78-6	100	7,3,1,5,6	10	100	1000	10000
ACETIC ACID, ETHYLENYL ESTER	00108-05-4	100	1,3,4,5,6,8	10	100	1000	10000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
ACETIC ACID, FLUORO-	00144-49-0	1	7,4	0.1	1	10	100
ACETIC ACID, FLUORO-, SODIUM SALT	00062-74-8	5	2,3,7,4,6	(See RCs of any listed constituents)			
ACETIC ACID, HEXYL ESTER	00142-92-7	100	7,6	10	100	1000	10000
ACETIC ACID, LEAD SALT	00301-04-2	5	2,3,7,1,6	(See RCs of any listed constituents)			
ACETIC ACID, MERCURY(2+) SALT	01600-27-7	1	7,1,4	(See RCs of any listed constituents)			
ACETIC ACID, METHYL ESTER	00079-20-9	10	7,1,6	1	10	100	1000
ACETIC ACID, PENTYL ESTER	00628-63-7	100	7,1,3,6	10	100	1000	10000
ACETIC ACID, PROPYL ESTER	00109-60-4	10	7,1,6	1	10	100	1000
ACETIC ACID, THALLIUM (1+) SALT	00563-68-8	10	2,7,3,6	(See RCs of any listed constituents)			
ACETIC ACID, ZINC SALT	00557-34-6	50	7,1,3	(See RCs of any listed constituents)			
ACETIC ANHYDRIDE	00108-24-7	100	1,3,6	10	100	1000	10000
ACETIMIDIC ACID, N-[(METHYLCARBAMOYL)OXY]THIO-...	16752-77-5	10	2,3,1,4,6	1	10	100	1000
ACETONE	67-64-1	100	1,3,5,6,8	6.3	50	6	50
ACETONE CYANOHYDRIN	00075-86-5	5	1,3,6,4,2	0.5	5	50	500
ACETONE THIOXEMICARBAZIDE	01752-30-3	1	4	0.1	1	10	100
ACETONITRILE	00075-05-8	100	1,2,3,6,7,8	10	100	1000	10000
ACETONITRILE, HYDROXY-	00107-16-4	1	4	0.1	1	10	100
3-(alpha-ACETONYLBENZYL)-4-HYDROXYCOUMARIN-AND SALTS	00081-81-2	10	1,2,3,4,6,3	1	10	100	1000
p-ACETOPHENETIDIDE	00062-44-2	10	6,2,3	1	10	100	1000
ACETOPHENONE	00098-86-2	100	1,3,2,6,8	10	100	1000	10000
ACETYL BENZOYL PEROXIDE	00644-31-5	10	1	1	10	100	1000
ACETYL BROMIDE	00506-96-7	100	1,3,7,6	10	100	1000	10000
ACETYL CHLORIDE	00075-36-5	100	1,2,3,6,7	10	100	1000	10000
ACETYL CHLORIDE, DICHLORO-	00079-36-7	10	7,1,6	1	10	100	1000
ACETYL CHLORIDE, FLUORO-	00359-06-8	1	7,4	0.1	1	10	100
ACETYL CHLORIDE, TRICHLORO-	00076-02-8	1	7,4	0.1	1	10	100
ACETYL PEROXIDE	00110-22-5	10	1,6	1	10	100	1000
1-ACETYL-2-THIOUREA	00591-08-2	50	1,2,3,6	5	50	500	5000
2-ACETYLAMINOFLUORENE	00053-96-3	1	2,3,6,8	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
ACETYLENE	00074-86-2	10	1,6	1	10	100	1000
ACETYLENE DICHLORIDE	00540-59-0	10	6,8	0.07	0.1	0.3	0.4
ACETYLENE TETRABROMIDE	00079-27-6	50	1,6	5	50	500	5000
ACETYLENE TETRACHLORIDE	79-34-5	10	1,2,3,5,6,8	0.002	0.009	0.005	0.02
ACROLEIN	00107-02-8	1	1,2,3,8,6,4	0.1	1	10	100
ACRYLAMIDE	00079-06-1	100	1,2,3,4,6,8	10	100	1000	10000
ACRYLIC ACID	00079-10-7	100	1,3,6,8	10	100	1000	10000
ACRYLONITRILE	00107-13-1	10	1,2,3,5,8,6,4	1	10	100	1000
ACRYLYL CHLORIDE	00814-68-6	1	4	0.1	1	10	100
ACTINOMYCIN D	00050-76-0	10	7,6	1	10	100	1000
ADIPIC ACID	00124-04-9	100	1,3,6	10	100	1000	10000
ADIPONITRILE	00111-69-3	1	6,4	0.1	1	10	100
ADIPYLDINITRILE	00111-69-3	1	6,4	0.1	1	10	100
ALACHLOR	15972-60-8	10	5	1	10	100	1000
ALANINE, 3-[P-BIS(2-CHLOROETHYL)AMINO]PHENYL-,L-	00148-82-3	1	2,3,6	0.1	1	10	100
ALDICARB	00116-06-3	1	1,3,6,4,2	0.1	1	10	100
ALDOL	00107-89-1	10	6	1	10	100	1000
ALDRIN	309-00-2	1	1,2,3,8,6,4	0.0005	0.002	0.08	0.5
ALIPHATIC HYDROCARBONS (See Petroleum Hydrocarbons)							
ALLYL ACETATE	00591-87-7	10	6	1	10	100	1000
ALLYL ALCOHOL	00107-18-6	10	1,2,3,6,4,8	1	10	100	1000
ALLYL BROMIDE	00106-95-6	10	1,6	1	10	100	1000
ALLYL CHLORIDE	00107-05-1	50	1,2,3,8,6	5	50	500	5000
ALLYL CHLOROCARBONATE	02937-50-0	10	1,6	1	10	100	1000
ALLYL CHLOROFORMATE	02937-50-0	10	6,1	1	10	100	1000
ALLYL GLYCIDYL ETHER (AGE)	00106-92-3	50	6	5	50	500	5000
ALLYL TRICHLOROSILANE	00107-37-9	10	1,6	1	10	100	1000
ALLYLAMINE	00107-11-9	1	6,4	0.1	1	10	100
ALUMINUM BROMIDE	07727-15-3	10	1	(See RCs of any listed constituents)			
ALUMINUM CHLORIDE	07446-70-0	10	6,1	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations				
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)	
ALUMINUM PHOSPHIDE	20859-73-8	10	4,6,1,2,3		(See RCs of any listed constituents)			
ALUMINUM SULFATE	10043-01-3	100	3,1,6		(See RCs of any listed constituents)			
ALUMINUM, CHLORODIETHYL-	00096-10-6	10	7,6	1	10	100	1000	
ALUMINUM, DICHLOROETHYL-	00563-43-9	10	7,6	1	10	100	1000	
ALUMINUM, HYDROBIS (2-METHYLPROPYL)-	01191-15-7	10	7,6	1	10	100	1000	
ALUMINUM, TRIBROMOTRIMETHYLDI-	12263-85-3	10	7,6	1	10	100	1000	
ALUMINUM, TRICHLOROTRIETHYLDI-	12075-68-2	10	7,6	1	10	100	1000	
ALUMINUM, TRIETHYL	00097-93-8	10	7,6	1	10	100	1000	
ALUMINUM, TRIS(2-METHYLPROPYL)-	00100-99-2	10	7,6	1	10	100	1000	
AMETRYN	00834-12-8	10	5	1	10	100	1000	
6-AMINO-1,1A,2,8,8A,8B-HEXAHYDRO-8-(HYDROXYMETHYL)..	00050-07-7	5	2,3,4,6	0.5	5	50	500	
2-AMINO-1-METHYL BENZENE	00095-53-4	10	3,2,5,6,8	1	10	100	1000	
4-AMINO-1-METHYL BENZENE	00106-49-0	10	3,2,6	1	10	100	1000	
2-AMINO-2-METHYL-1-PROPANOL	00124-68-5	100	6	10	100	1000	10000	
2-AMINO-3-METHYL-9H-PYRIDO[2,3-B]INDOLE	68806-83-7	1	6	0.1	1	10	100	
2-AMINO-3-METHYLIMIDAZO[4,5-F]QUINOLINE	76180-96-6	1	6	0.1	1	10	100	
2-AMINO-6-METHYLDIPYRIDO[1,2-A:3',2'-D]IMIDAZOLE	67730-11-4	1	6	0.1	1	10	100	
2-AMINO-9H-PYRIDO[2,3-B]INDOLE	26148-68-5	1	6	0.1	1	10	100	
3-AMINO-S-TRIAZOLE	00061-82-5	5	2,3,7,6,8	0.5	5	50	500	
AMINOCARB	02032-59-9	10	1	1	10	100	1000	
2-AMINODIPYRIDO[1,2-A:3',2'-D]IMIDAZOLE	67730-10-3	1	6	0.1	1	10	100	
2-AMINOETHANOL	00141-43-5	10	6,1	1	10	100	1000	
1-(2-AMINOETHYL)-PIPERAZINE	00140-31-8	100	6,1	10	100	1000	10000	
N-AMINOETHYLPIPERAZINE	00140-31-8	100	1,6	10	100	1000	10000	
5-(AMINOMETHYL)-3-ISOXAZOLOL	02763-96-4	50	1,2,3,4	5	50	500	5000	
AMINOPTERIN	00054-62-6	1	4	0.1	1	10	100	
4-AMINOPYRIDINE	00504-24-5	50	3,1,4,2	5	50	500	5000	
4-AMINOTOLUENE	00106-49-0	10	2,3,6	1	10	100	1000	
AMITON	00078-53-5	1	4	0.1	1	10	100	

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
AMITON OXALATE	03734-97-2	1	4	0.1	1	10	100
AMITROL	00061-82-5	5	2,3,7,6,8	0.5	5	50	500
AMITROLE	00061-82-5	5	2,3,7,6,8	0.5	5	50	500
AMMONIA	07664-41-7	10	4,6,3,5,7,8,1	1	10	100	1000
AMMONIA, ANHYDROUS	07664-41-7	10	6,1,3,4,5,8	1	10	100	1000
AMMONIUM ACETATE	00631-61-8	100	1,3,6	(See RCs of any listed constituents)			
AMMONIUM BENZOATE	01863-63-4	100	1,3,6	10	100	1000	10000
AMMONIUM BICARBONATE	01066-33-7	100	1,3,6	(See RCs of any listed constituents)			
AMMONIUM BICHROMATE	07789-09-5	5	3,1,6	(See RCs of any listed constituents)			
AMMONIUM BIFLUORIDE	01341-49-7	100	1,3,6	(See RCs of any listed constituents)			
AMMONIUM BISULFITE	10192-30-0	100	1,3,6	(See RCs of any listed constituents)			
AMMONIUM BROMIDE	12124-97-9	10	6	(See RCs of any listed constituents)			
AMMONIUM CARBAMATE	01111-78-0	100	1,3,6	(See RCs of any listed constituents)			
AMMONIUM CARBONATE	00506-87-6	100	3,6	(See RCs of any listed constituents)			
AMMONIUM CHLORIDE	12125-02-9	100	6,1,3	(See RCs of any listed constituents)			
AMMONIUM CHLOROPLATINATE	16919-58-7	100		(See RCs of any listed constituents)			
AMMONIUM CHROMATE	07788-98-9	5	3,1,6	(See RCs of any listed constituents)			
AMMONIUM CITRATE, DIBASIC	03012-65-5	100	1,3,6	10	100	1000	10000
AMMONIUM DICHROMATE	07789-09-5	5	6,1,3	(See RCs of any listed constituents)			
AMMONIUM FLUOBORATE	13826-83-0	100	1,3,6	(See RCs of any listed constituents)			
AMMONIUM FLUORIDE	01341-49-7	100	1,3,6	(See RCs of any listed constituents)			
AMMONIUM FLUORIDE	12125-01-8	10	6,1,3	(See RCs of any listed constituents)			
AMMONIUM HYDROGEN FLUORIDE	01341-49-7	100	1,3,6	(See RCs of any listed constituents)			
AMMONIUM HYDROSULFIDE SOLUTION	12135-76-1	10	1,3	(See RCs of any listed constituents)			
AMMONIUM HYDROXIDE	01336-21-6	50	1,3,6	(See RCs of any listed constituents)			
AMMONIUM NITRATE	06484-52-2	10	6,1,8	(See RCs of any listed constituents)			
AMMONIUM OXALATE	05972-73-6	100	3,6	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
AMMONIUM OXALATE	06009-70-7	100	3,6	(See RCs of any listed constituents)			
AMMONIUM OXALATE	14258-49-2	100	3,6	(See RCs of any listed constituents)			
AMMONIUM PERCHLORATE	07790-98-9	10	6,1	0.002	1	0.1	5
AMMONIUM PICRATE	00131-74-8	5	1,3,6	(See RCs of any listed constituents)			
AMMONIUM SILICOFLUORIDE	16919-19-0	50	1,3,6	(See RCs of any listed constituents)			
AMMONIUM SULFAMATE	07773-06-0	100	1,3,6	(See RCs of any listed constituents)			
AMMONIUM SULFAMATE (AMMATE)	07773-06-0	100	6,1,3	(See RCs of any listed constituents)			
AMMONIUM SULFIDE	12135-76-1	10	3,1,6	(See RCs of any listed constituents)			
AMMONIUM SULFIDE SOLUTION	12135-76-1	10	1,3,6	(See RCs of any listed constituents)			
AMMONIUM SULFITE	10196-04-0	100	1,3,6	(See RCs of any listed constituents)			
AMMONIUM TARTRATE	03164-29-2	100	1,3,6	10	100	1000	10000
AMMONIUM TARTRATE	14307-43-8	100	3,6	10	100	1000	10000
AMMONIUM THIOCYANATE	01762-95-4	100	1,3,6	(See RCs of any listed constituents)			
AMMONIUM THIOSULFATE	07783-18-8	100	1,6	(See RCs of any listed constituents)			
AMMONIUM VANADATE	07803-55-6	50	3,1,2,6	(See RCs of any listed constituents)			
AMMONIUM ZINC CHLORIDE	52628-25-8	50	7,1,3	(See RCs of any listed constituents)			
AMOSITE	01332-21-4	1	6,1,3,5,8	(Not Applicable)			
AMPHETAMINE	00300-62-9	1	4	0.1	1	10	100
iso-AMYL ACETATE	00625-16-1	100	6	10	100	1000	10000
tert-AMYL ACETATE	00625-16-1	100	3,6	10	100	1000	10000
SEC-AMYL ACETATE	00626-38-0	100	3,6	10	100	1000	10000
AMYL ACETATE	00628-63-7	100	6,1,3	10	100	1000	10000
n-AMYL ACETATE	00628-63-7	100	6,1,3	10	100	1000	10000
AMYL ALCOHOL	00071-41-0	10	6	1	10	100	1000
AMYL CHLORIDE	00543-59-9	10	1,6	1	10	100	1000
AMYL NITRATE	00110-46-3	10	1	1	10	100	1000
AMYL TRICHLOROSILANE	00107-72-2	10	6,1	1	10	100	1000
AMYLENE	00513-35-9	10	1,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
beta-AMYLENE-CIS	00627-20-3	10	6	1	10	100	1000
beta-AMYLENE-TRANS	00646-04-8	10	6	1	10	100	1000
ANDROST-4-EN-ONE,17-(1-OXOPROPOXY)-,(17a)	00057-85-2	1	7	0.1	1	10	100
ANHYDROUS AMMONIA	07664-41-7	10	1,3,4,5,6,8	1	10	100	1000
ANILINE	00062-53-3	100	1,2,3,4,5,6,8	10	100	1000	10000
ANILINE, 2,4,6-TRIMETHYL-	00088-05-1	1	4	0.1	1	10	100
ANIMAL OIL (DEP RQ in gallons)		55	5	(Not Applicable)			
O-ANISIDINE	00090-04-0	50	6,8	5	50	500	5000
ANTHOPHYLLITE	01332-21-4	1	6,1,3,5,8	(Not Applicable)			
ANTHRACENE	120-12-7	100	3,8,6	0.03	0.03	1000	3000
1-ANTHRACENESULFONIC ACID, 9,10-DIHYDRO-9,10-DIOXO..	00128-56-3	50	7	(See RCs of any listed constituents)			
ANTIMONATE(2-), BIS[.MU.-[2,3-DIHYDROXYBUTANEDIO..	28300-74-5	10	7,1,3	(See RCs of any listed constituents)			
ANTIMONOUS CHLORIDE	10025-91-9	50	1,3	(See RCs of any listed constituents)			
ANTIMONY	7440-36-0	100	6,3,7,2,8	0.006	8	20	30
ANTIMONY COMPOUNDS, NOS		100	3	(See RCs of any listed constituents)			
ANTIMONY FLUORIDE (SbF5)	07783-70-2	1	7,1,4,6	(See RCs of any listed constituents)			
ANTIMONY OXIDE	01309-64-4	50	1,3,6	(See RCs of any listed constituents)			
ANTIMONY PENTACHLORIDE	07647-18-9	50	6,1,3	(See RCs of any listed constituents)			
ANTIMONY PENTAFLUORIDE	07783-70-2	1	4,6,1	(See RCs of any listed constituents)			
ANTIMONY POTASSIUM TARTRATE	28300-74-5	10	1,3,6	(See RCs of any listed constituents)			
ANTIMONY SULFIDE	01345-04-6	10	1	(See RCs of any listed constituents)			
ANTIMONY TRIBROMIDE	07789-61-9	50	3,1,6	(See RCs of any listed constituents)			
ANTIMONY TRICHLORIDE	10025-91-9	50	3,1,6	(See RCs of any listed constituents)			
ANTIMONY TRIFLUORIDE	07783-56-4	50	3,1,6	(See RCs of any listed constituents)			
ANTIMONY TRIOXIDE	01309-64-4	50	6,1,3	(See RCs of any listed constituents)			
ANTIMYCIN A	01397-94-0	1	7,4	0.1	1	10	100
ANTU (ALPHA-NAPHTHYL THIOUREA)	00086-88-4	10	6,1,2,3,4	1	10	100	1000
ARGANTATE(1-), BIS(CYANO-C)-, POTASSIUM	00506-61-6	1	7,1,2,3,4	(See RCs of any listed constituents)			
ARGENTATE(1-),DICYANO-, POTASSIUM	00506-61-6	1	2,1,3,4	(See RCs of any listed constituents)			
AROCLOR 1016	12674-11-2	1	3,6	0.0005	0.005	1	4

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
AROCLOR 1221	11104-28-2	1	3,6	0.0005	0.005	1	4
AROCLOR 1232	11141-16-5	1	3,6	0.0005	0.005	1	4
AROCLOR 1242	53469-21-9	1	3,6	0.0005	0.005	1	4
AROCLOR 1248	12672-29-6	1	3,6	0.0005	0.005	1	4
AROCLOR 1254	11097-69-1	1	3,6	0.0005	0.005	1	4
AROCLOR 1260	11096-82-5	1	3,6	0.0005	0.005	1	4
AROCLORS	01336-36-3	1	2,1,3,5,6,8	0.0005	0.005	1	4
AROMATIC HYDROCARBONS (See Petroleum Hydrocarbons)							
AROMATIC SOLVENT	08030-30-6	10	7,1,6,5	(See TPH RC and RCs of other relevant constituents)			
ARSENENOUS ACID, SODIUM SALT	07784-46-5	1	7,1,3,4	(See RCs of any listed constituents)			
ARSENIC	7440-38-2	1	6,3,7,1,2,8	0.01	0.9	20	20
ARSENIC ACID	01327-52-2	1	7,6,3	(See RCs of any listed constituents)			
ARSENIC ACID	07778-39-4	1	1,3,6	(See RCs of any listed constituents)			
ARSENIC ACID (H3AsO4)	07778-39-4	1	7,1,3,6	(See RCs of any listed constituents)			
ortho-ARSENIC ACID	07774-41-6	10	1	1	10	100	1000
ARSENIC ACID (H3AsO4), CALCIUM SALT (2:3)	07778-44-1	1	7,1,3,4	(See RCs of any listed constituents)			
ARSINIC ACID, DIMETHYL-	00075-60-5	1	7,2,3	0.1	1	10	100
ARSINIC ACID, DIMETHYL-, SODIUM SALT	00124-65-2	1	4	(See RCs of any listed constituents)			
ARSENIC ACID (H3AsO4), HEMIHYDRATE	07774-41-6	10	1,7	1	10	100	1000
ARSENIC ACID (H3AsO4), LEAD SALT	07645-25-2	1	7,3,6	(See RCs of any listed constituents)			
ARSENIC ACID (H3AsO4), LEAD(2+) SALT (1:1)	07784-40-9	1	7,1,3	(See RCs of any listed constituents)			
ARSENIC ACID (H3AsO4), LEAD(4+) SALT (3:2)	10102-48-4	1	7,3,6	(See RCs of any listed constituents)			
ARSENIC ACID (H3AsO4), MONOPOTASSIUM SALT	07784-41-0	1	7,1,3	(See RCs of any listed constituents)			
ARSENIC ACID (H3AsO4), SODIUM SALT	07631-89-2	1	7,1,3,4	(See RCs of any listed constituents)			
ARSENIC BROMIDE	07784-33-0	10	1	(See RCs of any listed constituents)			
ARSENIC CHLORIDE	07784-34-1	1	6,1,3,4	(See RCs of any listed constituents)			
ARSENIC COMPOUNDS, NOS		1	3	(See RCs of any listed constituents)			
ARSENIC DISULFIDE	01303-32-8	1	3,6	(See RCs of any listed constituents)			
ARSENIC IODIDE	07784-45-4	5	1	(See RCs of any listed constituents)			
ARSENIC OXIDE	01303-28-2	1	1,2,3,4	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
ARSENIC OXIDE	01327-53-3	1	1,2,3,4,6	(See RCs of any listed constituents)			
ARSENIC PENTOXIDE	01303-28-2	1	1,2,3,4	(See RCs of any listed constituents)			
ARSENIC TRICHLORIDE	07784-34-1	1	3,1,4,6	(See RCs of any listed constituents)			
ARSENIC TRIHYDRIDE	07784-42-1	1		(See RCs of any listed constituents)			
ARSENIC TRIOXIDE	01327-53-3	1	1,2,3,6,4	(See RCs of any listed constituents)			
ARSENIC TRISULFIDE	01303-33-9	1	6,1,3	(See RCs of any listed constituents)			
ARSENOUS OXIDE	01327-53-3	1	4,1,2,3,6	(See RCs of any listed constituents)			
ARSENOUS TRICHLORIDE	07784-34-1	1	4,7,1,3,6	(See RCs of any listed constituents)			
ARSINE	07784-42-1	1	4,6,1,7	(See RCs of any listed constituents)			
ARSINE, DIETHYL-	00692-42-2	1	2,3,7,6	0.1	1	10	100
ARSONIC ACID, CALCIUM SALT (1:1)	52740-16-6	1	7,1,3	(See RCs of any listed constituents)			
ARSONIC ACID, PHENYL-	00098-05-5	1	2,7,4	0.1	1	10	100
ARSONIC ACID, POTASSIUM SALT	10124-50-2	1	1,3,4	(See RCs of any listed constituents)			
ARSONOUS DICHLORIDE, (2-CHLOROETHENYL)-	00541-25-3	1	7,4	0.1	1	10	100
ARSONOUS DICHLORIDE, PHENYL-	00696-28-6	1	7,1,2,3,4	0.1	1	10	100
ASBESTOS	01332-21-4	1	1,3,5,6,8	(Not Applicable)			
ASPHALT	08052-42-4	50	7,6	(See RCs of any listed constituents)			
ATRAZINE	01912-24-9	10	5	1	10	100	1000
AURAMINE	00492-80-8	10	2,3,6,8	1	10	100	1000
AVIATION FUEL (DEP RQ IN GALLONS)		10	5	(See TPH RC and RCs of other listed constituents)			
AZASERINE	00115-02-6	1	2,3,6	0.1	1	10	100
AZINPHOS-ETHYL	02642-71-9	1	4,1	0.1	1	10	100
AZINPHOS-METHYL	00086-50-0	1	4,6,1,3	0.1	1	10	100
AZIRIDINE	00151-56-4	1	2,3,7,8,6,1,4	0.1	1	10	100
AZIRIDINE, 2-METHYL-	00075-55-8	1	7,1,2,3,4,6,8	0.1	1	10	100
AZIRINO(2',3':3,4)PYRROLO(1,2-A)INDOLE-4,7-DION...	00050-07-7	5	2,3,7,4,6	0.5	5	50	500
AZODRIN	06923-22-4	1	6,4,1	0.1	1	10	100
AZOLE	00109-97-7	100	6	10	100	1000	10000
BACITRACIN	01405-87-4	1	7	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
BARIUM	7440-39-3	100	5	2	50	1000	3000
BARIUM CHLORATE	13477-00-4	10	6,1	(See RCs of any listed constituents)			
BARIUM CYANIDE	00542-62-1	5	1,2,3,7,6	(See RCs of any listed constituents)			
BARIUM NITRATE	10022-31-8	100	6,1	(See RCs of any listed constituents)			
BARIUM PEROXIDE	01304-29-6	10	1,6,7	(See RCs of any listed constituents)			
BAYGON	00114-26-1	1	7,6,8,1	0.1	1	10	100
BAYTEX	00055-38-9	5	6,1	0.5	5	50	500
BENOMYL	17804-35-2	5	6	0.5	5	50	500
BENSENESULFONIC ACID, DODECYL-	27176-87-0	50	7,1,3	5	50	500	5000
3,4-BENZACRIDINE	00225-51-4	10	3,2	1	10	100	1000
BENZAL CHLORIDE	00098-87-3	100	1,2,3,6,8,4	10	100	1000	10000
BENZALDEHYDE	00100-52-7	10	1,6	1	10	100	1000
BENZAMIDE, 3,5-DICHLORO-N-(1,1-DIMETHYL-2-PROPN..	23950-58-5	100	7,1,2,3,6,8	10	100	1000	10000
BENZAMINE,4-[(4-AMINOPHENYL)(4-IMINO-2,5-CYCLOHE..	00569-61-9	1	7	0.1	1	10	100
1,2-BENZANTHRACENE	00056-55-3	5	3,2,6	0.001	1	7	40
1,2-BENZANTHRACENE, 7,12-DIMETHYL-	00057-97-6	1	2,3,6	0.1	1	10	100
BENZENAMINE	00062-53-3	100	2,3,7,1,4,5,6,8	10	100	1000	10000
BENZENAMINE, 2-METHYL-	00095-53-4	10	7,2,3,5,6,8	1	10	100	1000
BENZENAMINE, 2-METHYL-, HYDROCHLORIDE	00636-21-5	10	2,3,7,6,8	1	10	100	1000
BENZENAMINE, 2-METHYL-5-NITRO-	00099-55-8	10	2,3,7,6,8	1	10	100	1000
BENZENAMINE, 3-(TRIFLUOROMETHYL)-	00098-16-8	1	4,7	0.1	1	10	100
BENZENAMINE, 4,4'-CARBONIMIDOYLBIS(N,N-DIMETHYL-	00492-80-8	10	3,7,2,6,8	1	10	100	1000
BENZENAMINE, 4,4'-METHYLENEBIS(2-CHLORO-	00101-14-4	5	2,3,6,8	0.5	5	50	500
BENZENAMINE, 4-CHLORO-	106-47-8	50	2,3,1,6	0.02	0.3	1	3
BENZENAMINE, 4-CHLORO-2-METHYL-,HYDROCHLORIDE	03165-93-3	10	3,7,1,6	1	10	100	1000
BENZENAMINE, 4-METHYL-	00106-49-0	10	2,3,6	1	10	100	1000
BENZENAMINE, 4-NITRO	00100-01-6	100	2,3,1,6	10	100	1000	10000
BENZENAMINE, N,N-DIMETHYL-	00121-69-7	100	7,6,8	10	100	1000	10000
BENZENAMINE, N,N-DIMETHYL-4-PHENYLAZO-	00060-11-7	5	2,3,7,6,8	0.5	5	50	500

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
BENZENAMINE, N-PHENYL-	00122-39-4	1	2,5,6	0.1	1	10	100
BENZENE	71-43-2	5	1,2,3,5,6,7,8	0.005	1	2	200
BENZENE SULFONIC ACID, 4-METHYL-	00104-15-4	10	7,6	1	10	100	1000
BENZENE, (1,1-DIMETHYLETHYL)-	00098-06-6	10	7,6,1	1	10	100	1000
BENZENE, (1-METHYLETHENYL)-	00098-83-9	10	7,6	1	10	100	1000
BENZENE, (1-METHYLETHYL)-	00098-82-8	100	3,7,1,6,8	10	100	1000	10000
BENZENE, (1-METHYLETHENYL)-	00098-83-9	10	7,6	1	10	100	1000
BENZENE, (1-METHYLETHYL)-	00098-82-8	100	3,7,1,6,8	10	100	1000	10000
BENZENE, (DICHLOROMETHYL)-	00098-87-3	100	2,3,7,1,4,8	10	100	1000	10000
BENZENE, (TRICHLOROMETHYL)-	00098-07-7	5	2,3,7,4,6,8	0.5	5	50	500
BENZENE, (TRIFLUOROMETHYL)-	00098-08-8	10	7,6	1	10	100	1000
BENZENE, 1,1'-(2,2,2-TRICHLOROETHYLIDENE)BIS[4-...	72-43-5	1	1,2,3,6,7,8	0.01	0.01	200	400
BENZENE, 1,1'-(2,2,2-TRICHLOROETHYLIDENE)BIS[4-C..	50-29-3	1	7,1,2,3,6	0.0003	0.001	6	30
BENZENE, 1,1'-(2,2-DICHLOROETHYLIDENE)BIS[4-CHLORO	72-54-8	1	7,1,2,3,6	0.0002	0.05	8	40
BENZENE, 1,1'-(DICHLOROETHYLIDENE)BIS[4-CHLORO-...	72-55-9	1	2,3,6	0.00005	0.4	6	30
BENZENE, 1,1'-OXYBIS-	00101-84-8	10	7,6	1	10	100	1000
BENZENE, 1,2,4,5-TETRACHLORO-	00095-94-3	100	2,3,7,1,6	10	100	1000	10000
BENZENE, 1,2,4-TRICHLORO-	120-82-1	10	1,2,3,8,6	0.07	0.2	2	6
BENZENE, 1,2,4-TRIMETHYL-	00095-63-6	100	7,8,6	10	100	1000	10000
BENZENE, 1,2-DICHLORO-	95-50-1	10	2,3,7,1,5,6,8	0.6	2	9	100
BENZENE, 1,2-DICHLORO-4-ISOCYANATO-	00102-36-3	1	4	0.1	1	10	100
BENZENE, 1,2-DIETHYL-	00135-01-3	100	7,6	10	100	1000	10000
BENZENE, 1,2-DIMETHYL	00095-47-6	50	7,3,5,6,8	6	6	500	500
BENZENE, 1,2-DINITRO-	00528-29-0	10	7,2,3,6,8	1	10	100	1000
BENZENE, 1,2-METHYLENEDIOXY-4-ALLYL-	00094-59-7	10	2,3,6,8	1	10	100	1000
BENZENE, 1,2-METHYLENEDIOXY-4-PROPENYL-	00120-58-1	10	3,2,6,8	1	10	100	1000
BENZENE, 1,2-METHYLENEDIOXY-4-PROPYL-	00094-58-6	5	2,3,8	0.5	5	50	500
BENZENE, 1,3,5-TRIMETHYL-	00108-67-8	1	7,6	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
BENZENE, 1,3,5-TRINITRO-	00099-35-4	5	2,3,7,1,6	0.5	5	50	500
BENZENE, 1,3-DICHLORO-	00541-73-1	10	3,2,7,1,8	0.1	6	3	200
BENZENE, 1,3-DIISOCYANATO-2-METHYL	00091-08-7	10	7,3,4,8	1	10	100	1000
BENZENE, 1,3-DIISOCYANATOMETHYL	00584-84-9	10	3	1	10	100	1000
BENZENE, 1,3-DIMETHYL-	00108-38-3	50	3,5,6,8	6	6	500	500
BENZENE, 1,3-DINITRO-	00099-65-0	10	7,3,6,8	1	10	100	1000
BENZENE, 1,4-DICHLORO-	00106-46-7	10	2,3,1,5,6,8	0.005	0.06	0.7	1
BENZENE, 1,4-DIETHYL-	00105-05-5	10	7,6	1	10	100	1000
BENZENE, 1,4-DIISOTHIOCYANATO-	04044-65-9	1	7,4	0.1	1	10	100
BENZENE, 1,4-DIMETHYL-	00106-42-3	50	3,5,6,8	6	6	500	500
BENZENE, 1,4-DINITRO-	00100-25-4	10	3,6	1	10	100	1000
BENZENE, 1-(CHLOROMETHYL)-4-NITRO-	00100-14-1	1	4,7	0.1	1	10	100
BENZENE, 1-BROMO-2-METHYL	00095-46-5	10	7,6	1	10	100	1000
BENZENE, 1-BROMO-4-PHENOXY-	00101-55-3	10	2,3,1,6	1	10	100	1000
BENZENE, 1-CHLORO-2,4-DINITRO-	00097-00-7	10	7,6	1	10	100	1000
BENZENE, 1-CHLORO-3-NITRO-	00121-73-3	100	7,1,6	10	100	1000	10000
BENZENE, 1-CHLORO-4-PHENOXY-	07005-72-3	100	7,1,3	10	100	1000	10000
BENZENE, 1-METHYL-1,3-DINITRO-	00606-20-2	10	3	1	10	100	1000
BENZENE, 1-METHYL-2,4-DINITRO-	121-14-2	5	2,3,8,6	0.03	20	0.7	10
BENZENE, 1-METHYL-2,6-DINITRO-	00606-20-2	10	2,3,8,6	1	10	100	1000
BENZENE, 1-METHYL-2-NITRO-	00088-72-2	50	7,3,6	5	50	500	5000
BENZENE, 1-METHYL-4-(METHYLETHYL)-	00099-87-6	10	7,6	1	10	100	1000
BENZENE, 1-METHYL-4-NITRO-	00099-99-0	50	7,3,6	5	50	500	5000
BENZENE, 2,4-DIISOCYANATO-1-METHYL-	00584-84-9	10	7,3,4,8	1	10	100	1000
BENZENE, 2,4-DIISOCYANATO-1-METHYL-	00584-84-9	10	7,3,4,8	1	10	100	1000
BENZENE, 2,4-DIISOCYANATOMETHYL-	00091-08-7	10	3,4,8	1	10	100	1000
BENZENE, 2,4-DIISOCYANATOMETHYL-	00584-84-9	10	3,4,8	1	10	100	1000
BENZENE, 2-AMINO-1-METHYL	00095-53-4	10	2,3,5,6,8	1	10	100	1000
BENZENE, 2-METHYL-1,3,5-TRINITRO-	00118-96-7	10	7,1,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	GW1 (mg/l)	Reportable Concentrations		
		RQ (Pounds)			GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
BENZENE, 2-METHYL-1,3-DINITRO-	00606-20-2	10	7,2,3,8,6	1	10	100	1000
BENZENE, 4-AMINO-1-METHYL	00106-49-0	10	2,3,6	1	10	100	1000
BENZENE, 4-METHYL-1-1,2-DINITRO-	00610-39-9	5	7,3	0.5	5	50	500
BENZENE, BIS(CHLOROMETHYL)-	28347-13-9	1	7,4	0.1	1	10	100
BENZENE, BROMO-	00108-86-1	10	7,1,6	1	10	100	1000
BENZENE, CHLORO-	108-90-7	10	2,3,1,5,6,8	0.1	0.2	1	3
BENZENE, CHLOROMETHYL-	00100-44-7	10	2,3,1,4,5,6,8	1	10	100	1000
BENZENE, DICHLORO-	25321-22-6	10	7,3,8,3	0.005	0.2	0.7	4
BENZENE, DICHLORO-, N.O.S.	25321-22-6	10	2,3,8,3	0.005	0.2	0.7	4
m-BENZENE, DIMETHYL	00108-38-3	50	3,5,6,8	6	6	500	500
BENZENE, DIMETHYL	01330-20-7	50	1,3,5,6,8	3	3	100	100
BENZENE, DINITRO-	25154-54-5	10	7,1,3	1	10	100	1000
BENZENE, DINITRO-, N.O.S.	00528-29-0	10	2,3,6,8	1	10	100	1000
BENZENE, ETHENYL-	00100-42-5	50	3,5,6,1,8	0.1	0.1	3	4
BENZENE, ETHENYLMETHYL-	25013-15-4	10	7,6,1	1	10	100	1000
BENZENE, ETHYL-	100-41-4	50	3,6,1,5,8	0.7	5	40	1000
BENZENE, HEXACHLORO-	00118-74-1	5	2,3,8,6	0.001	0.001	0.7	0.8
BENZENE, HEXAHYDRO-	00110-82-7	50	3,1,5,6,8	5	50	500	5000
BENZENE, HYDROXY-	00108-95-2	50	1,2,3,4,5,6,8	1	2	1	20
BENZENE, M-DIMETHYL-	00108-38-3	50	3,5,6,8	6	6	500	500
BENZENE, METHYL-	108-88-3	50	1,2,3,5,6,8	1	40	30	1000
BENZENE, METHYLDINITRO-	25321-14-6	5	7,1,3	0.03	2	0.7	2
BENZENE, METHYLNITRO-	01321-12-6	50	1,3	5	50	500	5000
BENZENE, NITRO-	00098-95-3	50	2,3,1,4,5,6,8	5	50	500	5000
BENZENE, O-DIMETHYL	00095-47-6	50	3,5,6,8	6	6	500	500
BENZENE, P-DIMETHYL-	00106-42-3	50	3,5,6,8	6	6	500	500
BENZENE, PENTACHLORO-	00608-93-5	5	2,3,7,6	0.5	5	50	500
BENZENE, PENTACHLORONITRO-	00082-68-8	10	2,3,6,8,3	1	10	100	1000
BENZENE, PROPYL-	00103-65-1	10	7,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
BENZENEACETIC ACID,ALPHA-[(DIMETHOXYPHOSPHINOTHIO..	02597-03-7	1	1,7	0.1	1	10	100
BENZENEACETIC ACID, 4-CHLORO-ALPHA-(4-CHLOROPHE...	00510-15-6	5	3,2,7,6,8	0.5	5	50	500
BENZENEACETONITRILE	00140-29-4	1	7,4,6	0.1	1	10	100
BENZENEAMINE, 2,4,6-TRIMETHYL-	00088-05-1	1	7,4	0.1	1	10	100
BENZENEAMINE, 2,6-DIMETHYL	00087-62-7	10	7,6,8	1	10	100	1000
BENZENEAMINE, N-NITROSO-N-PHENYL-	00086-30-6	10	7,1,3,6,8	1	10	100	1000
BENZENEARSONIC ACID	00098-05-5	1	2,4	0.1	1	10	100
BENZENEBUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO]-	00305-03-3	5	7,2,3,6	0.5	5	50	500
1,3BENZENEDIAMINE, 2-METHYL-	00823-40-5	5	7,2,3,6	0.5	5	50	500
1,3-BENZENEDIAMINE, 4-METHYL-	00095-80-7	5	7,2,3,6,8	0.5	5	50	500
1,2-BENZENEDIAMINE, 4-METHYL-	00496-72-0	5	7,2,3,6	0.5	5	50	500
BENZENEDIAMINE, AR-METHYL-	00095-80-7	5	3	0.5	5	50	500
BENZENEDIAMINE, AR-METHYL-	25376-45-8	5	7,2,3,8	0.5	5	50	500
1,4-BENZENEDIAMINE, N,N-DIMETHYL-	00099-98-9	1	7,4	0.1	1	10	100
1,2-BENZENEDICARBOXYLIC ACID ANHYDRIDE	00085-44-9	100	2,3,1,5,6,8	10	100	1000	10000
1,2-BENZENEDICARBOXYLIC ACID, BUTYL PHENYLMETHYL..	00085-68-7	10	2,1,3,8	1	10	100	1000
1,2-BENZENEDICARBOXYLIC ACID, DIOCTYL ESTER	00117-84-0	100	3,1,2	10	100	1000	10000
1,2-BENZENEDICARBOXYLIC ACID,DI-N-OCTYL ESTER	00117-84-0	100	3,1,2	10	100	1000	10000
1,2-BENZENEDICARBOXYLIC ACID,DIBUTYL ESTER	00084-74-2	5	2,3,7,1,,6,8	0.5	5	50	500
1,2-BENZENEDICARBOXYLIC ACID,DIETHYL ESTER	84-66-2	50	1,2,3,6,7,8	2	9	10	200
1,2-BENZENEDICARBOXYLIC ACID,DIMETHYL ESTER	131-11-3	100	1,2,3,8,6	0.3	50	0.7	50
1,2-BENZENEDICARBOXYLIC ACID,[BIS(2-ETHYTHEXYL)] ESTER	00117-81-7	10	2,3,5,8,6	0.006	50	90	600
1,3-BENZENEDIOL	00108-46-3	100	2,3,1,5,6	10	100	1000	10000
1,4-BENZENEDIOL	00123-31-9	1	4,6,8	0.1	1	10	100
1,2-BENZENEDIOL,4-[1-HYDROXY-2-(METHYLAMINO)ETH...	00051-43-4	50	2,3,7,6	5	50	500	5000
BENZENEETHANAMINE, .ALPHA.,.ALPHA.-DIMETHYL-	00122-09-8	100	1,2,3,6	10	100	1000	10000
BENZENEETHANAMINE, .ALPHA.-METHYL-, (.+.-)-	00300-62-9	1	7,4	0.1	1	10	100
GAMMA-BENZENEHEXACHLORIDE	58-89-9	1	3,1,4,5,6,8	0.0002	0.004	0.003	0.5
BENZENEMETHANAMINE, .ALPHA.-METHYL-	00098-84-0	10	7,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
BENZENEMETHANAMINE, N-ETHYL-N-PHENYL-	00092-59-1	50	7,6	5	50	500	5000
BENZENEMETHANOL 4-CHLORO-.ALPHA.-(4-CHLOROPHENY...	00115-32-2	5	1,3,6,8	0.5	5	50	500
BENZENESULFONIC ACID CHLORIDE	00098-09-9	10	3,1,6	1	10	100	1000
BENZENESULFONIC ACID, 4-HYDROXY-, ZINC SALT (2:1)	00127-82-2	100	3,1	(See RCs of any listed constituents)			
BENZENESULFONIC ACID, DODECYL-, CALCIUM SALT	26264-06-2	50	7,1,3	(See RCs of any listed constituents)			
BENZENESULFONIC ACID, DODECYL-, COMPD. WITH 1-AM..	42504-46-1	50	7,1,3	5	50	500	5000
BENZENESULFONIC ACID, DODECYL-, COMPD. WITH 2,2'..	27323-41-7	50	7,1,3	5	50	500	5000
BENZENESULFONIC ACID, DODECYL-, SODIUM SALT	25155-30-0	50	7,1,3	(See RCs of any listed constituents)			
BENZENESULFONYL CHLORIDE	00098-09-9	10	3,7,1,6	1	10	100	1000
BENZENETHIOL	00108-98-5	10	1,2,3,4,6	1	10	100	1000
BENZIDINE	00092-87-5	1	1,2,3,6,8	0.1	1	10	100
BENZIMIDAZOLE, 4,5-DICHLORO-2-(TRIFLUOROMETHYL)-	03615-21-2	1	4	0.1	1	10	100
BENZINE	08030-30-6	10	1,6,5	(See TPH RC and RCs of other relevant constituents)			
BENZISOTHIAZOL-3(2H)-ONE, 1,1-DIOXIDE	00081-07-2	10	7,2,3,6,8	1	10	100	1000
1,2-BENZISOTHIAZOL-3-(2H)-ONE, 1,1-DIOXIDE	00081-07-2	10	3,2,6,8,3	1	10	100	1000
BENZO(K)FLUORANTHENE	207-08-9	100	7,6,3,2	0.001	0.1	70	400
1,3-BENZODIOXOLE, 5-(1-PROPENYL)	00120-58-1	10	7,2,3,6,8	1	10	100	1000
1,3-BENZODIOXOLE, 5-(2-PROPENYL)-	00094-59-7	10	7,2,3,6,8	1	10	100	1000
BENZODIOXOLE, 5-PROPYL-	00094-58-6	5	7,2,3,8	0.5	5	50	500
2,3-BENZOFUORANTHENE	205-99-2	1	2,3,6	0.001	0.4	7	40
7-BENZOFURANOL, 2,3-DIHYDRO-2,2-DIMETHYL-, METHYL..	01563-66-2	5	7,1,3,4,6	0.5	5	50	500
BENZOIC ACID	00065-85-0	100	1,3,6,7	10	100	1000	10000
BENZOIC ACID, 3,6-DICHLORO-2-METHOXY-	01918-00-9	50	7,1,3	5	50	500	5000
BENZOIC ACID, AMMONIUM	01863-63-4	100	7,1,3,6	10	100	1000	10000
BENZOIC TRICHLORIDE	00098-07-7	5	8,2,3,4,6	0.5	5	50	500
1,2-BENZOISOTHIAZOLIN-3-ONE,1,1-DIOXIDE, AND SALTS	00081-07-2	10	2,3,6,8	1	10	100	1000
BENZOL	71-43-2	5	1,2,3,5,6,7,8	0.005	1	2	200
BENZONITRILE	00100-47-0	100	1,3,6	10	100	1000	10000
BENZONITRILE, 2,6-DICHLORO-	01194-65-6	10	1,3	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
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BENZONITRILE, 4-HYDROXY-3,5-DIIODO-	01689-83-4	10	1,7	1	10	100	1000
2H-1-BENZOPYRAN-2-ONE, 3-[1-(2-FURAMYL)-3-OXOBUTYL]-...	00117-52-2	50	7	5	50	500	5000
2H-1-BENZOPYRAN-2-ONE, 3-[3-(4'-BROMO[1,1'-BIPHENYL]-...	28772-56-7	1	7,4,6	0.1	1	10	100
2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(1,2,3,4-TETRAHYDR..	05836-29-3	1	7,4	0.1	1	10	100
2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL...	00129-06-6	1	4	(See RCs of any listed constituents)			
2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL	00081-81-2	10	7,1,2,3,4,6,3	1	10	100	1000
BENZOPYRANO[3,4-B]FURO[2,3-H][1]BENZOPYRAN-6(6AH..	00083-79-1	1	7,6,1	0.1	1	10	100
3,4-BENZOPYRENE	00050-32-8	1	2,3,6	0.0002	0.5	2	7
p-BENZOQUINONE	00106-51-4	5	2,3,6,8	0.5	5	50	500
BENZOTHIAZOLIUM, 3-ETHYL-2-[5-(3-ETHYL-2(3H)-BEN..	00514-73-8	1	7,4	0.1	1	10	100
BENZOTRICHLORIDE	00098-07-7	5	2,3,4,6,8	0.5	5	50	500
BENZOTRIFLUORIDE	00098-08-8	10	6	1	10	100	1000
BENZOYL CHLORIDE	00098-88-4	50	1,3,6,7,8	5	50	500	5000
BENZOYL PEROXIDE	00094-36-0	10	1,6,8	1	10	100	1000
BENZO[A]ANTHRACENE	56-55-3	5	3,2,6	0.001	1	7	40
BENZO[A]PYRENE	50-32-8	1	2,7,6,3	0.0002	0.5	2	7
BENZO[B]FLUORANTHENE	205-99-2	1	2,3,6	0.001	0.4	7	40
BENZO[G,H,I]PERYLENE	00191-24-2	100	7,3,6	0.02	0.02	1000	3000
BENZO[J,K]FLUORENE	206-44-0	10	2,3,6	0.09	0.2	1000	3000
BENZO[R,S,T]PENTAPHENE	00189-55-9	5	7,2,3,6	0.5	5	50	500
1,2-BENZPHENANTHRENE	00218-01-9	10	2,3,7,6	0.002	0.07	70	400
BENZYL BROMIDE	00100-39-0	10	1,6	1	10	100	1000
BENZYL CHLORIDE	00100-44-7	10	1,2,3,4,5,6,8	1	10	100	1000
BENZYL CHLOROFORMATE	00501-53-1	10	1	1	10	100	1000
BENZYL CYANIDE	00140-29-4	1	6,4	0.1	1	10	100
BENZYLIDENE CHLORIDE	00098-87-3	100	1,2,3,4,8	10	100	1000	10000
BENZ[A]ANTHRACENE	56-55-3	5	3,2,6	0.001	1	7	40
BENZ[A]ANTHRACENE, 7,12-DIMETHYL-	00057-97-6	1	7,2,3,6	0.1	1	10	100
BENZ[C]ACRIDINE	00225-51-4	10	3,7,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

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BENZ[E]ACEPHENANTHRYLENE	205-99-2	1	2,3,6	0.001	0.4	7	40
BENZ[J]ACEANTHRYLENE, 1,2-DIHYDRO-3-METHYL-	00056-49-5	5	2,3,7,6	0.5	5	50	500
BERYLLIUM	7440-41-7	5	6,3,5,7,2,8	0.004	0.2	90	200
BERYLLIUM COMPOUNDS, NOS		5	3	(See RCs of any listed constituents)			
BERYLLIUM CHLORIDE	07787-47-5	1	3,6,1	(See RCs of any listed constituents)			
BERYLLIUM CHLORIDE (BeCl2)	07787-47-5	1	7,1,3,6	(See RCs of any listed constituents)			
BERYLLIUM FLUORIDE	07787-49-7	1	3,6,1	(See RCs of any listed constituents)			
BERYLLIUM FLUORIDE (BeCl2)	07787-49-7	1	1,7,3,6	(See RCs of any listed constituents)			
BERYLLIUM NITRATE	07787-55-5	1	3,6	(See RCs of any listed constituents)			
BERYLLIUM NITRATE	13597-99-4	1	1,3,6	(See RCs of any listed constituents)			
BERILLIUM NITRATE (HYDRATED)	07787-55-5	1	6	(See RCs of any listed constituents)			
gamma-BHC	58-89-9	1	3,1,4,5,6,8	0.0002	0.004	0.003	0.5
alpha-BHC	00319-84-6	5	3,6	0.5	5	50	500
beta-BHC	00319-85-7	1	3,6	0.1	1	10	100
delta-BHC	00319-86-8	1	3,6	0.1	1	10	100
BICYCLO[2.2.1]HEPT-2-ENE, 5-ETHYLIDENE-	16219-75-3	100	7,6	10	100	1000	10000
BICYCLO[2.2.1]HEPT-5-ENE-2,3-DICARBOXYLIC ACID,..	00115-28-6	1	7	0.1	1	10	100
BICYCLO[2.2.1]HEPTAN-2-ONE, 1,7,7-TRIMETHYL-	00076-22-2	10	7,6	1	10	100	1000
BICYCLO[2.2.1]HEPTANE-2-CARBONITRILE,5-CHLORO-6-..	15271-41-7	1	4	0.1	1	10	100
BICYLCO[3.1.1]HEPT-2-ENE, 2,6,6-TRIMETHYL	00080-56-8	10	7,1,6	1	10	100	1000
BIDRIN	00141-66-2	1	6,4,1	0.1	1	10	100
BINAPACRYL	00485-31-4	1	1	0.1	1	10	100
2,2'-BIOXIRANE	01464-53-5	5	2,3,7,4,6,8	0.5	5	50	500
BIPHENYL	92-52-4	1	6,8,5,1	0.0009	0.2	0.05	6
1,1'-BIPHENYL	92-52-4	1	6,8,5,1	0.0009	0.2	0.05	6
(1,1'-BIPHENYL)-4,4'-DIAMINE,3,3'-DIMETHYL-	00119-93-7	5	2,3,6,8	0.5	5	50	500
(1,1'-BIPHENYL)-4,4'DIAMINE,3,3'DICHLORO-	91-94-1	1	2,3,7,6,8	0.08	2	3	20
(1,1'-BIPHENYL)-4,4'DIAMINE,3,3'DIMETHOXY-	00119-90-4	10	2,3,6,8	1	10	100	1000
1,1'-BIPHENYL, CHLORO-DERIVS.	1336-36-3	1	2,1,3,5,6,8	0.0005	0.005	3	4

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
1,1'-BIPHENYL,2,2',4,4',5,5',-HEXABROMO-	59080-40-9	1	7,6	0.1	1	10	100
1,1'BIPHENYL,2,2'3,3'4,4',5,5'6,6'-DECABROMO-	13654-09-6	1	7	0.1	1	10	100
1,1'BIPHENYL,HEXABROMO-	36355-01-8	1	7	0.1	1	10	100
1,1'BIPHENYL-2-OL,SODIUM SALT	00132-27-4	1	7,6	(See RCs of any listed constituents)			
[1,1'-BIPHENYL]-4,4'DIAMINE	00092-87-5	1	2,3,7,1,6,8	0.1	1	10	100
[1,1'-BIPHENYL]-4-ACETIC ACID, 2-FLUOROETHYL ESTER	04301-50-2	1	7,4	0.1	1	10	100
4,4'BIPYRIDINIUM, 1,1'-DIMETHYL-, BIS(METHYL SULFATE)	02074-50-2	1	7,4,6	0.1	1	10	100
4,4'-BIPYRIDINIUM, 1,1'-DIMETHYL-, DICHLORIDE	01910-42-5	1	7,4,6	0.1	1	10	100
BIS (2-CHLOROETHYL) ETHER	00111-44-4	5	2,3,6,8,4,1	0.03	0.03	0.7	0.7
BIS(2,3-EPOXYPROPYL) ETHER	02238-07-5	1	6,4	0.1	1	10	100
BIS(2-CHLORO-1-METHYLETHYL) ETHER	108-60-1	50	1,2,3,6,8	0.03	0.1	0.7	0.7
BIS(2-CHLORO-1-METHYLETHYL) ETHER	39638-32-9	50	1,2,3,6,8	0.03	0.1	0.7	0.7
BIS(2-CHLOROISOPROPYL)ETHER	00108-60-1	50	1,2,3,6,8	0.03	0.1	0.7	0.7
BIS(2-CHLOROISOPROPYL)ETHER	108-61-1	50	1,2,3,6,8	0.03	0.1	0.7	0.7
BIS(2-CHLOROETHOXY) METHANE	00111-91-1	50	2,3,6,8	5	50	500	5000
BIS(2-CHLOROETHYL)SULFIDE	00505-60-2	1	6,2,4,8	0.1	1	10	100
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	10	2,3,5,8,6	0.006	50	90	600
BIS(CHLOROMETHYL) ETHER	00542-88-1	5	2,3,6,8,4	0.5	5	50	500
BIS(CHLOROMETHYL)KETONE	00534-07-6	1	4	0.1	1	10	100
BIS(DIMETHYLTHIOCARBAMOYL) DISULFIDE	00137-26-8	5	2,3,1,6,8	0.5	5	50	500
BITOSCANATE	04044-65-9	1	4	0.1	1	10	100
BORANE, TRICHLORO-	10294-34-5	1	7,1,4	(See RCs of any listed constituents)			
BORANE, TRIETHYL-	00097-94-9	10	7,6	1	10	100	1000
BORANE, TRIFLUORO-	07637-07-2	1	7,1,4,6	(See RCs of any listed constituents)			
BORANE, TRIFLUORO-, COMPD. WITH 1,1'-OXYBIS[ETH...	00109-63-7	10	7,6	1	10	100	1000
BORATE(1-), TETRAFLUORO-, LEAD(2+) (2:1)	13814-96-5	5	7,1,3	(See RCs of any listed constituents)			
BORIC ACID, TRIMETHYL ESTER	00121-43-7	50	7,6	5	50	500	5000
BORIC ACID, ZINC SALT	01332-07-6	50	7,1,3	(See RCs of any listed constituents)			
BORON BROMIDE	10294-33-4	10	6	(See RCs of any listed constituents)			
BORON TRICHLORIDE	10294-34-5	1	4,1	(See RCs of any listed constituents)			
BORON TRIFLUORIDE	07637-07-2	1	4,6,1	(See RCs of any listed constituents)			
BORON TRIFLUORIDE COMPOUND WITH METHYL ETHER (1:1)	00353-42-4	1	4	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
BORON TRIFLUORIDE ETHERATE	00109-63-7	10	6	1	10	100	1000
BORON, TRIFLUORO[OXYBIS[METHANE]]-, (T-4)-	00353-42-4	1	7,4	(See RCs of any listed constituents)			
BRICK OIL	08001-58-9	1	7,2,3,6,1	(See RCs of any listed constituents)			
BROMACIL	00314-40-9	50	6	5	50	500	5000
BROMADIOLONE	28772-56-7	1	4,6	0.1	1	10	100
BROMINE	07726-95-6	1	4,6,1,7	0.1	1	10	100
BROMINE CYANIDE	00506-68-3	1	1,2,3,4,6	(See RCs of any listed constituents)			
BROMINE PENTAFLUORIDE	07789-30-2	10	6,1	(See RCs of any listed constituents)			
BROMINE TRIFLUORIDE	07787-71-5	10	6,1	(See RCs of any listed constituents)			
BROMOACETONE	00598-31-2	50	1,2,3,6	5	50	500	5000
BROMOBENZENE	00108-86-1	10	1,6	1	10	100	1000
BROMODICHLOROMETHANE	75-27-4	100	6	0.003	0.006	0.1	0.1
BROMOFORM	75-25-2	10	1,2,3,6,8	0.004	0.7	0.1	1
BROMOMETHANE	00074-83-9	50	2,8,1,3,4,5,6	0.007	0.007	0.5	0.5
4-BROMOPHENYL PHENYL ETHER	00101-55-3	10	1,2,3,6	1	10	100	1000
BROMOPHOS-ETHYL	04824-78-6	10	1	1	10	100	1000
3-BROMOPROPYNE	00106-96-7	1	6,4	0.1	1	10	100
O-BROMOTOLUENE	00095-46-5	10	6	1	10	100	1000
BROMOTOLUENE, ALPHA	00100-39-0	10	1,6	1	10	100	1000
BROMOXYNIL	01689-84-5	100	5,1	10	100	1000	10000
BRUCINE	00357-57-3	5	1,2,3,6	0.5	5	50	500
BUHACH	08003-34-7	1	7,1,3,6	0.1	1	10	100
BUTADIENE	00106-99-0	1	1,6,5,8	0.1	1	10	100
1,3-BUTADIENE	00106-99-0	1	5,8,6,1	0.1	1	10	100
BUTADIENE MONOXIDE	00930-22-3	10	6	1	10	100	1000
1,3-BUTADIENE, 1,1,2,3,4,4-HEXACHLORO-	87-68-3	1	2,3,7,6,8,1	0.0006	0.05	30	100
1,3-BUTADIENE, 2-CHLORO-	00126-99-8	1	7,1,2,5,6,8	0.1	1	10	100
1,3-BUTADIENE, 2-METHYL-	00078-79-5	10	7,1,3,6	1	10	100	1000
BUTANAL	00123-72-8	10	7,1,6,8	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
1-BUTANAMINE	00109-73-9	50	1,3,6	5	50	500	5000
sec-BUTANAMINE	13952-84-6	50	3,6	5	50	500	5000
2-BUTANAMINE	13952-84-6	50	7,3,6	5	50	500	5000
2-BUTANAMINE, (S)-	00513-49-5	50	7,3,6	5	50	500	5000
1-BUTANAMINE, 4-(DIETHOXYMETHYLSILYL)-	03037-72-7	1	7,4	0.1	1	10	100
1-BUTANAMINE, N,N-DIBUTYL-	00102-82-9	10	7,6	1	10	100	1000
1-BUTANAMINE, N-BUTYL-	00111-92-2	10	7,6	1	10	100	1000
1-BUTANAMINE, N-BUTYL-N-NITROSO-	00924-16-3	5	2,3,7,6,8	0.5	5	50	500
1-BUTANAMINE, N-METHYL	00110-68-9	10	7,6	1	10	100	1000
BUTANE	00106-97-8	10	1,6	1	10	100	1000
BUTANE, 1,1'-OXYBIS-	00142-96-1	10	7,1,6	1	10	100	1000
BUTANE, 1-(ETHENYLOXY)-	00111-34-2	50	7,6	5	50	500	5000
BUTANE, 1-BROMO-	00109-65-9	10	7,1,6	1	10	100	1000
BUTANE, 1-CHLORO-	00109-69-3	10	7,1,6	1	10	100	1000
BUTANE, 1-ISOCYANATO-	00111-36-4	10	7,1,6	1	10	100	1000
BUTANE, 2,2-DIMETHYL-	00075-83-2	10	7,1,6	1	10	100	1000
BUTANE, 2-METHYL-	00078-78-4	10	7,1,6	1	10	100	1000
BUTANEDIOIC ACID, ((DIMETHOXY PHOSPHINOTHIOYL)-...	00121-75-5	10	1,3,6	1	10	100	1000
BUTANEDIOIC ACID, 2,3-DIHYDROXY- [R-(R*,R*)]-, C..	00815-82-7	10	7,1,3	1	10	100	1000
BUTANEDIOIC ACID, 2,3-DIHYDROXY- [R-(R*,R*)]-, D..	03164-29-2	100	7,1,3,6	10	100	1000	10000
BUTANEDIOIC ACID, 2,3-DIHYDROXY-[R-(R*,R*)]-,AMM..	14307-43-8	100	7,3,6	10	100	1000	10000
2,3-BUTANEDIONE	00431-03-8	50	7,6,1	5	50	500	5000
BUTANENITRILE	00109-74-0	10	7,6	1	10	100	1000
BUTANETHIOL	00109-79-5	10	6,7,1	1	10	100	1000
1-BUTANETHIOL	00109-79-5	10	6,1	1	10	100	1000
2-BUTANETHIOL	00513-53-1	10	6,7	1	10	100	1000
BUTANOIC ACID	00107-92-6	100	1,3,6	10	100	1000	10000
BUTANOIC ACID, 3-OXO-, ETHYL ESTER	00141-97-9	10	7,6	1	10	100	1000
BUTANOIC ACID, 3-OXO-, METHYL ESTER	00105-45-3	10	7,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
BUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO]BENZENE-	00305-03-3	5	2,3,6	0.5	5	50	500
BUTANOIC ACID, ETHYL ESTER	00105-54-4	10	7,1,6	1	10	100	1000
BUTANOIC ACID, METHYL ESTER	00623-42-7	10	7,1,6	1	10	100	1000
2-BUTENOIC ACID, 3-METHYL-,2-(1-METHYLPROPYL)-4,6-DINITRO..	00485-31-4	1	1,7	0.1	1	10	100
1-BUTANOL	00071-36-3	100	1,3,6,7,5,8	10	100	1000	10000
2-BUTANOL	00078-92-2	10	6,7,1,8	1	10	100	1000
BUTANOL (SECONDARY)	00078-92-2	10	1,6,8	1	10	100	1000
BUTANOL (TERTIARY)	00075-65-0	10	1,6,8	1	10	100	1000
1-BUTANOL, 2-METHYL	00137-32-6	100	7,6	10	100	1000	10000
2-BUTANOL, 2-METHYL-	00075-85-4	10	7,6	1	10	100	1000
2-BUTANOL, 2-METHYL-, ACETATE	00625-16-1	100	7,3,6	10	100	1000	10000
1-BUTANOL, 3-METHYL-, ACETATE	00123-92-2	50	3,5,6	5	50	500	5000
2-BUTANONE	78-93-3	100	2,3,6,8,1	4	50	4	50
2-BUTANONE PEROXIDE	01338-23-4	5	2,3,6	0.5	5	50	500
2-BUTANONE, 3,3-DIMETHYL-1-(METHYLTHIO)-, O-[(METH..	39196-18-4	10	7,1,2,3,4	1	10	100	1000
3-BUTEN-2-ONE	00078-94-4	1	7,1,4,6	0.1	1	10	100
3-BUTEN-2-ONE, 3-METHYL-	00814-78-8	10	7,1,6	1	10	100	1000
1-BUTEN-3-YNE	00689-97-4	10	7,6	1	10	100	1000
2-BUTENAL	00123-73-9	10	3,4,6,1	1	10	100	1000
2-BUTENAL	04170-30-3	10	2,3,7,1,4	1	10	100	1000
2-BUTENAL, (E)-	00123-73-9	10	7,3,4,6,1	1	10	100	1000
1-BUTENE	00106-98-9	10	6	1	10	100	1000
2-BUTENE, (E)-	00624-64-6	10	7,6	1	10	100	1000
2-BUTENE, (Z)-	00590-18-1	10	7,6	1	10	100	1000
2-BUTENE, 1,3-DICHLORO-	00926-57-8	10	7,1,6	1	10	100	1000
2-BUTENE, 1,4-DICHLORO-	00764-41-0	1	2,3,7,1,6,8	0.1	1	10	100
2-BUTENE, 2-METHYL-	00513-35-9	10	7,1,6	1	10	100	1000
1-BUTENE, 2-METHYL-	00563-46-2	10	7,1,6	1	10	100	1000
1-BUTENE, 3-METHYL-	00563-45-1	10	7,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
2-BUTENE-CIS	00590-18-1	10	6	1	10	100	1000
2-BUTENE-TRANS	00624-64-6	10	6	1	10	100	1000
2-BUTENEDIOIC ACID (E)-	00110-17-8	100	1,3	10	100	1000	10000
2-BUTENEDIOIC ACID (Z)-	00110-16-7	100	1,3	10	100	1000	10000
2-BUTENOIC ACID, 2-METHYL-,7-((2,3-DIHYDROXY)-2-(1..	00303-34-4	5	2,7,3,6	0.5	5	50	500
2-BUTENOIC ACID, 3-[(DIMETHOXYPHOSPHINYL)OXY]-, ME..	07786-34-7	5	7,1,3,4,6	0.5	5	50	500
2-BUTOXY ETHANOL	00111-76-2	10	6	1	10	100	1000
SEC-BUTYL ACETATE	00105-46-4	100	3,6,1	10	100	1000	10000
BUTYL ACETATE	00105-46-4	100	1,3,6	10	100	1000	10000
iso-BUTYL ACETATE	00110-19-0	100	3,1,5,6	10	100	1000	10000
BUTYL ACETATE	00123-86-4	100	3,6	10	100	1000	10000
tert-BUTYL ACETATE	00540-88-5	100	6,3	10	100	1000	10000
BUTYL ACRYLATE	00141-32-2	100	8,6	10	100	1000	10000
n-BUTYL ACRYLATE	00141-32-2	100	6,8	10	100	1000	10000
N-BUTYL ALCOHOL	00071-36-3	100	1,3,5,6,8	10	100	1000	10000
BUTYL ALCOHOL	00071-36-3	100	6,1,3,5,8	10	100	1000	10000
TERT-BUTYL ALCOHOL	00075-65-0	10	6,8,1	1	10	100	1000
sec-BUTYL ALCOHOL	00078-92-2	10	6,8,1	1	10	100	1000
BUTYL BENZYL PHTHALATE	00085-68-7	10	1,2,3,8,6	1	10	100	1000
N-BUTYL BROMIDE	00109-65-9	10	1,6	1	10	100	1000
tert-BUTYL CARBINOL	00075-84-3	10	6	1	10	100	1000
BUTYL CELLOSOLVE	00111-76-2	10	6	1	10	100	1000
BUTYL CHLORIDE	00109-69-3	10	1,6	1	10	100	1000
BUTYL ETHER	00142-96-1	10	1,6	1	10	100	1000
tert-BUTYL HYDROPEROXIDE	00075-91-2	10	1,6	1	10	100	1000
n-BUTYL ISOCYANATE	00111-36-4	10	1,6	1	10	100	1000
BUTYL MERCAPTAN	00109-79-5	10	1,6	1	10	100	1000
BUTYL METHACRYLATE	00097-88-1	100	6	10	100	1000	10000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
tert-BUTYL PERACETATE	00107-71-1	100	6,1	10	100	1000	10000
tert-BUTYL PEROXYACETATE	00107-71-1	100	1,6	10	100	1000	10000
BUTYL PHOSPHATE	00126-73-8	50	6	5	50	500	5000
N-BUTYL PHTHALATE	00084-74-2	5	1,3,2,6,8	0.5	5	50	500
BUTYL TRICHLOROSILANE	07521-80-4	10	6	1	10	100	1000
BUTYL VINYL ETHER	00111-34-2	50	6	5	50	500	5000
2-SEC-BUTYL-4,6-DINITROPHENOL	00088-85-7	50	2,1,3,4	5	50	500	5000
tert-BUTYLAMINE	00075-64-9	50	3,6	5	50	500	5000
BUTYLAMINE	00109-73-9	50	1,3,6	5	50	500	5000
BUTYLAMINE	00513-49-5	50	3,6	5	50	500	5000
SEC-BUTYLAMINE (S-)	00513-49-5	50	6	5	50	500	5000
tert-BUTYLAMINOETHYL METHACRYLATE	03775-90-4	10	6	1	10	100	1000
BUTYLATE	02008-41-5	10	5	1	10	100	1000
BUTYLATED HYDROXYANISOLE	25013-16-5	1	6,7	0.1	1	10	100
tert-BUTYLBENZENE	00098-06-6	10	6,1	1	10	100	1000
n-BUTYLCYCLOHEXYLAMINE	10108-56-2	10	6	1	10	100	1000
1,2-BUTYLENE OXIDE	00106-88-7	10	8,6	1	10	100	1000
BUTYLENE OXIDE	00109-99-9	50	6,1,3,5	5	50	500	5000
BUTYRALDEHYDE	00123-72-8	10	8,6,1	1	10	100	1000
n-BUTYRALDEHYDE	00123-72-8	10	6,1,8	1	10	100	1000
BUTYRIC ACID	00107-92-6	100	1,3,6	10	100	1000	10000
BUTYRLTRICHLOROSILANE	07521-80-4	10	6	1	10	100	1000
BUTYRONITRILE	00109-74-0	10	6	1	10	100	1000
C.I. BASIC ACID GREEN 4	00569-64-2	1	6	0.1	1	10	100
C.I. BASIC RED 9, MONOHYDROCHLORIDE	00569-61-9	1	6,7	0.1	1	10	100
C.I. PIGMENT GREEN 21	12002-03-8	1	1,3,4	(See RCs of any listed constituents)			
CACODYLIC ACID	00075-60-5	1	2,3,6	0.1	1	10	100
CADMIUM	7440-43-9	5	6,3,5,7,2,8	0.004	0.004	70	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
CADMIUM ACETATE	00543-90-8	5	3,1,6	(See RCs of any listed constituents)			
CADMIUM BROMIDE	07789-42-6	5	3,1	(See RCs of any listed constituents)			
CADMIUM BROMIDE (CdBr ₂)	07789-42-6	5	7,1,3,6	(See RCs of any listed constituents)			
CADMIUM CHLORIDE	10108-64-2	5	6,3,1	(See RCs of any listed constituents)			
CADMIUM COMPOUNDS, NOS		5	3	(See RCs of any listed constituents)			
CADMIUM OXIDE	01306-19-0	1	6,4	(See RCs of any listed constituents)			
CADMIUM STEARATE	02223-93-0	1	4	(See RCs of any listed constituents)			
CADMIUM SULFIDE	01306-23-6	10	7,6,1	(See RCs of any listed constituents)			
CADMIUM SULPHIDE	01306-23-6	10	6,1	(See RCs of any listed constituents)			
CALCIUM	07440-70-2	10	6,7	(Not Applicable)			
CALCIUM ARSENATE	07778-44-1	1	4,3,1	(See RCs of any listed constituents)			
CALCIUM ARSENITE	52740-16-6	1	3,1,6	(See RCs of any listed constituents)			
CALCIUM CARBIDE	00075-20-7	5	3,6,7,1	0.5	5	50	500
CALCIUM CHLORATE	10137-74-3	10	6	(See RCs of any listed constituents)			
CALCIUM CHROMATE	13765-19-0	5	6,1,2,3,5,3	(See RCs of any listed constituents)			
CALCIUM CYANIDE	00592-01-8	5	6,2,7,3,1	(See RCs of any listed constituents)			
CALCIUM DODECYLBENZENE SULFONATE	26264-06-2	50	3,1,6	(See RCs of any listed constituents)			
CALCIUM HYPOCHLORITE	07778-54-3	5	6,3,1	(See RCs of any listed constituents)			
CAMPHECHLOR	08001-35-2	1	4,1,2,3,6,8	0.1	1	10	100
CAMPHENE, OCTACHLORO-	08001-35-2	1	2,3,1,4,6,8	0.1	1	10	100
CAMPHOR	00076-22-2	10	6	1	10	100	1000
CAMPHOR, SYNTHETIC	00076-22-2	10	6	1	10	100	1000
CANTHARADIN	00056-25-7	1	4	0.1	1	10	100
CAP	00302-22-7	1	6	0.1	1	10	100
CAPRYLALDEHYDE	00124-13-0	100	6	10	100	1000	10000
CAPTAFOF	2425-06-1	1	5	0.1	1	10	100
CAPTAN	00133-06-2	5	3,8,6,1	0.5	5	50	500
CARBACHOL CHLORIDE	00051-83-2	1	4	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
CARBAMIC ACID, DIMETHYL-, 1-[(DIMETHYLAMINO)CARB..	00644-64-4	1	7,4	0.1	1	10	100
CARBAMIC ACID, DIMETHYL-, 3-METHYL-1-(METHYLETH...	00119-38-0	1	7,4	0.1	1	10	100
CARBAMIC ACID, ETHYL ESTER	00051-79-6	10	2,3,7,6,8	1	10	100	1000
CARBAMIC ACID, METHYL-, 3-METHYLPHENYL ESTER	01129-41-5	1	4	0.1	1	10	100
CARBAMIC ACID, METHYL-, O-(((2,4-DIMETHYL-1,3-DI..	26419-73-8	1	4	0.1	1	10	100
CARBAMIC ACID, METHYLNITROSO-,ETHYL ESTER	00615-53-2	1	2,3,7,6	0.1	1	10	100
CARBAMIC ACID, MONOAMMONIUM SALT	01111-78-0	100	1,3,6	(See RCs of any listed constituents)			
CARBAMIC CHLORIDE, DIMETHYL-	00079-44-7	1	7,2,3,6,8	0.1	1	10	100
CARBAMIDE, N-ETHYL-N-NITROSO-	00759-73-9	1	2,3,6,8	0.1	1	10	100
CARBAMIDE, N-METHYL-N-NITROSO-	00684-93-5	1	2,3,6,8	0.1	1	10	100
CARBAMIDE, THIO-	00062-56-6	5	2,3,8	0.5	5	50	500
CARBAMIMIDOSELENOIC ACID	00630-10-4	50	2,3,6	5	50	500	5000
CARBAMODITHIOIC ACID, 1,2-ETHANEDIYLBIS, SALTS &..	00111-54-6	100	3,1,2,6	10	100	1000	10000
CARBAMODITHIOIC ACID, 1,2-ETHANEDIYLBIS-, DISODI..	00142-59-6	1	7,6,1	0.1	1	10	100
CARBAMODITHIOIC ACID, METHYL-, MONOSODIUM SALT	00137-42-8	1	1,7	0.1	1	10	100
CARBAMOTHIOIC ACID, BIS(1-METHYLETHYL)-, S-(2,3-..	02303-16-4	10	7,2,3,6,8,1	1	10	100	1000
CARBAMOYL CHLORIDE, DIMETHYL-	00079-44-7	1	2,3,6,8	0.1	1	10	100
CARBARYL	00063-25-2	10	3,6,8,1	1	10	100	1000
CARBOFURAN	01563-66-2	5	6,3,4,1	0.5	5	50	500
CARBOLIC ACID	108-95-2	50	1,2,3,4,5,6,8	1	2	1	20
CARBON BISULFIDE	00075-15-0	10	2,3,1,4,6,8	1	10	100	1000
CARBON DIOXIDE (RELEASES TO SURFACE WATERS ONLY)	00124-38-9	50	1,6	(Not Applicable)			
CARBON DISULFIDE	00075-15-0	10	2,3,6,7,4,8,1	1	10	100	1000
CARBON MONOXIDE	00630-08-0	10	6,7,1	(Not Applicable)			
CARBON OXIDE SULFIDE	00463-58-1	10	7,6,8	1	10	100	1000
CARBON OXYFLUORIDE	00353-50-4	50	2,3,1,6	5	50	500	5000
CARBON OXYSULFIDE	00463-58-1	10	6,8	1	10	100	1000
CARBON TETRACHLORIDE	56-23-5	5	2,3,5,6,8,1	0.002	0.002	5	5
CARBONIC ACID, DIAMMONIUM SALT	00506-87-6	100	7,3,6	(See RCs of any listed constituents)			
CARBONIC ACID, DIETHYL ESTER	00105-58-8	10	7,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
CARBONIC ACID, DITHALLIUM (I) SALT	06533-73-9	10	2,3,4	(See RCs of any listed constituents)			
CARBONIC ACID, DITHALLIUM(1+) SALT	06533-73-9	10	7,2,3,4	(See RCs of any listed constituents)			
CARBONIC ACID, MONOAMMONIUM SALT	01066-33-7	100	1,3,6	(See RCs of any listed constituents)			
CARBONIC ACID, ZINC SALT (1:1)	03486-35-9	50	7,1,3	(See RCs of any listed constituents)			
CARBONIC DICHLORIDE	00075-44-5	5	7,1,2,3,4,6,8	0.5	5	50	500
CARBONIC DIFLUORIDE	00353-50-4	50	7,1,2,3,6	5	50	500	5000
CARBOCHLORIDIC ACID, 1-METHYLETHYL ESTER	00108-23-6	1	4	0.1	1	10	100
CARBOCHLORIDIC ACID, 2-CHLOROETHYL ESTER	00627-11-2	1	7,4	0.1	1	10	100
CARBOCHLORIDIC ACID, 2-PROPENYL ESTER	02937-50-0	10	7,1,6	1	10	100	1000
CARBOCHLORIDIC ACID, ETHYL ESTER	00541-41-3	10	7,1,6,8	1	10	100	1000
CARBOCHLORIDIC ACID, METHYL ESTER	00079-22-1	50	2,3,7,1,4,8	5	50	500	5000
CARBOCHLORIDIC ACID, PROPYL ESTER	00109-61-5	1	4	0.1	1	10	100
CARBOCHLORIDOTHIOIC ACID, S-PROPYL ESTER	13889-92-4	100	7,6	10	100	1000	10000
CARBONOTHIOIC DIHYDRAZIDE	02231-57-4	1	7,4	0.1	1	10	100
CARBONYL CHLORIDE	00075-44-5	5	2,3,6,1,4,8	0.5	5	50	500
CARBONYL FLUORIDE	00353-50-4	50	2,3,6,1	5	50	500	5000
CARBONYL SULFIDE	00463-58-1	10	8,6	1	10	100	1000
CARBOPHENOTHION	00786-19-6	1	4,1	0.1	1	10	100
CARD-20(22)-ENOLIDE, 3-[(6-DEOXY-.ALPHA.-L-MANNO..	00630-60-4	1	7,4	0.1	1	10	100
CARD-20(22)-ENOLIDE, 3-[(O-2,6-DIDEOXY-.BETA.-D-..	20830-75-5	1	7,4	0.1	1	10	100
CARD-20-(22)-ENOLIDE, 3-[(O-2,6-DIDEOXY-.BETA.-D-..	00071-63-6	1	7,4	0.1	1	10	100
CARVONE	02244-16-8	10		1	10	100	1000
CELLOSOLVE ACETATE	00111-15-9	10	1,6	1	10	100	1000
CELLULOSE NITRATE	09004-70-0	50	6,7,1	5	50	500	5000
CHLORAL	00075-87-6	100	2,3,6	10	100	1000	10000
CHLORAMBUCIL	00305-03-3	5	2,6,3	0.5	5	50	500
CHLORDANE	57-74-9	1	3,4,5,8,1,2,6	0.002	0.002	0.7	30
CHLORDANE	12789-03-6	1	3,4,5,8,1,2,6	0.002	0.002	5	30
CHLORDANE (ALPHA AND GAMMA ISOMERS)	57-74-9	1	2,6,1,3,4,5,8	0.002	0.002	0.7	30
CHLORDANE (ALPHA AND GAMMA ISOMERS)	12789-03-6	1	2,6,1,3,4,5,8	0.002	0.002	5	30

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations				
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)	
CHLORDECONE	00143-50-0	1	6,1,2,3		0.1	1	10	100
CHLORDIMEFORM	06164-98-3	5	6		0.5	5	50	500
CHLORENDIC ACID	00115-28-6	1	6,7		0.1	1	10	100
1-(2-CHLORETHYL)-3-(4-METHYLCYCLOHEXYL)-1-NITROSOUREA	13909-09-6	1	6		0.1	1	10	100
CHLORFENVINPHOS	00470-90-6	1	6,4,1		0.1	1	10	100
CHLORIDE OF PHOSPHORUS	07719-12-2	50	1,3,4,6		(See RCs of any listed constituents)			
CHLORINATED CAMPHENE	08001-35-2	1	6,1,2,3,4,8		0.1	1	10	100
CHLORINE	07782-50-5	5	4,3,6,1,5,7,8		(Not Applicable)			
CHLORINE CYANIDE	00506-77-4	5	1,2,3,6		(See RCs of any listed constituents)			
CHLORINE DIOXIDE	10049-04-4	1	6,1,8		(See RCs of any listed constituents)			
CHLORINE DIOXIDE (HYDRATE)	10049-04-4	1	1,8,6		(See RCs of any listed constituents)			
CHLORINE FLUORIDE (ClF3)	07790-91-2	10	7		(See RCs of any listed constituents)			
CHLORINE OXIDE	10049-04-4	1	6,1,8		(See RCs of any listed constituents)			
CHLORMADIONE	00302-22-7	1	6		0.1	1	10	100
CHLORMEPHOS	24934-91-6	1	4,1		0.1	1	10	100
CHLORMEQUAT CHLORIDE	00999-81-5	1	4		0.1	1	10	100
CHLORNAPHAZINE	00494-03-1	10	3,6,3		1	10	100	1000
CHLOROACETYL CHLORIDE	00079-04-9	10	1,6		1	10	100	1000
1-CHLORO-1,1-DIFLUOROETHANE	00075-68-3	10	1,6,8		1	10	100	1000
2-CHLORO-1,3-BUTADIENE	00126-99-8	1	2,6,1,5,8		0.1	1	10	100
1-CHLORO-1-NITROPROPANE	00600-25-9	10	6		1	10	100	1000
4-CHLORO-2-NITROTOLUENE	00089-59-8	10	1		1	10	100	1000
2-CHLORO-1-PROPANOL	00078-89-7	100	6		10	100	1000	10000
1-CHLORO-2,3-EPOXYPROPANE	00106-89-8	10	2,3,6,4,5,8		1	10	100	1000
1-CHLORO-2,4-DINITROBENZENE	00097-00-7	10	6		1	10	100	1000
1-CHLORO-4-NITROBENZENE	00100-00-5	10	6		1	10	100	1000
2-CHLORO-2-NITROPROPANE	00594-71-8	10	6		1	10	100	1000
1-CHLORO-2-PROPANOL	00127-00-4	100	6		10	100	1000	10000
4-CHLORO-M-CRESOL	00059-50-7	100	1,3,2,6		10	100	1000	10000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	GW1 (mg/l)	Reportable Concentrations		
		RQ (Pounds)			GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
p-CHLORO-M-CRESOL	00059-50-7	100	2,3,1,6	10	100	1000	10000
4-CHLORO-O-TOLUIDINE	00095-69-2	1		0.1	1	10	100
4-CHLORO-O-TOLUIDINE HYDROCHLORIDE	03165-93-3	10	6,1,3	1	10	100	1000
CHLOROACETALDEHYDE	00107-20-0	50	1,2,3,6	5	50	500	5000
CHLOROACETIC ACID	00079-11-8	1	1,4,6,8	0.1	1	10	100
alpha-CHLOROACETOPHENONE	00532-27-4	10	6,8	1	10	100	1000
2-CHLOROACETOPHENONE	00532-27-4	10	6,8	1	10	100	1000
P-CHLOROANILINE	106-47-8	50	2,3,1,6	0.02	0.3	1	3
CHLOROBENZENE	108-90-7	10	2,3,1,5,6,8	0.1	0.2	1	3
CHLOROBENZILATE	00510-15-6	5	2,6,8,3	0.5	5	50	500
CHLOROBENZOL	108-90-7	10	2,3,1,5,6,8	0.1	0.2	1	3
CHLOROCARBONATE	00541-41-3	10	1,6,8	1	10	100	1000
CHLORODIBROMOMETHANE	124-48-1	10	1,3,6	0.002	0.02	0.005	0.03
CHLORODIPHENYL (42% CHLORINE)	53469-21-9	1	3,6	0.0005	0.005	1	4
CHLORODIPHENYL (54% CHLORINE)	11097-69-1	1	3,6	0.0005	0.005	1	4
CHLOROETHANE	00075-00-3	10	3,5,8,1,6	1	10	100	1000
2-CHLOROETHANOL	00107-07-3	1	6,1,4	0.1	1	10	100
CHLOROETHANOL	00107-07-3	1	4,1,6	0.1	1	10	100
CHLOROETHYL CHLOROFORMATE	00627-11-2	1	4	0.1	1	10	100
2-CHLOROETHYL VINYL ETHER	00110-75-8	50	1,2,3,6	5	50	500	5000
N,N-BIS(2-CHLOROETHYL)-2-NAPHTHYLAMINE	00494-03-1	10	6,3,3	1	10	100	1000
CHLOROFLUOROETHANE	00075-68-3	10	1,6,8	1	10	100	1000
CHLOROFORM	67-66-3	5	1,2,3,5,6,8,4	0.05	0.05	0.2	0.2
BIS(2-CHLOROISOPROPYL) ETHER	108-60-1	50	1,2,3,6,8	0.03	0.4	0.7	3
CHLOROMETHANE	00074-87-3	10	2,6,8,1,3	1	10	100	1000
CHLOROMETHYL ETHER	00542-88-1	5	4,2,3,6,8	0.5	5	50	500
CHLOROMETHYL METHYL ETHER	00107-30-2	5	2,3,8,6,4,1	0.5	5	50	500
beta-CHLORONAPHTHALENE	00091-58-7	100	3,1,2,6	10	100	1000	10000
2-CHLORONAPHTHALENE	00091-58-7	100	1,2,3,6	10	100	1000	10000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

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		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
m-CHLORONITROBENZENE	00121-73-3	100	6,1	10	100	1000	10000
o-CHLORONITROBENZENE	00088-73-3	10	6	1	10	100	1000
1-CHLOROPENTANE	00543-59-9	10	6,1	1	10	100	1000
CHLOROPHACINONE	03691-35-8	1	4,6	0.1	1	10	100
2-CHLOROPHENOL	95-57-8	10	1,2,3,6	0.01	7	0.7	100
4-CHLOROPHENOL	00106-48-9	10	5	0.00001	0.04	0.7	20
o-CHLOROPHENOL	95-57-8	10	1,2,3,6	0.01	7	0.7	100
4-CHLOROPHENYL PHENYL ETHER	07005-72-3	100	1,3,6	10	100	1000	10000
2-CHLOROPHENYL THIOUREA	05344-82-1	10	1,2,3,4	1	10	100	1000
1-(o-CHLOROPHENYL)THIOUREA	05344-82-1	10	2,3,1,4	1	10	100	1000
CHLOROPICRIN	00076-06-2	10	1,6	1	10	100	1000
beta-CHLOROPRENE	00126-99-8	1	6,1,2,5,8	0.1	1	10	100
CHLOROPRENE	00126-99-8	1	1,5,8,2,6	0.1	1	10	100
3-CHLOROPROPENE	00107-05-1	50	2,6,1,3,8	5	50	500	5000
2-CHLOROPROPENE	00557-98-2	10	1,6	1	10	100	1000
CHLOROPROPHAM	00101-21-3	10	5	1	10	100	1000
2-CHLOROPROPIONIC ACID	00598-78-7	6	100	10	100	1000	10000
3-CHLOROPROPIONITRILE	00542-76-7	50	3,1,2,4	5	50	500	5000
2-CHLOROPROPYLENE	00557-98-2	10	6,1	1	10	100	1000
1-CHLOROPROPYLENE	00590-21-6	10	6,1	1	10	100	1000
CHLOROSULFONIC ACID	07790-94-5	50	3,6,1	(See RCs of any listed constituents)			
CHLOROSULFURIC ACID	07790-94-5	50	6,7,1,3	(See RCs of any listed constituents)			
CHLOROTHALONIL	01897-45-6	5	6,8	0.5	5	50	500
o-CHLOROTOLUENE	00095-49-8	10	6	1	10	100	1000
CHLOROTOLUENE	00100-44-7	10	6,1,2,3,4,5,8	1	10	100	1000
CHLOROXYURON	01982-47-4	1	4	0.1	1	10	100
CHLORPHACINONE	03691-35-8	1	4,6	0.1	1	10	100
CHLORPYRIFOS	02921-88-2	1	6,1,3	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

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		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)	
CHLORTHIOPHOS	21923-23-9	1	4,1		0.1	1	10	100
CHROMIC (II) CHLORIDE	10049-05-5	50	6,1,3		(See RCs of any listed constituents)			
CHROMIC (III) CHLORIDE	10025-73-7	1	6,4		(See RCs of any listed constituents)			
CHROMIC ACETATE	01066-30-4	50	1,3,6		(See RCs of any listed constituents)			
CHROMIC ACID	07738-94-5	5	6,1,3,5		(See RCs of any listed constituents)			
CHROMIC ACID	11115-74-5	5	1,3,5,7,6		(See RCs of any listed constituents)			
CHROMIC ACID (H ₂ CrO ₄)	07738-94-5	5	7,1,3,5,6		(See RCs of any listed constituents)			
CHROMIC ACID (H ₂ Cr ₂ O ₇), DIAMMONIUM SALT	07789-09-5	5	7,1,3,6		(See RCs of any listed constituents)			
CHROMIC ACID (H ₂ Cr ₂ O ₇), DIPOTASSIUM SALT	07778-50-9	5	7,1,3,6		(See RCs of any listed constituents)			
CHROMIC ACID (H ₂ CrO ₄), DISODIUM SALT	07775-11-3	5	7,1,3,6		(See RCs of any listed constituents)			
CHROMIC ACID H ₂ CrO ₄ , CALCIUM SALT	13765-19-0	5	3		(See RCs of any listed constituents)			
CHROMIC ACID, (H ₂ CrO ₄), DIPOTASSIUM SALT	07789-00-6	5	7,1,3,6		(See RCs of any listed constituents)			
CHROMIC ACID, (H ₂ CrO ₄), DIAMMONIUM SALT	07788-98-9	5	7,1,3,6		(See RCs of any listed constituents)			
CHROMIC ACID, (H ₂ CrO ₄), STRONTIUM SALT (1:1)	07789-06-2	5	7,1,3,6		(See RCs of any listed constituents)			
CHROMIC ACID, CALCIUM SALT	13765-19-0	5	2,3,7,1,5,6,3		(See RCs of any listed constituents)			
CHROMIC ACID, DILITHIUM SALT	14307-35-8	5	7,1,3,6		(See RCs of any listed constituents)			
CHROMIC ACID, DISODIUM SALT	10588-01-9	5	1,3,6		(See RCs of any listed constituents)			
CHROMIC CHLORIDE	10025-73-7	1	4,6		(See RCs of any listed constituents)			
CHROMIC SULFATE	10101-53-8	50	1,3,6		(See RCs of any listed constituents)			
CHROMIUM	07440-47-3	100	6,3,5,7,2,8		0.1	0.3	100	200
CHROMIUM (TOTAL)	7440-47-3	100	6,3,5,7,2,8		0.1	0.3	100	200
CHROMIUM (III)	16065-83-1	100	5		0.1	0.6	1000	3000
CHROMIUM (VI)	18540-29-9	10	5		0.1	0.3	100	200
CHROMIUM ANHYDRIDE	01333-82-0	5	6,1		(See RCs of any listed constituents)			
CHROMIUM CHLORIDE (CrCl ₃)	10025-73-7	1	7,4,6		(See RCs of any listed constituents)			
CHROMIUM COMPOUNDS, NOS		5	3		(See RCs of any listed constituents)			
CHROMIUM SULFATE	10101-53-8	50	6,1,3		(See RCs of any listed constituents)			
CHROMOUS CHLORIDE	10049-05-5	50	1,3,6		(See RCs of any listed constituents)			
CHROMYL CHLORIDE	14977-61-8	1	6,1		(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations				
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)	
CHRYSENE	218-01-9	10	2,3,7,6		0.002	0.07	70	400
CLONITRALID	01420-04-8	5	6		0.5	5	50	500
COAL TAR PITCH	65996-93-2	1	6		(See TPH RC and RCs of other relevant constituents)			
COBALT	07440-48-4	50	7,6,8		5	50	500	5000
COBALT CARBONYL	10210-68-1	1	4		(See RCs of any listed constituents)			
COBALT, DI-MU.-CARBONYLHEXACARBONYLDI-	10210-68-1	1	7,4		(See RCs of any listed constituents)			
COBALT, [[2,2'-(1,2-ETHANEDIYLBIS(NITRILOMETHYLI.	14167-18-1	1	7,4		0.1	1	10	100
COBALT,((2,2'-(1,2-ETHANEDIYLBIS (NITRILOMETHYLI.	62207-76-5	1	4		0.1	1	10	100
COBALTOUS BROMIDE	07789-43-7	50	3,1,6		(See RCs of any listed constituents)			
COBALTOUS FORMATE	00544-18-3	50	3,1,6		(See RCs of any listed constituents)			
COBALTOUS SULFAMATE	14017-41-5	50	1,3,6		(See RCs of any listed constituents)			
COKE OVEN EMISSIONS		1	3		(See RCs of any listed constituents)			
COLCHICINE	00064-86-8	1	4		0.1	1	10	100
COLLODION	09004-70-0	50	6,1		5	50	500	5000
COPPER	07440-50-8	100	3,7,6,8		10	100	1000	10000
COPPER (2), TETRAAMMINE-, SULFATE (1:1), MONOHY...	10380-29-7	10	3		(See RCs of any listed constituents)			
COPPER ACETOARSENITE	12002-03-8	1	1,3,4		(See RCs of any listed constituents)			
COPPER CHLORIDE	07447-39-4	5	1,3,6		(See RCs of any listed constituents)			
COPPER CHLORIDE (CuCl2)	07447-39-4	5	7,1,3,6		(See RCs of any listed constituents)			
COPPER COMPOUNDS, NOS		100	3		(See RCs of any listed constituents)			
COPPER CYANIDE	00544-92-3	5	3,1,2,7,6		(See RCs of any listed constituents)			
COUMADIN	00081-81-2	10	6,1,2,3,4,3		1	10	100	1000
COUMAFURYL	00117-52-2	50			5	50	500	5000
COUMAPHOS	00056-72-4	5	1,3,4		0.5	5	50	500
COUMATETRALYL	05836-29-3	1	4		0.1	1	10	100
CREOSOTE	08001-58-9	1	3,6,2,8,1		(See RCs of any listed constituents)			
CREOSOTE OIL	08001-58-9	1	6,2,3,8,1		(See RCs of any listed constituents)			
CREOSOTE, COAL TAR	08001-58-9	1	6,1		(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
CREOSOTE, WOOD	08001-58-9	1	2,3,6,1	(See RCs of any listed constituents)			
o-CRESOL	00095-48-7	50	3,4,6,8	5	50	500	5000
m-CRESOL	00108-39-4	50	3,8,6	5	50	500	5000
CRESOL	01319-77-3	50	6,1,2,3,8	5	50	500	5000
p-CRESOL(S)	00106-44-5	50	3,5,6,8	5	50	500	5000
o-CRESYLIC ACID	00095-48-7	50	3,4,6,8	5	50	500	5000
p-CRESYLIC ACID	00106-44-5	50	3,5,6,8	5	50	500	5000
m-CRESYLIC ACID	00108-39-4	50	3,6,8	5	50	500	5000
CRESYLIC ACID	01319-77-3	50	2,3,1,6,8	5	50	500	5000
CRIMIDINE	00535-89-7	1	4	0.1	1	10	100
(E)-CROTONALDEHYDE	00123-73-9	10	3,6,4,1	1	10	100	1000
CROTONALDEHYDE	04170-30-3	10	1,2,3,4	1	10	100	1000
CROTOXYPHOS	07700-17-6	1	1	0.1	1	10	100
CRUFOMATE	00299-86-5	10	6	1	10	100	1000
CUMENE	00098-82-8	100	1,3,6,8	10	100	1000	10000
CUMENE HYDROPEROXIDE	00080-15-9	5	1,6,8,3	0.5	5	50	500
CUPRIC ACETATE	00142-71-2	10	1,3,6	(See RCs of any listed constituents)			
CUPRIC ACETOARSENITE	12002-03-8	1	3,1,4	(See RCs of any listed constituents)			
CUPRIC CHLORIDE	07447-39-4	5	3,1,6	(See RCs of any listed constituents)			
CUPRIC CYANIDE	00544-92-3	5	1,2,3,6	(See RCs of any listed constituents)			
CUPRIC OXALATE	05893-66-3	10	3,1,6	(See RCs of any listed constituents)			
CUPRIC SULFATE	07758-98-7	5	1,3,6	(See RCs of any listed constituents)			
CUPRIC SULFATE AMMONIATED	10380-29-7	10	3,6	(See RCs of any listed constituents)			
CUPRIC TARTRATE	00815-82-7	10	1,3,6	1	10	100	1000
CURPIC NITRATE	03251-23-8	10	6,1,3	(See RCs of any listed constituents)			
CUTTING OIL (DEP RQ in gallons)		10	5	(See TPH RC and RCs of other relevant constituents)			
CYANIDE	00057-12-5	5	1,7,2,3,8,6	0.03	0.03	30	100
CYANOGEN	00460-19-5	10	1,2,3,6	1	10	100	1000
CYANOGEN BROMIDE	00506-68-3	1	1,2,3,7,6,4	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
CYANOGEN CHLORIDE	00506-77-4	5	1,2,3,6,7	(See RCs of any listed constituents)			
CYANOGEN IODIDE	00506-78-5	1	4	(See RCs of any listed constituents)			
CYANOPHOS	02636-26-2	1	4,1	0.1	1	10	100
CYANURIC FLUORIDE	00675-14-9	1	4	0.1	1	10	100
CYCLOBUTANE	00287-23-0	10	7,6	1	10	100	1000
CYCLOHEPTANE	00291-64-5	50	7,6	5	50	500	5000
2,5-CYCLOHEXADIENE-1,4-DIONE	00106-51-4	5	2,3,6,8	0.5	5	50	500
1,4-CYCLOHEXADIENEDIONE	00106-51-4	5	2,3,6,8	0.5	5	50	500
CYCLOHEXANAMINE	00108-91-8	1	1,4,6	0.1	1	10	100
CYCLOHEXANAMINE, N-BUTYL-	10108-56-2	10	7,6	1	10	100	1000
CYCLOHEXANAMINE, N-CYCLOHEXYL-	00101-83-7	50	7,6	5	50	500	5000
CYCLOHEXANAMINE, N-ETHYL-	05459-93-8	10	7,6	1	10	100	1000
CYCLOHEXANE	00110-82-7	50	1,3,5,8,6	5	50	500	5000
CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1.ALPHA.,...	00319-86-8	1	7,3,6	0.1	1	10	100
CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1.ALPHA/2AL	00319-84-6	5	7,3,6	0.5	5	50	500
CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1.ALPHA/2BE	00319-85-7	1	7,3,6	0.1	1	10	100
CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1.alpha.,...	58-89-9	1	7,3,1,4,5,6,8	0.0002	0.004	0.003	0.5
CYCLOHEXANE, 5-ISOCYANATO-1-(ISOCYANATOMETHYL)-1..	04098-71-9	1	7,4,6	0.1	1	10	100
CYCLOHEXANE, CHLORO-	00542-18-7	10	7,6	1	10	100	1000
CYCLOHEXANE, METHYL-	00108-87-2	10	7,1,6	1	10	100	1000
CYCLOHEXANE, NITRO-	01122-60-7	1	7,4,6	0.1	1	10	100
CYCLOHEXANOL	00108-93-0	10	7,6	1	10	100	1000
CYCLOHEXANONE	00108-94-1	100	1,3,6	10	100	1000	10000
CYCLOHEXATRIENE	71-43-2	5	1,2,3,5,6,7,8	0.005	1	2	200
2-CYCLOHEXEN-1-ONE, 2-METHYL-5-(1-METHYLETHENYL)-...	02244-16-8	10	7	1	10	100	1000
2-CYCLOHEXEN-1-ONE,3,5,5-TRIMETHYL-	00078-59-1	10	7,1,3,6	1	10	100	1000
CYCLOHEXENE	00110-83-8	10	6	1	10	100	1000
CYCLOHEXENE, 4-ETHYL-	00100-40-3	10	7,6	1	10	100	1000
CYCLOHEXIMIDE	00066-81-9	1	6,4	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
CYCLOHEXYL CHLORIDE	00542-18-7	10	6	1	10	100	1000
2-CYCLOHEXYL-4,6-DINITROPHENOL	00131-89-5	10	2,1,3	1	10	100	1000
CYCLOHEXYLAMINE	00108-91-8	1	1,4,6	0.1	1	10	100
CYCLONITE	00121-82-4	10	6	0.001	50	1	80
1,3-CYCLOPENTADIENE, 1,2,3,4,5,5-HEXACHLORO-	00077-47-4	5	2,3,7,1,4,5,6,8	0.5	5	50	500
CYCLOPENTANE	00287-92-3	50	7,6,1	5	50	500	5000
CYCLOPENTANE, METHYL-	00096-37-7	10	1,7,6	1	10	100	1000
CYCLOPENTANONE	00120-92-3	50	6	5	50	500	5000
CYCLOPHOSPHAMIDE	00050-18-0	5	2,3,6	0.5	5	50	500
CYCLOPROPANE	00075-19-4	10	1,6,7	1	10	100	1000
CYCLOPROPANECARBOXYLIC ACID, 2,2-DIMETHYL-3-(2-...	00121-21-1	1	7,3	0.1	1	10	100
CYCLOPROPANECARBOXYLIC ACID, 3-(3-METHOXY-2-MET...	00121-29-9	1	7,1,3	0.1	1	10	100
CYHEXATIN	13121-70-5	1	6,1	0.1	1	10	100
p-CYMENE	00099-87-6	10	6	1	10	100	1000
2,4-D	00094-75-7	10	2,8,1,3,6	1	10	100	1000
2,4-DB	00094-82-6	10	5	1	10	100	1000
2,4-D ESTERS	00094-11-1	10	3,6	1	10	100	1000
2,4-D ESTERS	00094-79-1	10	3,6	1	10	100	1000
2,4-D ESTERS	00094-80-4	10	3,6	1	10	100	1000
2,4-D ESTERS	01320-18-9	10	3,6	1	10	100	1000
2,4-D ESTERS	01928-38-7	10	3,6	1	10	100	1000
2,4-D ESTERS	01928-61-6	10	3,6	1	10	100	1000
2,4-D ESTERS	01929-73-3	10	3,6	1	10	100	1000
2,4-D ESTERS	02971-38-2	10	3,6	1	10	100	1000
2,4-D ESTERS	25168-26-7	10	3,6	1	10	100	1000
2,4-D ESTERS	53467-11-1	10	3,6	1	10	100	1000
2,4-D, SALTS AND ESTERS	00094-75-7	10	3,1,2,6,8	1	10	100	1000
DASANIT	00115-90-2	1	6,4,1	0.1	1	10	100
DAUNOMYCIN	20830-81-3	5	6,2,3	0.5	5	50	500

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	GW1 (mg/l)	Reportable Concentrations		
		RQ (Pounds)			GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
DBCP	00096-12-8	1	8,2,3,6	0.1	1	10	100
DDD	72-54-8	1	2,3,1,6	0.0002	0.05	8	40
4,4-DDD	00072-54-8	1	3,1,2,6	0.0002	0.05	8	40
P,P'-DDE	72-55-9	1	2,3,6	0.00005	0.4	6	30
4,4'-DDE	72-55-9	1	2,3,6	0.00005	0.4	6	30
DDE	72-55-9	1	2,3,6	0.00005	0.4	6	30
DDT	50-29-3	1	2,3,6,1	0.0003	0.001	6	30
4,4'-DDT	50-29-3	1	2,3,6,1	0.0003	0.001	6	30
DDVP	00114-26-1	1	7,6,8,1	0.1	1	10	100
DEAK	00096-10-6	10	6	1	10	100	1000
DECABORANE	17702-41-9	1	6,1,4	(See RCs of any listed constituents)			
DECABORANE(14)	17702-41-9	1	4,7,1,6	(See RCs of any listed constituents)			
DECABROMOBIPHENYL	13654-09-6	1	6,7	0.1	1	10	100
DECACHLORO-OCTAHYDRO-1,3,4-METHENO-2H-CYCLOBUTA[...]	00143-50-0	1	2,3,1,6	0.1	1	10	100
DECAHYDRONAPHTHALENE	00091-17-8	10	1,6	1	10	100	1000
DECALIN	00091-17-8	10	1,6	1	10	100	1000
DECYL ACRYLATE	02156-96-9	100	6,1	10	100	1000	10000
DEHP	00117-81-7	10	2,3,5,8,6	0.006	50	90	600
DELANOV	00078-34-2	1	6,4,1	0.1	1	10	100
DEMETON	08065-48-3	1	4,6	0.1	1	10	100
DEMETON-S-METHYL	00919-86-8	1	4	0.1	1	10	100
DENATURED ALCOHOL (DEP RQ in gallons)	00064-17-5	10	6,1	1	10	100	1000
DEUTERIUM	07782-39-0	10	6,7	1	10	100	1000
DFP	00055-91-4	10	2,1,3,4	1	10	100	1000
DGE	02238-07-5	1	6,4	0.1	1	10	100
DI(2-ETHYLHEXYL)PHTHALATE	117-81-7	10	2,3,5,8,6	0.006	50	90	600
DI-N-BUTYL PHTHALATE	00084-74-2	5	2,3,1,6,8	0.5	5	50	500
DI-N-OCTYL PHTHALATE	00117-84-0	100	1,2,3	10	100	1000	10000
DI-N-PROPYLNITROSAMINE	00621-64-7	5	2,3,6,8	0.5	5	50	500

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
DI-SEC OCTYL PHTHALATE	117-81-7	10	2,3,5,8,6	0.006	50	90	600
DI-TERT-BUTYL PEROXIDE	00110-05-4	10	1,6	1	10	100	1000
DIACETONE ALCOHOL	00123-42-2	10	1,6	1	10	100	1000
DIACETYL	00431-03-8	50	1,6	5	50	500	5000
DIACETYL PEROXIDE	00110-22-5	10	6,1	1	10	100	1000
DIALIFOS	10311-84-9	1	4,1	0.1	1	10	100
DIALLATE	02303-16-4	10	6,2,3,8,1	1	10	100	1000
DIAMINE	00302-01-2	1	2,3,1,4,5,6,8	0.1	1	10	100
1,2-DIAMINOETHANE	00107-15-3	100	6,1,3,4	10	100	1000	10000
2,4-DIAMINOTOLUENE	00095-80-7	5	6,8,2,3	0.5	5	50	500
DIAMINOTOLUENE	00095-80-7	5	3,2,6,8	0.5	5	50	500
DIAMINOTOLUENE	00496-72-0	5	3,2,6	0.5	5	50	500
DIAMINOTOLUENE	00823-40-5	5	3,2,6	0.5	5	50	500
DIAMINOTOLUENE	25376-45-8	5	3,2,8,6	0.5	5	50	500
DIAMINOTOLUENE, N.O.S.	25376-45-8	5	2,3,8,6	0.5	5	50	500
DIAMMONIUM OXALATE	06009-70-7	100	6	(See RCs of any listed constituents)			
DIAMYLAMINE	02050-92-2	100	6	10	100	1000	10000
1,2-DIAZIDOETHANE	00107-15-3	100	1,3,4,6	10	100	1000	10000
DIAZINON	00333-41-5	1	1,3,6	0.1	1	10	100
DIAZOMETHANE	00334-88-3	10	8,6	1	10	100	1000
1,2,5,6-DIBENZANTHRACENE	53-70-3	1	3,2,6	0.0005	0.04	0.7	4
DIBENZOFURAN	00132-64-9	10	5	1	10	100	1000
DIBENZO(A,I)PYRENE	00189-55-9	5	6,2,3	0.5	5	50	500
DIBENZO-P-DIOXIN, 2,3,7,8-TETRACHLORO-	1746-01-6	1	6,2,3	3E-08	4E-05	2E-05	5E-05
DIBENZOYL PEROXIDE	00094-36-0	10	6,1,8	1	10	100	1000
DIBENZO[B,E][1,4]DIOXIN, 2,3,7,8-TETRACHLORO-	1746-01-6	1	7,6,2,3	3E-08	4E-05	2E-05	5E-05
1,2,7,8-DIBENZPYRENE	00189-55-9	5	2,3,6	0.5	5	50	500
DIBENZ[A,H]ANTHRACENE	53-70-3	1	3,7,6	0.0005	0.04	0.7	4

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations				
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)	
DIBENZ[A,I]PYRENE	00189-55-9	5	2,3,6		0.5	5	50	500
DIBENZO[A,H]ANTHRACENE	53-70-3	1	3,7,6		0.0005	0.04	0.7	4
DIBORANE	19287-45-7	1	4,6,1		(See RCs of any listed constituents)			
DIBORANE(6)	19287-45-7	1	7,1,4,6		(See RCs of any listed constituents)			
DIBORON HEXAHYDRIDE	19287-45-7	1			(See RCs of any listed constituents)			
DIBROM	00300-76-5	5	6,1,3		0.5	5	50	500
1,2-DIBROMO-3-CHLOROPROPANE	00096-12-8	1	2,3,6,8		0.1	1	10	100
DIBROMOCHLOROMETHANE	124-48-1	10	1,3,6		0.002	0.02	0.005	0.03
DIBROMOCHLOROPROPANE	00096-12-8	1	6,2,3,8		0.1	1	10	100
1,2-DIBROMOETHANE	106-93-4	1	1,2,3,8,6		0.00002	0.002	0.1	0.1
DIBROMOMETHANE	00074-95-3	50	1,2,3,8,6		5	50	500	5000
DIBUTYL ETHER	00142-96-1	10	6,1		1	10	100	1000
tert-DIBUTYL PEROXIDE	00110-05-4	10	6,1		1	10	100	1000
DIBUTYL PHOSPHITE	01809-19-4	100	6		10	100	1000	10000
DIBUTYL PHTHALATE	00084-74-2	5	3,6,8,1,2		0.5	5	50	500
DIBUTYLAMINE	00111-92-2	10	6		1	10	100	1000
DICAMBA	01918-00-9	50	1,3,6		5	50	500	5000
DICHLOBENIL	01194-65-6	10	1,3,6		1	10	100	1000
DICHLOFENTHION	00097-17-6	1	1		0.1	1	10	100
DICHLONE	00117-80-6	1	1,3,6		0.1	1	10	100
2,2-DICHLORO ISOPROPYL ETHER	108-60-1	50	1,2,3,6,8		0.03	0.1	0.7	0.7
2,2-DICHLORO ISOPROPYL ETHER	39638-32-9	50	1,2,3,6,8		0.03	0.1	0.7	0.7
1,1-DICHLORO-1-NITROETHANE	00594-72-9	10	6		1	10	100	1000
1,1-DICHLORO-2,2-BIS(P-CHLOROPHENYL) ETHANE	72-54-8	1	1,2,3,6		0.0002	0.05	8	40
1,4-DICHLORO-2-BUTENE	00764-41-0	1	2,3,1,6,8		0.1	1	10	100
3,5-DICHLORO-N-(1,1-DIMETHYL-2-PROPYNYL)BENZAMIDE	23950-58-5	100	2,3,1,6,8		10	100	1000	10000
DICHLOROACETYL CHLORIDE	00079-36-7	10	1,6		1	10	100	1000
S-(2,3-DICHLOROALLYL) DIISOPROPYLTHIOCARBAMATE	02303-16-4	10	2,3,6,8,1		1	10	100	1000
DICHLOROBENZALKONIUM CHLORIDE	08023-53-8	100			10	100	1000	10000
1,2-DICHLOROBENZENE	95-50-1	10	3,8,1,2,5,6		0.6	2	9	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	GW1 (mg/l)	Reportable Concentrations		
		RQ (Pounds)			GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
o-DICHLOROBENZENE	95-50-1	10	1,2,3,5,6,8	0.6	2	9	100
1,4-DICHLOROBENZENE	00106-46-7	10	3,8,1,2,5,6	0.005	0.06	0.7	1
p-DICHLOROBENZENE	00106-46-7	10	1,2,3,5,6,8	0.005	0.06	0.7	1
1,3-DICHLOROBENZENE	00541-73-1	10	3,8,1,2,6	0.1	6	3	200
m-DICHLOROBENZENE	00541-73-1	10	3,1,2,8,6	0.1	6	3	200
DICHLOROBENZENE	25321-22-6	10	3	0.005	0.2	0.7	4
DICHLOROBENZENE, N.O.S.	25321-22-6	10	2,3,8,6,3	0.005	0.2	0.7	4
3,3'-DICHLOROBENZIDINE	00091-94-1	1	2,3,6,8	0.08	2	3	20
DICHLOROBENZIDINE	00091-94-1	1	2,3,6,8	0.08	2	3	20
3,3'-DICHLOROBENZIDINE DIHYDROCHLORIDE	00612-83-9	1	6	0.1	1	10	100
DICHLOROBROMOMETHANE	75-27-4	100	6	0.003	0.006	0.1	0.1
1,3-DICHLOROBUTENE	00926-57-8	10	1,6	1	10	100	1000
DICHLOROBUTENE	00926-57-8	10	1,6	1	10	100	1000
1,3-DICHLOROBUTENE-2	00926-57-8	10	6,1	1	10	100	1000
trans-1,4-DICHLOROBUTENE	00110-57-6	1	4	0.1	1	10	100
DICHLORODIFLUOROMETHANE	00075-71-8	100	1,2,3,6,8	10	100	1000	10000
DICHLORODIPHENYL DICHLOROETHANE	72-54-8	1	2,1,3,6	0.0002	0.05	8	40
DICHLORODIPHENYL DICHLOROETHYLENE	72-55-9	1	2,3,6	0.00005	0.4	6	30
DICHLORODIPHENYL TRICHLOROETHANE	50-29-3	1	1,2,3,6	0.0003	0.001	6	30
1,1-DICHLOROETHANE	75-34-3	50	1,2,3,6,8	0.07	2	0.4	9
1,2-DICHLOROETHANE	107-06-2	10	1,2,3,5,8,6	0.005	0.005	0.1	0.1
1,1-DICHLOROETHENE	75-35-4	10	6,1,2,3,5,8	0.007	0.08	3	40
trans-1,2-DICHLOROETHENE	156-60-5	50	6,1,2,3,5	0.08	0.08	1	1
1,2-DICHLOROETHENE	540-59-0	10	6,8	0.07	0.1	0.3	0.4
DICHLOROETHYL ETHER	111-44-4	5	2,3,,6,8,4,1	0.03	0.03	0.7	0.7
1,1-DICHLOROETHYLENE	75-35-4	10	6,1,2,3,5,8	0.007	0.08	3	40
1,2-trans-DICHLOROETHYLENE	156-60-5	50	6,1,2,3,5	0.08	0.08	1	1
1,2-DICHLOROETHYLENE	156-60-5	50	6,1,2,3,5	0.08	0.08	1	1
1,2-DICHLOROETHYLENE	00540-59-0	10	6,8	0.07	0.1	0.3	0.4
sym-DICHLOROETHYLENE	00540-59-0	10	6,8	0.07	0.1	0.3	0.4

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
DICHLOROETHYLENE-CIS	156-59-2	10	6,5	0.02	0.02	0.1	0.1
DICHLOROETHYLENE-TRANS	156-60-5	50	6,1,2,3,5	0.08	0.08	1	1
DICHLOROISOPROPYL ETHER	108-60-1	50	1,2,3,6,8	0.03	0.1	0.7	0.7
DICHLOROISOPROPYL ETHER	39638-32-9	50	1,2,3,6,8	0.03	0.1	0.7	0.7
DICHLOROMETHANE	75-09-2	50	3,6,7,1,2,5,8	0.005	2	0.1	4
DICHLOROMETHOXY ETHANE	00111-91-1	50	2,3,6,8	5	50	500	5000
DICHLOROMETHYL ETHER	00542-88-1	5	3,2,4,6,8	0.5	5	50	500
DICHLOROMETHYLPHENYLSILANE	00149-74-6	1	4	0.1	1	10	100
2,6-DICHLOROPHENOL	00087-65-0	10	1,2,3,6	1	10	100	1000
2,4-DICHLOROPHENOL	00120-83-2	10	1,2,3,8,6	0.01	2	0.7	40
2,4-DICHLOROPHENOXYACETIC ACID	00094-75-7	10	1,6,2,3,8	1	10	100	1000
2,4-DICHLOROPHENOXYACETIC ACID, SALTS AND ESTERS	00094-75-7	10	2,3,1,6,8	1	10	100	1000
DICHLOROPHENYLARSINE	00696-28-6	1	2,3,1,4	0.1	1	10	100
DICHLOROPHENYLTRICHLOROSILANE	27137-85-5	1	1,4	0.1	1	10	100
1,2-DICHLOROPROPANE	78-87-5	50	1,2,3,5,6,8	0.003	0.003	0.1	0.1
1,1-DICHLOROPROPANE	00078-99-9	50	1,3,6	5	50	500	5000
1,3-DICHLOROPROPANE	00142-28-9	50	1,3,6	5	50	500	5000
DICHLOROPROPANE	26638-19-7	50	3,2,6	0.005	0.009	0.1	0.2
DICHLOROPROPANE - DICHLOROPROPENE (MIXTURE)	08003-19-8	10	3,6	(See RCs of any listed constituents)			
DICHLOROPROPANE, N.O.S.	26638-19-7	50	2,3,6	0.005	0.009	0.1	0.2
2,3-DICHLOROPROPENE	00078-88-6	10	3,6,8	1	10	100	1000
1,3-DICHLOROPROPENE	542-75-6	10	6,3,2,1,8	0.0004	0.01	0.01	0.4
DICHLOROPROPENE	542-75-6	10	6,3,2,1,8	0.0004	0.01	0.01	0.4
cis-1,3-DICHLOROPROPENE	10061-01-5	10	6	0.0005	0.005	0.01	0.1
trans-1,3-DICHLOROPROPENE	10061-02-6	10	6	0.0005	0.005	0.01	0.1
DICHLOROPROPENE	26952-23-8	10	2,3	0.0005	0.005	0.01	0.1
DICHLOROPROPENE, N.O.S.	26952-23-8	10	2,3	0.0005	0.005	0.01	0.1
2,2-DICHLOROPROPIONIC ACID	00075-99-0	100	1,3,6	10	100	1000	10000
1,3-DICHLOROPROPYLENE	00542-75-6	10	8,1,2,3,6	0.0004	0.01	0.01	0.4
DICHLORVOS	00062-73-7	5	3,6,4,8,1	0.5	5	50	500

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations				
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)	
DICOFOL	00115-32-2	5	8,6,1,3		0.5	5	50	500
DICROTOPHOS	00141-66-2	1	6,4,1		0.1	1	10	100
DICYCLOHEXYLAMINE	00101-83-7	50	6		5	50	500	5000
DICYCLOPENTADIENE	00077-73-6	10	6		1	10	100	1000
DIELDRIN	60-57-1	1	2,3,6,1		0.0001	0.0005	0.08	0.5
1,2:3,4-DIEPOXYBUTANE	01464-53-5	5	2,3,4,6,8		0.5	5	50	500
DIEPOXYBUTANE	01464-53-5	5	6,8,4,2,3		0.5	5	50	500
DIESEL FUEL (DEP RQ in gallons)		10		(See TPH RC and RCs of other relevant constituents)				
DIETHYL 'CELLOSOLVE'	00629-14-1	10	1,6		1	10	100	1000
p-DIETHYL BENZENE	00105-05-5	10	6		1	10	100	1000
o-DIETHYL BENZENE	00135-01-3	100	6		10	100	1000	10000
m-DIETHYL BENZENE	00141-93-5	100	6		10	100	1000	10000
DIETHYL CARBAMYL CHLORIDE	00088-10-8	10	6		1	10	100	1000
DIETHYL CARBONATE	00105-58-8	10	6		1	10	100	1000
DIETHYL CHLOROPHOSPHATE	00814-49-3	1	4		0.1	1	10	100
DIETHYL DICHLOROSILANE	01719-53-5	10	1,6		1	10	100	1000
DIETHYL ETHER	00060-29-7	10	6,1,3,5		1	10	100	1000
DIETHYL KETONE	00096-22-0	10	1,6		1	10	100	1000
O,O-DIETHYL O-2-PYRAZINYL PHOSPHOROTHIOATE	00297-97-2	10	2,1,3,4		1	10	100	1000
O,O-DIETHYL O-PYRAZINYL PHOSPHOROTHIOATE	00297-97-2	10	1,3,2,4		1	10	100	1000
DIETHYL PHTHALATE	84-66-2	50	1,2,3,6,8		2	9	10	200
O,O-DIETHYL S-METHYL DITHIOPHOSPHATE	03288-58-2	100	3,1,2,6		10	100	1000	10000
O,O-DIETHYL S-METHYL ESTER OF PHOSPHORODITHIOIC ACID	03288-58-2	100	2,1,3,6		10	100	1000	10000
DIETHYL ZINC	00557-20-0	10	6,1		1	10	100	1000
DIETHYL-P-NITROPHENYL PHOSPHATE	00311-45-5	10	3,1,2,6		1	10	100	1000
DIETHYLALUMINUM CHLORIDE	00096-10-6	10	6		1	10	100	1000
DIETHYLAMINE	00109-89-7	10	1,3,5,6,8		1	10	100	1000
DIETHYLARSINE	00692-42-2	1	2,3,6		0.1	1	10	100
DIETHYLCARBAMAZINE CITRATE	01642-54-2	1	4		0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	GW1 (mg/l)	Reportable Concentrations		
		RQ (Pounds)			GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
1,4-DIETHYLENE DIOXIDE	00123-91-1	10	3,1,2,5,6,8	0.0003	6	0.2	6
DIETHYLENE DIOXIDE	00123-91-1	10	6,1,2,3,5,8	0.0003	6	0.2	6
DIETHYLENE GLYCOL METHYL ETHER	00111-77-3	10	6	1	10	100	1000
1,4-DIETHYLENE OXIDE	00123-91-1	10	2,1,3,5,6,8	0.0003	6	0.2	6
DI-(2-ETHYLHEXYL) PHOSPHORIC ACID	00298-07-7	10	1	1	10	100	1000
DI(2-ETHYLHEXYL)PHTHALATE	117-81-7	10	2,3,5,8,6	0.006	50	90	600
DIETHYLHEXYL PHTHALATE	117-81-7	10	2,3,5,8,6	0.006	50	90	600
N,N'-DIETHYLHYDRAZINE	01615-80-1	5	2,3,6	0.5	5	50	500
1,2-DIETHYLHYDRAZINE	01615-80-1	5	6,2,3	0.5	5	50	500
O,O-DIETHYLPHOSPHORIC ACID, O-P-NITROPHENYL ESTER	00311-45-5	10	2,1,3,6	1	10	100	1000
DIETHYLSTILBESTROL	00056-53-1	1	2,3,6	0.1	1	10	100
DIETHYLZINC	00557-20-0	10	1,6	1	10	100	1000
DIFLUBENZURON	35367-38-5	1	5	0.1	1	10	100
DIFLUORO-1-CHLOROETHANE	00075-68-3	10	6,1,8	1	10	100	1000
DIFLUOROETHANE	00075-37-6	10	1,6	1	10	100	1000
1,1-DIFLUOROETHYLENE	00075-38-7	10	1	1	10	100	1000
DIGITOXIN	00071-63-6	1	4	0.1	1	10	100
DIGLYCIDYL ETHER	02238-07-5	1	6,4	0.1	1	10	100
DIGOXIN	20830-75-5	1	4	0.1	1	10	100
1,2-DIHYDRO-3,6-PYRIDAZINEDIONE	00123-33-1	100	2,3,1,6	10	100	1000	10000
DIHYDROSAFROLE	00094-58-6	5	2,3,8	0.5	5	50	500
3,4-DIHYDROXY-ALPHA-(METHYLAMINO)METHYL BENZYL AL..	00051-43-4	50	2,3,6	5	50	500	5000
DIHYDROXYBENZENE	00123-31-9	1	6,4,8	0.1	1	10	100
DIISOBUTYL KETONE	00108-83-8	10	1,6	1	10	100	1000
DIISOBUTYLALUMINUM HYDRIDE	01191-15-7	10	6	1	10	100	1000
DIISOBUTYLAMINE	00110-96-3	10	6	1	10	100	1000
DIISOPROPYL ETHER	00108-20-3	10	1,6	1	10	100	1000
DIISOPROPYL FLUOROPHOSPHATE	00055-91-4	10	3,1,2,4	1	10	100	1000
DIISOPROPYL PEROXYDICARBONATE	00105-64-6	10	6,1	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
DIISOPROPYLAMINE	00108-18-9	10	1,6	1	10	100	1000
DIKETENE	00674-82-8	10	6	1	10	100	1000
DILAUROYL PEROXIDE	00105-74-8	10	6	1	10	100	1000
DIMEFOX	00115-26-4	1	4	0.1	1	10	100
2,7,3,6-DIMETHANOLNAPHTH[2,3-B]OXIRENE, 3,4,5,6,9,9-HEXA..	72-20-8	1	7,1,3,6,4,2	0.002	0.005	10	20
1,2,3,4,10.10..DIMETHANONAPHTHALENE	60-57-1	1	2,3,6,1	0.0001	0.0005	0.08	0.5
1,4,5,8-DIMETHANONAPHTHALENE, 1,2,3,4,10,10-HEXACHLORO-...	00465-73-6	1	3,1,2,4	0.1	1	10	100
1,4,5,8-DIMETHANONAPHTHALENE, 1,2,3,4,10,10-HEXACHLORO-1..	00465-73-6	1	7,1,2,3,4	0.1	1	10	100
1,4,5,8-DIMETHANONAPHTHLAENE, 1,2,3,4,10,10-HEXACHLORO-1..	309-00-2	1	1,2,3,8,6,4	0.0005	0.002	0.08	0.5
2,7,3,6-DIMETHANONAPHTH[2,3-B]OXIRENE, 3,4,5,6,9,9 HEXA...	72-20-8	1	1,3,6,4,2	0.002	0.005	10	20
2,7,3,6-DIMETHANONAPHTH[2,3-B]OXIRENE, 3,4,5,6,9,9-HEXAC..	00060-57-1	1	2,3,6,1,7	0.0001	0.0005	0.08	0.5
DIMETHOATE	00060-51-5	5	2,3,4,1	0.5	5	50	500
DIMETHOXY STRICHNINE	00357-57-3	5	1,2,3,6	0.5	5	50	500
3,3'-DIMETHOXYBENZIDINE	00119-90-4	10	2,3,8,6	1	10	100	1000
3,3'-DIMETHOXYBENZIDINE DIHYDROCHLORIDE	20325-40-0	1	6	0.1	1	10	100
DIMETHOXYMETHANE	00109-87-5	10	6,1	1	10	100	1000
DIMETHYL ACETAMIDE	00127-19-5	10	6	1	10	100	1000
DIMETHYL CHLOROTHIOPHOSPHATE	02524-03-0	1	1,4	0.1	1	10	100
DIMETHYL ETHER	00115-10-6	10	1,6	1	10	100	1000
O,O-DIMETHYL O-(4-NITROPHENYL) PHOSPHOROTHIOATE	00298-00-0	10	2,1,3,4,6	1	10	100	1000
O,O-DIMETHYL O-P-NITROPHENYL PHOSPHOROTHIOATE	00298-00-0	10	3,1,2,4,6	1	10	100	1000
DIMETHYL PHOSPHOROCHLORIDOTHIOATE	02524-03-0	1	1,4	0.1	1	10	100
DIMETHYLPHENOL, 2,4-	00105-67-9	10	1,2,3,8,6	0.06	40	0.7	100
DIMETHYL PHTHALATE	131-11-3	100	1,2,3,8,6	0.3	50	0.7	50
DIMETHYL SULFATE	00077-78-1	10	1,2,3,4,6,8	1	10	100	1000
DIMETHYL SULFIDE	00075-18-3	10	1,6	1	10	100	1000
DIMETHYL SULPHATE	00077-78-1	10	6,1,2,3,4,8	1	10	100	1000
DIMETHYL-1,2-DIBROMO-2,2-DICHLOROETHYL PHOSPHAT...	00300-76-5	5	6,1,3	0.5	5	50	500
3,3-DIMETHYL-1-(METHYLTHIO)-2-BUTANONE, O-[(MET...	39196-18-4	10	2,3,1,4	1	10	100	1000
1,1-DIMETHYL-2-PHENYLETHANAMINE	00122-09-8	100	1,2,3,6	10	100	1000	10000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
DIMETHYL-O,O-DICHLOROVINYL-2,2-PHOSPHATE (TECHN...	00062-73-7	5	6,1,3,4,8	0.5	5	50	500
DIMETHYL-P-PHENYLENEDIAMINE	00099-98-9	1	4	0.1	1	10	100
DIMETHYLAMINE	00124-40-3	50	3,1,6	5	50	500	5000
2-(DIMETHYLAMINO) ETHANOL	00108-01-0	100	6	10	100	1000	10000
3-(DIMETHYLAMINO)-PROPYLAMINE	00109-55-7	10	6	1	10	100	1000
P-DIMETHYLAMINOAZOBENZENE	00060-11-7	5	3,6,2,8,3	0.5	5	50	500
4-DIMETHYLAMINOAZOBENZENE	00060-11-7	5	6,8,2,3	0.5	5	50	500
DIMETHYLANILINE	00121-69-7	100	6,8	10	100	1000	10000
N,N-DIMETHYLANILINE	00121-69-7	100	8,6	10	100	1000	10000
3,3'-DIMETHYLBENZIDINE	00119-93-7	5	8,2,6,3	0.5	5	50	500
alpha,alpha-DIMETHYLBENZYLHYDROPEROXIDE	00080-15-9	5	3,1,6,8	0.5	5	50	500
7,12-DIMETHYLBENZ[A]ANTHRACENE	00057-97-6	1	2,3,6	0.1	1	10	100
2,2-DIMETHYLBUTANE	00075-83-2	10	6,1	1	10	100	1000
2,3-DIMETHYLBUTANE	00079-29-8	10	1,6	1	10	100	1000
DIMETHYLCARBAMOYL CHLORIDE	00079-44-7	1	2,3,6,8	0.1	1	10	100
DIMETHYLCARBAMYL CHLORIDE	00079-44-7	1	8,2,3,6	0.1	1	10	100
DIMETHYLDICHLOROSILANE	00075-78-5	1	1,4,6	0.1	1	10	100
DIMETHYLFORMAMIDE	00068-12-2	10	5,6	1	10	100	1000
2,6-DIMETHYLHEPTANONE	00108-83-8	10	6,1	1	10	100	1000
1,1-DIMETHYLHYDRAZINE	00057-14-7	5	2,3,6,1,4,8	0.5	5	50	500
DIMETHYLHYDRAZINE	00057-14-7	5	1,4,2,3,6,8	0.5	5	50	500
1,2-DIMETHYLHYDRAZINE	00540-73-8	1	6,3,2	0.1	1	10	100
N,N-DIMETHYLMETHANAMINE	00075-50-3	10	6,1,3	1	10	100	1000
2,6-DIMETHYLMORPHOLINE	00141-91-3	100	6	10	100	1000	10000
DIMETHYLNITROSAMINE	00062-75-9	5	2,3,6,4,8	0.5	5	50	500
alpha,alpha-DIMETHYLPHENETHYLAMINE	00122-09-8	100	2,3,1,6	10	100	1000	10000
2,4-DIMETHYLPHENOL	105-67-9	10	1,2,3,8,6	0.06	40	0.7	100
2,6-DIMETHYLPHENOL	00576-26-1	50	5	0.0001	0.02	0.7	10
DIMETHYLPHENOL	01300-71-6	50	1,3	0.1	20	0.7	10

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
ALPHA,ALPHA-DIMETHYLPHENTHYLAMINE	00122-09-8	100	6,1,2,3	10	100	1000	10000
2,2-DIMETHYLPROPANE	00463-82-1	10	6	1	10	100	1000
DIMETHYLVINYL CHLORIDE	00513-37-1	1	6,7	0.1	1	10	100
DIMETILAN	00644-64-4	1	4	0.1	1	10	100
DINITRO-O-CRESOL	00534-52-1	5	6,1,2,3,4,8	0.5	5	50	500
4,6-DINITRO-O-CRESOL	00534-52-1	5	1,8,2,3,4,6	0.5	5	50	500
4,6-DINITRO-O-CYCLOHEXYLPHENOL	00131-89-5	10	3,1,2,6	1	10	100	1000
2,4-DINITROANILINE	00097-02-9	10	6	1	10	100	1000
m-DINITROBENZENE	00099-65-0	10	3,6,8	1	10	100	1000
p-DINITROBENZENE	00100-25-4	10	3,6,8	1	10	100	1000
DINITROBENZENE	00528-29-0	10	6,2,3,8	1	10	100	1000
o-DINITROBENZENE (MIXED)	00528-29-0	10	2,3,6,8	1	10	100	1000
DINITROBENZENE (MIXED)	25154-54-5	10	1,3,6	1	10	100	1000
DINITROBENZENE, N.O.S.	00528-29-0	10	2,3,6,8	1	10	100	1000
1,2-DINITROBENZOL	00528-29-0	10	6,2,3,8	1	10	100	1000
DINITROCRESOL	00534-52-1	5	4,1,2,3,6,8	0.5	5	50	500
DINITROCYCLOHEXYLPHENOL	00131-89-5	10	1,2,3,6	1	10	100	1000
2,4-DINITROPHENOL	51-28-5	5	2,3,8,6	0.2	20	3	50
2,5-DINITROPHENOL	00329-71-5	5	3,6	0.5	5	50	500
2,6-DINITROPHENOL	00573-56-8	5	3,6	0.5	5	50	500
DINITROPHENOL	25550-58-7	5	3,1,6	0.2	2	3	6
2,4-DINITROTOLUENE	00121-14-2	5	2,3,8,6	0.03	20	0.7	10
DINITROTOLUENE	00121-14-2	5	2,3,8,6	0.03	20	0.7	10
2,6-DINITROTOLUENE	00606-20-2	10	2,3,8,6	1	10	100	1000
3,4-DINITROTOLUENE	00610-39-9	5	3,6	0.5	5	50	500
DINITROTOLUENE	25321-14-6	5	1,3,6	0.03	2	0.7	2
DINOBTION	00973-21-7	1	1	0.1	1	10	100
DINOSEB	00088-85-7	50	1,3,4,2	5	50	500	5000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
DINOTERB	01420-07-1	1	4	0.1	1	10	100
N-DIOCTYL PHTHALATE	00117-84-0	100	1,2,3	10	100	1000	10000
DIOCTYL PHTHALATE	00117-84-0	100	1,2,3	10	100	1000	10000
DIOXACARB	06988-21-2	10	1	1	10	100	1000
1,4-DIOXANE	00123-91-1	10	2,3,5,8,6,1	0.0003	6	0.2	6
DIOXANE	00123-91-1	10	1,6,2,3,5,8	0.0003	6	0.2	6
p-DIOXANE	00123-91-1	10	6,1,2,3,5,8	0.0003	6	0.2	6
DIOXATHION	00078-34-2	1	4,6,1	0.1	1	10	100
DIOXINS (RCs expressed as equivalents of 2,3,7,8 tetrachlorodibenzo-p-dioxin)		1	5	3.00E-08	4.00E-05	2.00E-05	5.00E-05
DIOXOLANE	00646-06-0	50	1,6	5	50	500	5000
1,3-DIOXOLANE	00646-06-0	50	7,1,6	5	50	500	5000
DIPHACINONE	00082-66-6	1	4,1	0.1	1	10	100
DIPHENAMID	00957-51-7	50	5	5	50	500	5000
DIPHENYL	92-52-4	1	6,8,5,1	0.0009	0.2	0.05	6
1,2-DIPHENYL HYDRAZINE	00122-66-7	5	8,2,3,6	0.5	5	50	500
DIPHENYLAMINE	00122-39-4	1	2,5,6	0.1	1	10	100
DIPHENYLDICHLOROSILANE	00080-10-4	10	6,1	1	10	100	1000
1,2-DIPHENYLHYDRAZINE	00122-66-7	5	2,3,6,8	0.5	5	50	500
DIPHOSGENE	00075-44-5	5	1,2,3,4,6,8	0.5	5	50	500
DIPHOSPHORAMIDE, OCTAMETHYL-	00152-16-9	10	2,3,7,4,1	1	10	100	1000
DIPHOSPHORIC ACID, TETRAETHYL ESTER	00107-49-3	5	1,2,3,4,6	0.5	5	50	500
DIPROPYLAMINE	00142-84-7	100	3,6	10	100	1000	10000
DIPYRIDO[1,2-A,2',1'-C]PYRAZINEDIIUM, 6,7-DIHYDRO-	02764-72-9	50	7,3	5	50	500	5000
DIPYRIDO[1,2-A,2',1'-C]PYRAZINEDIIUM, 6,7-DIHYDRO.	00085-00-7	50	7,1,3,6	5	50	500	5000
DIQUAT	00085-00-7	50	1,3,6	5	50	500	5000
DIQUAT	02764-72-9	50	3,6	5	50	500	5000
DIQUAT DIBROMIDE	00085-00-7	50	6	5	50	500	5000
DI-SEC OCTYL PHTHALATE	00117-81-7	10	2,3,5,8,6	0.006	50	90	600
DISULFIDE, DIMETHYL	00624-92-0	50	7	5	50	500	5000
DISULFOTON	00298-04-4	1	1,3,6,4	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
DISYSTON	00298-04-4	1	6,1,3,4	0.1	1	10	100
DITHIAZININE IODIDE	00514-73-8	1	4	0.1	1	10	100
2,4-DITHIOBIURET	00541-53-7	10	1,2,3,4	1	10	100	1000
DITHIOBIURET	00541-53-7	10	4,1,2,3	1	10	100	1000
1,3-DITHIOLANE-2-CARBOXALDEHYDE, 2,4-DIMETHYL-,...	26419-73-8	1	4	0.1	1	10	100
DITHIONOUS ACID, ZINC SALT (1:1)	07779-86-4	50	7,1,3	(See RCs of any listed constituents)			
DITHIOPYROPHOSPHORIC ACID, TETRAETHYL-ESTER	03689-24-5	10	2,3,1,4,6	1	10	100	1000
DIULANE	00646-06-0	50	1,6	5	50	500	5000
DIURON	00330-54-1	10	1,3,6	1	10	100	1000
DNBP	00088-85-7	50	2,1,3,4	5	50	500	5000
DODECYLBENZENESULFONIC ACID	27176-87-0	50	1,3,6	5	50	500	5000
DODECYL TRICHLOROSILANE	04484-72-4	10	1	1	10	100	1000
DURSBAN	02921-88-2	1	6,1,3	0.1	1	10	100
DYFONATE	00944-22-9	1	6,4,1	0.1	1	10	100
EDIFENPHOS	17109-49-8	1	1	0.1	1	10	100
EDTA	00060-00-4	100	1,3	10	100	1000	10000
EHTAN, 1,1'-THIOBIS[2-CHLORO-	00505-60-2	1	7,2,4,6,8	0.1	1	10	100
EMETAN,6',7',10,11-TETRAMETHOXY-,DIHYDROCHLORIDE	00316-42-7	1	7,4	0.1	1	10	100
EMETINE, DIHYDROCHLORIDE	00316-42-7	1	4	0.1	1	10	100
ENDOSULFAN	115-29-7	1	1,2,3,6,4	0.002	0.002	0.5	1
alpha-ENDOSULFAN	959-98-8	1	1,2,3,6,4	0.002	0.002	0.5	1
beta-ENDOSULFAN	33213-65-9	1	1,2,3,6,4	0.002	0.002	0.5	1
ENDOSULFAN SULFATE	01031-07-8	1	1,3,6	(See RCs of any listed constituents)			
ENDOTHALL	00145-73-3	50	1,2,3,6	5	50	500	5000
ENDOTHION	02778-04-3	1	4	0.1	1	10	100
ENDRIN	72-20-8	1	1,3,6,4,2	0.002	0.005	10	20
ENDRIN ALDEHYDE	07421-93-4	1	1,3,6	0.1	1	10	100
ENDRIN AND METABOLITES	72-20-8	1	1,3,6,4,2	0.002	0.005	10	20
EPICHLOROHYDRIN	00106-89-8	10	1,3,5,8,6,4,2	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	GW1 (mg/l)	Reportable Concentrations		
		RQ (Pounds)			GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
EPINEPHRINE	00051-43-4	50	3,2,6	5	50	500	5000
EPN	02104-64-5	1	6,4,1	0.1	1	10	100
4,7-EPOXYISOBENZOFURAN-1,3-DIONE, HEXAHYDRO-3A,7A-DI..	00056-25-7	1	7,4	0.1	1	10	100
1,2-EPOXYPROPANE	00075-56-9	10	6,1,3,4,5,8	1	10	100	1000
ERGOCALCIFEROL (VITAMIN D)	00050-14-6	1	4,6	0.1	1	10	100
ERGOTAMAN-3',6',18-TRIONE, 12'-HYDROXY-2'-METHYL..	00379-79-3	1	7,4	0.1	1	10	100
ERGOTAMINE TARTRATE	00379-79-3	1	4	0.1	1	10	100
ERIONITE	66733-21-9	1	6,7	0.1	1	10	100
ETHANAL	00075-07-0	50	3,1,5,6,8	5	50	500	5000
ETHANAMINE	00075-04-7	10	6,7,1,3	1	10	100	1000
ETHANAMINE, 1,1-DIMETHYL-2-PHENYL-	00122-09-8	100	2,3,1,6	10	100	1000	10000
ETHANAMINE, 2-CHLORO-N,N-BIS(2-CHLOROETHYL)-	00555-77-1	1	7,4	0.1	1	10	100
ETHANAMINE, 2-CHLORO-N-(2-CHLOROETHYL)-N-ETHYL-	00538-07-8	1	7,4	0.1	1	10	100
ETHANAMINE, 2-CHLORO-N-(2-CHLOROETHYL)-N-METHYL-	00051-75-2	1	7,4,6,8	0.1	1	10	100
ETHANAMINE, N,N-DIETHYL-	00121-44-8	100	1,3,5,6	10	100	1000	10000
ETHANAMINE, N-ETHYL-	00109-89-7	10	1,3,5,6,8	1	10	100	1000
ETHANAMINE, N-ETHYL-N-NITROSO-	00055-18-5	1	2,3,7,6,8	0.1	1	10	100
ETHANAMINIUM, 2-CHLORO-N,N,N-TRIMETHYL-, CHLORIDE	00999-81-5	1	7,4	0.1	1	10	100
ETHANAMINIUM, 2-[(AMINOCARBONYLOXY)]-N,N,N-TRIME..	00051-83-2	1	7,4	0.1	1	10	100
ETHANE	00074-84-0	10	1,6,7	1	10	100	1000
ETHANE, 1,1'-OXYBIS(2-CHLORO-	111-44-4	5	2,3,6,8,4,1	0.03	0.03	0.7	0.7
ETHANE, 1,1'-OXYBIS-	00060-29-7	10	3,7,1,5,6	1	10	100	1000
ETHANE, 1,1'-[METHYLENEBIS(OXY)]BIS(2-CHLORO-	00111-91-1	50	2,3,6,8	5	50	500	5000
ETHANE, 1,1,1,2,2,2-HEXACHLORO-	67-72-1	10	1,2,3,5,6,8	0.008	0.1	0.7	3
ETHANE, 1,1,1,2-TETRACHLORO-	630-20-6	10	2,3,7,6,8	0.005	0.01	0.1	0.1
ETHANE, 1,1,1-TRICHLORO-	71-55-6	50	1,2,3,5,6,7,8	0.2	4	30	600
ETHANE, 1,1,1-TRICHLORO-2,2-BIS(P-CHLOROPHENYL)-	50-29-3	1	1,2,3,6	0.0003	0.001	6	30
ETHANE, 1,1,1-TRICHLORO-2,2-BIS(P-METHOXYPHENYL)-	72-43-5	1	1,2,3,6,8	0.01	0.01	200	400
ETHANE, 1,1,2,2-TETRABROMO-	00079-27-6	50	7,1,6	5	50	500	5000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
ETHANE, 1,1,2,2-TETRACHLORO-	79-34-5	10	1,2,3,7,5,6,8	0.002	0.009	0.005	0.02
ETHANE, 1,1,2-TRICHLORO-	79-00-5	10	2,3,5,6,7,8	0.005	0.9	0.1	2
ETHANE, 1,1-DICHLORO-	75-34-3	50	3,7,1,2,6,8	0.07	2	0.4	9
ETHANE, 1,1-DICHLORO-	00107-07-3	1	1,4,6	0.1	1	10	100
ETHANE, 1,1-DICHLORO-1-NITRO-	00594-72-9	10	7,6	1	10	100	1000
ETHANE, 1,1-DICHLORO-2,2-BIS(P-CHLOROPHENYL)-	72-54-8	1	2,1,3,6	0.0002	0.05	8	40
ETHANE, 1,1-DIETHOXY-	00105-57-7	10	1,6	1	10	100	1000
ETHANE, 1,2-BIS(2-CHLOROETHOXY)-	00112-26-5	100	7,6	10	100	1000	10000
ETHANE, 1,2-DIBROMO-	106-93-4	1	1,2,3,8,6	0.00002	0.002	0.1	0.1
ETHANE, 1,2-DICHLORO-	107-06-2	10	3,1,2,5,6,8	0.005	0.005	0.1	0.1
ETHANE, 1,2-DIETHOXY-	00629-14-1	10	7,1,6	1	10	100	1000
ETHANE, 1,2-DIMETHOXY-	00110-71-4	10	7,6	1	10	100	1000
ETHANE, 1-CHLORO-1,1-DIFLUORO-	00075-68-3	10	7,1,6,8	1	10	100	1000
ETHANE, BROMO	00074-96-4	10	7,6	1	10	100	1000
ETHANE, CHLORO	00075-00-3	10	7,1,3,5,6,8	1	10	100	1000
ETHANE, HEXACHLORO-	67-72-1	10	1,2,3,5,6,7,8	0.008	0.1	0.7	3
ETHANE, METHOXY-	00540-67-0	10	7,1,6	1	10	100	1000
ETHANE, NITRO-	00079-24-3	10	7,1,6	1	10	100	1000
ETHANE, PENTACHLORO-	00076-01-7	5	2,3,7,1	0.5	5	50	500
1,2-ETHANEDIAMINE	00107-15-3	100	1,3,4,6	10	100	1000	10000
1,2-ETHANEDIAMINE, N,N-DIMETHYL-N'-2-PYRIDINYL-N'-(2..	00091-80-5	100	7,2,3,6	10	100	1000	10000
ETHANEDINITRILE	00460-19-5	10	2,7,1,3,6	1	10	100	1000
ETHANEDIOIC ACID, AMMONIUM IRON SALT	55488-87-4	50	7,3,6	(See RCs of any listed constituents)			
ETHANEDIOIC ACID, AMMONIUM IRON(3+) SALT	02944-67-4	50	7,3,6	(See RCs of any listed constituents)			
ETHANEDIOIC ACID, AMMONIUM SALT	14258-49-2	100	7,3,6	(See RCs of any listed constituents)			
ETHANEDIOIC ACID, COPPER(2+) SALT (1:1), HEMIHYD..	05893-66-3	10	7,3,6	(See RCs of any listed constituents)			
ETHANEDIOIC ACID, DIAMMONIUM SALT, MONOHYDRATE	06009-70-7	100	7,3,6	(See RCs of any listed constituents)			
ETHANEDIOIC ACID, MONOAMMONIUM SALT, MONOHYDRATE	05972-73-6	100	7,3,6	(See RCs of any listed constituents)			
1,2-ETHANEDIOL, DINITRATE	00628-96-6	10	3,7,1,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
1,2-ETHANEDIYLBISCARBAMODITHIOIC ACID,SALTS AND ESTERS	00111-54-6	100	2,3,1,6	10	100	1000	10000
ETHANENITRILE	00075-05-8	100	2,3,1,6,8	10	100	1000	10000
ETHANEPEROXOIC ACID	00079-21-0	1	7,1,4,6,8	0.1	1	10	100
ETHANEPEROXOIC ACID, 1,1-DIMETHYLETHYL ESTER	00107-71-1	100	7,1,6	10	100	1000	10000
ETHANESULFONYL CHLORIDE, 2-CHLORO-	01622-32-8	1	7,4	0.1	1	10	100
ETHANETHIOAMIDE	00062-55-5	5	2,3,7,6,8	0.5	5	50	500
ETHANETHIOL	00075-08-1	10	6,7,1	1	10	100	1000
ETHANIMIDOTHIOIC ACID, 2-(DIMETHYLAMINO)-N-[[ME..	23135-22-0	1	7,4,5,1	0.1	1	10	100
ETHANIMIDOTHIOIC ACID, N-[[[(METHYLAMINO)CARBONYL..	16752-77-5	10	7,1,2,3,4,6	1	10	100	1000
ETHANOL (DEP RQ in gallons)	00064-17-5	10	1,7,6	1	10	100	1000
ETHANOL 2-(DIMETHYLAMINO)-	00108-01-0	100	7,6	10	100	1000	10000
2-ETHANOL, (2-AMINOETHOXY)	00929-06-6	50	1,6	5	50	500	5000
ETHANOL, 1,2-DICHLORO-, ACETATE	10140-87-1	1	4,7	0.1	1	10	100
ETHANOL, 2,2'-(NITROSOIMINO)BIS-	01116-54-7	1	2,3,6	0.1	1	10	100
ETHANOL, 2-(1-METHYLETHOXY)-	00109-59-1	10	7,6	1	10	100	1000
ETHANOL, 2-(2-METHOXYETHOXY)-	00111-77-3	10	7,6	1	10	100	1000
ETHANOL, 2-(METHYLAMINO)-	00109-83-1	10	7,6	1	10	100	1000
ETHANOL, 2-AMINO-	00141-43-5	10	7,1,6	1	10	100	1000
ETHANOL, 2-BUTOXY-	00111-76-2	10	7,6	1	10	100	1000
ETHANOL, 2-ETHOXY-	00110-80-5	10	2,1,3,6,8	1	10	100	1000
ETHANOL, 2-ETHOXY-, ACETATE	00111-15-9	10	7,1,6	1	10	100	1000
ETHANOL, 2-FLUORO-	00371-62-0	1	7,4	0.1	1	10	100
ETHANOL, 2-METHOXY-	00109-86-4	10	7,1,5,6,8	1	10	100	1000
ETHANOL, 2-METHOXY-, ACETATE	00110-49-6	10	7,1,6	1	10	100	1000
ETHANOLAMINE	00141-43-5	10	6,1	1	10	100	1000
ETHANONE, 1-PHENYL-	00098-86-2	100	2,3,7,1,6,8	10	100	1000	10000
ETHANONE, 2-CHLORO-1-PHENYL-	00532-27-4	10	7,6,8	1	10	100	1000
ETHANOYL CHLORIDE	00075-36-5	100	2,3,1,6	10	100	1000	10000
ETHENAMINE, N-METHYL-N-NITROSO-	04549-40-0	5	7,2,3,6,8	0.5	5	50	500

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	GW1 (mg/l)	Reportable Concentrations		
		RQ (Pounds)			GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
ETHENE	00074-85-1	1	6,7,1,8	0.1	1	10	100
ETHENE , 1,2-DICHLORO-	540-59-0	10	7,6,8	0.07	0.1	0.3	0.4
ETHENE, (2-CHLOROETHOXY)-	00110-75-8	50	2,1,3,6	5	50	500	5000
ETHENE, (2-METHOXYETHOXY)-	01663-35-0	10	7,6	1	10	100	1000
ETHENE, 1,1-DICHLORO-	00075-35-4	10	2,3,7,1,5,6,8	0.007	0.08	3	40
ETHENE, 1,1-DIFLUORO	00075-38-7	10	7,6,1	1	10	100	1000
ETHENE, 1,2-DICHLORO-	156-60-5	50	7,6,1,2,3,5	0.08	0.08	1	1
ETHENE, 1,2-DICHLORO- (E)	156-60-5	50	6,1,2,3,5	0.08	0.08	1	1
ETHENE, CHLORO-	75-01-4	1	1,2,3,5,6,7,8	0.002	0.002	0.7	0.7
ETHENE, CHLOROTRIFLUORO-	00079-38-9	10	7,1,6	1	10	100	1000
ETHENE, FLUORO	00075-02-5	10	7,1,6	1	10	100	1000
ETHENE, METHOXY-	00107-25-5	10	7,1,6	1	10	100	1000
ETHENE, TETRACHLORO-	127-18-4	10	1,3,5,6,8	0.005	0.05	1	10
ETHENE, TETRAFLUORO	00116-14-3	10	7,1,6	1	10	100	1000
ETHENE, TRICHLORO-	79-01-6	10	7,1,2,3,5,6,8	0.005	0.005	0.3	0.3
ETHION	00563-12-2	5	6,1,3,4	0.5	5	50	500
ETHOPROP	13194-48-4	1	6,4,1	0.1	1	10	100
ETHOPROPHOS	13194-48-4	1	4,6,1	0.1	1	10	100
2-ETHOXY-3,4-DIHYDRO-2-PYRAN	00103-75-3	100	6	10	100	1000	10000
2-ETHOXYETHANOL	00110-80-5	10	8,6,3,1,2	1	10	100	1000
2-ETHOXYETHYL ACETATE	00111-15-9	10	6,1	1	10	100	1000
ETHYL 4,4'-DICHLOROBENZILATE	00510-15-6	5	3,2,6,8	0.5	5	50	500
ETHYL ACETATE	00141-78-6	100	1,3,5,6	10	100	1000	10000
ETHYL ACETOACETATE	00141-97-9	10	6	1	10	100	1000
ETHYL ACRYLATE	00140-88-5	50	1,3,5,8,6	5	50	500	5000
ETHYL ALCOHOL (DEP RQ in gallons)	00064-17-5	10	1,6	1	10	100	1000
ETHYL ALDEHYDE	00075-07-0	50	1,3,5,6,8	5	50	500	5000
ETHYL BROMIDE	00074-96-4	10	6	1	10	100	1000
ETHYL BUTYL KETONE	00106-35-4	10	6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	GW1 (mg/l)	Reportable Concentrations		
		RQ (Pounds)			GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
ETHYL BUTYRATE	00105-54-4	10	1,6	1	10	100	1000
ETHYL CARBAMATE	00051-79-6	10	2,3,6,8	1	10	100	1000
ETHYL CHLORIDE	00075-00-3	10	8,1,6,3,5	1	10	100	1000
ETHYL CHLOROACETATE	00105-39-5	10	1,6	1	10	100	1000
ETHYL CHLOROFORMATE	00541-41-3	10	6,1,8	1	10	100	1000
ETHYL CYANIDE	00107-12-0	5	1,2,3,4,6	0.5	5	50	500
ETHYL CYANOACETATE	00105-56-6	10	6	1	10	100	1000
P,P-ETHYL DDD (PERTHANE)	00072-56-0	1	6	0.1	1	10	100
ETHYL DICHLOROSILANE	01789-58-8	10	6,1	1	10	100	1000
ETHYL ETHER	00060-29-7	10	1,3,5,6	1	10	100	1000
ETHYL FORMATE	00109-94-4	10	1,6	1	10	100	1000
ETHYL LACTATE	00097-64-3	10	1,6	1	10	100	1000
ETHYL MERCAPTAN	00075-08-1	10	1,6	1	10	100	1000
ETHYL METHACRYLATE	00097-63-2	50	1,2,3,6	5	50	500	5000
ETHYL METHANESULFONATE	00062-50-0	1	2,3,6	0.1	1	10	100
ETHYL METHANESULPHONATE	00062-50-0	1	6,2,3	0.1	1	10	100
ETHYL METHYL ETHER	00540-67-0	10	1,6	1	10	100	1000
ETHYL METHYL KETONE (MEK)	78-93-3	100	2,3,6,8,1	4	50	4	50
ETHYL METHYL KETONE PEROXIDE	01338-23-4	5	6,2,3	0.5	5	50	500
N-ETHYL MORPHOLINE	00100-74-3	10	6	1	10	100	1000
ETHYL NITRATE	00625-58-1	10	6,1	1	10	100	1000
ETHYL NITRITE	00109-95-5	10	1,6	1	10	100	1000
ETHYL PARATHION	00056-38-2	5	6,1,2,3,4,8	0.5	5	50	500
ETHYL PHENYL DICHLOROSILANE	01125-27-5	10	1	1	10	100	1000
ETHYL PHOSPHORODICHLORIDATE	01498-51-7	10	1	1	10	100	1000
ETHYL PROPIONATE	00105-37-3	10	1,6	1	10	100	1000
ETHYL THIOCYANATE	00542-90-5	1	4	0.1	1	10	100
ETHYL TRICHLOROSILANE	00115-21-9	1	1,4,6	0.1	1	10	100
5-ETHYL-2-METHYLPYRIDINE	00104-90-5	10	6,1	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
ETHYLALUMINUM DICHLORIDE	00563-43-9	10	6	1	10	100	1000
ETHYLALUMINUM SESQUICHLORIDE	12075-68-2	10	6	1	10	100	1000
ETHYLAMINE	00075-04-7	10	6,1,3	1	10	100	1000
ETHYLBENZENE	100-41-4	50	3,6,1,5,8	0.7	5	40	1000
ETHYLBENZYLANILINE	00092-59-1	50	6	5	50	500	5000
ETHYLBIS(2-CHLOROETHYL)AMINE	00538-07-8	1	4	0.1	1	10	100
ETHYLBIS(2-CHLOROETHYL)AMINE (NITROGEN MUSTARD ...	00538-07-8	1	4	0.1	1	10	100
2-ETHYLBUTYL ACRYLATE	03953-10-4	10	6	1	10	100	1000
n-ETHYLCYCLOHEXYLAMINE	05459-93-8	10	6	1	10	100	1000
ETHYLENE	00074-85-1	1	1,6,8	0.1	1	10	100
ETHYLENE BIS DITHIOCARBAMATE	00142-59-6	1	7,6,1	0.1	1	10	100
ETHYLENE CHLOROHYDRIN	00107-07-3	1	1,6,4	0.1	1	10	100
ETHYLENE CYANOHYDRIN	00109-78-4	10	6	1	10	100	1000
ETHYLENE DIBROMIDE	106-93-4	1	1,2,3,8,6	0.00002	0.002	0.1	0.1
ETHYLENE DICHLORIDE	107-06-2	10	1,2,3,8,6,5	0.005	0.005	0.1	0.1
ETHYLENE FLUOROXYDRIN	00371-62-0	1	4	0.1	1	10	100
ETHYLENE GLYCOL DIETHYL ETHER	00629-14-1	10	6,1	1	10	100	1000
ETHYLENE GLYCOL DIMETHYL ETHER	00110-71-4	10	6	1	10	100	1000
ETHYLENE GLYCOL DINITRATE	00628-96-6	10	6,1	1	10	100	1000
ETHYLENE GLYCOL ISOPROPYL ETHER	00109-59-1	10	6	1	10	100	1000
ETHYLENE GLYCOL MONOACRYLATE	00818-61-1	10	6	1	10	100	1000
ETHYLENE GLYCOL MONOBUTYL ETHER	00111-76-2	10	6	1	10	100	1000
ETHYLENE GLYCOL MONOETHYL ETHER	00110-80-5	10	1,2,6,3,8	1	10	100	1000
ETHYLENE GLYCOL MONOMETHYL ETHER	00109-86-4	10	1,5,6,8	1	10	100	1000
ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE	00110-49-6	10	1,6	1	10	100	1000
ETHYLENE OXIDE	00075-21-8	5	1,2,3,4,6,8	0.5	5	50	500
ETHYLENE THIOUREA	00096-45-7	5	6,8,2,3	0.5	5	50	500
ETHYLENE, 1,1-DICHLORO-2,2-BIS(4-CHLOROPHENYL)-	72-55-9	1	2,3,6	0.00005	0.4	6	30

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
1,2-ETHYLENEBISDITHIOCARBAMIC ACID	00111-54-6	100	6,1,2,3	10	100	1000	10000
ETHYLENEBISDITHIOCARBAMIC ACID, SALTS AND ESTERS	00111-54-6	100	2,3,1,6	10	100	1000	10000
ETHYLENEDIAMINE	00107-15-3	100	1,3,6,4	10	100	1000	10000
ETHYLENEDIAMINE TETRAACETIC ACID (EDTA)	00060-00-4	100	3,1,6	10	100	1000	10000
ETHYLENIMINE	00151-56-4	1	1,2,3,8,6,4	0.1	1	10	100
ETHYLHEXALDEHYDE	00123-05-7	10	1,6	1	10	100	1000
2-ETHYLHEXANAL	00123-05-7	10	6,1	1	10	100	1000
2-ETHYLHEXANOL	00104-76-7	10	6	1	10	100	1000
2-ETHYLHEXYL ACETATE	00103-09-3	10	6	1	10	100	1000
2-ETHYLHEXYL ACRYLATE	00103-11-7	10	6	1	10	100	1000
ETHYLIDENE CHLORIDE	75-34-3	50	6,1,2,3,8	0.07	2	0.4	9
1,1-ETHYLIDENE DICHLORIDE	75-34-3	50	6,1,2,3,8	0.07	2	0.4	9
ETHYLIDENE DICHLORIDE	75-34-3	50	6,1,2,3,8	0.07	2	0.4	9
1,2-ETHYLIDENE DICHLORIDE	107-06-2	10	1,2,3,8,6,5	0.005	0.005	0.1	0.1
ETHYLIDENE NORBORNENE	16219-75-3	100	6	10	100	1000	10000
ETHYLMERCURIC PHOSPHATE	02235-25-8	5		0.5	5	50	500
4-ETHYLMORPHOLINE	00100-74-3	10	6	1	10	100	1000
p-ETHYLPHENOL	00123-07-9	100	6	10	100	1000	10000
ETHYLTRICHLOROSILANE	00115-21-9	1	6,1,4	0.1	1	10	100
ETHYNE	00074-86-2	10	7,1,6	1	10	100	1000
ETHYNODIOL DIACETATE	00297-76-7	1	6,7	0.1	1	10	100
FAMPHUR	00052-85-7	50	1,2,3,6	5	50	500	5000
FENAMIPHOS	22224-92-6	1	6,4,1	0.1	1	10	100
FENITROTHION	00122-14-5	1	4,1	0.1	1	10	100
FENPROPATHRIN	39515-41-8	1	1	0.1	1	10	100
FENSULFOTHION	00115-90-2	1	6,4,1	0.1	1	10	100
FENTHION	00055-38-9	5	6,1	0.5	5	50	500
FERRIC AMMONIUM CITRATE	01185-57-5	50	1,3,6	5	50	500	5000
FERRIC AMMONIUM OXALATE	02944-67-4	50	3,6	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
FERRIC AMMONIUM OXALATE	55488-87-4	50	3,6	(See RCs of any listed constituents)			
FERRIC CHLORIDE	07705-08-0	50	1,3,6	(See RCs of any listed constituents)			
FERRIC FLUORIDE	07783-50-8	10	1,3,6	(See RCs of any listed constituents)			
FERRIC NITRATE	10421-48-4	50	1,3,6	(See RCs of any listed constituents)			
FERRIC SULFATE	10028-22-5	50	1,3,6	(See RCs of any listed constituents)			
FERROUS AMMONIUM SULFATE	10045-89-3	50	1,3,6	(See RCs of any listed constituents)			
FERROUS CHLORIDE	07758-94-3	10	1,3,6	(See RCs of any listed constituents)			
FERROUS SULFATE	07720-78-7	50	1,3,6	(See RCs of any listed constituents)			
FERROUS SULFATE	07782-63-0	50	3,6	(See RCs of any listed constituents)			
FLUENETIL	04301-50-2	1	4	0.1	1	10	100
FLUORACETYL CHLORIDE	00359-06-8	1	4	0.1	1	10	100
FLUORANTHENE	206-44-0	10	2,3,7,6	0.09	0.2	1000	3000
FLUORENE	86-73-7	100	3,6	0.03	0.04	1000	3000
9H-FLUORENE	86-73-7	100	3,6,7	0.03	0.04	1000	3000
FLUORIC ACID	07664-39-3	10	1,2,3,4,5,6,8	(See RCs of any listed constituents)			
FLUORINE	07782-41-4	5	4,6,1,2,3,7	(Not Applicable)			
FLUROACETAMIDE	00640-19-7	10	1,3,4,2,6	1	10	100	1000
2-FLUROACETAMIDE	00640-19-7	10	6,1,3,2,4	1	10	100	1000
FLUROACETAMIDE/1081	00640-19-7	10	6,1,2,3,4	1	10	100	1000
FLUROACETIC ACID	00144-49-0	1	4	0.1	1	10	100
FLUROACETIC ACID, SODIUM SALT	00062-74-8	5	2,3,4,6	(See RCs of any listed constituents)			
FLUROCARBON 11	00075-69-4	100	6,1,2,3,8	10	100	1000	10000
FLUROCARBON 12	00075-71-8	100	6,1,2,3,8	10	100	1000	10000
FLUROSULFONIC ACID	07789-21-1	10	1	(See RCs of any listed constituents)			
FLUROTRICHLOROMETHANE	00075-69-4	100	6,1,2,3,8	10	100	1000	10000
FLUROURACIL	00051-21-8	1	4	0.1	1	10	100
FLURIDONE	59756-60-4	10	5	1	10	100	1000
FOLPET	00133-07-3	1	5	0.1	1	10	100
FONOFOS	00944-22-9	1	6,4,1	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
FORMALDEHYDE	00050-00-0	10	2,3,4,5,6,7,8,1	1	10	100	1000
FORMALDEHYDE CYANOHYDRIN	00107-16-4	1	4	0.1	1	10	100
FORMALIN	00050-00-0	10	1,6,2,3,4,5,8	1	10	100	1000
FORMAMIDE	00075-12-7	10	6,7	1	10	100	1000
FORMAMIDE, N,N-DIMETHYL-	00068-12-2	10	7,5,6	1	10	100	1000
FORMETANATE	23422-53-9	1	4,1	0.1	1	10	100
FORMIC ACID	00064-18-6	100	1,2,3,6,7,8	10	100	1000	10000
FORMIC ACID, 1-METHYLETHYL ESTER	00625-55-8	10	7,6	1	10	100	1000
FORMIC ACID, COBALT(2+) SALT	00544-18-3	50	7,1,3,6	(See RCs of any listed constituents)			
FORMIC ACID, ETHYL ESTER	00109-94-4	10	7,1,6	1	10	100	1000
FORMIC ACID, METHYL ESTER	00107-31-3	10	7,1,6	1	10	100	1000
FORMIC ACID, ZINC SALT	00557-41-5	50	7,1,3	(See RCs of any listed constituents)			
FORMOTHION	02540-82-1	1	4	0.1	1	10	100
FORMPARANATE	17702-57-7	1	4	0.1	1	10	100
FOSHIETAN	21548-32-3	1	4	0.1	1	10	100
FREON 11	00075-69-4	100	1,2,3,6,8	10	100	1000	10000
FREON 12	00075-71-8	100	1,2,3,6,8	10	100	1000	10000
FUBERIDAZOLE	03878-19-1	1	4	0.1	1	10	100
FUEL OIL #'s 2,4,5,6 (DEP RQ in gallons)		10		(See TPH RC and RCs of other relevant constituents)			
FULMINIC ACID, MERCURY SALT	00628-86-4	5	2,1,3	(See RCs of any listed constituents)			
FULMINIC ACID, MERCURY(2+) SALT	00628-86-4	5	7,1,2,3,6	(See RCs of any listed constituents)			
FUMARIC ACID	00110-17-8	100	1,3,6	10	100	1000	10000
FURADAN	01563-66-2	5	6,1,3,4	0.5	5	50	500
2-FURALDEHYDE	00098-01-1	100	6,1,3	10	100	1000	10000
FURAN	00110-00-9	10	1,3,6,4	1	10	100	1000
FURAN, TETRAHYDRO-	00109-99-9	50	3,1,5,6	5	50	500	5000
2-FURANCARBOXALDEHYDE	00098-01-1	100	3,7,1,6	10	100	1000	10000
2,5-FURANDIONE	00108-31-6	100	2,3,5,6,8	10	100	1000	10000
2-FURANMETHANOL	00098-00-0	10	7,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
FURANMETHANOL, TETRAHYDRO-	00097-99-4	10	7,6	1	10	100	1000
FURFURAL	00098-01-1	100	1,3,6	10	100	1000	10000
FURFURAN	00110-00-9	10	3,1,4,6	1	10	100	1000
FURFURYL ALCOHOL	00098-00-0	10	6	1	10	100	1000
7H-FURO[3,2G][1]BENZOPYRAN-7-ONE,4-METHOXY-	00484-20-8	1	7	0.1	1	10	100
GALLIUM CHLORIDE	13450-90-3	1	7,4	(See RCs of any listed constituents)			
GALLIUM TRICHLORIDE	13450-90-3	1	4	(See RCs of any listed constituents)			
GASOLINE (DEP RQ in gallons)		10		(See TPH RC and RCs of other relevant constituents)			
D-GLUCOPYRANOSE, 2-DEOXY-2-(3-METHYL-3-NITROSOUREI..	18883-66-4	1	2,3,6	0.1	1	10	100
D-GLUCOSE, 2-DEOXY-2-[[(METHYLNITROSOAMINO) CARBONY..	18883-66-4	1	7,2,3,6	0.1	1	10	100
L-GLUTAMIC ACID, N-[4-[[(2,4-DIAMINO-6-PTERIDINYL)..	00054-62-6	1	7,4	0.1	1	10	100
GLYCIDALDEHYDE	00765-34-4	5	6,2,3	0.5	5	50	500
GLYCIDYLALDEHYDE	00765-34-4	5	2,3,6	0.5	5	50	500
GLYCINE, N,N'-1,2-ETHANEDIYLBIS[N-(CARBOXYMETHYL..	00060-00-4	100	7,1,3,6	10	100	1000	10000
GLYCOL MONOETHYL ETHER	00110-80-5	10	6,1,2,3,8	1	10	100	1000
GRISEOFULVIN	00126-07-8	1	6,7	0.1	1	10	100
GUANIDINE, N-METHYL-N'-NITRO-N-NITROSO-	00070-25-7	5	7,1,2,3,6,3	0.5	5	50	500
GUANIDINE, N-NITROSO-N-METHYL-N'-NITRO-	00070-25-7	5	2,3,1,6,3	0.5	5	50	500
GUTHION	00086-50-0	1	1,3,6,4	0.1	1	10	100
HALOWAX 1014	01335-87-1	1	6,8	0.1	1	10	100
gamma-HCH	58-89-9	1	3,1,4,5,6,8	0.0002	0.004	0.003	0.5
alpha-HCH	00319-84-6	5	6,3	0.5	5	50	500
beta-HCH	00319-85-7	1	6,3	0.1	1	10	100
HEPTACHLOR	76-44-8	1	1,2,3,5,6,8	0.0004	0.001	0.3	2
HEPTACHLOR EPOXIDE	1024-57-3	1	3,2,6	0.0002	0.002	0.1	0.9
HEPTACHLOR EPOXIDE (ALPHA, BETA, AND GAMMA ISOMERS)	1024-57-3	1	3,2,6	0.0002	0.002	0.1	0.9
HEPTANE (N-HEPTANE)	00142-82-5	10	1,7,6	1	10	100	1000
3-HEPTANONE	00106-35-4	10	6	1	10	100	1000
2-HEPTANONE	00110-43-0	10	7,1,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
4-HEPTANONE, 2,6-DIMETHYL-	00108-83-8	10	7,1,6	1	10	100	1000
2,2',4,4',5,5'-HEXABROMO-1,1'BIPHENYL	59080-40-9	1	6,7	0.1	1	10	100
HEXABROMOBIPHENYL	36355-01-8	1	6,7	0.1	1	10	100
HEXACHLORO-1,3-BUTADIENE	87-68-3	1	2,3,6,8,1	0.0006	0.05	30	100
1,2,3,4,10,10-HEXACHLORO-1,4,4A,5,8,8A-HEXAHYDRO-1,4:5,8-ENDO,..	309-00-2	1	1,2,3,8,6,4	0.0005	0.002	0.08	0.5
1,2,3,4,10,10-HEXACHLORO-1,4,4A,5,8,8A-HEXAHYDRO-1,4:5,8-ENDO,..	00465-73-6	1	2,3,1,4	0.1	1	10	100
1,2,3,4,10,10-HEXACHLORO-6,7-EPOXY-1,4,4A,5,6,7,8,8A-OCTAHYDRO..	60-57-1	1	2,3,6,1	0.0001	0.0005	0.08	0.5
HEXACHLOROBENZENE	118-74-1	5	2,3,8,6	0.001	0.001	0.7	0.8
HEXACHLOROBUTADIENE	00087-68-3	1	2,3,6,8,1	0.0006	0.05	30	100
alpha-HEXACHLOROCYCLOHEXANE	00319-84-6	5	6,3	0.5	5	50	500
beta-HEXACHLOROCYCLOHEXANE	00319-85-7	1	6,3	0.1	1	10	100
HEXACHLOROCYCLOHEXANE (GAMMA ISOMER)	00058-89-9	1	3,1,4,5,6,8	0.0002	0.004	0.003	0.5
HEXACHLOROCYCLOPENTADIENE	00077-47-4	5	1,2,3,4,5,6,8	0.5	5	50	500
HEXACHLOROETHANE	00067-72-1	10	1,2,3,5,6,8	0.008	0.1	0.7	3
HEXACHLOROHEXAHYDRO-ENDO,ENDO-DIMETHANONAPHTHALENE	00465-73-6	1	1,2,3,4	0.1	1	10	100
HEXACHLORONAPHTHALENE	01335-87-1	1	6,8	0.1	1	10	100
HEXACHLOROPHENE	00070-30-4	10	2,3,5,6,8	1	10	100	1000
HEXACHLOROPROPENE	01888-71-7	50	1,2,3,6	5	50	500	5000
HEXADECYLTRICHLOROSILANE	05894-60-0	50	6,1	5	50	500	5000
1,4-HEXADIENE	00592-45-0	10	6,7	1	10	100	1000
HEXAETHYL TETRAPHOSPHATE	00757-58-4	10	1,2,3,6	1	10	100	1000
HEXAFLUOROACETONE	00684-16-2	10	6	1	10	100	1000
HEXAFLUOROPHOSPHORIC ACID	16940-81-1	10	1	(See RCs of any listed constituents)			
HEXAFLUOROPROPYLENE	00116-14-3	10	1,6	1	10	100	1000
HEXAMETHYLENEDIAMINE	00124-09-4	10	1,6	1	10	100	1000
HEXAMETHYLENEDIAMINE, N,N'-DIBUTYL-	04835-11-4	1	4	0.1	1	10	100
HEXAMETHYLENEIMINE	00111-49-9	10	1,6	1	10	100	1000
HEXANAL	00066-25-1	10	6,7	1	10	100	1000
HEXANAL, 2-ETHYL-	00123-05-7	10	7,1,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	GW1	Reportable Concentrations		
		RQ (Pounds)			GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
HEXANE	00110-54-3	10	1,6,5	1	10	100	1000
HEXANE (N-HEXANE)	00110-54-3	10	6,1,5	1	10	100	1000
1,6-HEXANEDIAMINE, N,N'-DIBUTYL-	04835-11-4	1	7,4	0.1	1	10	100
HEXANEDIOIC ACID	00124-04-9	100	1,3,6	10	100	1000	10000
1-HEXANOL, 2-ETHYL-	00104-76-7	10	7,6	1	10	100	1000
2-HEXANONE	00591-78-6	10	6,5,7	1	10	100	1000
2-HEXANONE, 5-METHYL-	00110-12-3	10	7,6	1	10	100	1000
HEXAZINONE	51235-04-2	100	5	10	100	1000	10000
1-HEXENE	00592-41-6	10	6,7	1	10	100	1000
HEXONE	108-10-1	100	1,3,8,6	0.35	50	0.4	50
sec-HEXYL ACETATE	00142-92-7	100	6	10	100	1000	10000
HEXYLENE GLYCOL	00107-41-5	10	6	1	10	100	1000
HEXYLTRICHLOROSILANE	00928-65-4	10	1	1	10	100	1000
HMX	02691-41-0			0.2	50	2	100
HYDRAULIC OIL (petroleum based or unknown) (DEP RQ IN GALLONS)		10	5	(See TPH RC and RCs of other listed constituents)			
HYDRAULIC OIL (vegetable oil) (DEP RQ in gallons)		55	5	(Not Applicable)			
HYDRAZINE	00302-01-2	1	2,3,5,7,8,6,4,1	0.1	1	10	100
HYDRAZINE 1,2-DIETHYL-	01615-80-1	5	2,3,7,6	0.5	5	50	500
HYDRAZINE, 1,1-DIMETHYL-	00057-14-7	5	2,3,7,1,4,6,8	0.5	5	50	500
HYDRAZINE, 1,2-DIMETHYL-	00540-73-8	1	3,2,7,6	0.1	1	10	100
HYDRAZINE, 1,2-DIPHENYL-	00122-66-7	5	2,3,6,8	0.5	5	50	500
HYDRAZINE, ANHYDROUS	00302-01-2	1	1,2,3,4,5,6,8	0.1	1	10	100
HYDRAZINE, METHYL-	00060-34-4	5	2,3,7,1,4,6,8	0.5	5	50	500
HYDRAZINE, PHENYL-	00100-63-0	50	7,6	5	50	500	5000
HYDRAZINE, PHENYL-, MONOHYDROCHLORIDE	00059-88-1	1	7,4	0.1	1	10	100
HYDRAZINECARBOTHIOAMIDE	00079-19-6	10	2,3,7,1,4	1	10	100	1000
HYDRAZINECARBOTHIOAMIDE, 2-(1-METHYLETHYLIDENE)-	01752-30-3	1	7,4	0.1	1	10	100
HYDRAZINECARBOXAMIDE, MONOHYDROCHLORIDE	00563-41-7	1	7,4	0.1	1	10	100
HYDRAZINE SULFATE	10034-93-2	10	6,8	(See RCs of any listed constituents)			
HYDRAZOBENZENE	00122-66-7	5	8,6,2,3	0.5	5	50	500

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
HYDRIODIC ACID	10034-85-2	10	6,7	(See RCs of any listed constituents)			
HYDROBROMIC ACID	10035-10-6	10	6	(See RCs of any listed constituents)			
HYDROCHLORIC ACID	07647-01-0	100	1,3,7,8,4,5,6	(See RCs of any listed constituents)			
HYDROCYANIC ACID	00074-90-8	5	1,2,3,6,7,4,8	0.5	5	50	500
HYDROFLUORIC ACID	07664-39-3	10	6,1,2,3,7,4,5,8	(See RCs of any listed constituents)			
HYDROFLUOROSILICIC ACID	16961-83-4	10	1	(See RCs of any listed constituents)			
HYDROGEN	01333-74-0	10	6,1	(Not Applicable)			
HYDROGEN CHLORIDE	07647-01-0	100	1,4,5,6,3,8	(See RCs of any listed constituents)			
HYDROGEN CYANIDE	00074-90-8	5	2,3,6,8,1,4	0.5	5	50	500
HYDROGEN FLUORIDE	07664-39-3	10	4,6,1,2,3,5,8	(See RCs of any listed constituents)			
HYDROGEN PEROXIDE	07722-84-1	1	6,1,4	(See RCs of any listed constituents)			
HYDROGEN PEROXIDE (H2O2)	07722-84-1	1	7,1,4,6	(See RCs of any listed constituents)			
HYDROGEN PHOSPHIDE	07803-51-2	10	2,3,1,4,6	(See RCs of any listed constituents)			
HYDROGEN SELENIDE	07783-07-5	1	4,6,1	(See RCs of any listed constituents)			
HYDROGEN SELENIDE (H2Se)	07783-07-5	1	7,1,4,6	(See RCs of any listed constituents)			
HYDROGEN SULFATE	07664-93-9	50	1,3,4,5,6,8	(See RCs of any listed constituents)			
HYDROGEN SULFIDE	07783-06-4	10	4,6,1,2,3,5,8	(See RCs of any listed constituents)			
HYDROGEN SULFIDE (H2S)	07783-06-4	10	7,1,2,3,4,5,6,8	(See RCs of any listed constituents)			
HYDROPEROXIDE, 1-METHYL-1-PHENYLETHYL-	00080-15-9	5	3,7,1,6,8	0.5	5	50	500
HYDROQUINONE	00123-31-9	1	8,6,4	0.1	1	10	100
HYDROSULFURIC ACID	07783-06-4	10	3,1,2,4,5,6,8	(See RCs of any listed constituents)			
2-HYDROXY-2-METHYL-PROPANENITRILE	00075-86-5	5	6,1,2,3,4	0.5	5	50	500
HYDROXYDIMETHYLARSINE OXIDE	00075-60-5	1		0.1	1	10	100
2-HYDROXYETHYL ACRYLATE	00818-61-1	10	6	1	10	100	1000
HYDROXYLAMINE	07803-49-8	10	6,7	1	10	100	1000
3-HYDROXYPROPANENITRILE	00109-78-4	10	6	1	10	100	1000
HYPOCHLORITE SOLUTION	07681-52-9	10	1,3	(See RCs of any listed constituents)			
HYPOCHLOROUS ACID, CALCIUM SALT	07778-54-3	5	7,1,3,6	(See RCs of any listed constituents)			
HYPOCHLOROUS ACID, SODIUM SALT	07681-52-9	10	7,1,3	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
HYPOCHLOROUS ACID, SODIUM SALT, PENTAHYDRATE	10022-70-5	10	7,3	(See RCs of any listed constituents)			
2-IMIDAZOLIDINETHIONE	00096-45-7	5	2,3,7,6,8	0.5	5	50	500
IMIDOLE	00109-97-7	100	6	10	100	1000	10000
1H-INDENE-1,3(2H)-DIONE,2-[(4-CHLOROPHENYL)PHENYLAC..	03691-35-8	1	7,4,6	0.1	1	10	100
INDENO(1,2,3-CD)PYRENE	193-39-5	10	2,3,7,6	0.0005	0.1	7	40
1H-INDOLE-3-ACETIC ACID, 1-(4-CHLOROBENZOYL)-5-METH..	00053-86-1	10	7	1	10	100	1000
INDOMETHACIN	00053-86-1	10		1	10	100	1000
IODINE	07553-56-2	10	6,7	(Not Applicable)			
IODINE CYANIDE	00506-78-5	1	7,4	(See RCs of any listed constituents)			
IODINE MONOCHLORIDE	07790-99-0	10	1	(See RCs of any listed constituents)			
IODOMETHANE	00074-88-4	10	2,3,6,8	1	10	100	1000
IOXYNIL	01689-83-4	10	1	1	10	100	1000
IRON CARBONYL	13463-40-6	1	6,4	(See RCs of any listed constituents)			
IRON CARBONYL, (TB-5-11)-	13463-40-6	1	4,6	(See RCs of any listed constituents)			
IRON CHLORIDE	07705-08-0	50	1,3,6	(See RCs of any listed constituents)			
IRON CHLORIDE (FeC12)	07758-94-3	10	7,1,3,6	(See RCs of any listed constituents)			
IRON CHLORIDE (FeC13)	07705-08-0	50	7,1,3,6	(See RCs of any listed constituents)			
IRON FLUORIDE (FeF3)	07783-50-8	10	7,1,3,6	(See RCs of any listed constituents)			
IRON PENTACARBONYL	13463-40-6	1	4,6	(See RCs of any listed constituents)			
IRON SESQUICHLORIDE	07705-08-0	50	1,3,6	(See RCs of any listed constituents)			
ISOAMYL ACETATE	00123-92-2	50	5,6,3	5	50	500	5000
ISOBENZAN	00297-78-9	1	4	0.1	1	10	100
1,3-ISOBENZOFURANDIONE	00085-44-9	100	7,1,2,3,5,6,8	10	100	1000	10000
ISOBUTANE	00075-28-5	10	1,6	1	10	100	1000
ISOBUTANOL	00078-83-1	100	1,6,2,3,5	10	100	1000	10000
1-ISOBUTENYL METHYL KETONE	00141-79-7	10		1	10	100	1000
ISOBUTYL ACETATE	00110-19-0	100	1,5,6,3	10	100	1000	10000
ISOBUTYL ACRYLATE	00106-63-8	10	6	1	10	100	1000
ISOBUTYL ALCOHOL	00078-83-1	100	1,2,3,5,6	10	100	1000	10000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	GW1 (mg/l)	Reportable Concentrations		
		RQ (Pounds)			GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
ISOBUTYL METHYL KETONE	108-10-1	100	1,3,8,6	0.35	50	0.4	50
ISOBUTYLAMINE	00078-81-9	50	1,6,3	5	50	500	5000
ISOBUTYLENE	00115-11-7	10	1,6	1	10	100	1000
ISOBUTYRALDEHYDE	00078-84-2	10	6,8	1	10	100	1000
ISOBUTYRIC ACID	00079-31-2	100	1,3,6	10	100	1000	10000
ISOBUTYRIC ANHYDRIDE	00097-72-3	100	1,6	10	100	1000	10000
ISOBUTYRONITRILE	00078-82-0	1	4,6	0.1	1	10	100
ISOCYANIC ACID, 3,4-DICHLORPHENYL ESTER	00102-36-3	1	4	0.1	1	10	100
ISOCYANIC ACID, METHYL ESTER	00624-83-9	5	7,1,2,3,4,6,8	0.5	5	50	500
ISODECYL DIPHENYL PHOSPHATE	29761-21-5	50	1	5	50	500	5000
ISODRIN	00465-73-6	1	1,4,2,3	0.1	1	10	100
ISOFLUORPHATE	00055-91-4	10	4,1,2,3	1	10	100	1000
ISOHEXANE	00107-83-5	10	6,1	1	10	100	1000
1H-ISOINDOLE-1,3(2H)-DIONE,3A,4,7,7A-TETRAHYDRO-2-...	00133-06-2	5	1,3,6,8	0.5	5	50	500
ISOOCTANE	00540-84-1	10	1,6	1	10	100	1000
ISOPENTANE	00078-78-4	10	1,6	1	10	100	1000
ISOPENTANOIC ACID	00503-74-2	10	1,6	1	10	100	1000
ISOPHORONE	00078-59-1	10	1,3,6	1	10	100	1000
ISOPHORONE DIISOCYANATE	04098-71-9	1	6,4	0.1	1	10	100
ISOPRENE	00078-79-5	10	1,3,6	1	10	100	1000
ISOPROCARB	02631-40-5	1	1	0.1	1	10	100
ISOPROPANOLAMINE DODECYLBENZENESULFONATE	42504-46-1	50	1,3,6	5	50	500	5000
ISOPROPENYL ACETATE	00108-22-5	10	6	1	10	100	1000
ISOPROPOXYETHANOL	00109-59-1	10	6	1	10	100	1000
ISOPROPYL ACETATE	00108-21-4	10	1,5,6	1	10	100	1000
ISOPROPYL BENZENE	00098-82-8	100	1,6,3,8	10	100	1000	10000
ISOPROPYL CHLORIDE	00075-29-6	10	6,1	1	10	100	1000
ISOPROPYL CHLOROFORMATE	00108-23-6	1	4	0.1	1	10	100
ISOPROPYL ETHER	00108-20-3	10	6,1	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
ISOPROPYL FORMATE	00625-55-8	10	6	1	10	100	1000
ISOPROPYL MERCAPTAN	00075-33-2	10	1,6	1	10	100	1000
ISOPROPYL PERCARBONATE	00105-64-6	10	1,6	1	10	100	1000
ISOPROPYL PEROXYDICARBONATE	00105-64-6	10	1,6	1	10	100	1000
ISOPROPYLAMINE	00075-31-0	10	1,6	1	10	100	1000
ISOPROPYLMETHYLPYRAZOLYL DIMETHYLCARBAMATE	00119-38-0	1	4	0.1	1	10	100
ISOSAFROLE	00120-58-1	10	2,3,6,8	1	10	100	1000
3(2H)-ISOXAZOLONE, 5-(AMINOMETHYL)-	02763-96-4	50	2,3,7,1,4	5	50	500	5000
JET FUEL (DEP RQ in gallons)		10	5	(See TPH RC and RCs of other relevant constituents)			
KELTHANE	00115-32-2	5	1,3,6,8	0.5	5	50	500
KEPONE	00143-50-0	1	1,2,3,6	0.1	1	10	100
KEROSENE (DEP RQ in gallons)	08008-20-6	10	1,6	(See TPH RC and RCs of other relevant constituents)			
LACTONITRILE	00078-97-7	1	4,6	0.1	1	10	100
LANNATE	16752-77-5	10	6,1,2,3,4	1	10	100	1000
LASIOCARPINE	00303-34-4	5	2,3,6	0.5	5	50	500
LEAD	7439-92-1	5	3,5,7,2,6,8	0.01	0.01	200	600
LEAD ACETATE	00301-04-2	5	1,2,3,6	(See RCs of any listed constituents)			
LEAD ARSENATE	07645-25-2	1	3,6	(See RCs of any listed constituents)			
LEAD ARSENATE	07784-40-9	1	1,3	(See RCs of any listed constituents)			
LEAD ARSENATE	10102-48-4	1	6,3	(See RCs of any listed constituents)			
LEAD CHLORIDE	07758-95-4	5	1,3	(See RCs of any listed constituents)			
LEAD CHLORIDE (PbCl ₂)	07758-95-4	5	7,1,3	(See RCs of any listed constituents)			
LEAD COMPOUNDS, NOS		1	3	(See RCs of any listed constituents)			
LEAD FLUOBORATE	13814-96-5	5	1,3	(See RCs of any listed constituents)			
LEAD FLUORIDE	07783-46-2	5	1,3	(See RCs of any listed constituents)			
LEAD FLUORIDE (PbF ₂)	07783-46-2	5	7,1,3	(See RCs of any listed constituents)			
LEAD IODIDE	10101-63-0	5	1,3	(See RCs of any listed constituents)			
LEAD NITRATE	10099-74-8	5	6,1,3	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
LEAD PHOSPHATE	07446-27-7	5	6,2,3	(See RCs of any listed constituents)			
LEAD STEARATE	01072-35-1	5	7,1,3,6	(See RCs of any listed constituents)			
LEAD STEARATE	07428-48-0	5	7,1,3,6	(See RCs of any listed constituents)			
LEAD STEARATE	52652-59-2	5	3,6	(See RCs of any listed constituents)			
LEAD STEARATE	56189-09-4	5	3,6	(See RCs of any listed constituents)			
LEAD SUBACETATE	01335-32-6	5	6,2,3,5	0.5	5	50	500
LEAD SULFATE	07446-14-2	5	7,1,3	(See RCs of any listed constituents)			
LEAD SULFATE	15739-80-7	5	1,3,6	(See RCs of any listed constituents)			
LEAD SULFIDE	01314-87-0	5	1,3	(See RCs of any listed constituents)			
LEAD THIOCYANATE	00592-87-0	5	7,1,3,6	(See RCs of any listed constituents)			
LEAD, BIS(ACETATO-O) TETRAHYDROXYTRI-	01335-32-6	5	2,3,5,6	0.5	5	50	500
LEAD, BIS(OCTADECANOATO)DIOXODI-	52652-59-2	5	7,3,6	(See RCs of any listed constituents)			
LEAD, BIS(OCTADECANOATO)DIOXODI-	56189-09-4	5	7,3,6	(See RCs of any listed constituents)			
LEPTOPHOS	21609-90-5	1	4	0.1	1	10	100
LEWISITE	00541-25-3	1	4	0.1	1	10	100
LINDANE	58-89-9	1	3,1,4,5,6,8	0.0002	0.004	0.003	0.5
LINURON	00330-55-2	50	5	5	50	500	5000
LIQUEFIED PETROLEUM GAS	00074-98-6	10	1,6	1	10	100	1000
LIQUEFIED PETROLEUM GAS	00075-28-5	10	1,6	1	10	100	1000
LIQUEFIED PETROLEUM GAS	00106-97-8	10	1,6	1	10	100	1000
LIQUEFIED PETROLEUM GAS	00115-07-1	10	1,6,8	1	10	100	1000
LIQUEFIED PETROLEUM GAS	00115-11-7	10	1,6	1	10	100	1000
LITHIUM	07439-93-2	10	6,7	1	10	100	1000
LITHIUM AMIDE	07782-89-0	10	1	(See RCs of any listed constituents)			
LITHIUM CHROMATE	14307-35-8	5	1,3,6	(See RCs of any listed constituents)			
LITHIUM HYDRIDE	07580-67-8	1	6,1,4	(See RCs of any listed constituents)			
LITHIUM HYDRIDE (LiH)	07580-67-8	1	7,1,4,6	(See RCs of any listed constituents)			
LITHIUM TETRAHYDROALUMINATE	16853-85-3	10	6	(See RCs of any listed constituents)			
LUBRICATING OIL (DEP RQ in gallons)		10	5	(See TPH RC and RCs of other relevant constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
LYE	01310-73-2	50	1,3,6,8	(See RCs of any listed constituents)			
MCPA	00094-74-6	10	5	1	10	100	1000
MCPB	00094-81-5	1	5	0.1	1	10	100
MAGNESIUM	07439-95-4	10	6	(Not Applicable)			
MALATHION	00121-75-5	10	1,3,6	1	10	100	1000
MALEIC ACID	00110-16-7	100	1,3,6	10	100	1000	10000
MALEIC ANHYDRIDE	00108-31-6	100	2,3,5,8,6	10	100	1000	10000
MALEIC HYDRAZIDE	00123-33-1	100	1,2,3,6	10	100	1000	10000
MALONONITRILE	00109-77-3	50	1,2,3,4,8	5	50	500	5000
MANEB	12427-38-2	5	8,6,1	0.5	5	50	500
MANGANESE, TRICARBONYL METHYLCYCLOPENTADIENYL	12108-13-3	1	4,6	0.1	1	10	100
MANGANESE, TRICARBONYL[(1,2,3,4,5-.ETA.)-1-METH...	12108-13-3	1	4,6	0.1	1	10	100
MARLATE	72-43-5	1	1,2,3,6,8	0.01	0.01	200	400
MARSH GAS	00074-82-8	10	6,1	1	10	100	1000
MATTING ACID	07664-93-9	50	1,3,4,5,6,8	(See RCs of any listed constituents)			
MECHLORETHAMINE	00051-75-2	1	4,6,8	0.1	1	10	100
MEDROXYPROGESTERONE ACETATE	00071-58-9	1	6,7	0.1	1	10	100
MEGESTROL ACETATE	00595-33-5	1	6,7	0.1	1	10	100
MELPHALAN	00148-82-3	1	2,3,6	0.1	1	10	100
MEPHOSFOLAN	00950-10-7	1	4,1	0.1	1	10	100
MERCAPTOACETIC ACID	00068-11-1	100	6	10	100	1000	10000
MERCAPTODIMETHUR	02032-65-7	5	1,3,4,6	0.5	5	50	500
2-MERCAPTOETHANOL	00060-24-2	100	6	10	100	1000	10000
MERCURATE(2-), ETHYL[PHOSPHATO(3--O)-], DIHYDROGEN	02235-25-8	5	7	0.5	5	50	500
MERCURIC ACETATE	01600-27-7	1	1,4	(See RCs of any listed constituents)			
MERCURIC CHLORIDE	07487-94-7	1	1,4	(See RCs of any listed constituents)			
MERCURIC CYANIDE	00592-04-1	1	6,1,3	(See RCs of any listed constituents)			
MERCURIC NITRATE	10045-94-0	5	1,3,6	(See RCs of any listed constituents)			
MERCURIC OXIDE	21908-53-2	1	4,1	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
MERCURIC POTASSIUM CYANIDE	00591-89-9	10	1	1	10	100	1000
MERCURIC SULFATE	07783-35-9	5	1,3,6	(See RCs of any listed constituents)			
MERCURIC SULFOCYANATE	00592-85-8	5	1,3	(See RCs of any listed constituents)			
MERCURIC THIOCYANATE	00592-85-8	5	1,3,6	(See RCs of any listed constituents)			
MERCUROUS NITRATE	07782-86-7	5	3,6	(See RCs of any listed constituents)			
MERCUROUS NITRATE	10415-75-5	5	1,3,6	(See RCs of any listed constituents)			
MERCURY	7439-97-6	1	6,1,3,7,2,8	0.002	0.02	20	30
MERCURY CHLORIDE (HgCl ₂)	07487-94-7	1	7,1,4	(See RCs of any listed constituents)			
MERCURY COMPOUNDS, NOS		1	3	(See RCs of any listed constituents)			
MERCURY CYANIDE (HG(CN) ₂)	00592-04-1	1	7,1,3,6	(See RCs of any listed constituents)			
MERCURY FULMINATE	00628-86-4	5	1,2,3,6	(See RCs of any listed constituents)			
MERCURY OXIDE	21908-53-2	1	7,1,4	(See RCs of any listed constituents)			
MERCURY, (ACETATO-O)(2-METHOXYETHYL)-	00151-38-2	1	7,4	0.1	1	10	100
MERCURY, (ACETATO-O)PHENYL-	00062-38-4	10	3,7,2,4,6,1	1	10	100	1000
MERCURY, (CYANOQUANIDINATO-N')METHYL-	00502-39-6	1	7,4	0.1	1	10	100
MERCURY, ACETATOPHENYL-	00062-38-4	10	2,3,4,6,1	1	10	100	1000
MERPHOS	00150-50-5	10	5	1	10	100	1000
MERPHOS OXIDE	00078-48-8	5	5	0.5	5	50	500
MESITYLENE	00108-67-8	1	6	0.1	1	10	100
MESUROL	02032-65-7	5	3,1,4,6	0.5	5	50	500
METAM SODIUM	00137-42-8	1	1	0.1	1	10	100
METAPHOSPHORIC ACID (H ₃ P ₃ O ₉),TRISODIUM SALT	07785-84-4	100	7,3,6	(See RCs of any listed constituents)			
METAPHOSPHORIC ACID (H ₆ P ₆ O ₁₈), HEXASODIUM SALT	10124-56-8	100	7,3,6	(See RCs of any listed constituents)			
METAPHOSPHORIC ACID,TRISODIUM SALT	07785-84-4	100	6	(See RCs of any listed constituents)			
METHACROLEIN DIACETATE	10476-95-6	1	4	0.1	1	10	100
METHACRYLIC ACID	00079-41-4	10	6	1	10	100	1000
METHACRYLIC ANHYDRIDE	00760-93-0	1	4	0.1	1	10	100
METHACRYLONITRILE	00126-98-7	50	1,2,3,4,6,8	5	50	500	5000
METHACRYLOYL CHLORIDE	00920-46-7	1	4	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
METHACRYLOYLOXYETHYL ISOCYANATE	30674-80-7	1	4	0.1	1	10	100
METHALLYL CHLORIDE	00563-47-3	10	6	1	10	100	1000
METHAMIDOPHOS	10265-92-6	1	4,6,1	0.1	1	10	100
METHANAMINE, N-METHYL-	00124-40-3	50	3,1,6	5	50	500	5000
METHANAMINE, N-METHYL-N-NITROSO-	00062-75-9	5	7,2,3,4,6,8	0.5	5	50	500
METHANE	00074-82-8	10	1,6,7	1	10	100	1000
METHANE, BROMO-	74-83-9	50	2,8,1,3,4,5,6	0.007	0.007	0.5	0.5
METHANE, BROMODICHLORO-	75-27-4	100	6	0.003	0.006	0.1	0.1
METHANE, CHLORO-	00074-87-3	10	3,7,1,2,6,8	1	10	100	1000
METHANE, CHLOROMETHOXY-	00107-30-2	5	2,3,1,4,6,8	0.5	5	50	500
METHANE, DIBROMO-	00074-95-3	50	3,7,1,2,8,6	5	50	500	5000
METHANE, DIBROMOCHLORO-	124-48-1	10	1,3	0.002	0.02	0.005	0.03
METHANE, DICHLORO-	75-09-2	50	3,6,7,1,2,5,8	0.005	2	0.1	4
METHANE, DICHLORODIFLUORO-	00075-71-8	100	2,3,7,1,6,8	10	100	1000	10000
METHANE, DIMETHOXY-	00109-87-5	10	7,1,6	1	10	100	1000
METHANE, IODO-	00074-88-4	10	3,7,2,6,8	1	10	100	1000
METHANE, ISOCYANATE-	00624-83-9	5	7,1,2,3,4,6,8	0.5	5	50	500
METHANE, ISOCYNATO-	00624-83-9	5	7,1,2,3,4,6,8	0.5	5	50	500
METHANE, ISOTHIOCYANATO-	00556-61-6	1	7,4	0.1	1	10	100
METHANE, NITRO-	00075-52-5	10	7,1,6	1	10	100	1000
METHANE, OXYBIS-	00115-10-6	10	7,1,6	1	10	100	1000
METHANE, OXYBIS[CHLORO-	00542-88-1	5	2,3,7,4,6,8	0.5	5	50	500
METHANE, TETRACHLORO-	56-23-5	5	2,3,5,6,8,1	0.002	0.002	5	5
METHANE, TETRANITRO-	00509-14-8	5	2,3,7,1,4,6	0.5	5	50	500
METHANE, THIOBIS-	00075-18-3	10	7,1,6	1	10	100	1000
METHANE, TRIBROMO-	75-25-2	10	1,2,3,6,8	0.004	0.7	0.1	1
METHANE, TRICHLORO-	67-66-3	5	1,2,3,5,6,8,4	0.05	0.05	0.2	0.2
METHANE, TRICHLOROFLUORO-	00075-69-4	100	2,7,3,1,6,8	10	100	1000	10000
METHANESULFENYL CHLORIDE, TRICHLORO-	00594-42-3	10	7,3,1,2,4,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
METHANESULFONIC ACID, ETHYL ESTER	00062-50-0	1	2,3,7,6	0.1	1	10	100
METHANESULFONYL FLUORIDE	00558-25-8	1	7,4	0.1	1	10	100
METHANETHIOL	00074-93-1	10	2,3,6,7,1,4,8	1	10	100	1000
METHANETHIOL, TRICHLORO-	00594-42-3	10	2,1,3,4,6	1	10	100	1000
METHANIMIDAMIDE, N,N-DIMETHYL-N'-[2-METHYL-4-[[(.	17702-57-7	1	7,4	0.1	1	10	100
METHANIMIDAMIDE, N,N-DIMETHYL-N'-[3-[[(METHYLAMI..	23422-53-9	1	7,4,1	0.1	1	10	100
4,7-METHANO-1H-INDENE, 1,2,4,5,6,7,8,8-OCTACHLORO-2,3,	57-74-9	1	3,4,5,8,1,2,6	0.002	0.002	0.7	30
4,7-METHANO-1H-INDENE, 1,2,4,5,6,7,8,8-OCTACHLORO-2,3,	12789-03-6	1	3,4,5,8,1,2,6	0.002	0.002	5	30
4,7-METHANO-1H-INDENE, 1,4,5,6,7,8,8-HEPTACHLORO-2,3..	1024-57-3	1	3,2,6	0.0002	0.002	0.1	0.9
4,7-METHANO-1H-INDENE, 3A,4,7,7A-TETRAHYDRO-	00077-73-6	10	7,6	1	10	100	1000
4,7-METHANO-1H-INDENE, 1,4,5,6,7,8,8-HEPTACHLORO-3A,4..	76-44-8	1	1,2,3,5,6,7,8	0.0004	0.001	0.3	2
4,7-METHANO-1H-ISOINDOLE-1,3(2H)-DIONE, 3A,4,7,7A-TE..	00991-42-4	1	7,4	0.1	1	10	100
6,9-METHANO-2,4,3-BENZODIOXATHIEPIN, 6,7,8,9,10,10-...	01031-07-8	1	1,3,6	(See RCs of any listed constituents)			
6,9-METHANO-2,4,3-BENZODIOXATHIEPIN, 6,7,8,9,10,10-H..	33213-65-9	1	1,2,3,6,4	0.002	0.002	0.5	1
6,9-METHANO-2,4,3-BENZODIOXATHIEPIN, 6,7,8,9,10,10-H...	115-29-7	1	1,2,3,6,4	0.002	0.002	0.5	1
2,5-METHANO-2H-INDEO(1,2-B)OXIRENE, 2,3,4,5,6,7,8-HE...	1024-57-3	1	3,2,6	0.0002	0.002	0.1	0.9
3,6-METHANO-8H-1,5,7-TRIOXACYCLOPENTA[IJ]CYCLOPROP[...]	00124-87-8	1	7,4	0.1	1	10	100
METHANOIC ACID	00064-18-6	100	2,3,1,6,8	10	100	1000	10000
4,7-METHANOINDAN, 1,2,4,5,6,7,8,8-OCTACHLORO-3A,4,7,..	57-74-9	1	3,4,5,8,1,2,6	0.002	0.002	0.7	30
4,7-METHANOINDAN, 1,2,4,5,6,7,8,8-OCTACHLORO-3A,4,7,..	12789-03-6	1	3,4,5,8,1,2,6	0.002	0.002	5	30
4,7-METHANOISOBENZOFURAN, 1,3,4,5,6,7,8,8-OCTACH..	00297-78-9	1	7,4	0.1	1	10	100
METHANOL	00067-56-1	100	1,3,6,7,8	10	100	1000	10000
METHANOL, SODIUM SALT	00124-41-4	50	1,3	(See RCs of any listed constituents)			
METHAPYRILENE	00091-80-5	100	2,3,6	10	100	1000	10000
1,3,4-METHENO-1H-CYCLOBUTA[CD]PENTALENE, 1,1A,2,2,3,3A..	02385-85-5	1	7,5,6,1	0.1	1	10	100
1,3,4-METHENO-2H-CYCLOBUTA[CD]PENTALEN-2-ONE, 1,1A,3,3A..	00143-50-0	1	7,1,2,3,6	0.1	1	10	100
1,2,4-METHENOCYCLOPENTA[CD]PENTALENE-5-CARBOXALDEHD..	07421-93-4	1	7,1,3,6	0.1	1	10	100
METHIDATHION	00950-37-8	1	6,4,1	0.1	1	10	100
METHIOCARB	02032-65-7	5	3,4,1,6	0.5	5	50	500
METHOMYL	16752-77-5	10	4,6,1,2,3	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
METHOXY-DDT	72-43-5	1	1,2,3,6,8	0.01	0.01	200	400
METHOXYCHLOR	72-43-5	1	1,2,3,6,8	0.01	0.01	200	400
2-METHOXYETHANOL	00109-86-4	10	8,1,5,6	1	10	100	1000
2-METHOXYETHYL ACETATE	00110-49-6	10	6,1	1	10	100	1000
METHOXYETHYLMERCURIC ACETATE	00151-38-2	1	4	0.1	1	10	100
4-METHOXYPHENOL	00150-76-5	100	6	10	100	1000	10000
5-METHOXYPORALEN	00484-20-8	1	6,7	0.1	1	10	100
METHYL (N-AMYL) KETONE	00110-43-0	10	6,1	1	10	100	1000
METHYL 2-CHLOROACRYLATE	00080-63-7	1	4	0.1	1	10	100
METHYL ACETATE	00079-20-9	10	1,6	1	10	100	1000
METHYL ACETOACETATE	00105-45-3	10	6	1	10	100	1000
METHYL ACETONE	78-93-3	100	2,3,6,8,1	4	50	4	50
METHYL ACETYLENE	00074-99-7	10	6	1	10	100	1000
METHYL ACRYLATE	00096-33-3	10	1,5,6,8	1	10	100	1000
METHYL ALCOHOL	00067-56-1	100	3,1,6,8	10	100	1000	10000
METHYL AMYL ALCOHOL	00105-30-6	100	6	10	100	1000	10000
METHYL AMYL KETONE	00110-43-0	10	1,6	1	10	100	1000
METHYL BORATE	00121-43-7	50	6	5	50	500	5000
METHYL BROMIDE	74-83-9	50	2,8,1,3,4,5,6	0.007	0.007	0.5	0.5
METHYL BUTENE	00563-46-2	10	1,6	1	10	100	1000
METHYL BUTYL KETONE	00591-78-6	10	6,5	1	10	100	1000
METHYL BUTYRATE	00623-42-7	10	6,1	1	10	100	1000
METHYL CCNU	13909-09-6	1	6	0.1	1	10	100
METHYL CELLOSOLVE	00109-86-4	10	1,5,6,8	1	10	100	1000
METHYL CELLOSOLVE ACETATE	00110-49-6	10	1,6	1	10	100	1000
METHYL CHLORIDE	00074-87-3	10	8,1,2,3,6	1	10	100	1000
METHYL CHLOROACETATE	00096-34-4	100	6	10	100	1000	10000
METHYL CHLOROCARBONATE	00079-22-1	50	1,2,3,4,8	5	50	500	5000
METHYL CHLOROFORM	71-55-6	50	1,2,3,5,6,8	0.2	4	30	600

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
METHYL CHLOROFORMATE	00079-22-1	50	1,4,2,3,8	5	50	500	5000
METHYL CHLOROMETHYL ETHER	00107-30-2	5	6,1,2,3,4,8	0.5	5	50	500
METHYL CYANIDE	00075-05-8	100	1,2,3,6,8	10	100	1000	10000
METHYL DISULFIDE	00624-92-0	50		5	50	500	5000
METHYL ETHER	00115-10-6	10	6,1	1	10	100	1000
METHYL ETHYL ETHER	00540-67-0	10	1,6	1	10	100	1000
METHYL ETHYL KETONE (MEK)	78-93-3	100	2,3,6,8,1	4	50	4	50
METHYL ETHYL KETONE PEROXIDE	01338-23-4	5	6,2,3	0.5	5	50	500
METHYL ETHYL PYRIDINE	00104-90-5	10	1,6	1	10	100	1000
METHYL FORMATE	00107-31-3	10	1,6	1	10	100	1000
METHYL GUTHION	00086-50-0	1	6,1,3,4	0.1	1	10	100
METHYL IODIDE	00074-88-4	10	2,3,6,8	1	10	100	1000
METHYL ISOAMYL KETONE	00110-12-3	10	6	1	10	100	1000
METHYL ISOBUTYL CARBINOL	00105-30-6	100	6	10	100	1000	10000
METHYL ISOBUTYL KETONE	108-10-1	100	1,3,8,6	0.35	50	0.4	50
METHYL ISOCYANATE	00624-83-9	5	7,1,2,3,4,6,8	0.5	5	50	500
METHYL ISOPROPENYL KETONE	00814-78-8	10	6,1	1	10	100	1000
METHYL ISOTHIOCYANATE	00556-61-6	1	4	0.1	1	10	100
METHYL MERCAPTAN	00074-93-1	10	2,3,6,1,4,8	1	10	100	1000
METHYL MERCURY	22967-92-6	1	5	0.0003	0.02	4	8
METHYL METHACRYLATE	00080-62-6	50	2,3,5,6,8,1	5	50	500	5000
METHYL METHACRYLATE MONOMER	00080-62-6	50	1,2,3,5,6,8	5	50	500	5000
METHYL METHANESULFONATE	00066-27-3	100	6	10	100	1000	10000
METHYL N-BUTYL KETONE	00591-78-6	10	6,5	1	10	100	1000
METHYL PARATHION	00298-00-0	10	1,2,3,6,4	1	10	100	1000
METHYL PENTANE	00107-83-5	10	1,6	1	10	100	1000
METHYL PHENKAPTON	03735-23-7	1	4	0.1	1	10	100
METHYL PHOSPHONIC DICHLORIDE	00676-97-1	1	4	0.1	1	10	100
METHYL PROPIONATE	00554-12-1	10	6,1	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
METHYL PROPYL KETONE	00107-87-9	10	1,6	1	10	100	1000
alpha-METHYL STYRENE	00098-83-9	10	6	1	10	100	1000
METHYL STYRENE	25013-15-4	10	6,1	1	10	100	1000
METHYL SULFATE	00077-78-1	10	1,2,3,4,6,8	1	10	100	1000
METHYL SULFIDE	00075-18-3	10	1,6	1	10	100	1000
METHYL TERT-BUTYL ETHER	1634-04-4	6	8,6,5	0.07	5	0.1	100
METHYL THIOCYANATE	00556-64-9	1	4	0.1	1	10	100
METHYL VINYL KETONE	00078-94-4	1	1,6,4	0.1	1	10	100
2-METHYL-1-BUTANOL	00137-32-6	100	6	10	100	1000	10000
3-METHYL-1-BUTENE	00563-45-1	10	6	1	10	100	1000
2-METHYL-1-BUTENE (TECHNICAL)	00563-46-2	10	6,1	1	10	100	1000
2-METHYL-1-PENTANOL	00105-30-6	100	6	10	100	1000	10000
1-METHYL-1-PHENYLETHYL-HYDROPEROXIDE	00080-15-9	5	1,3,6,8	0.5	5	50	500
1-METHYL-2,6-DINITROBENZENE	00606-20-2	10	6	1	10	100	1000
2-METHYL-2-(METHYTHIO)PROPIONALDEHYDE-O-(METHYCARB..)	00116-06-3	1	2,1,3,4,6	0.1	1	10	100
2-METHYL-2-BUTANOL	00075-85-4	10	6	1	10	100	1000
2-METHYL-2-BUTENE	00513-35-9	10	6,1	1	10	100	1000
1-METHYL-2-CHLOROBENZENE	00095-49-8	10	7,6	1	10	100	1000
5-METHYL-2-HEXANONE	00110-12-3	10	6	1	10	100	1000
4-METHYL-2-PENTANONE	108-10-1	100	1,3,8,6	0.35	50	0.4	50
2-METHYL-2-PHENYLPROPANE	00098-06-6	10	6,1	1	10	100	1000
2-METHYL-2-PROPANETHIOL	00075-66-1	10	6	1	10	100	1000
2-METHYL-2-PROPANOL	00075-65-0	10	6,1,8	1	10	100	1000
2-METHYL-5-ETHYLPYRIDINE	00104-90-5	10	6,1	1	10	100	1000
3-METHYL PYRIDINE	00108-99-6	50	1,7	5	50	500	5000
N-METHYL-N'-NITRO-N-NITROSOGUANIDINE	00070-25-7	5	1,2,3,6,3	0.5	5	50	500
METHYLACRYLONITRILE	00126-98-7	50	6,1,2,3,4,8	5	50	500	5000
METHYLAL	00109-87-5	10	1,6	1	10	100	1000
METHYLALUMINUM SESQUIBROMIDE	12263-85-3	10	6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
METHYLAMINE	00074-89-5	10	1,6,7,3	1	10	100	1000
METHYLAMINE, N,N-DIMETHYL-	00075-50-3	10	7,1,3,6	1	10	100	1000
2-METHYLANILINE	00100-61-8	5	5	0.5	5	50	500
o-METHYLANILINE	00095-53-4	10	6,2,3,5,8	1	10	100	1000
alpha-METHYLBENZYLAMINE	00098-84-0	10	6	1	10	100	1000
1-METHYLBUTADIENE	00504-60-9	10	3,1,6	1	10	100	1000
n-METHYLBUTYLAMINE	00110-68-9	10	6	1	10	100	1000
3-METHYLCHOLANTHRENE	00056-49-5	5	2,3,6	0.5	5	50	500
METHYLCYCLOHEXANE	00108-87-2	10	1,6	1	10	100	1000
METHYLCYCLOPENTANE	00096-37-7	10	1,6	1	10	100	1000
METHYLCYCLOPENTADIENYL MANGANESE TRICARBONYL	12108-13-3	1	6,4	0.1	1	10	100
METHYLDICHLOROSILANE	00075-54-7	10	1,6	1	10	100	1000
4,4'-METHYLENE BIS(2-CHLOROANILINE)	00101-14-4	5	2,3,6,8	0.5	5	50	500
METHYLENE BROMIDE	00074-95-3	50	2,3,8,1,6	5	50	500	5000
METHYLENE CHLORIDE	75-09-2	50	3,6,7,1,2,5,8	0.005	2	0.1	4
METHYLENE OXIDE	00050-00-0	10	2,3,1,4,5,6,8	1	10	100	1000
2,2'-METHYLENEBIS(3,4,6-TRICHLOROPHENOL)	00070-30-4	10	2,3,5,6,8	1	10	100	1000
n-METHYLETHANOLAMINE	00109-83-1	10	6	1	10	100	1000
METHYLHYDRAZINE	00060-34-4	5	4,1,2,3,6,8	0.5	5	50	500
METHYLHYDRAZINE (MONO)	00060-34-4	5	6,1,2,3,4,8	0.5	5	50	500
2-METHYLLACTONITRILE	00075-86-5	5	2,3,1,4,6	0.5	5	50	500
METHYLMERCAPTAN	00074-93-1	10	2,3,6,1,4,8	1	10	100	1000
METHYLMERCURIC DICYANAMIDE	00502-39-6	1	4	0.1	1	10	100
2-METHYLNAPHTHALENE	91-57-6	10	5	0.01	2	0.7	80
3-METHYLPENTANE	00096-14-0	10	6	1	10	100	1000
2-METHYLPROPENAL	00078-85-3	10	6	1	10	100	1000
2-METHYLPROPENE	00115-11-7	10	6,1	1	10	100	1000
METHYLSTYRENE	25013-15-4	10	6,1	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
METHYLTHIOURACIL	00056-04-2	5	2,3,6	0.5	5	50	500
METHYLTRICHLOROSILANE	00075-79-6	1	1,4,6	0.1	1	10	100
METHYLTRITHION	00953-17-3	5	1	0.5	5	50	500
2-METHYLVALERALDEHYDE	00123-15-9	50	6	5	50	500	5000
METOLCARB	01129-41-5	1	4	0.1	1	10	100
MEVINPHOS	07786-34-7	5	4,6,1,3	0.5	5	50	500
MEXACARBATE	00315-18-4	50	1,3,4	5	50	500	5000
MILBAN	00137-30-4	10	6	1	10	100	1000
MINERAL OIL	(DEP RQ in Gallons)	25	5,6	(See TPH and RCs of other relevant constituents)			
MINERAL OIL DIELECTRIC FLUID (PCBs - <2mg/L)	(DEP RQ in Gallons)	25	5,6	(See TPH and RCs of other relevant constituents)			
MINERAL SPIRITS	08030-30-6	10	6,1,5	(See TPH RC and RCs of other relevant constituents)			
MIREX	02385-85-5	1	6,5,1	0.1	1	10	100
MITOMYCIN C	00050-07-7	5	2,6,4,3	0.5	5	50	500
MNNG	00070-25-7	5	3	0.5	5	50	500
MOCA	00101-14-4	5	8,2,3,6	0.5	5	50	500
MONOCHLOROACETONE	00078-95-5	10	1,6	1	10	100	1000
MONOCHLOROBENZENE	108-90-7	10	2,3,1,5,6,8	0.1	0.2	1	3
MONOCHLOROETHYLENE	00075-01-4	1	1,2,3,5,6,8	0.002	0.002	0.7	0.7
MONOCROTOPHOS	06923-22-4	1	6,4,1	0.1	1	10	100
MONOETHANOLAMINE	00141-43-5	10	1,6	1	10	100	1000
MONOETHYLAMINE	00075-04-7	10	1,3,6	1	10	100	1000
MONOMETHYLAMINE	00074-89-5	10	3,6,1	1	10	100	1000
MONOMETHYLHYDRAZINE	00060-34-4	5	6,1,2,3,4,8	0.5	5	50	500
MORPHOLINE	00110-91-8	10	1,6	1	10	100	1000
MORPHOLINE, 2,6-DIMETHYL	00141-91-3	100	7,6	10	100	1000	10000
MORPHOLINE, 4-ETHYL-	00100-74-3	10	7,6	1	10	100	1000
L-5-(MORPHOLINE...)-2-OXAZOLIDINONE	03795-88-8	1	6,7	0.1	1	10	100
DL-5-(MORPHOLINOMETHYL..)-2-OXAZOLIDINONE HYDROCHLO..	13146-28-6	1	6,7	0.1	1	10	100
MOTH BALLS	91-20-3	10	1,2,3,5,6,8	0.14	0.7	4	20
MURIATIC ACID	07647-01-0	100	1,3,4,5,6,8	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations				
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)	
MUSCIMOL	02763-96-4	50	4,1,2,3		5	50	500	5000
MUSTARD GAS	00505-60-2	1	2,8,6,4		0.1	1	10	100
MUSTARD OIL	00057-06-7	10	6		1	10	100	1000
N-PROPYLAMINE	00107-10-8	100	2,3,1,6		10	100	1000	10000
NABAM	00142-59-6	1	7,6,1		0.1	1	10	100
NALED	00300-76-5	5	1,3,6		0.5	5	50	500
NAPHTHA	08030-30-6	10	6,1,5	(See TPH RC and RCs of other relevant constituents)				
NAPHTHA VM&P	08030-30-6	10	6,1,5	(See TPH RC and RCs of other relevant constituents)				
NAPHTHA VM&P 50 DEGREE FLASH	08030-30-6	10	6,1,5	(See TPH RC and RCs of other relevant constituents)				
NAPHTHA VM&P HIGH FLASH	08030-30-6	10	6,1,5	(See TPH RC and RCs of other relevant constituents)				
NAPHTHA VM&P, REGULAR	08030-30-6	10	6,1,5	(See TPH RC and RCs of other relevant constituents)				
5,12-NAPHTHACENEDIONE, (8S-CIS)-8-ACETYL-10-[3-...	20830-81-3	5	2,3,6		0.5	5	50	500
5,12-NAPHTHACENEDIONE, 8-ACETYL-10-[(3-AMINO-2,3,6-TR..	20830-81-3	5	7,2,3,6		0.5	5	50	500
2-NAPHTHALENAMINE	00091-59-8	5	7,2,3,6,8		0.5	5	50	500
1-NAPHTHALENAMINE	00134-32-7	10	2,3,6,8		1	10	100	1000
NAPHTHALENAMINE, N,N'-BIS(2-CHLOROETHYL)-	00494-03-1	10	3		1	10	100	1000
2-NAPHTHALENAMINE, N,N-BIS(2-CHLOROETHYL)-	00494-03-1	10	7,3,6,3		1	10	100	1000
NAPHTHALENE	91-20-3	10	1,2,3,5,6,7,8		0.14	0.7	4	20
NAPHTHALENE, 2-CHLORO-	00091-58-7	100	3,7,1,2,6		10	100	1000	10000
NAPHTHALENE, DECAHYDRO-	00091-17-8	10	7,1,6		1	10	100	1000
NAPHTHALENE, HEXACHLORO	01335-87-1	1	,6,8		0.1	1	10	100
1,4-NAPHTHALENEDIONE	00130-15-4	100	2,3,1,6		10	100	1000	10000
1,4-NAPHTHALENEDIONE, 2,3-DICHLORO-	00117-80-6	1	1,3,6		0.1	1	10	100
2,7-NAPHTHALENEDISULFONIC ACID,3,3'-[(3,3'-DIMETHYL-..	00072-57-1	5	2,3,7,6,8		0.5	5	50	500
1-NAPHTHALENOL, METHYLCARBAMATE	00063-25-2	10	7,1,3,6,8		1	10	100	1000
NAPHTHENIC ACID	01338-24-5	10	1,3,6		1	10	100	1000
1,4-NAPHTHOQUINONE	00130-15-4	100	1,2,3,6		10	100	1000	10000
1-NAPHTHYL-2-THIOUREA	00086-88-4	10	2,1,3,4,6		1	10	100	1000
2-NAPHTHYLAMINE	00091-59-8	5	2,3,6,8		0.5	5	50	500
beta-NAPHTHYLAMINE	00091-59-8	5	2,3,6,8		0.5	5	50	500

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

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CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
1-NAPHTHYLAMINE	00134-32-7	10	2,3,6,8	1	10	100	1000
alpha-NAPHTHYLAMINE	00134-32-7	10	2,3,8,6	1	10	100	1000
2-NAPHTHYLAMINE, N,N-BIS(2-CHLOROETHYL)-	00494-03-1	10	3,6,3	1	10	100	1000
alpha-NAPHTHYLTHIOUREA	00086-88-4	10	3,1,2,4,6	1	10	100	1000
NAPHTHYLTHIOUREA (alpha)	00086-88-4	10	1,2,3,4,6	1	10	100	1000
NAPHTHALENE, BETA-CHLORO	00091-58-7	100	2,1,3,6	10	100	1000	10000
NEMACUR	22224-92-6	1	6,4,1	0.1	1	10	100
NEOHEXANE	00075-83-2	10	1,6	1	10	100	1000
NIALATE	00563-12-2	5	6,1,3,4	0.5	5	50	500
NICKEL	7440-02-0	10	6,3,5,7,2,8	0.1	0.2	600	1000
NICKEL ACETATE	00373-02-4	1	6	0.1	1	10	100
NICKEL AMMONIUM SULFATE	15699-18-0	10	3,6	(See RCs of any listed constituents)			
NICKEL CARBONYL	13463-39-3	5	4,6,2,3,1	(See RCs of any listed constituents)			
NICKEL CARBONYL (Ni(CO)4), (T-4)	13463-39-3	5	1,2,3,4,6	(See RCs of any listed constituents)			
NICKEL CHLORIDE	07718-54-9	10	3,6	(See RCs of any listed constituents)			
NICKEL CHLORIDE	37211-05-5	10	1,3,7	(See RCs of any listed constituents)			
NICKEL CHLORIDE (NiCl2)	07718-54-9	10	7,3,6	(See RCs of any listed constituents)			
NICKEL COMPOUNDS, NOS		10	3	(See RCs of any listed constituents)			
NICKEL CYANIDE	00557-19-7	5	3,1,2,7,6	(See RCs of any listed constituents)			
NICKEL HYDROXIDE	12054-48-7	5	1,3,6	(See RCs of any listed constituents)			
NICKEL HYDROXIDE	12125-56-3	1	6	(See RCs of any listed constituents)			
NICKEL NITRATE	14216-75-2	10	3,6	(See RCs of any listed constituents)			
NICKEL SULFATE	07786-81-4	10	1,3,6	(See RCs of any listed constituents)			
NICKEL TETRACARBONYL	13463-39-3	5	2,3,1,4,6	(See RCs of any listed constituents)			
NICKEL(II) CYANIDE	00557-19-7	5	3,2,1,6	(See RCs of any listed constituents)			
NICOTINE	00054-11-5	10	1,6,4,2,3	1	10	100	1000
NICOTINE (ALKALOID)	00054-11-5	10	6,1,2,3,4	1	10	100	1000
NICOTINE AND SALTS	00054-11-5	10	2,3,1,4,6	1	10	100	1000
NICOTINE SULFATE	00065-30-5	10	1,4	(See RCs of any listed constituents)			
NITIC ACID, ZIRCONIUM(4+) SALT	13746-89-9	100	7,1,3	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
NITRIC ACID	07697-37-2	50	4,6,3,7,8	(See RCs of any listed constituents)			
NITRIC ACID SILVER(1+) SALT	07761-88-8	1	7,1,3,6	(See RCs of any listed constituents)			
NITRIC ACID THALLIUM (I) SALT	10102-45-1	10	2,3,1	(See RCs of any listed constituents)			
NITRIC ACID, BERYLLIUM SALT	13597-99-4	1	7,1,3,6	(See RCs of any listed constituents)			
NITRIC ACID, BERYLLIUM SALT, TRIHYDRATE	07787-55-5	1	7,3,6	(See RCs of any listed constituents)			
NITRIC ACID, COPPER(2+) SALT	03251-23-8	10	7,1,3,6	(See RCs of any listed constituents)			
NITRIC ACID, ETHYL ESTER	00625-58-1	10	7,1,6	1	10	100	1000
NITRIC ACID, IRON (3) SALT	10421-48-4	50	1,3,6	(See RCs of any listed constituents)			
NITRIC ACID, LEAD(2) SALT	10099-74-8	5	6,1,3	(See RCs of any listed constituents)			
NITRIC ACID, MERCURY(1+) SALT	10415-75-5	5	7,1,3,6	(See RCs of any listed constituents)			
NITRIC ACID, MERCURY(1+) SALT, MONOHYDRATE	07782-86-7	5	7,3,6	(See RCs of any listed constituents)			
NITRIC ACID, MERCURY(2) SALT	10045-94-0	5	3,1,6	(See RCs of any listed constituents)			
NITRIC ACID, NICKEL SALT	14216-75-2	10	7,3,6	(See RCs of any listed constituents)			
NITRIC ACID, ZINC SALT	07779-88-6	50	7,1,3	(See RCs of any listed constituents)			
NITRIC ETHER	00625-58-1	10	1,6	1	10	100	1000
NITRIC OXIDE	10102-43-9	5	4,6,1,2,3	(See RCs of any listed constituents)			
5-NITRO-O-TOLUIDINE	00099-55-8	10	2,3,6,8	1	10	100	1000
p-NITROANILINE	00100-01-6	100	1,2,3,6	10	100	1000	10000
NITROBENZENE	00098-95-3	50	3,4,5,6,8,1,2	5	50	500	5000
NITROBENZOL	00098-95-3	50	1,2,3,4,5,6,8	5	50	500	5000
NITROCELLULOSE	09004-70-0	50	1,6	5	50	500	5000
M-NITROCHLOROBENZENE	00121-73-3	100	1,6	10	100	1000	10000
NITROCYCLOHEXANE	01122-60-7	1	6,4	0.1	1	10	100
NITROETHANE	00079-24-3	10	1,6	1	10	100	1000
NITROGEN (LIQUIFIED)	07727-37-9	10	6	(Not Applicable)			
NITROGEN DIOXIDE	10102-44-0	5	4,6,1,2,3	(See RCs of any listed constituents)			
NITROGEN DIOXIDE	10544-72-6	5	3,6	(See RCs of any listed constituents)			
NITROGEN MUSTARD	00051-75-2	1	2,8,4,6	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

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CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
NITROGEN PEROXIDE	10102-44-0	5	6,1,2,3,4	(See RCs of any listed constituents)			
NITROGEN TETROXIDE	10544-72-6	5	6,3	(See RCs of any listed constituents)			
NITROGEN(II) OXIDE	10102-43-9	5	2,3,1,4,6	(See RCs of any listed constituents)			
NITROGEN(IV) OXIDE	10102-44-0	5	2,3,1,4,6	(See RCs of any listed constituents)			
NITROGEN(IV) OXIDE	10544-72-6	5	3,6	(See RCs of any listed constituents)			
NITROGLYCERIN	00055-63-0	5	1,6,8,2,3	0.5	5	50	500
NITROGLYCERINE	00055-63-0	5	2,3,6,1,8	0.5	5	50	500
NITROMETHANE	00075-52-5	10	1,6	1	10	100	1000
o-NITROPHENOL	00088-75-5	10	1,3,8,6	1	10	100	1000
2-NITROPHENOL	00088-75-5	10	3,8,1,6	1	10	100	1000
p-NITROPHENOL	00100-02-7	10	1,3,6,2,8	1	10	100	1000
4-NITROPHENOL	00100-02-7	10	2,3,8,1,6	1	10	100	1000
m-NITROPHENOL	00554-84-7	10	1,3,6	1	10	100	1000
NITROPHENOL (MIXED)	25154-55-6	10	3,6	1	10	100	1000
2-NITROPROPANE	00079-46-9	5	2,3,6,8	0.5	5	50	500
1-NITROPROPANE	00108-03-2	10	1,6	1	10	100	1000
N-NITROSO-DI-N-PROPYLAMINE	00621-64-7	5	2,3,8,6	0.5	5	50	500
N-NITROSO-N-ETHYLUREA	00759-73-9	1	6,2,3,8	0.1	1	10	100
N-NITROSO-N-METHYLUREA	00684-93-5	1	6,2,3,8	0.1	1	10	100
N-NITROSO-N-METHYLURETHANE	00615-53-2	1	6,2,3	0.1	1	10	100
N-NITROSODI-N-BUTYLAMINE	00924-16-3	5	6,2,3,8	0.5	5	50	500
N-NITROSODI-N-PROPYLAMINE	00621-64-7	5	6,2,3,8	0.5	5	50	500
N-NITROSODIETHANOLAMINE	01116-54-7	1	6,2,3	0.1	1	10	100
N-NITROSODIETHYLAMINE	00055-18-5	1	2,3,6,8	0.1	1	10	100
N-NITROSODIMETHYLAMINE	00062-75-9	5	2,3,6,8,4	0.5	5	50	500
N-NITROSODIPHENYLAMINE	00086-30-6	10	1,3,6,8	1	10	100	1000
NITROSOMETHYLAMINE	00062-75-9	5	4,2,3,6,8	0.5	5	50	500
4-(N-NITROSOMETHYLAMINO)-1-(3-PYRIDYL)-1-BUTANONE	64091-91-4	1	6	0.1	1	10	100
N-NITROSOMETHYL VINYLAMINE	04549-40-0	5	6,2,3,8	0.5	5	50	500

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
N-NITROSOPIPERIDINE	00100-75-4	5	2,3,6,8	0.5	5	50	500
N-NITROSOPYRROLIDINE	00930-55-2	1	6,3,2	0.1	1	10	100
NITROSOPYRROLIDINE	00930-55-2	1	2,3,6	0.1	1	10	100
NITROSYL CHLORIDE	02696-92-6	10	1	(See RCs of any listed constituents)			
o-NITROTOLUENE	00088-72-2	50	3,6	5	50	500	5000
m-NITROTOLUENE	00099-08-1	50	3,6	5	50	500	5000
NITROTOLUENE	00099-08-1	50	6,3	5	50	500	5000
p-NITROTOLUENE	00099-99-0	50	3,6	5	50	500	5000
NITROTOLUENE	01321-12-6	50	1,3,6	5	50	500	5000
NITROUS ACID, SODIUM SALT	07632-00-0	10	7,1,3	(See RCs of any listed constituents)			
NITROUS ETHER	00109-95-5	10	1,6	1	10	100	1000
NONANE	00111-84-2	10	6	1	10	100	1000
NONYLPHENOL	25154-52-3	5	1,6,7	0.5	5	50	500
NONYLTRICHLOROSILANE	05283-67-0	10	1	1	10	100	1000
NORBORMIDE	00991-42-4	1	4	0.1	1	10	100
5-NORBORNENE-2,3-DIMETHANOL,1,4,5,6,7,7-HEXACHLORO..	115-29-7	1	1,2,3,6,4	0.002	0.002	0.5	1
NORDHAUSEN ACID	07664-93-9	50	1,3,4,5,6,8	(See RCs of any listed constituents)			
19-NORPREGN-4-EN-20-YNE-3,17-DIOL, DIACETATE,(3a,17')	00297-76-7	1	7	0.1	1	10	100
O,O-DIETHYL S-[2-(ETHYLTHIO)ETHYL] PHOSPHORODITH..	00298-04-4	1	3,1,4,6	0.1	1	10	100
OCHRATOXIN A	00303-47-9	1	6	0.1	1	10	100
OCTABROMOBIPHENYL	27858-07-7	1	6	0.1	1	10	100
OCTADECANOIC ACID, CADMIUM SALT	02223-93-0	1	7,4	(See RCs of any listed constituents)			
OCTADECANOIC ACID, LEAD (2+) SALT	01072-35-1	5	7,1,3,6	(See RCs of any listed constituents)			
OCTADECANOIC ACID, LEAD SALT	07428-48-0	5	7,1,3,6	(See RCs of any listed constituents)			
OCTAMETHYLPYROPHOSPHORAMIDE	00152-16-9	10	1,2,3,4	1	10	100	1000
OCTANAL	00124-13-0	100	7,6	10	100	1000	10000
OCTANE	00111-65-9	10	1,6	1	10	100	1000
1-OCTANETHIOL	00111-88-6	100	6	10	100	1000	10000
N-OCTANOYL PEROXIDE	00762-16-3	10	1	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
1-OCTENE	00111-66-0	10	6	1	10	100	1000
OCTYLTRICHLORSILANE	05283-66-9	10	1	1	10	100	1000
OIL (See specific oil listings; ie. gasoline, petroleum based oil, animal oil, etc)		5					
OIL OF MIRBANE	00098-95-3	50	1,2,3,4,5,6,8	5	50	500	5000
OIL OF TURPENTINE	08006-64-2	10	7,1,6	(See TPH RC and RCs of other relevant constituents)			
OIL OF VITRIOL	07664-93-9	50	1,3,4,5,6,8	(See RCs of any listed constituents)			
OLEUM (fuming sulfuric acid)	08014-95-7	50	1,3,6	(See RCs of any listed constituents)			
ORGANORHODIUM COMPLEX (PMN-82-147)		1	4	0.1	1	10	100
OSMIUM (VIII) OXIDE	20816-12-0	50	2,1,3,6,8,3	(See RCs of any listed constituents)			
OSMIUM OXIDE	20816-12-0	50	3,7,1,2,6,8,3	(See RCs of any listed constituents)			
OSMIUM OXIDE OSO4 (T-4)-	20816-12-0	50	3	(See RCs of any listed constituents)			
OSMIUM TETROXIDE	20816-12-0	50	6,1,2,3,8,3	(See RCs of any listed constituents)			
OUABAIN	00630-60-4	1	4	0.1	1	10	100
7-OXABICYCLO[2.2.1]HEPTANE-2,3-DICARBOXYLIC ACID	00145-73-3	50	2,3,7,1,6	5	50	500	5000
OXAMYL	23135-22-0	1	4,5,1	0.1	1	10	100
1,2-OXATHIOLANE, 2,2-DIOXIDE	01120-71-4	5	2,3,6,8	0.5	5	50	500
2H-1,3,2-OXAZAPHOSPHORIN-2-AMINE, N,N-BIS(2-CHLOROETH..	00050-18-0	5	7,2,3,6	0.5	5	50	500
2H-1,3,2-OXAZAPHOSPHORINE,2-[BIS(2-CHLOROETHYL)AMINO]..	00050-18-0	5	2,3,6	0.5	5	50	500
2-OXAZOLIDINONE,5-(4-MORPHOLINYLMETHYL)-3-[[5-NIT..	03795-88-8	1	7	0.1	1	10	100
2-OXAZOLIDINONE,5-(4-MORPHOLINYLMETHYL)-3-[[5-NIT..	13146-28-6	1	7	0.1	1	10	100
OXETANE, 3,3-BIS(CHLOROMETHYL)	00078-71-7	1	7,4	0.1	1	10	100
2-OXETANONE	00057-57-8	1	7,6,4,8	0.1	1	10	100
2-OXETANONE, 4-METHYLENE-	00674-82-8	10	7,6	1	10	100	1000
OXIRANE	00075-21-8	5	2,3,7,1,4,6,8	0.5	5	50	500
OXIRANE, (CHLOROMETHYL)-	00106-89-8	10	2,3,4,5,6,8	1	10	100	1000
OXIRANE, 2,2'-[OXYBIS(METHYLENE)]BIS-	02238-07-5	1	7,4,6	0.1	1	10	100
OXIRANE, 2-(CHLOROMETHYL)-	00106-89-8	10	2,3,4,5,6,8	1	10	100	1000
OXIRANE, ETHENYL-	00930-22-3	10	7,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
OXIRANE, ETHYL-	00106-88-7	10	7,6,8	1	10	100	1000
OXIRANE, METHYL-	00075-56-9	10	7,1,3,4,5,6,8	1	10	100	1000
OXIRANE, [(2-PROPENYLOXY)METHYL]-	00106-92-3	50	7,6	5	50	500	5000
OXIRANECARBOXALDEHYDE	00765-34-4	5	7,2,3,6	0.5	5	50	500
OXIRANECARBOXYALDEHYDE	00765-34-4	5	3,2,6	0.5	5	50	500
OXYDISULFOTON	02497-07-6	1	4,1	0.1	1	10	100
OXYGEN (LIQUID)	07782-44-7	10	6	(Not Applicable)			
OZONE	10028-15-6	1	4,6	(Not Applicable)			
PARAFORMALDEHYDE	30525-89-4	50	1,3,7,6	5	50	500	5000
PARALDEHYDE	00123-63-7	50	1,2,3,6,8	5	50	500	5000
PARANITROANILINE	00100-01-6	100	1,2,3,6	10	100	1000	10000
PARAOXON	00311-45-5	10	3,1,2,6	1	10	100	1000
PARAQUAT	01910-42-5	1	6,4	0.1	1	10	100
PARAQUAT BIS(METHYL SULFATE)	02074-50-2	1	6,4	0.1	1	10	100
PARAQUAT DICHLORIDE	01910-42-5	1	6,4	0.1	1	10	100
PARAQUAT METHOSULFATE	02074-50-2	1	4,6	0.1	1	10	100
PARATHION	00056-38-2	5	1,2,3,6,4,8	0.5	5	50	500
PARATHION-METHYL	00298-00-0	10	4,1,2,3,6	1	10	100	1000
PARIS GREEN	12002-03-8	1	1,4,3	(See RCs of any listed constituents)			
PCB	1336-36-3	1	2,1,3,5,6,8	0.0005	0.005	1	4
PCB-CONTAMINATED MATERIAL < 500 ppm (DEP RQ in gal)		10	5	(See RCs of any listed constituents)			
PCB-CONTAMINATED MATERIAL =>500 ppm (DEP RQ in gal)		1	5	(See RCs of any listed constituents)			
PCNB	00082-68-8	10	2,3,6,8,3	1	10	100	1000
PCP	87-86-5	5	1,2,3,5,6,8	0.001	0.2	3	10
PENTABORANE	19624-22-7	1	4,6,1	(See RCs of any listed constituents)			
PENTABORANE(9)	19624-22-7	1	7,1,4,6	(See RCs of any listed constituents)			
PENTABORON NONAHYDRIDE	19624-22-7	1		(See RCs of any listed constituents)			
PENTACHLOROBENZENE	00608-93-5	5	2,3,6	0.5	5	50	500
PENTACHLOROETHANE	00076-01-7	5	2,3,1	0.5	5	50	500
PENTACHLORONITROBENZENE	00082-68-8	10	2,3,6,8,3	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
PENTACHLOROPHENOL	87-86-5	5	1,2,3,5,6,8	0.001	0.2	3	10
PENTACHLOROPHOSPHORANE	10026-13-8	1	6,1,4	(See RCs of any listed constituents)			
1-PENTADECANAMINE	02570-26-5	1	7,4	0.1	1	10	100
PENTADECYLAMINE	02570-26-5	1	4	0.1	1	10	100
1,3-PENTADIENE	00504-60-9	10	1,3,7,6	1	10	100	1000
PENTADIENE (CIS & TRANS MIXED)	00504-60-9	10	6,1,3	1	10	100	1000
PENTALIN	00076-01-7	5	2,3,1	0.5	5	50	500
PENTAMETHYLENE OXIDE	00142-68-7	50	6	5	50	500	5000
PENTANAL	00110-62-3	10	7,6	1	10	100	1000
PENTANAL, 2-METHYL-	00123-15-9	50	7,6	5	50	500	5000
PENTANE	00109-66-0	10	1,6	1	10	100	1000
PENTANE, 1-CHLORO-	00543-59-9	10	7,1,6	1	10	100	1000
PENTANE, 2,2,4-TRIMETHYL-	00540-84-1	10	7,1,6	1	10	100	1000
PENTANE, 2-METHYL-	00107-83-5	10	7,1,6	1	10	100	1000
PENTANE, 3-METHYL-	00096-14-0	10	7,6	1	10	100	1000
2,4-PENTANEDIOL, 2-METHYL-	00107-41-5	10	7,6	1	10	100	1000
2,4-PENTANEDIONE	00123-54-6	100	6	10	100	1000	10000
PENTANOIC ACID	00109-52-4	10	7,1,6	1	10	100	1000
1-PENTANOL	00071-41-0	10	6,7	1	10	100	1000
1-PENTANOL, 2-METHYL-	00105-30-6	100	7,6	10	100	1000	10000
2-PENTANOL, ACETATE	00626-38-0	100	7,3	10	100	1000	10000
3-PENTANONE	00096-22-0	10	7,1,6	1	10	100	1000
2-PENTANONE	00107-87-9	10	6,1	1	10	100	1000
2-PENTANONE, 4-HYDROXY-4-METHYL-	00123-42-2	10	7,1,6	1	10	100	1000
2-PENTANONE, 4-METHYL-	108-10-1	100	1,3,8,6	0.35	50	0.4	50
1-PENTENE	00109-67-1	10	7,6	1	10	100	1000
2-PENTENE, (E)-	00646-04-8	10	7,6	1	10	100	1000
2-PENTENE, (Z)-	00627-20-3	10	7,6	1	10	100	1000
1-PENTENE, 2,4,4-TRIMETHYL-	00107-39-1	10	7,6	1	10	100	1000
2-PENTENE, 2,4,4-TRIMETHYL-	00107-40-4	10	7,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST
TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
3/20/20 (Effective 12/27/19) - corrected 2-PENTENE, 3,4-DIMETHYL- 2,4-PENTENEDIONE	00598-96-9	50	7,6	5	50	500	5000
PENTYL ACETATE	00123-54-6	100	7,6	10	100	1000	10000
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) (sum of constituents listed below)	00628-63-7	100	6,1,3	10	100	1000	10000
PERFLUORODECANOIC ACID (PFDA)	-	1		2E-05			
PERFLUOROHEPTANOIC ACID (PFHpA)	335-76-2			see PFAS	40	3E-04	0.4
PERFLUOROHEXANESULFONIC ACID (PFHxS)	375-85-9	1		see PFAS	40	5E-04	0.4
PERFLUORONONANOIC ACID (PFNA)	355-46-4	1		see PFAS	0.5	3E-04	0.4
PERFLUOROOCTANESULFONIC ACID (PFOS)	375-95-1	1		see PFAS	40	3.2E-04	0.4
PERFLUOROOCTANOIC ACID (PFOA)	1763-23-1	1		see PFAS	0.5	2E-03	0.4
PERACETIC ACID	335-67-1	1		see PFAS	40	7.2E-04	0.4
PERCHLORATE COMPOUNDS, NOS	00079-21-0	1	4,6,8,1	0.1	1	10	100
PERCHLORIC ACID	07601-90-3	10	6,10,002	1	0.1	5	
		10	6,1,7	(See RCs of any listed constituents)			
PERCHLOROETHYLENE	127-18-4	10	1,3,5,6,8	0.005	0.05	1	10
PERCHLOROMETHYL MERCAPTAN	00594-42-3	10	6,1,2,3,4	1	10	100	1000
PERFLUOROISOBUTYLENE	00382-21-8	1	6	0.1	1	10	100
PERMANGANATE OF POTASH	07722-64-7	10	1,3,6	(See RCs of any listed constituents)			
PERMANGANIC ACID (HMnO4), POTASSIUM SALT	07722-64-7	10	7,1,3,6	(See RCs of any listed constituents)			
PERMETHRIN	52645-53-1	1	6	0.1	1	10	100
PEROXIDE, BIS(1,1-DIMETHYLETHYL)-	00110-05-4	10	7,1,6	1	10	100	1000
PEROXIDE, DIACETYL-	00110-22-5	10	7,1,6	1	10	100	1000
PEROXIDE, DIBENZOYL	00094-36-0	10	7,1,6,8	1	10	100	1000
PEROXYACETIC ACID	00079-21-0	1	1,6,4,8	0.1	1	10	100
PETROLEUM BASED OIL (DEP RQ in gallons)		10	5	(See TPH RC and RCs of other relevant constituents)			
PETROLEUM DISTILLATES	08030-30-6	10	6,1,5	(See TPH RC and RCs of other relevant constituents)			
PETROLEUM ETHER	08030-30-6	10	6,1,5	(See TPH RC and RCs of other relevant constituents)			
PETROLEUM HYDROCARBONS							
TOTAL PETROLEUM HYDROCARBONS (TPH) (DEP RQ in gallons)		10	5	0.2	5	1000	3000
ALIPHATIC HYDROCARBONS							
C ₅ through C ₈ Aliphatic Hydrocarbons				0.3	3	100	500
C ₉ through C ₁₂ Aliphatic Hydrocarbons				0.7	5	1000	3000
C ₉ through C ₁₈ Aliphatic Hydrocarbons	310 CMR - 1877			0.7	5	1000	3000
C ₁₉ through C ₃₆ Aliphatic Hydrocarbons				14	50	3000	5000
AROMATIC HYDROCARBONS							
C ₉ through C ₁₀ Aromatic Hydrocarbons				0.2	4	100	500
C ₁₁ through C ₂₂ Aromatic Hydrocarbons				0.2	5	1000	3000
PETROLEUM NAPHTHA	08030-30-6	10	6,1,5	(See TPH RC and RCs of other relevant constituents)			
PHENACETIN	00062-44-2	10	2,3,6	1	10	100	1000

310 CMR

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
5/23/14 (Effective 4/25/14) - corrected	00532-27-4	10	6,8	1	10	100	1000
PHENANTHRENE	85-01-8	100	3,7,6	0.04	10	10	1000
PHENAZOPYRIDINE	00094-78-0	100	6	10	100	1000	10000
PHENOL 108-95-2	50	1,2,3,4,5,6,8	1	2	1	20	
PHENOL, 4-(DIMETHYLAMINO)-3-METHYL-,METHYLCARBAMATE..	02032-59-9	10	1,7	1	10	100	1000
PHENOL, 2-(1,3-DIOXOLAN-2-YL)-, METHYLCARBAMATE	06988-21-2	10	1,7	1	10	100	1000
PHENOL, 2,2'-METHYLENEBIS[3,4,6-TRICHLORO-	00070-30-4	10	7,2,3,5,6,8	1	10	100	1000
PHENOL, 2-(1-METHYLETHYL)-, METHYLCARBAMATE	02631-40-5	1	1,7	0.1	1	10	100
PHENOL, 2,2'-THIOBIS(4,6-DICHLORO)-	00097-18-7	10	7	1	10	100	1000
PHENOL, 2,2'-THIOBIS[4-CHLORO-6-METHYL]-	04418-66-0	1	4,7	0.1	1	10	100
PHENOL, 2,3,4,6-TETRACHLORO-	00058-90-2	5	2,3,7,1,6	0.5	5	50	500
PHENOL, 2,3,4-TRICHLORO-	15950-66-0	5	7,3	0.5	5	50	500
PHENOL, 2,3,5-TRICHLORO-	00933-78-8	5	7,3	0.5	5	50	500
PHENOL, 2,3,6-TRICHLORO-	00933-75-5	5	7,3	0.5	5	50	500
PHENOL, 2,4,5-TRICHLORO-	95-95-4	5	2,3,7,8,6	0.2	3	3	600
PHENOL, 2,4,6-TRICHLORO-	88-06-2	5	2,3,5,6,7,8	0.01	0.5	0.7	20
PHENOL, 2,4,6-TRINITRO-	00088-89-1	10	7,1,6,8	1	10	100	1000
PHENOL, 2,4,6-TRINITRO-, AMMONIUM SALT	00131-74-8	5	3,1,6	(See RCs of any listed constituents)			
PHENOL, 2,4-DICHLORO-	120-83-2	10	2,3,1,8,6	0.01	2	0.7	40
PHENOL, 2,4-DIMETHYL-	105-67-9	10	1,2,3,8,6	0.06	40	0.7	100
PHENOL, 2,4-DINITRO-	51-28-5	5	2,3,7,8,6	0.2	20	3	50
PHENOL, 2,4-DINITRO-6-(1-METHYLPROPYL)-	00088-85-7	50	2,3,1,4	5	50	500	5000
PHENOL, 2,4-DINITRO-6-METHYL-, AND SALTS	00534-52-1	5	2,3,1,4,6,8	0.5	5	50	500
PHENOL, 2,5-DINITRO-	31031MR-5 1878	5	7,3,6	0.5	5	50	500
PHENOL, 2,6-DICHLORO-	00087-65-0	10	2,3,7,1,6	1	10	100	1000
PHENOL, 2,6-DINITRO-	00573-56-8	5	7,3,6	0.5	5	50	500
PHENOL, 2-(1,1-DIMETHYLETHYL)-4,6-DINITRO-	01420-07-1	1	7,4,1	0.1	1	10	100
PHENOL, 2-(1-METHYLETHOXY)-, METHYLCARBAMATE	00114-26-1	1	7,6,8,1	0.1	1	10	100
PHENOL, 2-CHLORO-	95-57-8	10	1,2,3,6	0.01	7	0.7	100
PHENOL, 2-CYCLOHEXYL-4,6-DINITRO-	00131-89-5	10	2,3,1,6	1	10	100	1000

310 C

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
PHENOL, 2-METHYL-	00095-48-7	50	7,3,4,6,8	5	50	500	5000
PHENOL, 2-METHYL-4,6-DINITRO-	00534-52-1	5	7,1,2,3,4,6,8	0.5	5	50	500
PHENOL, 3,4,5-TRICHLORO-	00609-19-8	5	7,3	0.5	5	50	500
PHENOL, 3,5-DIMETHYL-4-(METHYLTHIO)-, METHYLCARB..	02032-65-7	5	7,1,3,4,6	0.5	5	50	500
PHENOL, 3-(1-METHYLETHYL)-, METHYLCARBAMATE	00064-00-6	1	7,4	0.1	1	10	100
PHENOL, 3-METHYL-	00108-39-4	50	3,6,8	5	50	500	5000
PHENOL, 3-METHYL-5-(1-METHYLETHYL)-, METHYLCARBA..	02631-37-0	1	7,4,1	0.1	1	10	100
PHENOL, 3-NITRO-	00554-84-7	10	7,1,3,6	1	10	100	1000
PHENOL, 4,4'-(1,2-DIETHYL-1,2-ETHENEDIYL)BIS	00056-53-1	1	7,2,3,6	0.1	1	10	100
PHENOL, 4,4'-(1,2-DIETHYL-1,2-ETHENEDIYL)BIS-(,E)	00056-53-1	1	3	0.1	1	10	100
PHENOL, 4-(DIMETHYLAMINO)-3,5-DIMETHYL-,METHYLCA..	00315-18-4	50	7,1,3,4	5	50	500	5000
PHENOL, 4-CHLORO-3-METHYL-	00059-50-7	100	2,3,7,1,6	10	100	1000	10000
PHENOL, 4-ETHYL-	00123-07-9	100	7,6	10	100	1000	10000
PHENOL, 4-METHOXY-	00150-76-5	100	7,6	10	100	1000	10000
PHENOL, 4-METHYL-	00106-44-5	50	3,5,6,8	5	50	500	5000
PHENOL, 4-NITRO-	00100-02-7	10	2,3,1,6,8	1	10	100	1000
PHENOL, DIMETHYL-	01300-71-6	50	1,3	0.1	20	0.7	10
PHENOL, DINITRO-	25550-58-7	5	7,1,3,6	0.2	2	3	6
PHENOL, METHYL-	01319-77-3	50	2,1,3,6,8	5	50	500	5000
PHENOL, 2-METHYL-4,6-DINITRO-, SODIUM SALT	02312-76-7	10	1,7	1	10	100	1000
PHENOL, NITRO-	25154-55-6	10	7,3,6	1	10	100	1000
PHENOL, O-CHLORO-	95-57-8	10	1,2,3,6	0.01	7	0.7	100
PHENOL, PENTACHLORO-	87-86-5	5	1,2,3,7,5,6,8	0.001	0.2	3	10
PHENOL, PENTACHLORO-, SODIUM SALT	00131-52-2	1	1,2	(See RCs of any listed constituents)			
PHENOL, TRICHLORO-	25167-82-2	5	7,1,3	0.01	0.1	2	2
PHENOL,(1,1-DIMETHYLETHYL)-4-METHOXY-	25013-16-5	1	7	0.1	1	10	100
PHENOXARSINE, 10,10'-OXYDI	00058-36-6	1	4	0.1	1	10	100
PHENTHOATE	02597-03-7	1	1	0.1	1	10	100
PHENYL ETHER VAPOR	00101-84-8	10	6	1	10	100	1000
PHENYL MERCAPTAN	00108-98-5	10	1,2,3,4,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
PHENYL, 2-(1-METHYLPROPYL)-4,6-DINITRO-	00088-85-7	50	7,1,2,3,4	5	50	500	5000
PHENYL, 2-NITRO-	00088-75-5	10	7,1,3,8,6	1	10	100	1000
L-PHENYLALANINE, 4-[BIS(2-CHLOROETHYL)AMINO]-	00148-82-3	1	7,2,3,6	0.1	1	10	100
PHENYLDICHLOROARSINE	00696-28-6	1	1,2,3,4	0.1	1	10	100
M-PHENYLENE DIAMINE	00108-45-2	100	6	10	100	1000	10000
1,10-(1,2-PHENYLENE)PYRENE	193-39-5	10	2,3,6	0.0005	0.1	7	40
PHENYLETHYLENE	00100-42-5	50	3,5,6,1,8	0.1	0.1	3	4
PHENYLHYDRAZINE	00100-63-0	50	6	5	50	500	5000
PHENYLHYDRAZINE HYDROCHLORIDE	00059-88-1	1	4	0.1	1	10	100
PHENYLMERCURIC ACETATE	00062-38-4	10	3,2,4,6,1	1	10	100	1000
PHENYLMERCURY ACETATE	00062-38-4	10	3,2,4,6,1	1	10	100	1000
PHENYLSILATRANE	02097-19-0	1	4	0.1	1	10	100
N-PHENYLTHIOUREA	00103-85-5	10	1,2,3,4	1	10	100	1000
PHENYLTHIOUREA	00103-85-5	10	4,1,2,3	1	10	100	1000
PHENYLTRICHLOROSILANE	00098-13-5	1	1,6,4	0.1	1	10	100
PHOPHAMIDIC ACID, (1-METHYLETHYL)-, ETHYL 3-ME..	22224-92-6	1	7,4,6,1	0.1	1	10	100
PHORATE	00298-02-2	5	2,3,6,4,1	0.5	5	50	500
PHOSACETIM	04104-14-7	1	6,4	0.1	1	10	100
PHOSALONE	02310-17-0	5	1	0.5	5	50	500
PHOSDRIN	07786-34-7	5	6,3,1,4	0.5	5	50	500
PHOSFOLAN	00947-02-4	1	4	0.1	1	10	100
PHOSGENE	00075-44-5	5	1,2,3,4,6,8	0.5	5	50	500
PHOSMET	00732-11-6	1	4,1	0.1	1	10	100
PHOSPHAMIDON	13171-21-6	1	4,6,1	0.1	1	10	100
PHOSPHINE	07803-51-2	10	4,6,1,2,3,7	(See RCs of any listed constituents)			
PHOSPHONIC ACID, (2,2,2-TRICHLORO-1-HYDROXYETHYL)..	00052-68-6	10	7,1,3,8	1	10	100	1000
PHOSPHONIC ACID, DIBUTYL ESTER	01809-19-4	100	7,6	10	100	1000	10000
PHOSPHONIC DIAMIDE, P-(5-AMINO-3-PHENYL-1H-1,2,4..	01031-47-6	1	7,4	0.1	1	10	100
PHOSPHONIC DICHLORIDE, METHYL-	00676-97-1	1	7,4	0.1	1	10	100
PHOSPHONODITHIOIC ACID, ETHYL-, O-ETHYL S-PHENYL..	00944-22-9	1	7,4,6,1	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
PHOSPHONOFUORIDIC ACID, METHYL-, 1-METHYLETHYL ..	00107-44-8	1	4	0.1	1	10	100
PHOSPHONOTHIOIC ACID, ETHYL-, O-ETHYL O-(2,4,5-T..	00327-98-0	1	7,4,1	0.1	1	10	100
PHOSPHONOTHIOIC ACID, METHYL-, O-(4-NITROPHENYL...	02665-30-7	1	7,4	0.1	1	10	100
PHOSPHONOTHIOIC ACID, METHYL-, O-ETHYL-O-[4-(ME...	02703-13-1	1	7,4	0.1	1	10	100
PHOSPHONOTHIOIC ACID, METHYL-, S-(2-(DIISOPROPY...	50782-69-9	1	4	0.1	1	10	100
PHOSPHONOTHIOIC ACID, METHYL-, S-[2-[BIS(1-METHY..	50782-69-9	1	4,7	0.1	1	10	100
PHOSPHONOTHIOIC ACID, PHENYL-, O-(4-BROMO-2,5-DI..	21609-90-5	1	7,4	0.1	1	10	100
PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(4-NITR..	02104-64-5	1	7,4,6,1	0.1	1	10	100
PHOSPHORAMIDIC ACID, (4-METHYL-1,3-DITHIOLAN-2-Y..	00950-10-7	1	7,4,1	0.1	1	10	100
PHOSPHORAMIDIC ACID, 1,3-DITHIETAN-2-YLIDENE-, D..	21548-32-3	1	7,4	0.1	1	10	100
PHOSPHORAMIDIC ACID, 1,3-DITHIOLAN-2-YLIDENE-	00947-02-4	1	7,4	0.1	1	10	100
PHOSPHORAMIDIC ACID, METHYL-, 2-CHLORO-4-(1,1-DI..	00299-86-5	10	7,6	1	10	100	1000
PHOSPHORAMIDOTHIOIC ACID, (1-IMINOETHYL)-, O,O-B..	04104-14-7	1	7,4,6	0.1	1	10	100
PHOSPHORAMIDOTHIOIC ACID, O,S,-DIMETHYL ESTER	10265-92-6	1	7,4,6,1	0.1	1	10	100
PHOSPHORCHLORIDIC ACID, DIETHYL ESTER	00814-49-3	1	7,4	0.1	1	10	100
PHOSPHORIC ACID	07664-38-2	100	6,1,3,5,7,8	(See RCs of any listed constituents)			
PHOSPHORIC ACID TRIBUTYL ESTER	00126-73-8	50	7,6	5	50	500	5000
PHOSPHORIC ACID, 1,2-DIBROMO-2,2-DICHLOROETHYL D..	00300-76-5	5	7,1,3,6	0.5	5	50	500
PHOSPHORIC ACID, 2,2-DICHLOROETHANENYL DIMETHYL E.	00062-73-7	5	7,1,3,4,6,8	0.5	5	50	500
PHOSPHORIC ACID, 2-CHLORO-1-(2,4-DICHLOROPHENYL)..	00470-90-6	1	7,4,6,1	0.1	1	10	100
PHOSPHORIC ACID, 2-CHLORO-3-(DIETHYLAMINO)-1-ME...	13171-21-6	1	4,6,1	0.1	1	10	100
PHOSPHORIC ACID, 3-(DIMETHYLAMINO)-1-METHYL-3-...	00141-66-2	1	7,4,6,1	0.1	1	10	100
PHOSPHORIC ACID, DIETHYL 4-NITROPHENYL ESTER	00311-45-5	10	7,1,2,3,6	1	10	100	1000
PHOSPHORIC ACID, DIETHYL P-NITROPHENYL ESTER	00311-45-5	10	2,3,1,6	1	10	100	1000
PHOSPHORIC ACID, DIMETHYL 4-(METHYLTHIO)PHENYL E..	03254-63-5	1	7,4	0.1	1	10	100
PHOSPHORIC ACID, DISODIUM SALT	07558-79-4	100	7,1,3,6	(See RCs of any listed constituents)			
PHOSPHORIC ACID, DISODIUM SALT, DODECAHYDRATE	10039-32-4	100	7,3,6	(See RCs of any listed constituents)			
PHOSPHORIC ACID, DISODIUM SALT, HYDRATE	10140-65-5	100	7,3,6	(See RCs of any listed constituents)			
PHOSPHORIC ACID, ISODECYL DIPHENYL ESTER	29761-21-5	50	1,7	5	50	500	5000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	Reportable Concentrations			
		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
PHOSPHORIC ACID, LEAD SALT	07446-27-7	5	2,3,6	(See RCs of any listed constituents)			
PHOSPHORIC ACID, LEAD(2+) SALT (2:3)	07446-27-7	5	7,2,3,6	(See RCs of any listed constituents)			
PHOSPHORIC ACID, TRIS(METHYLPHENYL) ESTER	01330-78-5	5	1,7	0.5	5	50	500
PHOSPHORIC ACID, TRISODIUM SALT	07601-54-9	100	7,1,3,6	(See RCs of any listed constituents)			
PHOSPHORIC ACID, TRISODIUM SALT, DECAHYDRATE	10361-89-4	100	7,3,6	(See RCs of any listed constituents)			
PHOSPHORIC ACID, TRISODIUM SALT, DODECAHYDRATE	10101-89-0	100	7,3,6	(See RCs of any listed constituents)			
PHOSPHORIC ANHYDRIDE	01314-56-3	1	1,4	(See RCs of any listed constituents)			
PHOSPHOROCHLORIDOTHIOIC ACID, O,O-DIMETHYL ESTER	02524-03-0	1	7,1,4	0.1	1	10	100
PHOSPHORODIAMIDIC FLUORIDE, TETRAMETHYL-	00115-26-4	1	4	0.1	1	10	100
PHOSPHORODITHIOIC ACID, S[2-CHLORO-1-(1,3-DIHYDR...	10311-84-9	1	4,1	0.1	1	10	100
PHOSPHORODITHIOIC ACID, O,O-DIETHYL S-[2-(ETHYLS..	02497-07-6	1	7,4,1	0.1	1	10	100
PHOSPHORODITHIOIC ACID, O,O-DIETHYL S-(ETHYLTHI...	00298-02-2	5	2,3,7,4,6,1	0.5	5	50	500
PHOSPHORODITHIOIC ACID, O,O-DIETHYL S-METHYL ESTER	03288-58-2	100	2,3,7,1,6	10	100	1000	10000
PHOSPHORODITHIOIC ACID, O,O-DIETHYL S-[(4-OXO-1,..	02642-71-9	1	7,4,1	0.1	1	10	100
PHOSPHORODITHIOIC ACID, O,O-DIETHYL S-[2-(ETHYLT..	00298-04-4	1	7,1,3,4,6	0.1	1	10	100
PHOSPHORODITHIOIC ACID, O,O-DIETHYL S-[2-[(1-ME...	02275-18-5	1	7,4,1	0.1	1	10	100
PHOSPHORODITHIOIC ACID, O,O-DIMETHYL S-[(4-OXO-1..	00086-50-0	1	7,1,3,4,6	0.1	1	10	100
PHOSPHORODITHIOIC ACID, O-ETHYL S,S-DIPHENYL ESTER	17109-49-8	1	1,7	0.1	1	10	100
PHOSPHORODITHIOIC ACID, O-ETHYL S,S-DIPROPYL ESTER	13194-48-4	1	4,6,1	0.1	1	10	100
PHOSPHORODITHIOIC ACID, S,S'-1,4-DIOXANE-2,3-DYL..	00078-34-2	1	7,4,6,1	0.1	1	10	100
PHOSPHORODITHIOIC ACID, S,S'-METHYLENE O,O,O',O'..	00563-12-2	5	7,1,3,4,6	0.5	5	50	500
PHOSPHORODITHIOIC ACID, S-(CHLOROMETHYL) O,O-DIE..	24934-91-6	1	7,4,1	0.1	1	10	100
PHOSPHORODITHIOIC ACID, S-[(6-CHLORO-2-OXO-3(2H)-BENZA..	02310-17-0	5	1,7	0.5	5	50	500
PHOSPHORODITHIOIC ACID, S-[(1,1-DIMETHYLETHYL)...	13071-79-9	1	4,1	0.1	1	10	100
PHOSPHORODITHIOIC ACID, S-[(1,3-DIHYDRO-1,3-DIOX..	00732-11-6	1	7,4,1	0.1	1	10	100
PHOSPHORODITHIOIC ACID, S-[(5-METHOXY-2-OXO-1,3,..	00950-37-8	1	7,4,6,1	0.1	1	10	100
PHOSPHORODITHIOIC ACID, S-[2-(ETHYLTHIO)ETHYL] O..	00640-15-3	100	7	10	100	1000	10000
PHOSPHORODITHIOIC ACID, S-[2-(FORMYLMETHYLAMINO)..	02540-82-1	1	7,4	0.1	1	10	100
PHOSPHORODITHIOIC ACID, S-[[2,5-DICHLOROPHENYL)..	03735-23-7	1	7,4	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
PHOSPHORODITHIOIC ACID, S-[[4-(4-CHLOROPHENYL)THIO..	00786-19-6	1	7,4,1	0.1	1	10	100
PHOSPHORODITHIOIC ACID,O,O-DIMETHYL S-[2(METHYL...	00060-51-5	5	2,3,7,1,4	0.5	5	50	500
PHOSPHOROFUORIDIC ACID,BIS(1-METHYLETHYL) ESTER	00055-91-4	10	2,3,7,1,4	1	10	100	1000
PHOSPHOROTHIOIC ACID, O,O-DIMETHYL-S-(2-METHYLTHI..	02587-90-8	1	4	0.1	1	10	100
PHOSPHOROTHIOIC ACID, O,O,-DIETHYL O-(3,5,6-TRIC..	02921-88-2	1	7,1,3,6	0.1	1	10	100
PHOSPHOROTHIOIC ACID, O,O-DIETHYL O-(1-PHENYL-1H..	24017-47-8	1	7,4,1	0.1	1	10	100
PHOSPHOROTHIOIC ACID, O,O-DIETHYL O-(4-NITROPHEN..	00056-38-2	5	7,1,2,3,4,6,8	0.5	5	50	500
PHOSPHOROTHIOIC ACID, O,O-DIETHYL O-PYRAZINYL E...	00297-97-2	10	2,3,7,1,4	1	10	100	1000
PHOSPHOROTHIOIC ACID, O,O-DIETHYL O-[2-(ETHYLTHI..	08065-48-3	1	7,4,6	0.1	1	10	100
PHOSPHOROTHIOIC ACID, O,O-DIMETHYL O-[3-METHYL...	00055-38-9	5	7,6,1	0.5	5	50	500
PHOSPHOROTHIOIC ACID, O,O-DIMETHYL O-(4-NITROPHE..	00298-00-0	10	7,1,2,3,4,6	1	10	100	1000
PHOSPHOROTHIOIC ACID, O,O-DIMETHYL O-[P-[(DIMET...	00052-85-7	50	2,3,1,6	5	50	500	5000
PHOSPHOROTHIOIC ACID, O,O-DIMETHYL-O-(3-METHYL-...	00122-14-5	1	4,1	0.1	1	10	100
PHOSPHOROTHIOIC ACID, O-(4-BROMO-2,5-DICHLOROPHENYL),	04824-78-6	10	1,7	1	10	100	1000
PHOSPHOROTHIOIC ACID, O-(3-CHLORO-4-METHYL-2-OXO..	00056-72-4	5	7,1,3,4	0.5	5	50	500
PHOSPHOROTHIOIC ACID, O-(4-CYANOPHENYL) O,O-DIME..	02636-26-2	1	7,4,1	0.1	1	10	100
PHOSPHOROTHIOIC ACID, O-O-DIETHYL O-[4-(METHYLS...	00115-90-2	1	4,6,1	0.1	1	10	100
PHOSPHOROTHIOIC ACID, O-(2,4-DICHLOROPHENYL) O,O-DIETH..	00097-17-7	1	1,7	0.1	1	10	100
PHOSPHOROTHIOIC ACID, O-[2,5-DICHLORO-4-(METHYL...	21923-23-9	1	7,4,1	0.1	1	10	100
PHOSPHOROTHIOIC ACID, O-[2-(DIETHYLAMINO)-6-METH...	23505-41-1	1	7,4	0.1	1	10	100
PHOSPHOROTHIOIC ACID, O-[4-[(DIMETHYLAMINO)SULFO...	00052-85-7	50	7,1,2,3,6	5	50	500	5000
PHOSPHOROTHIOIC ACID, 0,0'-(THIODI-4,1-PHENYLENE...	03383-96-8	10	7,6,1	1	10	100	1000
PHOSPHOROTHIOIC ACID, S-[(5-METHOXY-4-OXO-4H-PYR...	02778-04-3	1	7,4	0.1	1	10	100
PHOSPHOROTHIOIC ACID, S-[2-(DIETHYLAMINO)ETHYL] ..	03734-97-2	1	7,4	0.1	1	10	100
PHOSPHOROTHIOIC ACID, S-[2-(ETHYLTHIO)ETHYL] O,O..	00919-86-8	1	7,4	0.1	1	10	100
PHOSPHOROTHIOIC ACID,O,O-DIETHYL O-(P-NITROPHENY..	00056-38-2	5	2,3,1,4,6,8	0.5	5	50	500
PHOSPHOROUS ACID, TRIMETHYL ESTER	00121-45-9	100	7,6	10	100	1000	10000
PHOSPHOROUS TRICHLORIDE	07719-12-2	50	4,6,1,3,7	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
PHOSPHORUS	07723-14-0	1	4,3,7,1,6,8	(Not Applicable)			
PHOSPHORUS BROMIDE	07789-60-8	10	1	(See RCs of any listed constituents)			
PHOSPHORUS CHLORIDE	07719-12-2	50	1,3,4,6	(See RCs of any listed constituents)			
PHOSPHORUS OXIDE	01314-56-3	1	1,4	(See RCs of any listed constituents)			
PHOSPHORUS OXYBROMIDE	07789-59-5	10	1	(See RCs of any listed constituents)			
PHOSPHORUS OXYCHLORIDE	10025-87-3	50	4,3,6,1	(See RCs of any listed constituents)			
PHOSPHORUS PENTACHLORIDE	10026-13-8	1	4,6,1	(See RCs of any listed constituents)			
PHOSPHORUS PENTASULFIDE	01314-80-3	10	6,1,3	(See RCs of any listed constituents)			
PHOSPHORUS PENTOXIDE	01314-56-3	1	1,4	(See RCs of any listed constituents)			
PHOSPHORUS SESQUISULFIDE	01314-85-8	10	6,1	(See RCs of any listed constituents)			
PHOSPHORUS SULFIDE	01314-80-3	10	6,3,1	(See RCs of any listed constituents)			
PHOSPHORYL CHLORIDE	10025-87-3	50	6,1,3,4	(See RCs of any listed constituents)			
PHOSPHOTHIOIC ACID, S-[2-(DIETHYLAMINO)ETHYL] O,..	00078-53-5	1	7,4	0.1	1	10	100
PHOSPHRIC ACID, DIMETHYL 1-METHYL-3-(METHYLAMINO)..	06923-22-4	1	7,4,6,1	0.1	1	10	100
PHOSPORAMIDOCYANIDIC ACID, DIMETHYL-, ETHYL ESTER	00077-81-6	1	7,4	0.1	1	10	100
PHTHALIC ANHYDRIDE	00085-44-9	100	1,2,3,5,6,8	10	100	1000	10000
PHYSOSTIGMINE	00057-47-6	1	4	0.1	1	10	100
PHYSOSTIGMINE SALICYLATE (1:1)	00057-64-7	1	4	(See RCs of any listed constituents)			
PICLORAM	01918-02-1	10	6	1	10	100	1000
4-PICOLINE	00108-89-4	10	7,6	1	10	100	1000
2-PICOLINE	00109-06-8	100	1,2,3,6,8	10	100	1000	10000
PICRATE OF AMMONIUM	00131-74-8	5	1,3,6	(See RCs of any listed constituents)			
PICRIC ACID	00088-89-1	10	1,6,8	1	10	100	1000
PICROTOXIN	00124-87-8	1	4	0.1	1	10	100
alpha-PINENE	00080-56-8	10	1,6	1	10	100	1000
PIPERAZINE	00110-85-0	10	6	1	10	100	1000
1-PIPERAZINEETHANAMINE	00140-31-8	100	7,1,6	10	100	1000	10000
PIPERIDINE	00110-89-4	1	6,4	0.1	1	10	100
PIPERIDINE, 1-NITROSO-	00100-75-4	5	2,3,6,8	0.5	5	50	500

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
2,6-PIPERIDINEDIONE, 4-[2-(3,5-DIMETHYL-2-OXOCYLCOHE..	00066-81-9	1	7,4,6	0.1	1	10	100
PIPERYLENE	00504-60-9	10	1,3,6	1	10	100	1000
PIRIMICARB	23103-98-2	100	1	10	100	1000	10000
PIRIMIFOS-ETHYL	23505-41-1	1	4	0.1	1	10	100
PLATINATE(2-), HEXACHLORO-, DIAMMONIUM, (OC-6-11)	16919-58-7	100	7	(See RCs of any listed constituents)			
PLATINOUS CHLORIDE	10025-65-7	50		(See RCs of any listed constituents)			
PLATINUM CHLORIDE II	10025-65-7	50	7	(See RCs of any listed constituents)			
PLATINUM CHLORIDE IV	13454-96-1	100	7	(See RCs of any listed constituents)			
PLATINUM TETRACHLORIDE	13454-96-1	100		(See RCs of any listed constituents)			
PLICTRAN	13121-70-5	1	6,1	0.1	1	10	100
PLUMBANE, TETRAETHYL-	00078-00-2	5	2,3,7,1,4,6	0.5	5	50	500
PLUMBANE, TETRAMETHYL-	00075-74-1	1	7,4,6,1	0.1	1	10	100
POLYCHLORINATED BIPHENYL, N.O.S.	1336-36-3	1	2,1,3,5,6,8	0.0005	0.005	1	4
POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	1	6,1,3,5,8,2	0.0005	0.005	1	4
POLYCHLORINATED BIPHENYLS (PCBS)	11096-82-5	1	3,6	0.0005	0.005	1	4
POLYCHLORINATED BIPHENYLS (PCBS)	11097-69-1	1	3,6	0.0005	0.005	1	4
POLYCHLORINATED BIPHENYLS (PCBS)	11104-28-2	1	3,6	0.0005	0.005	1	4
POLYCHLORINATED BIPHENYLS (PCBS)	11141-16-5	1	3,6	0.0005	0.005	1	4
POLYCHLORINATED BIPHENYLS (PCBS)	12672-29-6	1	3,6	0.0005	0.005	1	4
POLYCHLORINATED BIPHENYLS (PCBS)	12674-11-2	1	3,6	0.0005	0.005	1	4
POLYCHLORINATED BIPHENYLS (PCBS)	53469-21-9	1	3,6	0.0005	0.005	1	4
POLY[OXY(METHYL-1,2-ETHANEDIYL)], .ALPHA.-[(2,4-..	53467-11-1	10	7,3,6	1	10	100	1000
POTASSIUM	07440-09-7	10	6,7	(Not Applicable)			
POTASSIUM ARSENATE	07784-41-0	1	1,3,6	(See RCs of any listed constituents)			
POTASSIUM ARSENITE	10124-50-2	1	4,1,3	(See RCs of any listed constituents)			
POTASSIUM BICHROMATE	07778-50-9	5	3,1,6	(See RCs of any listed constituents)			
POTASSIUM BROMATE	07758-01-2	100	6,1	(See RCs of any listed constituents)			
POTASSIUM CHROMATE	07789-00-6	5	1,3,6	(See RCs of any listed constituents)			
POTASSIUM CYANIDE	00151-50-8	5	2,3,7,6,4,1,3	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
POTASSIUM DICHLORO-S-TRIAZINETRIONE	02244-21-5	10	6,1	1	10	100	1000
POTASSIUM DICROMATE	07778-50-9	5	6,1,3	(See RCs of any listed constituents)			
POTASSIUM HYDRATE	01310-58-3	50	1,3,6	(See RCs of any listed constituents)			
POTASSIUM HYDROXIDE	01310-58-3	50	6,1,3	(See RCs of any listed constituents)			
POTASSIUM PERCHLORATE	07778-74-7	10	6,1	0.002	1	0.1	5
POTASSIUM PERMANGANATE	07722-64-7	10	6,1,3	(See RCs of any listed constituents)			
POTASSIUM PEROXIDE	17014-71-0	10	6,1	(See RCs of any listed constituents)			
POTASSIUM SILVER CYANIDE	00506-61-6	1	1,2,3,4	(See RCs of any listed constituents)			
POTASSIUM SULFIDE	01312-73-8	10	6,7,1	(See RCs of any listed constituents)			
PREGN-4-ENE-3,20-DIONE,17-(ACETYLOXY)-6-METHYL-...	00071-58-9	1	7	0.1	1	10	100
PREGNA-4,6-DIENE-3,20-DIONE,17-(ACETYLOXY)-6-..	00595-33-5	1	7	0.1	1	10	100
PREGNA-4,6-DIENE-3,20-DIONE,17-(ACETYLOXY)-6-CHL..	00302-22-7	1	7,6	0.1	1	10	100
PROMECARB	02631-37-0	1	4,1	0.1	1	10	100
PROMETON	01610-18-0	50	5	5	50	500	5000
PRONAMIDE	23950-58-5	100	6,1,2,3,8	10	100	1000	10000
PROPANAL	00123-38-6	10	6,1,8	1	10	100	1000
1-PROPANAL, 2,3-EPOXY-	00765-34-4	5	3,2,6	0.5	5	50	500
PROPANAL, 2-METHYL-2-(METHYLTHIO)-,O-[(METHYLAM...]	00116-06-3	1	2,3,1,4,6	0.1	1	10	100
2-PROPANAMINE	00075-31-0	10	7,1,6	1	10	100	1000
1-PROPANAMINE	00107-10-8	100	2,3,1,6	10	100	1000	10000
2-PROPANAMINE, 2-METHYL-	00075-64-9	50	7,3,6	5	50	500	5000
1-PROPANAMINE, 2-METHYL-	00078-81-9	50	7,1,3,6	5	50	500	5000
1-PROPANAMINE, 2-METHYL-N-(2-METHYLPROPYL)-	00110-96-3	10	7,6	1	10	100	1000
1-PROPANAMINE, N,N-DIPROPYL-	00102-69-2	50	7,6	5	50	500	5000
2-PROPANAMINE, N-(1-METHYLETHYL)-	00108-18-9	10	7,1,6	1	10	100	1000
1-PROPANAMINE, N-NITROSO-N-PROPYL-	00621-64-7	5	7,2,3,6,8	0.5	5	50	500
1-PROPANAMINE, N-PROPYL-	00142-84-7	100	3,7,6	10	100	1000	10000
PROPANE	00074-98-6	10	1,6,7	1	10	100	1000
1,3-PROPANE SULTONE	01120-71-4	5	6,2,3,8	0.5	5	50	500
PROPANE SULTONE	01120-71-4	5	6,8,2,3	0.5	5	50	500

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
PROPANE, 1,1'-OXYBIS-	00111-43-3	10	7,6	1	10	100	1000
PROPANE, 1,1-DICHLORO	00078-99-9	50	7,1,3,6	5	50	500	5000
PROPANE, 1,2,3-TRICHLORO-	00096-18-4	10	2,7,6	1	10	100	1000
PROPANE, 1,2-DIBROMO-3-CHLORO-	00096-12-8	1	2,3,7,6,8	0.1	1	10	100
PROPANE, 1,2-DICHLORO-	78-87-5	50	7,1,2,3,5,6,8	0.003	0.003	0.1	0.1
PROPANE, 1,3-DICHLORO-	00142-28-9	50	7,1,3,6	5	50	500	5000
PROPANE, 1-CHLORO-	00540-54-5	10	7,1,6	1	10	100	1000
PROPANE, 1-CHLORO-1-NITRO-	00600-25-9	10	7,6	1	10	100	1000
PROPANE, 1-NITRO-	00108-03-2	10	7,1,6	1	10	100	1000
PROPANE, 2,2'-OXYBIS(2-CHLORO-	108-60-1	50	1,2,3,6,8	0.03	0.1	0.7	0.7
PROPANE, 2,2'-OXYBIS(2-CHLORO-	39638-32-9	50	1,2,3,6,8	0.03	0.1	0.7	0.7
PROPANE, 2,2'-OXYBIS-	00108-20-3	10	7,1,6	1	10	100	1000
PROPANE, 2,2-DIMETHYL-	00463-82-1	10	7,6	1	10	100	1000
PROPANE, 2-CHLORO-	00075-29-6	10	7,6,1	1	10	100	1000
PROPANE, 2-METHYL-	00075-28-5	10	7,1,6	1	10	100	1000
PROPANE, 2-NITRO-	00079-46-9	5	2,3,7,6,8	0.5	5	50	500
PROPANE, DICHLORO-	26638-19-7	50	7,2,3,6	0.005	0.009	0.1	0.2
PROPANE, DICHLORO-, N.O.S.	26638-19-7	50	2,3,6	0.005	0.009	0.1	0.2
1,3-PROPANEDIAMINE, N,N-DIMETHYL-	00109-55-7	10	7,6	1	10	100	1000
PROPANEDINITRILE	00109-77-3	50	2,3,1,4,8	5	50	500	5000
PROPANEDIOIC ACID, DITHALLIUM SALT	02757-18-8	1	7,4	(See RCs of any listed constituents)			
PROPANENITRILE, 2-HYDROXY	00078-97-7	1	7,4,6	0.1	1	10	100
PROPANENITRILE	00107-12-0	5	2,3,1,4,6	0.5	5	50	500
PROPANENITRILE, 2-HYDROXY-2-METHYL-	00075-86-5	5	2,3,7,1,4,6	0.5	5	50	500
PROPANENITRILE, 2-METHYL-	00078-82-0	1	7,4,6	0.1	1	10	100
PROPANENITRILE, 3-CHLORO-	00542-76-7	50	3,2,7,1,4	5	50	500	5000
PROPANENITRILE, 3-HYDROXY-	00109-78-4	10	7,6	1	10	100	1000
2-PROPANENOIC ACID, METHYL ESTER	00096-33-3	10	7,1,5,6,8	1	10	100	1000
PROPANETHIOL, 2-METHYL-	00075-66-1	10	7,6	1	10	100	1000
1,2,3-PROPANETRICARBOXYLIC ACID, 2-HYDROXY-, DIAMMONIU..	03012-65-5	100	7,1,3,6	10	100	1000	10000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
1,2,3-PROPANETRICARBOXYLIC ACID, 2-HYDROXY-AMMONIUM L...	01185-57-5	50	3,1,6	5	50	500	5000
1,2,3-PROPANETRIOL, TRINITRATE	00055-63-0	5	2,3,7,1,6,8	0.5	5	50	500
PROPANOIC ACID	00079-09-4	100	7,1,3,6	10	100	1000	10000
PROPANOIC ACID, 2,2-DICHLORO-	00075-99-0	100	7,1,3,6	10	100	1000	10000
PROPANOIC ACID, 2-(2,4,5-TRICHLOROPHENOXY)-	00093-72-1	10	7,1,2,3,6	1	10	100	1000
PROPANOIC ACID, 2-(2,4,5-TRICHLOROPHENOXY)-, ISO..	32534-95-5	10	7,3,6	1	10	100	1000
PROPANOIC ACID, 2-HYDROXY-, ETHYL ESTER	00097-64-3	10	7,1,6	1	10	100	1000
PROPANOIC ACID, ANHYDRIDE	00123-62-6	100	1,3,6	10	100	1000	10000
2-PROPANOIC ACID, BUTYL ESTER	00141-32-2	100	7,6,8	10	100	1000	10000
PROPANOIC ACID, ETHYL ESTER	00105-37-3	10	7,1,6	1	10	100	1000
PROPANOIC ACID, METHYL ESTER	00554-12-1	10	7,1,6	1	10	100	1000
1-PROPANOL	00071-23-8	10	7,1,5,6	1	10	100	1000
2-PROPANOL, 1-CHLORO-	00127-00-4	100	7,6	10	100	1000	10000
2-PROPANOL, 1-METHOXY-	00107-98-2	10	7,6	1	10	100	1000
1-PROPANOL, 2,2-DIMETHYL-	00075-84-3	10	7,6	1	10	100	1000
1-PROPANOL, 2,3-DIBROMO-, PHOSPHATE	00126-72-7	5	2,3,6,8	0.1	1	10	100
1-PROPANOL, 2-AMINO-2-METHYL-	00124-68-5	100	7,6	10	100	1000	10000
1-PROPANOL, 2-CHLORO-	00078-89-7	100	7,6	10	100	1000	10000
2-PROPANOL, 2-METHYL-	00075-65-0	10	7,1,6,8	1	10	100	1000
1-PROPANOL, 2-METHYL-	00078-83-1	100	2,3,7,1,5,6	10	100	1000	10000
PROPANOL, 2-METHYL-	00078-84-2	10	7,6,8	1	10	100	1000
1-PROPANOL-2,3-EPOXY	00765-34-4	5	2,3,6	0.5	5	50	500
2-PROPANONE	67-64-1	100	1,3,5,6,8	6.3	50	6	50
2-PROPANONE, 1,3-DICHLORO-	00534-07-6	1	7,4	0.0004	0.01	10	0.4
2-PROPANONE, 1-BROMO-	00598-31-2	50	2,3,7,1,6	5	50	500	5000
PROPARGITE	02312-35-8	5	1,3,6	0.5	5	50	500
PROPARGYL ALCOHOL	00107-19-7	50	1,2,3,6	5	50	500	5000
PROPARGYL BROMIDE	00106-96-7	1	6,4	0.1	1	10	100
2-PROPEN-1-AMINE	00107-11-9	1	4,6	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
2-PROPEN-1-OL	00107-18-6	10	2,3,1,4,6,8	1	10	100	1000
1-PROPEN-2-01, ACETATE	00108-22-5	10	7,6	1	10	100	1000
2-PROPENAL	00107-02-8	1	2,3,1,4,6,8	0.1	1	10	100
PROPENAL, 2-METHYL-	00078-85-3	10	7,6	1	10	100	1000
2-PROPENAMIDE	00079-06-1	100	2,3,7,1,4,6,8	10	100	1000	10000
1-PROPENE	00115-07-1	10	8,1,6	1	10	100	1000
1-PROPENE, 1,1,2,3,3,3-HEXACHLORO-	01888-71-7	50	2,3,7,1,6	5	50	500	5000
1-PROPENE, 1,3-, DICHLORO-, (E)-	10061-02-6	10	7,6	0.0005	0.005	0.01	0.1
1-PROPENE, 1,3-DICHLORO-	542-75-6	10	6,3,2,1,8	0.0004	0.01	0.01	0.4
1-PROPENE, 1,3-DICHLORO-, (Z)-	10061-01-5	10	7,6	0.0005	0.005	0.01	0.1
1-PROPENE, 1,3-DICHLORO-, MIXT. WITH 1,2-DICHLORORO..	08003-19-8	10	7,3,6	(See RCs of any listed constituents)			
1-PROPENE, 1-CHLORO-	00590-21-6	10	7,6,1	1	10	100	1000
1-PROPENE, 2,3-DICHLORO-	00078-88-6	10	7,3,8	1	10	100	1000
1-PROPENE, 2-CHLORO-	00557-98-2	10	7,1,6	1	10	100	1000
PROPENE, 2-CHLORO-2-NITRO	00594-71-8	10	7,6	1	10	100	1000
1-PROPENE, 2-METHYL-	00115-11-7	10	7,1,6	1	10	100	1000
1-PROPENE, 3-BROMO-	00106-95-6	10	7,1,6	1	10	100	1000
1-PROPENE, 3-CHLORO-	00107-05-1	50	1,2,3,6,8	5	50	500	5000
1-PROPENE, 3-CHLORO-2-METHYL-	00563-47-3	10	7,6	1	10	100	1000
1-PROPENE, 3-ISOTHIOCYANATO	00057-06-7	10	7,6	1	10	100	1000
1-PROPENE, DICHLORO-	26952-23-8	10	7,2,3	0.0005	0.005	0.01	0.1
PROPENE, DICHLORO-, N.O.S.	26952-23-8	10	2,3	0.0005	0.005	0.01	0.1
1-PROPENE, 1-CHLORO-2-METHYL-	00513-37-1	1	7	0.1	1	10	100
2-PROPENE-1,1-DIOL, 2-METHYL-, DIACETATE	10476-95-6	1	7,4	0.1	1	10	100
2-PROPENENITRILE	00107-13-1	10	2,3,1,4,5,6,8	1	10	100	1000
2-PROPENENITRILE, 2-METHYL-	00126-98-7	50	2,3,1,4,6,8	5	50	500	5000
2-PROPENOIC ACID	00079-10-7	100	3,7,1,6,8	10	100	1000	10000
PROPENOIC ACID, 2-CHLORO-, METHYL ESTER	00080-63-7	1	7,4	0.1	1	10	100
2-PROPENOIC ACID, 2-ETHYHEXYL ESTER	00103-11-7	10	7,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME SOURCES	GW1	Reportable Concentrations		
		RQ (Pounds)			GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
2-PROPENOIC ACID, 2-ETHYLBUTYL ESTER	03953-10-4	10	7,6	1	10	100	1000
2-PROPENOIC ACID, 2-HYDROXYETHYL ESTER	00818-61-1	10	7,6	1	10	100	1000
PROPENOIC ACID, 2-METHYL	00079-41-4	10	7,6	1	10	100	1000
2-PROPENOIC ACID, 2-METHYL-, 2,-[(1,1-DIMETHYLETHY..	03775-90-4	10	7,6	1	10	100	1000
PROPENOIC ACID, 2-METHYL-, 2-ISOCYANATOETHYL ESTER	30674-80-7	1	7,4	0.1	1	10	100
2-PROPENOIC ACID, 2-METHYL-, ANHYDRIDE	00760-93-0	1	7,4	0.1	1	10	100
2-PROPENOIC ACID, 2-METHYL-, ETHYL ESTER	00097-63-2	50	2,3,7,1,6	5	50	500	5000
2-PROPENOIC ACID, 2-METHYL-, METHYL ESTER	00080-62-6	50	2,3,7,1,5,6,8	5	50	500	5000
2-PROPENOIC ACID, 2-METHYLPROPYL ESTER	00106-63-8	10	7,6	1	10	100	1000
2-PROPENOIC ACID, DECYL ESTER	02156-96-9	100	7,6,1	10	100	1000	10000
2-PROPENOIC ACID, ETHYL ESTER	00140-88-5	50	7,3,1,5,6,8	5	50	500	5000
2-PROPENOYL CHLORIDE	00814-68-6	1	7,4	0.1	1	10	100
2-PROPENOYL CHLORIDE, 2-METHYL-	00920-46-7	1	7,4	0.1	1	10	100
beta-PROPIOLACTONE	00057-57-8	1	6,8,4	0.1	1	10	100
3-PROPIOLACTONE	00057-57-8	1	6,4,8	0.1	1	10	100
PROPIONALDEHYDE	00123-38-6	10	1,8,6	1	10	100	1000
PROPIONIC ACID	00079-09-4	100	1,3,6	10	100	1000	10000
PROPIONIC ACID, 2-(2,4,5-TRICHLOROPHENOXY)-	00093-72-1	10	2,3,1,6	1	10	100	1000
PROPIONIC ANHYDRIDE	00123-62-6	100	1,3,6	10	100	1000	10000
PROPIONIC NITRILE	00107-12-0	5	6,1,2,3,4	0.5	5	50	500
PROPIONITRILE	00107-12-0	5	1,4,2,3,6	0.5	5	50	500
PROPIONITRILE, 3-CHLORO-	00542-76-7	50	4,1,2,3	5	50	500	5000
PROPOIPHENONE, 4'-AMINO-	00070-69-9	1	4	0.1	1	10	100
PROPOXUR	00114-26-1	1	7,6,8,1	0.1	1	10	100
PROPRIOLACTONE, BETA-	00057-57-8	1	4,6,8	0.1	1	10	100
n-PROPYL ACETATE	00109-60-4	10	6,1	1	10	100	1000
PROPYL ACETATE	00109-60-4	10	1,6	1	10	100	1000
PROPYL ALCOHOL	00071-23-8	10	1,5,6	1	10	100	1000
PROPYL CHLORIDE	00540-54-5	10	1,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	GW1 (mg/l)	Reportable Concentrations		
					GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
PROPYL CHLOROFORMATE	00109-61-5	1	4	0.1	1	10	100
PROPYL CHLOROTHIOFORMATE	13889-92-4	100	6	10	100	1000	10000
n-PROPYL ETHER	00111-43-3	10	6	1	10	100	1000
PROPYL MERCAPTAN	00107-03-9	10	1,6	1	10	100	1000
PROPYL TRICHLOROSILANE	00141-57-1	10	1,6	1	10	100	1000
PROPYLAMINE	00107-10-8	100	1,6,2,3	10	100	1000	10000
PROPYLBENZENE	00103-65-1	10	6	1	10	100	1000
PROPYLENE	00115-07-1	10	1,8,6	1	10	100	1000
PROPYLENE DICHLORIDE	78-87-5	50	1,2,3,6,5,8	0.003	0.003	0.1	0.1
PROPYLENE GLYCOL METHYL ETHER	00107-98-2	10	6	1	10	100	1000
PROPYLENE GLYCOL MONOMETHYL ETHER	00107-98-2	10	6	1	10	100	1000
PROPYLENE IMINE	00075-55-8	1	6,1,2,3,4,8	0.1	1	10	100
PROPYLENE OXIDE	00075-56-9	10	1,3,4,5,6,8	1	10	100	1000
PROPYLENEIMINE	00075-55-8	1	1,4,8,2,3,6	0.1	1	10	100
1,2-PROPYLENIMINE	00075-55-8	1	2,3,1,4,6,8	0.1	1	10	100
PROPYLTRICHLOROSILANE	00141-57-1	10	6,1	1	10	100	1000
2-PROPYN-1-OL	00107-19-7	50	2,3,1,6	5	50	500	5000
PROPYNE	00074-99-7	10	6	1	10	100	1000
1-PROPYNE	00074-99-7	10	7,6	1	10	100	1000
1-PROPYNE, 3-BROMO- PROTHOATE	00106-96-7	1	4,6	0.1	1	10	100
	02275-18-5	1	4,1	0.1	1	10	100
PRUSSIC ACID	00074-90-8	5	1,2,3,4,6,8	0.5	5	50	500
2,4(1H,3H)-PRYIMIDINEDIONE, 5-[BIS(2-CHLOROETHYL)AMINO]- PSEUDOCUMENE	00066-75-1	5	7,2,3,6	0.5	5	50	500
	00095-63-6	100	8,6	10	100	1000	10000
2H-PYRAN, TETRAHYDRO- PYRENE 129-00-0	00142-68-7	50	7,6	5	50	500	5000
	100	3,4	0.02	0.02	1000	3000	
PYRETHRIN 1	00121-21-1	1	3,6	0.1	1	10	100
PYRETHRIN 2	00121-29-9	1	1,3,6	0.1	1	10	100
PYRETHRINS	08003-34-7	1	1,3,6	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
PYRETHRINS AND PYRETHROIDS	08003-34-7	1	7,1,3,6	0.1	1	10	100
PYRETHROIDS	08003-34-7	1	1,3,6	0.1	1	10	100
PYRETHRUM	08003-34-7	1	6,1,3	0.1	1	10	100
3,6-PYRIDAZINEDIONE, 1,2-DIHYDRO-	00123-33-1	100	1,2,3,6	10	100	1000	10000
4-PYRIDINAMINE	00504-24-5	50	3,7,4,2	5	50	500	5000
4-PYRIDINAMINE	02763-96-4	50	2,1,3,4	5	50	500	5000
PYRIDINE	00110-86-1	50	1,2,3,8,6	5	50	500	5000
PYRIDINE, (S)-3-(1-METHYL-2-PYRROLIDINYL)-,AND S..	00054-11-5	10	2,3,1,4,6	1	10	100	1000
PYRIDINE, 2-METHYL-5-VINYL	00140-76-1	1	4	0.1	1	10	100
PYRIDINE, 2-[(2-(DIMETHYLAMINO)ETHYL)-2-THENYLA...	00091-80-5	100	2,3,6	10	100	1000	10000
PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-, (S)-	00054-11-5	10	7,1,2,3,4,6	1	10	100	1000
PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-, (S)-, SU..	00065-30-5	10	7,1,4	(See RCs of any listed constituents)			
PYRIDINE, 4-AMINO-	00504-24-5	50	4,3,2	5	50	500	5000
PYRIDINE, 4-METHYL-	00108-89-4	10	7,6	1	10	100	1000
PYRIDINE, 4-NITRO-, 1-OXIDE	01124-33-0	1	7,4	0.1	1	10	100
PYRIDINE, 5-ETHENYL-2-METHYL	00140-76-1	1	7,4	0.1	1	10	100
PYRIDINE, 5-ETHYL-2-METHYL-	00104-90-5	10	7,1,6	1	10	100	1000
PYRIDINE, HEXAHYDRO-N-NITROSO-	00100-75-4	5	2,3,6,8	0.5	5	50	500
PYRIDINE,2-METHYL-	00109-06-8	100	2,3,1,6,8	10	100	1000	10000
2-PYRIDINECARBOXYLIC ACID, 4-AMINO-3,5,6-TRICHOLOR..	01918-02-1	10	7,6	1	10	100	1000
4-PYRIMIDINAMINE, 2-CHLORO-N,N,6-TRIMETHYL-	00535-89-7	1	7,4	0.1	1	10	100
2,4(1H,3H)-PYRIMIDINEDIONE, 5-BROMO-6-METHYL-3-(1-METHYLPRO..	00314-40-9	50	7,6	5	50	500	5000
2,4(1H,3H)-PYRIMIDINEDIONE, 5-FLUORO-	00051-21-8	1	7,4	0.1	1	10	100
4(1H)-PYRIMIDINONE, 2,3-DIHYDRO-6-METHYL-2-THIO...	00056-04-2	5	2,3,7,6	0.5	5	50	500
PYRIMINIL	53558-25-1	1	4	0.1	1	10	100
PYROPHOSPHORIC ACID, TETRAETHYL ESTER	00107-49-3	5	2,3,1,4,6	0.5	5	50	500
PYROSULFURYL CHLORIDE	07791-27-7	10	1	(See RCs of any listed constituents)			
PYRROLE	00109-97-7	100	6	10	100	1000	10000
1H-PYRROLE	00109-97-7	100	7,6	10	100	1000	10000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

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		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
PYRROLE, TETRAHYDRO-N-NITROSO-	00930-55-2	1	2,3,6	0.1	1	10	100
PYRROLE[2,3-B]INDOLE-5-OL, 1,2,3,3a,8,8a-HEXAHYD..	00057-47-6	1	7,4	0.1	1	10	100
PYRROLIDINE	00123-75-1	10	1,7,6	1	10	100	1000
PYRROLIDINE, 1-NITROSO-	00930-55-2	1	7,2,3,6	0.1	1	10	100
QUINOLINE	00091-22-5	100	1,3,6,7,8	10	100	1000	10000
QUINONE	00106-51-4	5	8,6,2,3	0.5	5	50	500
QUINTOZENE	00082-68-8	10	8,2,3,6,3	1	10	100	1000
RDX	00121-82-4	10	6	0.001	50	1	80
RESERPINE	00050-55-5	100	1,2,3,6	10	100	1000	10000
RESORCINOL	00108-46-3	100	1,2,3,5,6	10	100	1000	10000
RHODIUM TRICHLORIDE	10049-07-7	1		(See RCs of any listed constituents)			
RONNEL	00299-84-3	5	6	0.5	5	50	500
ROTENONE (COMMERCIAL)	00083-79-4	1	7,6,1	0.1	1	10	100
RUBBER SOLVENT (NAPHTHA)	08030-30-6	10	6,1,5	(See TPH RC and RCs of other relevant constituents)			
SACCHARIN	00081-07-2	10	6,8,2,3	1	10	100	1000
SACCHARIN AND SALTS	00081-07-2	10	2,3,6,8	1	10	100	1000
SAFROLE	00094-59-7	10	3,6,8,2	1	10	100	1000
SALCOMINE	14167-18-1	1	4	0.1	1	10	100
SARIN	00107-44-8	1	4	0.1	1	10	100
9,10-SECOERGOSTA-5,7,10(19),22-TETRAEN-3-OL, (3.BETA...	00050-14-6	1	7,4,6	0.1	1	10	100
SELENIC ACID, SODIUM SALT	13410-01-0	1	4	(See RCs of any listed constituents)			
SELENINYL CHLORIDE	07791-23-3	1	7,4	(See RCs of any listed constituents)			
SELENIOS ACID	07783-00-8	5	4,3,2	(See RCs of any listed constituents)			
SELENIOS ACID (H2SeO3)	07783-00-8	5	7,2,3,4	(See RCs of any listed constituents)			
SELENIOS ACID (H2SeO3), MONOSODIUM SALT	07782-82-3	10	7,3,6	(See RCs of any listed constituents)			
SELENIOS ACID, DISODIUM SALT	10102-18-8	10	7,1,3,4	(See RCs of any listed constituents)			
SELENIOS ACID, DITHALLIUM(1+) SALT	12039-52-0	10	3	(See RCs of any listed constituents)			
SELENIUM	7782-49-2	10	3,6,5,7,2,8	0.05	0.1	400	700
SELENIUM COMPOUNDS, NOS		10	3	(See RCs of any listed constituents)			
SELENIUM DIOXIDE	07446-08-4	5	3,1,6	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

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		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
SELENIUM DIOXIDE	07783-00-8	5	2,3,4	(See RCs of any listed constituents)			
SELENIUM DISULFIDE	07488-56-4	5	3,5,6	(See RCs of any listed constituents)			
SELENIUM OXIDE	07446-08-4	5	1,3,6	(See RCs of any listed constituents)			
SELENIUM OXIDE (SeO2)	07446-08-4	5	7,1,3,6	(See RCs of any listed constituents)			
SELENIUM OXYCHLORIDE	07791-23-3	1	4	(See RCs of any listed constituents)			
SELENIUM SULFIDE	07488-56-4	5	5,3,6	(See RCs of any listed constituents)			
SELENIUM SULFIDE (SeS2)	07488-56-4	5	7,3,5,6	(See RCs of any listed constituents)			
SELENOUREA	00630-10-4	50	2,3,7,6	5	50	500	5000
SEMICARBAZIDE HYDROCHLORIDE	00563-41-7	1	4	0.1	1	10	100
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L-SERINE, DIAZOACETATE (ESTER)	00115-02-6	1	2,3,6	0.1	1	10	100
SEVIN 00063-25-2	10	6,1,3,8	1	10	100	1000	
SILANE, (4-AMONOBUTYL)DIETHOXYMETHYL-	03037-72-7	1	4	0.1	1	10	100
SILANE, BURLTRICHLORO-	07521-80-4	10	7,6	1	10	100	1000
SILANE, CHLOROTRIMETHYL-	00075-77-4	1	7,1,4,6	0.1	1	10	100
SILANE, DICHLORODIMETHYL-	00075-78-5	1	7,1,4,6	0.1	1	10	100
SILANE, DICHLORODIPHENYL-	00080-10-4	10	7,1,6	1	10	100	1000
SILANE, DICHLOROETHYL	01789-58-8	10	7,1,6	1	10	100	1000
SILANE, DICHLOROMETHYL-	00075-54-7	10	7,1,6	1	10	100	1000
SILANE, DICHLOROMETHYLPHENYL-	00149-74-6	1	7,4	0.1	1	10	100
SILANE, TRICHLORO(CHLOROMETHYL)-	01558-25-4	1	7,4	0.1	1	10	100
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SILANE, TRICHLORO(DICHLOROPHENYL)-	27137-85-5	1	7,1,4	0.1	1	10	100
SILANE, TRICHLORO-	10025-78-2	10	7,1,6	1	10	100	1000
SILANE, TRICHLORO-2-PROPENYL-	00107-37-9	10	7,1,6	1	10	100	1000
SILANE, TRICHLOROETHYL-	00115-21-9	1	7,1,4,6	0.1	1	10	100
SILANE, TRICHLOROHEXADECYL-	05894-60-0	50	7,1,6	5	50	500	5000
SILANE, TRICHLOROMETHYL-	00075-79-6	1	7,1,4,6	0.1	1	10	100
SILANE, TRICHLOROPENTYL-	00107-72-2	10	7,1,6	1	10	100	1000
SILANE, TRICHLOROPHENYL-	00098-13-5	1	7,1,4,6	0.1	1	10	100
SILANE, TRICHLOROPROPYL	00141-57-1	10	7,1,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

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		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
SILANE, TRIETHOXY-	00998-30-1	1	7,4	0.1	1	10	100
SILICATE(2-), HEXAFLUORO-, DIAMMONIUM	16919-19-0	50	7,1,3,6	(See RCs of any listed constituents)			
SILICATE(2-), HEXAFLUORO-, ZINC (1:1)	16871-71-9	100	7,1,3	(See RCs of any listed constituents)			
SILICON CHLORIDE	10026-04-7	10	1	(See RCs of any listed constituents)			
SILICON TETRAFLUORIDE	07783-61-1	10	1	(See RCs of any listed constituents)			
SILVER 7440-22-4	50	6,1,3,7,2,8	0.007	0.007	100	200	
SILVER COMPOUNDS, NOS		50	3	(See RCs of any listed constituents)			
SILVER CYANIDE	00506-64-9	1	1,2,3,7	(See RCs of any listed constituents)			
SILVER NITRATE	07761-88-8	1	6,1,3	(See RCs of any listed constituents)			
SILVEX 00093-72-1	10	2,3,1,6	1	10	100	1000	
SIMAZINE	00122-34-9	10	6	1	10	100	1000
SINTERED CALCIUM CHROMATE	13765-19-0	5	6,1,2,3,5,3	(See RCs of any listed constituents)			
SODIUM 07440-23-5	6,1,3,7 5	(Not Applicable)					
SODIUM AMIDE	07782-92-5	10	1	(See RCs of any listed constituents)			
SODIUM ANTHRAQUINONE-1-SULFONATE	00128-56-3	50		(See RCs of any listed constituents)			
SODIUM ARSENATE	07631-89-2	1	4,1,3	(See RCs of any listed constituents)			
SODIUM ARSENITE	07784-46-5	1	4,1,3	(See RCs of any listed constituents)			
SODIUM AZIDE	26628-22-8	50	6,1,3,7,4	(See RCs of any listed constituents)			
SODIUM BICHROMATE	10588-01-9	5	6,3,1	(See RCs of any listed constituents)			
SODIUM BIFLUORIDE	01333-83-1	10	1,3,6	(See RCs of any listed constituents)			
SODIUM BISULFITE	07631-90-5	100	6,1,3	(See RCs of any listed constituents)			
SODIUM CACODYLATE	00124-65-2	1	4	(See RCs of any listed constituents)			
SODIUM CHLORATE	07775-09-9	10	6,1	(See RCs of any listed constituents)			
SODIUM CHLORITE	07758-19-2	10	6,1	(See RCs of any listed constituents)			
SODIUM CHROMATE	07775-11-3	5	1,3,6	(See RCs of any listed constituents)			
SODIUM CYANIDE	00143-33-9	5	1,2,3,7,6,4	(See RCs of any listed constituents)			
SODIUM DICHROMATE	10588-01-9	5	1,3,6	(See RCs of any listed constituents)			
SODIUM DINITRO-O-CRESOLATE	02312-76-7	10	1	1	10	100	1000
SODIUM DODECYLBENZENESULFONATE	25155-30-0	50	1,3,6	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

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		RQ (Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
SODIUM FLUORIDE	01333-83-1	10	1,3,6	(See RCs of any listed constituents)			
SODIUM FLUORIDE	07681-49-4	50	6,1,3	(See RCs of any listed constituents)			
SODIUM FLUORIDE (MONO)	07681-49-4	50	1,3,6	(See RCs of any listed constituents)			
SODIUM FLUORIDE (NaF)	07681-49-4	50	7,1,3,6	(See RCs of any listed constituents)			
SODIUM FLUOROACETATE	00062-74-8	5	6,4,2,3	(See RCs of any listed constituents)			
SODIUM HYDRATE	01310-73-2	50	1,3,6,8	(See RCs of any listed constituents)			
SODIUM HYDRIDE	07646-69-7	10	6,1,7	(See RCs of any listed constituents)			
SODIUM HYDROGEN SULFITE	07631-90-5	100	1,3,6	(See RCs of any listed constituents)			
SODIUM HYDROSULFIDE	16721-80-5	100	1,3,6	(See RCs of any listed constituents)			
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SODIUM HYDROXIDE	01310-73-2	50	6,1,3,8	(See RCs of any listed constituents)			
SODIUM HYPOCHLORITE	07681-52-9	10	1,3,6	(See RCs of any listed constituents)			
SODIUM HYPOCHLORITE	10022-70-5	10	3	(See RCs of any listed constituents)			
SODIUM HYPOCHLORITE PENTAHYDRATE	10022-70-5	10	3,6	(See RCs of any listed constituents)			
SODIUM METHYLATE	00124-41-4	50	1,3,6	(See RCs of any listed constituents)			
SODIUM NITRITE	07632-00-0	10	1,3,6	(See RCs of any listed constituents)			
SODIUM PENTACHLOROPHENATE	00131-52-2	1	1,2	(See RCs of any listed constituents)			
SODIUM PERCHLORATE	07601-89-0	10	6,1	0.0021	0.1	5	
SODIUM PEROXIDE	01313-60-6	10	6,1	0.0021	0.1	5	
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SODIUM PHOSPHATE, DIBASIC	07558-79-4	100	1,3,6	(See RCs of any listed constituents)			
SODIUM PHOSPHATE, DIBASIC	10039-32-4	100	3,6	(See RCs of any listed constituents)			
SODIUM PHOSPHATE, DIBASIC	10140-65-5	100	3,6	(See RCs of any listed constituents)			
SODIUM PHOSPHATE, TRIBASIC	07601-54-9	100	1,3,6	(See RCs of any listed constituents)			
SODIUM PHOSPHATE, TRIBASIC	07758-29-4	100	3,6	(See RCs of any listed constituents)			
SODIUM PHOSPHATE, TRIBASIC	07785-84-4	100	3,6	(See RCs of any listed constituents)			
SODIUM PHOSPHATE, TRIBASIC	10101-89-0	100	3,6	(See RCs of any listed constituents)			
SODIUM PHOSPHATE, TRIBASIC	10124-56-8	100	3,6	(See RCs of any listed constituents)			
SODIUM PHOSPHATE, TRIBASIC	10361-89-4	100	3,6	(See RCs of any listed constituents)			
SODIUM SELENATE	13410-01-0	1	4	(See RCs of any listed constituents)			
SODIUM SELENITE	07782-82-3	10	3,6	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

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SODIUM SELENITE	10102-18-8	10	4,1,3	(See RCs of any listed constituents)			
SODIUM SULFIDE	16721-80-5	100	6,1,3	(See RCs of any listed constituents)			
SODIUM SULFIDE (NA(SH))	16721-80-5	100	7,1,3,6	(See RCs of any listed constituents)			
SODIUM TELLURITE	10102-20-2	1	4	(See RCs of any listed constituents)			
SODIUM-O-PHENYLPHENATE	00132-27-4	1	6,7	(See RCs of any listed constituents)			
SPIRO[BENZOFURAN-2(3H),1'-[2]CYCLOHEXENE]-3,4'.	00126-07-8	1	7	0.1	1	10	100
STANNANE, ACETOXYTRIPHENYL-	00900-95-8	1	4,1	0.1	1	10	100
STANNANE, CHLOROTRIPHENYL-	00639-58-7	1	7,4	0.1	1	10	100
STANNANE, TETRAETHYL-	00597-64-8	1	7,4	0.1	1	10	100
STANNANE, TRICYCLOHEXYLHYDROXY-	13121-70-5	1	6,1	0.1	1	10	100
STANNIC CHLORIDE	07646-78-8	10	6	(See RCs of any listed constituents)			
STEARIC ACID, LEAD (2+) SALT	01072-35-1	5	7,1,3,6	(See RCs of any listed constituents)			
STEARIC ACID, LEAD SALT	07428-48-0	5	7,1,3,6	(See RCs of any listed constituents)			
STEARIC ACID, LEAD SALT, DIBASIC	52652-59-2	5	3,6	(See RCs of any listed constituents)			
STEARIC ACID, LEAD SALT, DIBASIC	56189-09-4	5	6	(See RCs of any listed constituents)			
STIBINE TRIFLUORO-	07783-56-4	50	7,1,3,6	(See RCs of any listed constituents)			
STIBINE, TRIBROMO-	07789-61-9	50	7,1,3,6	(See RCs of any listed constituents)			
STIBINE, TRICHLORO-	10025-91-9	50	1,3,6	(See RCs of any listed constituents)			
4,4'-STILBENEDIOL, ALPHA,ALPHA'-DIETHYL-	00056-53-1	1	3,2,6	0.1	1	10	100
4,4'-STILBENEDIOL, ALPHA,ALPHA-DIETHYL, BIS(DIHYDROGE..	00056-53-1	1	2,3,6	0.1	1	10	100
STREPTOZOTOCIN	18883-66-4	1	6,2,3	0.1	1	10	100
STRICHNIDIN-10-ONE, SULFATE (2:1)	00060-41-3	1	7,4	(See RCs of any listed constituents)			
STRONTIUM CHROMATE	07789-06-2	5	6,1,3	(See RCs of any listed constituents)			
STRONTIUM SULFIDE	01314-96-1	10	1,2,3,6	(See RCs of any listed constituents)			
STRYCHNIDIN-10-ONE, 2,3-DIMETHOXY-	00357-57-3	5	2,3,7,1,6	0.5	5	50	500
STRYCHNIDIN-10-ONE, AND SALTS	00057-24-9	5	2,3,7,1,4,6	0.5	5	50	500
STRYCHNINE	00057-24-9	5	1,6,4,2,3	0.5	5	50	500
STRYCHNINE, SULFATE	00060-41-3	1	4	(See RCs of any listed constituents)			
STYRENE	100-42-5	50	3,5,6,1,8	0.1	0.1	3	4

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

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SULFAMIC ACID, COBALT(2+) SALT (2:1)	14017-41-5	50	7,1,3,6	(See RCs of any listed constituents)			
SULFAMIC ACID, MONOAMMONIUM SALT	07773-06-0	100	7,1,3,6	(See RCs of any listed constituents)			
SULFIDE, BIS(2-CHLOROETHYL)-	00505-60-2	1	2,4,6,8	0.1	1	10	100
SULFOLANE	00126-33-0	100	6	10	100	1000	10000
SULFOTEP	03689-24-5	10	6,4,1,2,3	1	10	100	1000
SULFOXIDE, 3-CHLOROPROPYL OCTYL	03569-57-1	1	7,4	0.1	1	10	100
SULFUR CHLORIDE	12771-08-3	50	3,6	(See RCs of any listed constituents)			
SULFUR CHLORIDE (DI)	10545-99-0	10	1	(See RCs of any listed constituents)			
SULFUR DIOXIDE	07446-09-5	1	6,1,7,4	(See RCs of any listed constituents)			
SULFUR FLUORIDE (SF4), (T-4)-	07783-60-0	1	7,4,6	(See RCs of any listed constituents)			
SULFUR HYDRIDE	07783-06-4	10	2,3,1,4,5,6,8	(See RCs of any listed constituents)			
SULFUR MONOCHLORIDE	12771-08-3	50	3,6	(See RCs of any listed constituents)			
SULFUR MONOCHLORIDE	10025-67-9	10	6	(See RCs of any listed constituents)			
SULFUR PHOSPHIDE	01314-80-3	10	3,1,6	(See RCs of any listed constituents)			
SULFUR SELENIDE	07488-56-4	5	3,5,6	(See RCs of any listed constituents)			
SULFUR TETRAFLUORIDE	07783-60-0	1	4,6	(See RCs of any listed constituents)			
SULFUR TRIOXIDE	07446-11-9	1	1,7,4	(See RCs of any listed constituents)			
SULFURIC ACID	07664-93-9	50	4,6,1,3,5,7,8	(See RCs of any listed constituents)			
SULFURIC ACID	08014-95-7	50	3,1,6	(See RCs of any listed constituents)			
SULFURIC ACID COPPER(2+) SALT (1:1)	07758-98-7	5	7,1,3,6	(See RCs of any listed constituents)			
SULFURIC ACID, ALUMINUM SALT	10043-01-3	100	1,3,6	(See RCs of any listed constituents)			
SULFURIC ACID, AMMONIUM IRON	10045-89-3	50	3,1,6	(See RCs of any listed constituents)			
SULFURIC ACID, AMMONIUM NICKEL(2+) SALT (2:2:1)	15699-18-0	10	7,3,6	(See RCs of any listed constituents)			
SULFURIC ACID, CHROMIUM(3) SALT(3:2)	10101-53-8	50	1,3,6	(See RCs of any listed constituents)			
SULFURIC ACID, DIMETHYL ESTER	00077-78-1	10	2,3,7,1,4,6,8	1	10	100	1000
SULFURIC ACID, DITHALLIUM(1+) SALT	07446-18-6	10	7,1,3,4	(See RCs of any listed constituents)			
SULFURIC ACID, IRON(2+) SALT (1:1)	07720-78-7	50	7,1,3,6	(See RCs of any listed constituents)			
SULFURIC ACID, IRON(2+) SALT (1:1), HEPTAHYDRATE	07782-63-0	50	7,3,6	(See RCs of any listed constituents)			
SULFURIC ACID, IRON(3) SALT(3:2)	10028-22-5	50	3,1,6	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
SULFURIC ACID, LEAD SALT	15739-80-7	5	7,1,3,6	(See RCs of any listed constituents)			
SULFURIC ACID, LEAD(2+) SALT	07446-14-2	5	7,1,3	(See RCs of any listed constituents)			
SULFURIC ACID, MERCURY(2+) SALT (1:1)	07783-35-9	5	7,1,3,6	(See RCs of any listed constituents)			
SULFURIC ACID, MIXT. WITH SULFUR TRIOXIDE	08014-95-7	50	7,1,3,6	(See RCs of any listed constituents)			
SULFURIC ACID, NICKEL(2+) SALT (1:1)	07786-81-4	10	7,1,3,6	(See RCs of any listed constituents)			
SULFURIC ACID, THALLIUM SALT	10031-59-1	10	7,3,4	(See RCs of any listed constituents)			
SULFURIC ACID, THALLIUM(I) SALT	07446-18-6	10	3,1,4	(See RCs of any listed constituents)			
SULFURIC ACID, ZINC SALT (1:1)	07733-02-0	50	7,1,3	(See RCs of any listed constituents)			
SULFURIC ACID, ZIRCONIUM(4+) SALT (2:1)	14644-61-2	100	7,1,3	(See RCs of any listed constituents)			
SULFURIC ANHYDRIDE	07446-11-9	1	1,4	(See RCs of any listed constituents)			
SULFUROUS ACID, 2-[4-(1,1-DIMETHYLETHYL)PHENOXY]..	02312-35-8	5	7,1,3,6	0.5	5	50	500
SULFUROUS ACID, DIAMMONIUM SALT	10196-04-0	100	1,3,6	(See RCs of any listed constituents)			
SULFUROUS ACID, MONOAMMONIUM SALT	10192-30-0	100	1,3,6	(See RCs of any listed constituents)			
SULFUROUS ACID, MONOSODIUM SALT	07631-90-5	100	7,1,3,6	(See RCs of any listed constituents)			
SULFURYL CHLORIDE	07791-25-5	10	6,1,7	(See RCs of any listed constituents)			
SULFURYL FLUORIDE	02699-79-8	10	6,1,7	(See RCs of any listed constituents)			
SYNTHETIC OIL (DEP RQ in gallons)		10	5	(Not Applicable)			
SYSTOX 08065-48-3	1	6,4	0.1	1	10	100	
2,4,5,-T 00093-76-5	10	1,2,3,6	1	10	100	1000	
2,4,5-T ACID ESTERS	32534-95-5	10	6	1	10	100	1000
2,4,5-T AMINES	01319-72-8	100	3,6	10	100	1000	10000
2,4,5-T AMINES	02008-46-0	100	3,6	10	100	1000	10000
2,4,5-T AMINES	03813-14-7	100	3,6	10	100	1000	10000
2,4,5-T AMINES	06369-96-6	100	3,6	10	100	1000	10000
2,4,5-T AMINES	06369-97-7	100	3,6	10	100	1000	10000
2,4,5-T ESTERS	00093-79-8	50	3,6	5	50	500	5000
2,4,5-T ESTERS	01928-47-8	50	3,6	5	50	500	5000
2,4,5-T ESTERS	02545-59-7	50	3,6	5	50	500	5000
2,4,5-T ESTERS	25168-15-4	50	3,6	5	50	500	5000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
2,4,5-T ESTERS	61792-07-2	50	3,6	5	50	500	5000
2,4,5-T SALTS	13560-99-1	50	3,6	(See RCs of any listed constituents)			
TABUN 00077-81-6	1	4	0.1	1	10	100	
TARTARIC ACID, AMMONIUM SALT	14307-43-8	100	6	10	100	1000	10000
TARTARIC ACID, DIAMMONIUM SALT	03164-29-2	100	6	10	100	1000	10000
TDE	72-54-8	1	1,3,6,2	0.0002	0.05	8	40
TEBUTHIURON	34014-18-1	100	5	10	100	1000	10000
TEDP	03689-24-5	10	6,1,2,3,4	1	10	100	1000
TELLURIC ACID, DISODIUM SALT	10102-20-2	1	7,4	(See RCs of any listed constituents)			
TELLURIUM	13494-80-9	1	4,6	0.1	1	10	100
TELLURIUM FLUORIDE (TeF6), (OC-6-11)-	07783-80-4	1	7,4,6	(See RCs of any listed constituents)			
TELLURIUM HEXAFLUORIDE	07783-80-4	1	4,6	(See RCs of any listed constituents)			
TEMEPHOS	03383-96-8	10	6,1	1	10	100	1000
TEPP	00107-49-3	5	6,4,1,2,3	0.5	5	50	500
TERBUFOS	13071-79-9	1	4,1	0.1	1	10	100
TERBUTRYN	00886-50-0	10	5	1	10	100	1000
TESTOSTERONE PROPIONATE	00057-85-2	1	6,7	0.1	1	10	100
1,1,1,2,-TETRABROMOETHANE	00079-27-6	50	6,1	5	50	500	5000
1,2,4,5-TETRACHLOROBENZENE	00095-94-3	100	1,2,3,6	10	100	1000	10000
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN(TCDD)	1746-01-6	1	6,2,3	3E-08	4E-05	2E-05	5E-05
TETRACHLORODIBENZO-P-DIOXIN, 2,3,7,8- (equivalents)	1746-01-6	1	6,2,3	3E-08	4E-05	2.E-05	5.E-05
1,1,2,2-TETRACHLOROETHANE	79-34-5	10	1,2,3,5,6,8	0.002	0.009	0.005	0.02
TETRACHLOROETHANE	79-34-5	10	1,2,3,5,6,8	0.002	0.009	0.005	0.02
1,1,1,2-TETRACHLOROETHANE	630-20-6	10	2,3,6,8	0.005	0.01	0.1	0.1
TETRACHLOROETHYLENE	127-18-4	10	1,3,5,6,8	0.005	0.05	1	10
TETRACHLOROMETHANE	56-23-5	5	2,3,5,6,8,1	0.002	0.002	5	5
TETRACHLOROPHENOL	25167-83-3	5	1	0.5	5	50	500
2,3,4,6-TETRACHLOROPHENOL	00058-90-2	5	1,2,3,6	0.5	5	50	500
2,3,5,6-TETRACHLOROPHENOL	00935-95-5	5	5	0.5	5	50	500

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
TETRAETHYL DITHIONOPYRO-PHOSPHATE	03689-24-5	10	6,1,2,3,4	1	10	100	1000
TETRAETHYL LEAD	00078-00-2	5	1,2,3,4,6	0.5	5	50	500
TETRAETHYL PYROPHOSPHATE	00107-49-3	5	1,3,2,4,6	0.5	5	50	500
TETRAETHYLDITHIOPYROPHOSPHATE	03689-24-5	10	1,2,3,4,6	1	10	100	1000
TETRAETHYLPYROPHOSPHATE	00107-49-3	5	2,1,3,4,6	0.5	5	50	500
TETRAETHYLTIN	00597-64-8	1	4	0.1	1	10	100
TETRAFLUROETHYLENE	00116-14-3	10	1,6	1	10	100	1000
TETRAFLUROETHYLENE MONOMER	00116-14-3	10	6,1	1	10	100	1000
TETRAHYDROFURAN	00109-99-9	50	1,3,5,6	5	50	500	5000
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TETRAHYDROFURFURYL ALCOHOL	00097-99-4	10	6	1	10	100	1000
TETRAMETHYL LEAD	00075-74-1	1	4,6,1	0.1	1	10	100
TETRAMETHYLTHIURAM DISULFIDE	00137-26-8	5	6,1,2,3,8	0.5	5	50	500
TETRANITROMETHANE	00509-14-8	5	1,2,3,6,4	0.5	5	50	500
TETRAPHOSPHORIC ACID, HEXAETHYL ESTER	00757-58-4	10	2,3,7,1,6	1	10	100	1000
TETROSAN	08023-53-8	100	7	10	100	1000	10000
TETRYL 00479-45-8	10	1,6	1	10	100	1000	
THALLIC OXIDE	01314-32-5	10	2,3	(See RCs of any listed constituents)			
THALLIUM	7440-28-0	50	6,3,7,2,8	0.002	3	8	60
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THALLIUM (I) ACETATE	00563-68-8	10	2,3,6	(See RCs of any listed constituents)			
THALLIUM (I) CARBONATE	06533-73-9	10	2,3,4	(See RCs of any listed constituents)			
THALLIUM (I) CHLORIDE	07791-12-0	10	3,2,4	(See RCs of any listed constituents)			
THALLIUM (I) NITRATE	10102-45-1	10	2,3,6,1	(See RCs of any listed constituents)			
THALLIUM (I) SELENIDE	12039-52-0	10	3,2,3	(See RCs of any listed constituents)			
THALLIUM (I) SULFATE	07446-18-6	10	3,1,4	(See RCs of any listed constituents)			
THALLIUM COMPOUNDS, NOS		50	3	(See RCs of any listed constituents)			
THALLIUM CHLORIDE (TICl)	07791-12-0	10	7,2,3,4	(See RCs of any listed constituents)			
THALLIUM OXIDE	01314-32-5	10	2,3	(See RCs of any listed constituents)			
THALLIUM SELENIDE	12039-52-0	10	2,3,3	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
THALLIUM SELENITE	12039-52-0	10	2,3,6,3	(See RCs of any listed constituents)			
THALLIUM SULFATE	07446-18-6	10	1,3,4	(See RCs of any listed constituents)			
THALLIUM SULFATE	10031-59-1	10	4,3	(See RCs of any listed constituents)			
THALLOUS CARBONATE	06533-73-9	10	4,2,3	(See RCs of any listed constituents)			
THALLOUS CHLORIDE	07791-12-0	10	4,2,3	(See RCs of any listed constituents)			
THALLOUS MALONATE	02757-18-8	1	4	(See RCs of any listed constituents)			
THALLOUS SULFATE	07446-18-6	10	4,1,3	(See RCs of any listed constituents)			
THALLOUS SULFATE	10031-59-1	10	3,4	(See RCs of any listed constituents)			
THIMET 00298-02-2	5	6,2,3,4,1	0.5	5	50	500	
THIOACETAMIDE	00062-55-5	5	2,3,6,8	0.5	5	50	500
THIOCARBAZIDE	02231-57-4	1	4	0.1	1	10	100
THIOCYANIC ACID, (2-BENZOTHAZOLYLTHIO)-METHYL ...	21564-17-0	100	7	10	100	1000	10000
THIOCYANIC ACID, AMMONIUM SALT	01762-95-4	100	7,1,3,6	(See RCs of any listed constituents)			
THIOCYANIC ACID, ETHYL ESTER	00542-90-5	1	7,4	0.1	1	10	100
THIOCYANIC ACID, LEAD(2+) SALT	00592-87-0	5	7,1,3,6	(See RCs of any listed constituents)			
THIOCYANIC ACID, MERCURY(2+) SALT	00592-85-8	5	7,1,3,6	(See RCs of any listed constituents)			
THIOCYANIC ACID, METHYL ESTER	00556-64-9	1	7,4	0.1	1	10	100
THIODAN	115-29-7	1	1,2,3,6,4	0.002	0.002	0.5	1
THIODIPHOSPHORIC ACID ([(HO)2P(S)]2O), TETRAETHY..	03689-24-5	10	7,1,2,3,4,6	1	10	100	1000
THIOFANOX	39196-18-4	10	4,1,2,3	1	10	100	1000
THIOIMIDODICARBONIC DIAMIDE	00541-53-7	10	3,2,7,1,4	1	10	100	1000
THIOMETHANOL	00074-93-1	10	2,3,6,1,4,8	1	10	100	1000
THIOMETON	00640-15-3	100		10	100	1000	10000
THIONAZIN	00297-97-2	10	4,1,2,3	1	10	100	1000
THIONYL CHLORIDE	07719-09-7	10	6,1,7	(See RCs of any listed constituents)			
THIOPEROXYDICARBONIC DIAMIDE, TETRAMETHYL-	00137-26-8	5	1,2,3,6,8	0.5	5	50	500
THIOPHENE	00110-02-1	10	6	1	10	100	1000
THIOPHENE, TETRAHYDRO-, 1,1-DIOXIDE	00126-33-0	100	7,6	10	100	1000	10000
THIOPHENOL	00108-98-5	10	1,2,3,4,6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
THIOPHOSGENE	00463-71-8	10	2	1	10	100	1000
THIOPHOSPHORYL CHLORIDE	03982-91-0	10	1	1	10	100	1000
THIOSEMICARBAZIDE	00079-19-6	10	1,2,3,4	1	10	100	1000
THIOSULFURIC ACID (H ₂ S ₂ O ₃), DIAMMONIUM SALT	07783-18-8	100	7,1,6	(See RCs of any listed constituents)			
THIOUREA	00062-56-6	5	2,3,6,7,8	0.5	5	50	500
THIOUREA, (2-CHLOROPHENYL)-	05344-82-1	10	2,3,7,4,1	1	10	100	1000
THIOUREA, (2-METHYLPHENYL)-	00614-78-8	1	7,4	0.1	1	10	100
THIOUREA, 1-NAPHTHALENYL-	00086-88-4	10	2,3,7,1,4,6	1	10	100	1000
THIOUREA, PHENYL-	00103-85-5	10	2,3,1,4	1	10	100	1000
THIRAM 00137-26-8	5	1,3,6,2,8	0.5	5	50	500	
THIURAM	00137-26-8	5	2,1,3,6,8	0.5	5	50	500
TIN, CHLOROTRIMETHYL	01066-45-1	1	4	0.1	1	10	100
TITANIUM CHLORIDE (TiCl ₄), (T-4)-	07550-45-0	1	7,1,4,6,8	(See RCs of any listed constituents)			
TITANIUM TETRACHLORIDE	07550-45-0	1	6,1,8,4	(See RCs of any listed constituents)			
TOBACCO LEAF, ABSOLUTE	08037-19-2	1	6,7	(See RCs of any listed constituents)			
TOBACCO OIL	08037-19-2	1	7	(See RCs of any listed constituents)			
o-TOLIDINE	00119-93-7	5	8,6,2,3	0.5	5	50	500
TOLUENE	108-88-3	50	1,2,3,5,6,8	1	40	30	1000
TOLUENE 2,4-DIISOCYANATE	00584-84-9	10	4,8,3	1	10	100	1000
TOLUENE 2,6-DIISOCYANATE	00091-08-7	10	4,8,3	1	10	100	1000
TOLUENE DIISOCYANATE	00091-08-7	10	3,4,8	1	10	100	1000
TOLUENE DIISOCYANATE	00584-84-9	10	3,4,8	1	10	100	1000
TOLUENE-2,4-DIISOCYANATE (TDI)	00584-84-9	10	6,3,4,8	1	10	100	1000
TOLUENEDIAMINE	00095-80-7	5	3,2,6,8	0.5	5	50	500
2,4-TOLUENEDIAMINE	00095-80-7	5	2,3,6,8	0.5	5	50	500
TOLUENEDIAMINE	00496-72-0	5	3,2,6	0.5	5	50	500
3,4-TOLUENEDIAMINE	00496-72-0	5	2,3,6	0.5	5	50	500
TOLUENEDIAMINE	00823-40-5	5	3,2,6	0.5	5	50	500

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
2,6-TOLUENEDIAMINE	00823-40-5	5	2,3,6	0.5	5	50	500
TOLUENEDIAMINE	25376-45-8	5	3,2,8,6	0.5	5	50	500
TOLUENEDIAMINE, N.O.S.	25376-45-8	5	2,3,8,6	0.5	5	50	500
p-TOLUENESULFONIC ACID	00104-15-4	10	6	1	10	100	1000
o-TOLUIDINE	00095-53-4	10	2,5,6,8,3	1	10	100	1000
p-TOLUIDINE	00106-49-0	10	2,6,3	1	10	100	1000
o-TOLUIDINE HYDROCHLORIDE	00636-21-5	10	6,2,3,8	1	10	100	1000
TOLUOL 108-88-3	50	1,2,3,5,6,8	1	40	30	1000	
TOLYLENE DIISOCYANATE	00584-84-9	10	2,1,3	1	10	100	1000
TORDON	01918-02-1	10	6	1	10	100	1000
TOTAL PETROLEUM HYDROCARBONS (See Petroleum Hydrocarbons)							
TOXAPHENE	08001-35-2	1	6,1,2,3,8,7,4	0.1	1	10	100
2,4,5-TP 00093-72-1	10	1,2,3,6	1	10	100	1000	
2,4,5-TP ACID ESTERS	32534-95-5	10	3,6	1	10	100	1000
TRANSFORMER OIL (DEP RQ IN GALLONS)		10	5	(See TPH RC and RCs of other listed constituents)			
TREMOLITE	01332-21-4	1	6,1,3,5,8	(Not Applicable)			
TRIAMIPHOS	01031-47-6	1	4	0.1	1	10	100
1,3,5-TRIAZINE, 2,4,6-TRIFLUORO-	00675-14-9	1	7,4	0.1	1	10	100
TRIAZOFOS	24017-47-8	1	4,1	0.1	1	10	100
1H-1,2,4-TRIAZOL-3-AMINE	00061-82-5	5	2,3,7,6,8	0.5	5	50	500
TRIBROMOMETHANE	75-25-2	10	1,2,3,6,8	0.004	0.7	0.1	1
TRIBUTYL PHOSPHATE	00126-73-8	50	6	5	50	500	5000
TRIBUTYLALUMINUM	01116-70-7	10	6	1	10	100	1000
TRIBUTYLAMINE	00102-82-9	10	6	1	10	100	1000
TRICHLORFON	00052-68-6	10	3,8,1	1	10	100	1000
TRICHLOROACETIC ACID	00076-03-9	10	1,6	1	10	100	1000
TRICHLORO(CHLOROMETHYL)SILANE	01558-25-4	1	4	0.1	1	10	100
TRICHLORO(DICHLOROPHENYL)SILANE	27137-85-5	1	4,1	0.1	1	10	100
1,1,1-TRICHLORO-2,2-BIS(P-CHLOROPHENY...	50-29-3	1	1,2,3,6	0.0003	0.001	6	30

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
TRICHLOROACETALDEHYDE	00075-87-6	100	6	10	100	1000	10000
TRICHLOROACETYL CHLORIDE	00076-02-8	1	4	0.1	1	10	100
1,2,4-TRICHLOROBENZENE	120-82-1	10	1,2,3,8,6	0.07	0.2	2	6
1,1,1-TRICHLOROETHANE	71-55-6	50	1,2,3,5,6,8	0.2	4	30	600
1,1,2-TRICHLOROETHANE	79-00-5	10	2,3,5,6,8	0.005	0.9	0.1	2
TRICHLOROETHENE	79-01-6	10	1,2,3,5,6,8	0.005	0.005	0.3	0.3
TRICHLOROETHYLENE	79-01-6	10	1,2,3,5,6,8	0.005	0.005	0.3	0.3
TRICHLOROETHYLSILANE	00115-21-9	1	6,4,1	0.1	1	10	100
TRICHLOROFUOROMETHANE	00075-69-4	100	1,6,2,3,8	10	100	1000	10000
TRICHLOROMETHANE	67-66-3	5	1,2,3,5,6,8,4	0.05	0.05	0.2	0.2
TRICHLOROMETHANESULFENYL CHLORIDE	00594-42-3	10	1,3,2,4,6	1	10	100	1000
TRICHLOROMETHANETHIOL	00594-42-3	10	2,1,3,4,6	1	10	100	1000
TRICHLOROMONOFUOROMETHANE	00075-69-4	100	2,3,1,6,8	10	100	1000	10000
TRICHLORONATE	00327-98-0	1	4,1	0.1	1	10	100
2,4,6-TRICHLOROPHENOL	88-06-2	5	2,3,5,6,8	0.01	0.5	0.7	20
2,4,5-TRICHLOROPHENOL	95-95-4	5	2,3,8,6	0.2	3	4	600
3,4,5-TRICHLOROPHENOL	00609-19-8	5	3,6	0.5	5	50	500
2,3,6-TRICHLOROPHENOL	00933-75-5	5	3,6	0.5	5	50	500
2,3,5-TRICHLOROPHENOL	00933-78-8	5	3,6	0.5	5	50	500
2,3,4-TRICHLOROPHENOL	15950-66-0	5	3,6	0.5	5	50	500
TRICHLOROPHENOL	25167-82-2	5	1,3,6	0.01	0.1	2	2
2,4,5-TRICHLOROPHENOXYACETIC ACID	00093-76-5	10	1,2,3,6	1	10	100	1000
2,4,5-TRICHLOROPHENOXYPROPIONIC ACID	00093-72-1	10	1,2,3,6	1	10	100	1000
TRICHLOROPHENYLSILANE	00098-13-5	1	4,1,6	0.1	1	10	100
1,2,3-TRICHLOROPROPANE	00096-18-4	10	2,6	1	10	100	1000
TRICHLOROSILANE	10025-78-2	10	6,1	1	10	100	1000
TRICHLORO-S-TRIAZINETRIONE	00087-90-1	10	2,6	1	10	100	1000
TRICHLORPHON	00052-68-6	10	1,3,8	1	10	100	1000
TRICRESYL PHOSPHATE	01330-78-5	5	1	0.5	5	50	500

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	GW1	Reportable Concentrations		
		RQ (Pounds)	SOURCES		GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
TRICYCLOHEXYLTIN HYDROXIDE	13121-70-5	1	6,1	0.1	1	10	100
TRIETHANOLAMINE DODECYLBENZENESULFONATE	27323-41-7	50	1,3,6	5	50	500	5000
TRIETHOXSILANE	00998-30-1	1	4	0.1	1	10	100
TRIETHYLALUMINUM	00097-93-8	10	6	1	10	100	1000
TRIETHYLAMINE	00121-44-8	100	1,3,5,6	10	100	1000	10000
TRIETHYLBORANE	00097-94-9	10	6	1	10	100	1000
TRIFLUOROBORANE	07637-07-2	1	6,1,4	(See RCs of any listed constituents)			
TRIFLUOROCHLOROETHYLENE	00079-38-9	10	1,6	1	10	100	1000
TRIFLURALIN	01582-09-8	1	6,8	0.1	1	10	100
TRIGLYCOL DICHLORIDE	00112-26-5	100	6	10	100	1000	10000
TRIIISOBTYLALUMINUM	00100-99-2	10	6	1	10	100	1000
1,3,5-TRIMETHYL BENZENE	00108-67-8	1	6	0.1	1	10	100
TRIMETHYL PHOSPHITE	00121-45-9	100	6	10	100	1000	10000
TRIMETHYL TIN CHLORIDE	01066-45-1	1	4	0.1	1	10	100
2,4,4-TRIMETHYL-1-PENTENE	00107-39-1	10	6	1	10	100	1000
2,4,4-TRIMETHYL-2-PENTENE	00107-40-4	10	6	1	10	100	1000
3,4,4-TRIMETHYL-2-PENTENE	00598-96-9	50	6	5	50	500	5000
TRIMETHYLAMINE	00075-50-3	10	1,3,6	1	10	100	1000
1,2,4-TRIMETHYLBENZENE	00095-63-6	100	8,6	10	100	1000	10000
TRIMETHYLCHLOROSILANE	00075-77-4	1	1,4,6	0.1	1	10	100
TRIMETHYLOLPROPANE PHOSPHITE	00824-11-3	1	4	0.1	1	10	100
sym-TRINITROBENZENE	00099-35-4	5	2,3,1,6	0.5	5	50	500
TRINITROBENZENE	00099-35-4	5	1,6,2,3	0.5	5	50	500
2,4,6-TRINITROPHENOL	00088-89-1	10	6,1,8	1	10	100	1000
TRINITROTOLUENE	00118-96-7	10	6,1	1	10	100	1000
2,4,6-TRINITROTOLUENE (TNT)	00118-96-7	10	6,1	1	10	100	1000
2,6,7TRIOXA-1-PHOSPHABICYCLO [2.2.2.]OCTANE, 4-ETHYL-	00824-11-3	1	7,4	0.1	1	10	100
2,8,9-TRIOXA-5-AZA-1-SILABICYCLO[3.3.3]UNDECANE, 1-PHE..	02097-19-0	1	7,4	0.1	1	10	100
TRIOXANE	00110-88-3	10	6	1	10	100	1000

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
1,3,5-TRIOXANE, 2,4,6-TRIMETHYL-	00123-63-7	50	2,3,1,6,8	5	50	500	5000
TRIPHENYL TIN CHLORIDE	00639-58-7	1	4	0.1	1	10	100
TRIPHENYLTIN HYDROXIDE	00076-87-9	1	6,1	0.1	1	10	100
TRIPHOSPHORIC ACID, PENTASODIUM SALT	07758-29-4	100	7,3,6	(See RCs of any listed constituents)			
TRIPROPYLAMINE	00102-69-2	50	6	5	50	500	5000
TRIS(2,3-DIBROMOPROPYL) PHOSPHATE	00126-72-7	5	2,3,8,6	0.1	1	10	100
TRIS(2-CHLOROETHYL)AMINE	00555-77-1	1	4	0.1	1	10	100
TRYPAN BLUE	00072-57-1	5	2,3,6,8	0.5	5	50	500
TURPENTINE	08006-64-2	10	6,1	(See TPH RC and RCs of other relevant constituents)			
UDMH 00057-14-7	5	1,2,3,4,6,8	0.5	5	50	500	
URACIL MUSTARD	00066-75-1	5	2,3,6	0.5	5	50	500
URACIL, 5-[BIS(2-CHLOROETHYL)AMINO]-	00066-75-1	5	2,3,6	0.5	5	50	500
URANIUM, BIS(ACETATO-O)DIOXO-	00541-09-3	10	7,1,3	1	10	100	1000
URANIUM, BIS(NITRATO-O,O')DIOXO-, (OC-6-11)-	36478-76-9	100	7,1,3	(See RCs of any listed constituents)			
URANIUM, BIS(NITRATO-O)DIOXO-, (T-4)-	10102-06-4	10	7,1,3,6	(See RCs of any listed constituents)			
URANIUM HEXAFLUORIDE	07783-81-5	10	1	(See RCs of any listed constituents)			
URANYL ACETATE	00541-09-3	10	1,3,6	1	10	100	1000
URANYL NITRATE	10102-06-4	10	6,1,3	(See RCs of any listed constituents)			
URANYL NITRATE	36478-76-9	100	1,3,6	(See RCs of any listed constituents)			
UREA, N'-(3,4-DICHLOROPHENYL)-N,N-DIMETHYL-	00330-54-1	10	7,1,3,6	1	10	100	1000
UREA, N'-[4-(4-CHLOROPHENOXY)PHENYL]-N,N-DIMETHYL-	01982-47-4	1	7,4	0.1	1	10	100
UREA, N-(4-NITROPHENYL)-N'-(3-PYRIDINYLMETHYL)-	53558-25-1	1	7,4	0.1	1	10	100
UREA, N-ETHYL-N-NITROSO-	00759-73-9	1	7,2,3,6,8	0.1	1	10	100
UREA, N-METHYL-N-NITROSO-	00684-93-5	1	7,2,3,6,8	0.1	1	10	100
UREA,N-(2-CHLOROETHYL)-N'-(4-METHYLCYCLOHEXYL)-N..	13909-09-6	1	7	0.1	1	10	100
URETHANE	00051-79-6	10	2,3,6,8	1	10	100	1000
VALERALDEHYDE	00110-62-3	10	6	1	10	100	1000
VALERIC ACID	00109-52-4	10	1,6	1	10	100	1000
VALINOMYCIN	02001-95-8	1	7,4	0.1	1	10	100

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
VANADATE (VO31-), AMMONIUM	07803-55-6	50	7,1,2,3,6	(See RCs of any listed constituents)			
VANADIC ACID, AMMONIUM SALT	07803-55-6	50	3,2,1,6	(See RCs of any listed constituents)			
VANADIUM	7440-62-2	50	5	0.03	4	400	700
VANADIUM CHLORIDE (VC14), (T-4)-	07632-51-1	10	7,1,6	(See RCs of any listed constituents)			
VANADIUM OXIDE	01314-62-1	50	1,2,3,4,5,6	(See RCs of any listed constituents)			
VANADIUM OXYTRICHLORIDE	07727-18-6	10	1	(See RCs of any listed constituents)			
VANADIUM PENTOXIDE	01314-62-1	50	1,2,3,5,4,6	(See RCs of any listed constituents)			
VANADIUM TETRACHLORIDE	07632-51-1	10	6,1	(See RCs of any listed constituents)			
VANADIUM, OXO[SULFATO(2-)-O]-	27774-13-6	50	7,1,3	(See RCs of any listed constituents)			
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VANADYL SULFATE	27774-13-6	50	1,3,6	(See RCs of any listed constituents)			
VAPONA	00062-73-7	5	6,1,3,4,8	0.5	5	50	500
VEGETABLE OIL (DEP RQ in gallons)		55	5	(Not Applicable)			
VINYL 2-CHLOROETHYL ETHER	00110-75-8	50	6,1,2,3	5	50	500	5000
VINYL 2-METHOXYLETHYL ETHER	01663-35-0	10	6	1	10	100	1000
VINYL ACETATE	00108-05-4	100	1,3,5,8,6,4	10	100	1000	10000
VINYL ACETATE MONOMER	00108-05-4	100	4,1,3,5,6,8	10	100	1000	10000
VINYL ACETYLENE	00689-97-4	10	6	1	10	100	1000
VINYL BUTYL ETHER	00111-34-2	50	6	5	50	500	5000
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VINYL CHLORIDE	75-01-4	1	1,2,3,5,6,8	0.002	0.002	0.7	0.7
VINYL CYANIDE	00107-13-1	10	6,1,2,3,4,5,8	1	10	100	1000
4-VINYL CYCLOHEXENE	00100-40-3	10	6	1	10	100	1000
VINYL FLUORIDE	00075-02-5	10	1,6	1	10	100	1000
VINYL METHYL ETHER	00107-25-5	10	1,6	1	10	100	1000
VINYL TOLUENE	25013-15-4	10	6,1	1	10	100	1000
VINYL TRICHLOROSILANE	00075-94-5	10	1,6	1	10	100	1000
4-VINYL-1-CYCLOHEXENE	00100-40-3	10	6	1	10	100	1000
VINYLAMINE, N-METHYL-N-NITROSO	04549-40-0	5	3,1,6,8	0.5	5	50	500
VINYLDENE CHLORIDE	00075-35-4	10	1,3,5,6,8,2	0.007	0.08	3	40

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
VINYLLIDENE FLUORIDE	00075-38-7	10	6,1	1	10	100	1000
VITRIOL, OIL OF	07664-93-9	50	1,3,4,5,6,8	(See RCs of any listed constituents)			
VM & P NAPHTHA	08030-30-6	10	6,1,5	(See TPH RC and RCs of other relevant constituents)			
WARFARIN	00081-81-2	10	1,2,3,4,6,3	1	10	100	1000
WARFARIN SODIUM	00129-06-6	1	4	(See RCs of any listed constituents)			
WASTE OIL (DEP RQ in gallons)		10		(See TPH RC and RCs of other relevant constituents)			
WHITE OIL (DEP RQ in gallons)		55	5	(Not Applicable)			
o-XYLENE	00095-47-6	50	3,5,6,8			(see XYLENES (Mixed Isomers))	
p-XYLENE	00106-42-3	50	3,5,6,8			(see XYLENES (Mixed Isomers))	
m-XYLENE	00108-38-3	50	3,5,8,6			(see XYLENES (Mixed Isomers))	
XYLENES (Mixed Isomers)	1330-20-7	50	1,3,5,6,8	3	3	100	100
2,4-XYLENOL	105-67-9	10	1,2,3,8,6	0.06	40	0.7	100
XYLENOL	01300-71-6	50	1,3,6	0.1	20	0.7	10
o-XYLIDINE	00087-62-7	10	6,8	1	10	100	1000
2,6-XYLIDINE	00087-62-7	10	8,6	1	10	100	1000
XYLOL 1330-20-7	50	1,3,5,6,8	3	3	100	100	
XYLYLENE DICHLORIDE	28347-13-9	1	4	0.1	1	10	100
YOHIMBAN-16-CARBOXYLIC ACID, 11,17-DIMETHOXY- 1...	00050-55-5	100	2,3,7,1,6	10	100	1000	10000
ZINC	7440-66-6	50	6,3,7,8	0.9	0.9	1000	3000
ZINC ACETATE	00557-34-6	50	1,3,6	(See RCs of any listed constituents)			
ZINC AMMONIUM CHLORIDE	14639-97-5	100	3	(See RCs of any listed constituents)			
ZINC AMMONIUM CHLORIDE	14639-98-6	100	3	(See RCs of any listed constituents)			
ZINC AMMONIUM CHLORIDE	52628-25-8	50	1,3,6	(See RCs of any listed constituents)			
ZINC BORATE	01332-07-6	50	1,3,6	(See RCs of any listed constituents)			
ZINC BROMIDE	07699-45-8	50	1,3,6	(See RCs of any listed constituents)			
ZINC BROMIDE (ZnBr2)	07699-45-8	50	7,1,3,6	(See RCs of any listed constituents)			
ZINC CARBONATE	03486-35-9	50	1,3,6	(See RCs of any listed constituents)			
ZINC CHLORATE	10361-95-2	10	6,1	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
ZINC CHLORIDE	07646-85-7	50	1,3,6	(See RCs of any listed constituents)			
ZINC CHLORIDE (ZnCl ₂)	07646-85-7	50	7,1,3,6	(See RCs of any listed constituents)			
ZINC CHROMATE	13530-65-9	5	6	(See RCs of any listed constituents)			
ZINC COMPOUNDS, NOS		50	3	(See RCs of any listed constituents)			
ZINC CYANIDE	00557-21-1	5	7,2,3,6,1	(See RCs of any listed constituents)			
ZINC ETHYL	00557-20-0	10	1,6	1	10	100	1000
ZINC FLUORIDE	07783-49-5	50	1,3,6	(See RCs of any listed constituents)			
ZINC FLUORIDE (ZnF ₂)	07783-49-5	50	7,1,3,6	(See RCs of any listed constituents)			
ZINC FORMATE	00557-41-5	50	1,3,6	(See RCs of any listed constituents)			
ZINC HYDROSULFITE	07779-86-4	50	1,3,6	(See RCs of any listed constituents)			
ZINC NITRATE	07779-88-6	50	1,3,6	(See RCs of any listed constituents)			
ZINC PHENOLSULFONATE	00127-82-2	100	1,3,6	(See RCs of any listed constituents)			
ZINC PHOSPHIDE	01314-84-7	10	6,1,2,3,4,3	(See RCs of any listed constituents)			
ZINC SILICOFLUORIDE	16871-71-9	100	1,3,6	(See RCs of any listed constituents)			
ZINC SULFATE	07733-02-0	50	1,3,6	(See RCs of any listed constituents)			
ZINC, DICHLORO[4,4-DIMETHYL-5-[[[(METHYLAMINO)CA..	58270-08-9	1	4,7	0.1	1	10	100
ZINC, DIETHYL	00557-20-0	10	7,1,6	1	10	100	1000
ZINCATE(2-), TETRACHLORO-, DIAMMONIUM, (T-4)-	14639-97-5	100	7,3	(See RCs of any listed constituents)			
ZINCATE(3-), PENTACHLORO-, TRIAMMONIUM	14639-98-6	100	7,3,6	(See RCs of any listed constituents)			
ZINEB 12122-67-7	5	5	0.5	5	50	500	
ZIRCONATE(2-), HEXAFLUORO-, DIPOTASSIUM,(OC-6-11)-	16923-95-8	50	7,1,3	(See RCs of any listed constituents)			
ZIRCONIUM	07440-67-7	10	6,7,1	1	10	100	1000
ZIRCONIUM CHLORIDE	10026-11-6	100	1,3,6	(See RCs of any listed constituents)			
ZIRCONIUM NITRATE	13746-89-9	100	1,3,6	(See RCs of any listed constituents)			
ZIRCONIUM PICRAMATE	63868-82-6	10	1,6	1	10	100	1000
ZIRCONIUM POTASSIUM FLUORIDE	16923-95-8	50	1,3,6	(See RCs of any listed constituents)			
ZIRCONIUM SULFATE	14644-61-2	100	1,3,6	(See RCs of any listed constituents)			
ZIRCONIUM TETRACHLORIDE	10026-11-6	100	6,1,3	(See RCs of any listed constituents)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP		NAME SOURCES	Reportable Concentrations			
		RQ	(Pounds)		GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
UNLISTED HAZARDOUS MATERIALS								(Not Applicable)
CHARACTERISTIC OF CORROSIVITY			10	5				(Not Applicable)
CHARACTERISTIC OF IGNITABILITY ++			10	5				(Not Applicable)
CHARACTERISTIC OF INFECTIVITY			10	5				(Not Applicable)
CHARACTERISTIC OF REACTIVITY			10	5				(Not Applicable)
CHARACTERISTIC OF TOXICITY				3				(Not Applicable)
ARSENIC			1	3				(Not Applicable)
BARIUM			50	3				(Not Applicable)
BENZENE			5	3				(Not Applicable)
CADMIUM			5	3				(Not Applicable)
CARBON TETRACHLORIDE			5	3				(Not Applicable)
CHLORDANE			1	3				(Not Applicable)
CHLOROBENZENE			10	3				(Not Applicable)
CHLOROFORM			5	3				(Not Applicable)
CHROMIUM			5	3				(Not Applicable)
O-CRESOL			50	3				(Not Applicable)
P-CRESOL			50	3				(Not Applicable)
M-CRESOL			50	3				(Not Applicable)
CRESOL			50	3				(Not Applicable)
2,4-D	3	10	(Not Applicable)					(Not Applicable)
1,4-DICHLOROBENZENE			10	3				(Not Applicable)
1,2-DICHLOROETHANE			10	3				(Not Applicable)
1,1-DICHLOROETHYLENE			10	3				(Not Applicable)
2,4-DINITROTOLUENE			5	3				(Not Applicable)
ENDRIN			1	3				(Not Applicable)
HEPTACHLOR (AND EPOXIDE)			1	3				(Not Applicable)
HEXACHLOROBENZENE			5	3				(Not Applicable)
HEXACHLOROBUTADIENE			1	3				(Not Applicable)

++ Characteristic of Ignitibility does not include oils such as kerosene, gasoline, or jet fuel as these are considered PETROLEUM BASED OILS.

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST
TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations		
		RQ (Pounds)	SOURCES	GW1 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
HEXACHLOROETHANE		10	3	(Not Applicable)		
LEAD	3 5	(Not Applicable)				
LINDANE		1	3	(Not Applicable)		
MERCURY		1	3	(Not Applicable)		
METHOXYCHLOR		1	3	(Not Applicable)		
METHYL ETHYL KETONE		100	3	(Not Applicable)		
NITROBENZENE		50	3	(Not Applicable)		
PENTACHLOROPHENOL		5	3	(Not Applicable)		
PYRIDINE		50	3	(Not Applicable)		
SELENIUM		10	3	(Not Applicable)		
SILVER		50	3	(Not Applicable)		
TETRACHLOROETHYLENE		10	3	(Not Applicable)		
TOXAPHENE		1	3	(Not Applicable)		
2,4,5-TP		10	3	(Not Applicable)		
TRICHLOROETHYLENE		10	3	(Not Applicable)		
2,4,6-TRICHLOROPHENOL		5	3	(Not Applicable)		
2,4,5-TRICHLOROPHENOL		5	3	(Not Applicable)		
VINYL CHLORIDE		1	3	(Not Applicable)		

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
F001..... The following spent halogenated solvents used in degreasing; all spent solvent mixtures/blends used in degreasing containing, before use, a total of 10% or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. (a) Tetrachloroethylene; (b) Trichloroethylene; (c) Methylene chloride; (d) 1,1,1-Trichloroethane; (e) Carbon tetrachloride; (f) Chlorinated fluorocarbons		5		(Not Applicable)			
F002..... The following spent halogenated solvents; all spent solvent mixtures/blends containing before use, a total of 10% or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. (a) Tetrachloroethylene; (b) Methylene chloride; (c) Trichloroethylene; (d) 1,1,1-Trichloroethane; (e) Chlorobenzene; (f) 1,2,2-Trichloro-1,2,2-trifluoroethane; (g) o-Dichlorobenzene; (h) Trichlorofluoromethane; (i) 1,1,2-Trichloroethane.		5		(Not Applicable)			
F003..... The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents: (a) Xylene; (b) Acetone; (c) Ethyl acetate; (d) Ethylbenzene; (e) Ethyl ether; (f) Methyl isobutyl ketone; (g) n-Butyl alcohol; (h) Cyclohexanone; (i) Methanol.		10		(Not Applicable)			
F004..... The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents: cresols and cresylic acid, and nitrobenzene.		50		(Not Applicable)			
F005..... The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents: (a) toluene; (b) methyl ethyl ketone; (c) carbon disulfide; (d) isobutanol; and (e) pyridine		10		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
F006..... Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid and anodizing of aluminum, (2) tin plating on carbon steel, (3) zinc plating (segregated basis) on carbon steel, (4) aluminum or zinc-aluminum plating on carbon steel, (5) cleaning/stripping associated with tin, zinc, and aluminum plating on carbon steel, and (6) chemical etching and milling of aluminum		5		(Not Applicable)			
F007..... Spent cyanide plating bath solutions from electroplating operations.		5		(Not Applicable)			
F008..... Plating bath residues from the bottom of the plating baths from electroplating operations where cyanides are used in the process.		5		(Not Applicable)			
F009..... Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.		5		(Not Applicable)			
F010..... Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.		5		(Not Applicable)			
F011..... Spent cyanide solution from salt bath pot cleaning from metal heat treating operations.		5		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
F012..... Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process. Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process.		5		(Not Applicable)			
F020..... Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-Trichlorophenol.)		1		(Not Applicable)			
F021..... Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.		1		(Not Applicable)			
F022..... Wastes (except wastewater and spent carbon from hydrogen chloride purification) from manufacturing use (as a reactant chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.		1		(Not Applicable)			
F023..... Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating		1		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
<p>process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-Trichlorophenol.)</p>							
F024.....		1					(Not Applicable)
<p>Wastes including but not limited to distillation residues, heavy ends, tars, and reactor cleanout wastes, from the production of chlorinated aliphatic hydrocarbons, having carbon content from one to five, utilizing free radical catalyzed processes. (This listing does not include light ends, spent filters and filter aids, spent desiccants(sic), wastewater, wastewater treatment sludges, spent catalysts, and wastes listed in Section 261.32.)</p>							
F025.....		1					(Not Applicable)
<p>Condensed light ends, spend filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free-radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.</p>							
F026.....		1					(Not Applicable)
<p>Waste (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.</p>							
F027.....		1					(Not Applicable)
<p>Discarded unused formulations containing tri-, tetra, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-Trichlorophenol as the sole component.)</p>							

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
F028..... Residues resulting from the incineration or thermal treatment of soil contaminated with EPA hazardous waste NOS. F020, F021, F022, F023, F026, AND F027.		1		(Not Applicable)			
F032..... Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with 40 CFR Part 261.35, or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.		1		(Not Applicable)			
F034..... Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.		1		(Not Applicable)			
F035..... Wastewater (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.		1		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
F037..... Petroleum refinery primary oil/water/solids separation sludge - Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooking wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in 40 CFR Part 261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing.		1		(Not Applicable)			
F038..... Petroleum refinery secondary (emulsified) oil/water/solids separation sludge - Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooking wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks, and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do no receive dry weather flow, sludges generated from once-through non-contact cooling waters segregated for treatment from other process or oil cooling wastes, sludges and floats generated in aggressive biological treatment units as defined in 40 CFR Part 261.31(b)(2) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing.		1		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
F039..... Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under 40 CFR Part 261.31 Subpart D. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other hazardous wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028.)		1		(Not Applicable)			
K001..... Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.		1		(Not Applicable)			
K002..... Wastewater treatment sludge from the production of chrome yellow and orange pigments.		1		(Not Applicable)			
K003..... Wastewater treatment sludge from the production of molybdate orange pigments.		5		(Not Applicable)			
K004..... Wastewater treatment sludge from the production of zinc yellow pigments.		5		(Not Applicable)			
K005..... Wastewater treatment sludge from the production of chrome green pigments.		5		(Not Applicable)			
K006..... Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).		5		(Not Applicable)			
K007..... Wastewater treatment sludge from the production of iron blue pigments.		5		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
K008..... Oven residue from the production of chrome oxide green pigments.		5		(Not Applicable)			
K009..... Distillation bottoms from the production of acetaldehyde from ethylene.		5		(Not Applicable)			
K010..... Distillation side cuts from the production of acetaldehyde from ethylene.		5		(Not Applicable)			
K011..... Bottom stream from the wastewater stripper in the production of acrylonitrile.		5		(Not Applicable)			
K013..... Bottom stream from the acetonitrile column in the production of acrylonitrile.		5		(Not Applicable)			
K014..... Bottoms from the acetonitrile purification column in the production of acrylonitrile.		100		(Not Applicable)			
K015..... Still bottoms from the distillation of benzyl chloride.		5		(Not Applicable)			
K016..... Heavy ends or distillation residues from the production of carbon tetrachloride.		1		(Not Applicable)			
K017..... Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.		5		(Not Applicable)			
K018..... Heavy ends from the fractionation column in ethyl chloride production.		1		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST
TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
K019..... Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.		1		(Not Applicable)			
K020..... Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.		1		(Not Applicable)			
K021..... Aqueous spent antimony catalyst waste from fluoromethanes production.		5		(Not Applicable)			
K022..... Distillation bottom tars from the production of phenol/acetone from cumeme.		1		(Not Applicable)			
K023..... Distillation light ends from the production of phthalic anhydride from naphthalene.		100		(Not Applicable)			
K024..... Distillation bottoms from the production of phthalic anhydride from naphthalene.		100		(Not Applicable)			
K025..... Distillation bottoms from the production of nitrobenzene by the nitration of benzene.		5		(Not Applicable)			
K026..... Stripping still tails from the production of methyl ethyl pyridines.		50		(Not Applicable)			
K027..... Centrifuge and distillation residues from toluene diisocyanate production.		5		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
K028..... Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-Trichloroethane.		1		(Not Applicable)			
K029..... Waste from the product steam stripper in the production of 1,1,1-Trichloroethane.		1		(Not Applicable)			
K030..... Column bottoms or heavy ends from the combined production of Trichloroethylene and Perchloroethylene.		1		(Not Applicable)			
K031..... By-product salts generated in the production of MSMA and Cacodylic Acid.		1		(Not Applicable)			
K032..... Wastewater treatment sludge from the production of chlordane.		5		(Not Applicable)			
K033..... Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.		5		(Not Applicable)			
K034..... Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.		5		(Not Applicable)			
K035..... Wastewater treatment sludges generated in the production of creosote.		1		(Not Applicable)			
K036..... Still bottoms from toluene reclamation distillation in the production of disulfoton.		1		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
K037..... Wastewater treatment sludges from the production of disulfoton.		1		(Not Applicable)			
K038..... Wastewater from the washing and stripping of phorate production.		5		(Not Applicable)			
K039..... Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.		5		(Not Applicable)			
K040..... Wastewater treatment sludge from the production of phorate.		5		(Not Applicable)			
K041..... Wastewater treatment sludge from the production of toxaphene.		1		(Not Applicable)			
K042..... Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.		5		(Not Applicable)			
K043..... 2,6-Dichlorophenol waste from the production of 2,4-D.		5		(Not Applicable)			
K044..... Wastewater treatment sludges from the manufacturing and processing of explosives.		5		(Not Applicable)			
K045..... Spent carbon from the treatment of wastewater containing explosives.		5		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
K046..... Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.		5		(Not Applicable)			
K047..... Pink/red water from TNT operations.		5		(Not Applicable)			
K048..... Dissolved air flotation (daf) float from the petroleum refining industry.		5		(Not Applicable)			
K049..... Slop oil emulsion solids from the petroleum refining industry.		5		(Not Applicable)			
K050..... Heat exchanger bundle cleaning sludge from the petroleum refining industry.		5		(Not Applicable)			
K051..... Api separator sludge from the petroleum refining industry.		5		(Not Applicable)			
K052..... Tank bottoms (leaded) from the petroleum refining industry.		5		(Not Applicable)			
K060..... Ammonia still lime sludge from coking operations.		1		(Not Applicable)			
K061..... Emission control dust/sludge from the primary production of steel in electric furnaces.		5		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
K062..... Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industries (SIC codes 331 and 332).		5		(Not Applicable)			
K064..... Acid plant blowdown slurry/sludge resulting from thickening of blowdown slurry from primary copper production.		5		(Not Applicable)			
K065..... Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities.		5		(Not Applicable)			
K066..... Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production.		5		(Not Applicable)			
K069..... Emission control dust/sludge from secondary lead smelting.		5		(Not Applicable)			
K071..... Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.		1		(Not Applicable)			
K073..... Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.		5		(Not Applicable)			
K083..... Distillation bottoms from aniline extraction.		10		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
K084..... Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo/arsenic compounds.		1		(Not Applicable)			
K085..... Distillation of fractionation column bottoms from the production of chlorobenzene.		5		(Not Applicable)			
K086..... Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.		5		(Not Applicable)			
K087..... Decanter tank tar sludge from coking operations.		10		(Not Applicable)			
K088..... Spent potliners from primary aluminum reduction.		1		(Not Applicable)			
K090..... Emission control dust or sludge from ferrochromiumsiron production.		1		(Not Applicable)			
K091..... Emission control dust or sludge from ferrochromium production.		1		(Not Applicable)			
K093..... Distillation light ends from the production of phthalic anhydride from ortho-xylene.		100		(Not Applicable)			
K094..... Distillation bottoms from the production of phthalic anhydride from ortho-xylene.		100		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
K095..... Distillation bottoms from the production of 1,1,1-Trichloroethane.		10		(Not Applicable)			
K096..... Heavy ends from the heavy ends column from the production of 1,1,1-Trichloroethane		10		(Not Applicable)			
K097..... Vacuum stripper discharge from the chlordane chlorinator in the production chlordane.		1		(Not Applicable)			
K098..... Untreated process wastewater from the production of toxaphene.		1		(Not Applicable)			
K099..... Untreated wastewater from the production of 2,4-D.		5		(Not Applicable)			
K100..... Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting (components of this waste are identical with those of K069).		5		(Not Applicable)			
K101..... Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.		1		(Not Applicable)			
K102..... Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.		1		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
K103..... Process residues from aniline extraction from the production of aniline.		10		(Not Applicable)			
K104..... Combined wastewater streams generated from nitrobenzene/aniline chlorobenzenes.		5		(Not Applicable)			
K105..... Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.		5		(Not Applicable)			
K106..... Wastewater treatment sludge from the mercury cell process in chlorine production.		1		(Not Applicable)			
K107..... Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazines.		5		(Not Applicable)			
K108..... Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.		5		(Not Applicable)			
K109..... Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.		5		(Not Applicable)			
K110..... Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.		5		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
K111..... Product washwaters from the production of dinitrotoluene via nitration of toluene.		5		(Not Applicable)			
K112..... Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.		5		(Not Applicable)			
K113..... Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.		5		(Not Applicable)			
K114..... Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.		5		(Not Applicable)			
K115..... Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.		5		(Not Applicable)			
K116..... Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.		5		(Not Applicable)			
K117..... Wastewater from the reaction vent gas scrubber in the production of ethylene bromide via bromination of ethene.		1		(Not Applicable)			
K118..... Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide.		1		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
K123..... Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts.		5		(Not Applicable)			
K124..... Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.		5		(Not Applicable)			
K125..... Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.		5		(Not Applicable)			
K126..... Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.		5		(Not Applicable)			
K131..... Wastewater from the reactor and spent sulfuric acid from the acid dryer in the production of methyl bromide.		10		(Not Applicable)			
K132..... Spent absorbent and wastewater solids from the production of methyl bromide.		50		(Not Applicable)			
K136..... Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.		1		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP RQ (Pounds)	NAME SOURCES	Reportable Concentrations			
				GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
K141..... Process related from the recovery of coal tar, including but not limited to, tar collecting sump residues from the production of coke by-products produced from coal. This listing does not include K087 (Decanter tank tar sludge from coking operations).		1		(Not Applicable)			
K142..... Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.		1		(Not Applicable)			
K143..... Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal.		1		(Not Applicable)			
K144..... Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.		1		(Not Applicable)			
K145..... Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.		1		(Not Applicable)			
K147..... Tar storage tank residues from coal tar refining.		1		(Not Applicable)			

MASSACHUSETTS OIL AND HAZARDOUS MATERIAL LIST

TABLE 1 ALPHABETICAL ORDER

CHEMICAL NAME	CAS NUM.	DEP	NAME	Reportable Concentrations			
		RQ (Pounds)	SOURCES	GW1 (mg/l)	GW2 (mg/l)	S1 (mg/kg)	S2 (mg/kg)
K148..... Residues from coal tar distillation, including, but not limited to, still bottoms.		1		(Not Applicable)			
K149..... Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. (This waste does not include still bottoms from the distillation of benzyl chloride.)		5		(Not Applicable)			
K150..... Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.		5		(Not Applicable)			
K151..... Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.		5		(Not Applicable)			

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

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NON-TEXT PAGE

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 42.00: CERTIFICATION AND OPERATION OF ENVIRONMENTAL ANALYSIS LABORATORIES

Section

- 42.01: Purpose
- 42.02: Applicability
- 42.03: Definitions
- 42.04: Application Procedure
- 42.05: Certification Matrices, Disciplines, and Categories
- 42.06: Laboratory Certification Ratings
- 42.07: Criteria for Certification
- 42.08: Minimum Standards for Certification
- 42.09: Issuance of Certificate
- 42.10: Requirements for Maintaining Certification Status
- 42.11: Renewal of Certificate
- 42.12: Denial, Downgrading, and Revocation of Certification
- 42.13: Reporting Requirements
- 42.14: Maintenance of Records
- 42.15: Right of Entry
- 42.16: Reciprocity
- 42.17: Orders, Violations, and Penalties
- 42.18: Right to Appeal
- 42.19: List of Certified Laboratories
- 42.20: Potable Water
- 42.21: Non-potable Water (Reserved)
- 42.22: Severability

42.01: Purpose

310 CMR 42.00 establishes a program for Department certification of laboratories to conduct analytical measurements for purposes of determining chemical, radiochemical, and microbiological parameters in environmental samples.

42.02: Applicability

A laboratory performing analyses shall be subject to the requirements of 310 CMR 42.00 for those analyses for which it holds Department certification and that it identifies in any issued report as having been conducted in accordance with the Department's certification standards. An analysis for which a laboratory holds Department certification is deemed to be identified in a report as having been conducted in accordance with the Department's certification standards unless the report expressly states that the analysis was not conducted in accordance with the Department's certification standards.

42.03: Definitions

As used in 310 CMR 42.00, the following terms shall have the meanings stated:

Ambient Water refers to any fresh, marine, or estuarine surface water used for recreation, propagation of fish, shellfish, or wildlife, agriculture, industry, or navigation.

Analyst means a chemist, microbiologist or technician who actually performs a test.

Analytical Batch means a group of up to 20 samples to be analyzed for chemical or radiochemical parameters, or a group of up to ten samples to be analyzed for microbiological parameters, that behave similarly with respect to the testing procedures being employed and that are processed as a unit. For quality control purposes, if the number of samples in a group to be analyzed for chemical or radiochemical parameters is greater than 20, then each group of 20 or fewer samples will be handled as a separate batch. If the number of samples in a group to be analyzed for microbiology parameters is greater than ten, then each group of ten or fewer samples will be handled as a separate batch.

42.03: continued

Category means an analyte or group of analytes for which certification is offered.

Certification Officer means the person or persons designated by the Department to inspect and evaluate environmental laboratories for compliance with the criteria set forth in 310 CMR 42.00.

Certified Thermometer means a thermometer that has documentation showing that it has been compared against a National Institute of Standards and Technology thermometer for the temperature range in which it is to be used.

Check Standard means a solution of one or more analytes that is used to check laboratory performance. It is prepared from a source of reagents different from those used to prepare the stock standards and primary dilution standard solutions.

Department means the Department of Environmental Protection of the Commonwealth of Massachusetts.

Discipline means a scientific area of expertise for testing (*e.g.*, microbiology, chemistry, radiochemistry).

EPA means the United States Environmental Protection Agency.

Field Reagent Blank means reagent water or analyte-free solvent placed in a sample container in the laboratory, taken to the sampling site and returned to the laboratory unopened. It is treated as a sample in all respects, including exposure to sampling site conditions, storage, preservation and all analytical procedures.

Holding Time means the maximum amount of time a sample may be held from collection to analysis or, where applicable, from collection to extraction (sample holding time) or the maximum amount of time a sample extract may be held from extraction to analysis (sample extract holding time).

Instrumentation Analyst means an analyst who operates an instrument including, but not limited to, an atomic absorption spectrophotometer, ion chromatograph (IC), gas chromatograph, liquid chromatograph (LC), gas chromatograph/mass spectrometer (GC/MS), inductively coupled plasma-atomic emission spectrometer (ICP), ICP/MS, or LC/MS.

Laboratory Fortified Blank means an aliquot of reagent water to which known quantities of the method analytes are added in the laboratory. The laboratory fortified blank is analyzed exactly as a sample. Its purpose is to determine whether the methodology is in control, and whether the laboratory is capable of making accurate measurements at the required method detection limit.

Laboratory Fortified Sample Matrix means an aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The laboratory fortified sample matrix is analyzed exactly as a sample. Its purpose is to determine whether the sample matrix contributes bias to the analytical results. The background concentrations of the analytes in the sample matrix must be determined in a separate aliquot and the measured values in the laboratory fortified sample matrix corrected by background concentrations.

Laboratory Reagent Blank means an aliquot of reagent water that is treated exactly as a sample including exposure to all glassware, equipment, solvents, reagents, internal standards, and surrogates that are used with other samples. The laboratory reagent blank is used to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

Matrix means the substrate of a test sample (*e.g.*, potable water, non-potable water).

Maximum Contaminant Level means the maximum permissible level of a contaminant in water that is delivered to any user of a public water system.

42.03: continued

Maximum Residual Disinfectant Level means a level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects pursuant to the Department's Drinking Water Program.

Method Detection Limit means the minimum concentration of substance that can be identified, measured, and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte. The method detection limit refers to samples that have been processed through all the steps of an established analytical procedure.

Minimum Reporting Level means the minimum concentration that can be reported as a quantitated value for a target analyte in a sample following analysis.

Person means an individual, corporation, company, association, trust, partnership, the Commonwealth, a municipality, district or other subdivision or body politic of the Commonwealth, and any department, agency or instrumentality of the United States.

Primary Dilution Standard Solution means a solution of several analytes prepared in the laboratory from stock standard solutions and diluted as needed to prepare calibration solutions and other needed analyte solutions.

Proficiency Test (PT) Samples mean samples that contain known amounts of analytes and are obtained from the Department or from a third party acceptable to the Department. The composition of the sample is unknown to the laboratory performing the analysis. The PT sample is used to evaluate the ability of the laboratory and of the individual analyst to produce accurate and precise results within specified acceptance criteria. PT samples may be single blind (*i.e.*, the laboratory/analyst knows that the sample is a PT sample), or double blind (*i.e.*, the PT sample appears to be a routine sample so the laboratory/analyst is unaware that the sample is a PT sample).

Proficiency Testing means a program in which proficiency test samples are used to evaluate the analytical performance of a laboratory.

Signature means any mark, such as initials, printed or handwritten name, or equivalent electronic documentation made by a person to signify his or her responsibility for the performance of an action such as a measurement or the authentication of documentation produced internal to the laboratory analytical process. The signature must represent a unique person who can be identified with a specific action in the laboratory.

Source Water means untreated water from streams, rivers, lakes, or underground aquifers that is used to supply private wells and public drinking water.

Stock Standard Solution means a concentrated solution containing a single certified standard that is a method analyte, or a concentrated solution of a single analyte prepared in the laboratory with an assayed reference compound.

Surrogate Analyte means a pure analyte(s), which is extremely unlikely to be found in any sample, and which is added to a sample aliquot in known amount(s) before extraction and is measured with the same procedures used to measure other sample components.

Valid Data means analytical data that are:

- (a) technically sound (*i.e.*, generated in accordance with good laboratory practices and meeting the quality control criteria of approved analytical methods); and
- (b) legally defensible (*i.e.*, the laboratory's compliance with quality control criteria designed to assure the accuracy of the analysis is completely and accurately documented).

42.04: Application Procedure

- (1) Filing. An application for certification in one or more matrices, disciplines, or categories shall be submitted on forms provided by the Department.
- (2) Inspection. The applicant must submit to an inspection of the laboratory to enable the Department to determine whether the laboratory satisfies the Department's standards for certification.
- (3) Proficiency Testing. The applicant must satisfactorily analyze samples from a proficiency testing program approved by the Department for the matrices, disciplines, and categories for which certification is sought.

42.05: Certification Matrices, Disciplines and Categories

Qualified applicants may be certified in one or more of the following matrices, disciplines and categories:

(1) Potable Water. Certification in this matrix applies to analyses of drinking water supplies for purposes of, but not limited to, determining compliance with 310 CMR 22.00: *Drinking Water Regulations*. Certification in this matrix may be obtained in any or all of the following disciplines and categories:

(a) Microbiology. Certification in this discipline may be obtained in any or all of the following categories:

1. Total Coliform (Water Treatment and Distribution);
2. *Escherichia coli* (Water Treatment and Distribution);
3. Heterotrophic Plate Count;
4. Total Coliform in Source Water;
5. Fecal Coliform in Source Water;
6. *Escherichia coli* in Source Water;
7. Enterococci in Source Water.

(b) Chemistry. Certification in this discipline may be obtained in any or all of the following categories:

1. Metals:
 - a. Antimony;
 - b. Arsenic;
 - c. Barium;
 - d. Beryllium;
 - e. Cadmium;
 - f. Chromium;
 - g. Copper;
 - h. Lead;
 - i. Mercury;
 - j. Nickel;
 - k. Selenium;
 - l. Silver;
 - m. Thallium;
 - n. Aluminum;
 - o. Iron;
 - p. Manganese;
 - q. Zinc;
2. Nitrate-N;
3. Nitrite-N;
4. Fluoride;
5. Sodium;
6. Sulfate;
7. Cyanide;
8. Turbidity;
9. Residual Free Chlorine;
10. Calcium;
11. Total Alkalinity;

42.05: continued

12. Total Dissolved Solids;
 13. pH;
 14. Polychlorinated biphenyls;
 15. Herbicides:
 - a. 2,4-D;
 - b. 2,4,5-TP;
 - c. Dalapon;
 - d. Dinoseb;
 - e. Pentachlorophenol;
 - f. Picloram;
 16. Pesticides:
 - a. Alachlor;
 - b. Atrazine;
 - c. Chlordane;
 - d. Endrin;
 - e. Heptachlor;
 - f. Heptachlor epoxide;
 - g. Hexachlorobenzene;
 - h. Hexachlorocyclopentadiene;
 - i. Lindane;
 - j. Methoxychlor;
 - k. Simazine;
 - l. Toxaphene;
 17. Carbamates:
 - a. Aldicarb;
 - b. Aldicarb sulfone;
 - c. Aldicarb sulfoxide;
 - d. Carbofuran;
 - e. Vydate;
 18. Benzo-a-pyrene;
 19. Adipates/Phthalates;
 20. Trihalomethanes;
 21. Volatile Organic Compounds (including vinyl chloride);
 22. 1,2-Dibromo-3-chloropropane (DBCP) and 1,2-Dibromoethane (EDB);
 23. Asbestos;
 24. Diquat;
 25. Endothall;
 26. Glyphosate;
 27. Haloacetic Acids;
 28. Bromate;
 29. Chlorite;
 30. Perchlorate;
 31. 1,4-Dioxane;
 32. Chloride;
 33. Per-and Polyfluoroalkyl substances (PFAS).
- (c) Radiochemistry. Certification in this discipline may be obtained in any or all of the following categories:
1. Gross Alpha;
 2. Gross Beta;
 3. Strontium-89;
 4. Strontium-90;
 5. Radium-226;
 6. Radium-228;
 7. Tritium;
 8. Uranium;
 9. Iodine-131;
 10. Cesium-134;
 11. Cesium-137;
 12. Cobalt-60;
 13. Ruthenium-106

42.05: continued

(2) Non-potable Water. Certification in this matrix applies to analyses of water conducted in accordance with 40 CFR Part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act*. Certification in this matrix may be obtained in any or all of the following disciplines and categories:

(a) Microbiology. Certification in this discipline may be obtained in any or all of the following categories:

1. Ambient Water:
 - a. *Escherichia coli*;
 - b. Enterococci.
2. Wastewater:
 - a. Fecal Coliform;
 - b. *Escherichia coli*;
 - c. Enterococci.

(b) Chemistry. Certification in this discipline may be obtained in any or all of the following categories:

1. Metals:
 - a. Aluminum;
 - b. Antimony;
 - c. Arsenic;
 - d. Beryllium;
 - e. Cadmium;
 - f. Chromium;
 - g. Cobalt;
 - h. Copper;
 - i. Iron;
 - j. Lead;
 - k. Manganese;
 - l. Mercury;
 - m. Molybdenum;
 - n. Nickel;
 - o. Selenium;
 - p. Silver;
 - q. Strontium;
 - r. Thallium;
 - s. Titanium;
 - t. Vanadium;
 - u. Zinc;
2. Minerals:
 - a. pH;
 - b. Specific Conductivity;
 - c. Total Dissolved Solids;
 - d. Total Hardness (as Calcium carbonate);
 - e. Calcium;
 - f. Magnesium;
 - g. Sodium;
 - h. Potassium;
 - i. Total Alkalinity (as Calcium carbonate);
 - j. Chloride;
 - k. Fluoride;
 - l. Sulfate;
3. Nutrients:
 - a. Ammonia-N;
 - b. Nitrate-N;
 - c. Kjeldahl-N;
 - d. Orthophosphate;
 - e. Total Phosphorus;

42.05: continued

4. Demand:
 - a. Chemical Oxygen Demand;
 - b. Biochemical Oxygen Demand;
 - c. Total Organic Carbon;
5. Total Cyanide;
6. Residue, Non-filterable (Total Suspended Solids);
7. Total Residual Chlorine;
8. Oil and Grease;
9. Total Phenolics;
10. Volatile Organic Compounds (VOCs):
 - a. Volatile Halocarbons;
 - b. Volatile Aromatics;
11. Pesticides:
 - a. Chlordane;
 - b. Aldrin;
 - c. alpha-BHC (alpha-Hexachlorocyclohexane);
 - d. beta-BHC (beta-Hexachlorocyclohexane);
 - e. gamma-BHC (gamma-Hexachlorocyclohexane);
 - f. delta-BHC (delta-Hexachlorocyclohexane);
 - g. Dieldrin;
 - h. 4,4'-DDD;
 - i. 4,4'-DDE;
 - j. 4,4'-DDT;
 - k. Endosulfan I;
 - l. Endosulfan II;
 - m. Endosulfan sulfate;
 - n. Endrin;
 - o. Endrin aldehyde;
 - p. Heptachlor;
 - q. Heptachlor epoxide;
 - r. Toxaphene;
12. Polychlorinated biphenyls (water);
13. Polychlorinated biphenyls (oil);
14. Perchlorate;
15. Semi-Volatile Organic Compounds (SVOCs):
 - a. Acid Extractables;
 - b. Base/Neutral Extractables.

42.06: Laboratory Certification Ratings

The Department shall classify a laboratory by matrix, discipline, and category according to the following rating scheme:

- (1) Certified - the laboratory meets the Department's minimum requirements for certification and is deemed capable of producing Valid Data;
- (2) Provisionally Certified - the Department deems the laboratory capable of producing Valid Data despite minor deficiencies;
- (3) Not Certified - the laboratory fails to meet the Department's minimum requirements for certification and is deemed incapable of consistently producing Valid Data.

42.07: Criteria for Certification

- (1) Proficiency Testing. Satisfactory performance in the proficiency testing program is accomplished when the analytes in a category are correctly identified and acceptably quantified. Criteria for acceptability shall be set by the Department for each analyte in each discipline and category. Continued unsatisfactory performance in the analysis of an analyte within a category may result in revocation of certification for that analyte.

42.07: continued

(2) Inspections.

(a) The Department may conduct an inspection of each laboratory to determine whether or not the laboratory meets the Department's standards for performing analyses in the matrices, disciplines, and categories for which certification is sought or is obtained.

(b) The Department shall consider the following factors in determining whether to certify or continue certification of a laboratory:

1. Education and experience of laboratory personnel;
2. Adequacy of laboratory facilities and equipment;
3. Adherence to Department-approved methodology and quality assurance/quality control procedures;
4. Adherence to Department-approved methods of handling and reporting data;
5. Adequacy of safety equipment and training; and
6. Any other factors the Department deems relevant to the determination of the ability of a laboratory to operate in a professional manner.

(c) If the Department issues a report of deficiencies found during an inspection of a laboratory, the laboratory shall have 90 days from the date of issuance of the report to take the necessary corrective actions specified in the report and submit documentation of such corrective action to the Department.

42.08: Minimum Standards for Certification

(1) Personnel. Certified laboratories and laboratories seeking certification shall designate a laboratory director and laboratory supervisor(s), and employ a sufficient number of qualified analysts commensurate with the laboratory's workload. The designated laboratory director and laboratory supervisor may be the same individual if he or she possesses the minimum qualifications and fulfills the responsibilities of both positions as set in 310 CMR 42.08(1).

(a) The laboratory director shall have the following responsibilities:

1. Developing policies, programs, and standard operating procedures that will ensure accurate and objective analytical results;
2. Employing and ensuring the training of qualified laboratory personnel;
3. Reporting analytical results to the Department in accordance with 310 CMR 42.13; and
4. Interpreting and evaluating reports of analyses submitted by the laboratory upon request of the Department.

(b) A laboratory supervisor shall have the following responsibilities:

1. Performing analyses and/or providing personal and direct supervision and training to laboratory analysts performing analyses in the categories for which the supervisor is qualified;
2. Instruction and general supervision of all other laboratory operations including sample tracking, data validation, quality control, verification, and prompt reporting of results; and
3. Acceptance and non-acceptance of samples submitted to the laboratory for analysis.

(c) Minimum Qualifications of Laboratory Director.

1. Academic Training. The laboratory director shall possess a Bachelor's degree in biology, chemistry, or a closely related field. If chemical analyses are to be performed by the laboratory, the director must have at least 24 college credits in chemistry.
2. Experience. The laboratory director shall have a minimum of three years of experience in an environmental analysis laboratory.

(d) Minimum Qualifications of Laboratory Supervisor for Laboratories Certified in the Discipline of Chemistry or Radiochemistry.

1. Academic Training. The laboratory supervisor shall possess a Bachelor's degree in chemistry, biology, or a closely related field, and have at least 30 college credits in chemistry.
2. Experience.
 - a. Chemistry. The laboratory supervisor shall have a minimum of two years of laboratory experience in chemical analysis including one year of experience in the specific chemical methods supervised.
 - b. Radiochemistry. The laboratory supervisor shall have a minimum of two years of laboratory experience in radiochemical analyses, including one year of experience in the radiochemical methods for which the laboratory is certified.

42.08: continued

(e) Minimum Qualifications of Laboratory Supervisor for Laboratories Certified in the Discipline of Microbiology.

1. Academic Training. The laboratory supervisor shall have a minimum of a Bachelor's degree in biology, chemistry, or a closely related field with at least four college credits in microbiology.
2. Experience. The laboratory supervisor shall have a minimum of one year of experience in the microbiological methods for which the laboratory is certified.

(f) Minimum Qualifications of Instrumentation Analyst.

1. Academic Training. An instrumentation analyst shall possess a minimum of a high school diploma or equivalent and eight college credits in chemistry.
2. Experience. An instrumentation analyst shall have a minimum of one year of training or experience in the operation of the appropriate instrumentation.

(g) Minimum Qualifications of Analyst.

1. Academic Training. An analyst shall possess a minimum of a high school diploma or equivalent.
2. Training. An analyst shall receive specialized training in the methods to be performed.

(h) The Department may exempt a laboratory holding certification status on the effective date of 310 CMR 42.00 from one or more of the requirements set forth in 310 CMR 42.08(1), if the Department finds that strict compliance with such requirements would result in an undue hardship and would not serve to further the intent of 310 CMR 42.00. An exemption, when granted, shall be effective for not more than one year unless renewed by the Department.

(2) Facilities. A certified laboratory shall have:

- (a) Adequate space in which to perform the analyses and related activities in the disciplines and categories in which it is certified;
- (b) A well-lighted laboratory work bench area of ample size that is convenient to a sink, hot and cold running water, gas, suction, and electrical outlets if necessary;
- (c) Clear aisles between benches that provide adequate room for passage of personnel and equipment;
- (d) Appropriate ventilation including exhaust hoods for the handling of chemicals and samples in order to limit contamination of samples, standards, and other laboratory areas with the performance of each exhaust hood and biological safety cabinet tested by a qualified person annually and determined to be operating satisfactorily;
- (e) Appropriate facilities for the storage of volatile, corrosive, and flammable materials;
- (f) Controlled laboratory temperature and humidity at the levels required for the proper performance of the analyses and for the optimum operation of instruments that are sensitive to variations in temperature; and
- (g) A locked facility for storage of chain-of-custody samples.

(3) Equipment and Materials. Certified laboratories and laboratories seeking certification shall have readily available on the premises all equipment, supplies, reagents, glassware, and instrumentation necessary to perform the analyses for which the laboratory is certified or seeks certification and related quality control activities. Such equipment and materials shall be maintained in good working condition, meet the performance criteria of the analytical method used, and, where appropriate, meet the criteria specified in 310 CMR 42.08(3):

- (a) Refrigerator. Aqueous reagents and samples may be stored in a standard household refrigerator. A flammable materials refrigerator shall be used for storage of organics and flammable materials. The internal temperature of a refrigerator shall be maintained at $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$. Organics and flammable materials not requiring refrigeration shall be stored in a flammable storage cabinet.
- (b) Drying Oven. The drying oven shall have selectable temperature control with a range from room temperature to $180^{\circ}\text{C} \pm 2^{\circ}\text{C}$ or higher.
- (c) Source of Distilled or Deionized Water. Distilled or deionized water shall meet the minimum criteria of the methodologies employed.
- (d) Top-loader Balance. The balance pan shall be clean and free of corrosion. The balance must be capable of detecting a weight of 100 mg at a 150 g load or one mg for a load of 10 g or less.

42.08: continued

- (e) Hot Plate. The hot plate shall have selectable temperature controls for safe heating of laboratory reagents.
 - (f) Magnetic Stirrer. The magnetic stirrer shall be of variable speed with a stirring bar coated with inert material.
 - (g) Glassware. Glassware shall be made of borosilicate glass. Volumetric glassware shall be marked "Class A".
 - (h) Analytical Balance. The analytical balance shall be readable to 0.1 mg. It shall be mounted on a stable shock-proof base and protected from interference due to air currents.
 - (i) Conductivity Meter. The conductivity meter shall be readable in appropriate units, have a range from 2 ohms to 2 megohms or equivalent micromhos or Siemens, and be capable of measuring conductivity with an error not exceeding $\pm 1\%$ or one $\mu\text{S}/\text{cm}$, whichever is greater.
 - (j) pH Meter. The pH meter shall be accurate to at least ± 0.05 units and have scale readability to ± 0.01 units.
 - (k) Thermometer. The thermometer shall have 1°C or finer subdivisions and be calibrated in degrees Celsius for the temperature range in which it will be used. The column shall have no separations. An organic solvent-filled thermometer may be used in a refrigerator. The laboratory may use electronic temperature measurement devices having the appropriate accuracy and readability for their intended use.
 - (l) Water Baths. Water baths may be electric or steam heated and capable of controlling temperature to 100°C within 5°C .
 - (m) Incubators. Incubators shall have an internal temperature-monitoring device and be capable of maintaining proper temperature.
 - (n) Autoclave. The autoclave shall be equipped with an accurate thermometer, a separate pressure gauge, and an operational safety valve. It shall maintain the sterilization temperature throughout the sterilization cycle and depressurize slowly so that no air bubbles form in inverted tubes and medium does not boil over. When being used to sterilize carbohydrate-containing media, the autoclave must be capable of completing an entire cycle (*i.e.*, time when materials are exposed to heat) within 45 minutes when a 12-15 minute sterilization period is used.
 - (o) Hot-air Sterilization Oven. Hot-air sterilization ovens shall be capable of maintaining a stable sterilization temperature (170°C - 180°C).
 - (p) Muffle Furnace. Muffle furnaces shall be capable of heating glassware to 400°C for cleaning.
 - (q) Reagents, Standards, Media. Consumable supplies such as, but not limited to, reagents, standards, and media must not be used beyond their expiration date.
 - (r) Stereo Microscope. Stereo microscopes must have a magnification of 10-15x and be equipped with a fluorescent light source.
 - (s) Colony Counter. When the pour plate technique is used, a dark-field colony counter must be used to count heterotrophic plate count colonies.
- (4) Laboratory Safety Measures Affecting Laboratory Analysis Capability. Certified laboratories shall be in compliance with local, state, and federal laws to the extent that required conditions directly affect laboratory capability in providing accurate and reliable analysis and maintaining the integrity of samples and of the analytical process; or are referenced as required for environmental laboratories by the acceptable analytical method(s) employed. These conditions include, but are not limited to, safety protocols involving physical, chemical, radiochemical, and biological hazards; availability and use of fire safety equipment; protective clothing and equipment including respirators; appropriate handling of compressed gas cylinders; and appropriate storage and disposal of materials and wastes.
- (5) Quality Assurance/Quality Control.
- (a) General Requirements.
 - 1. Quality Assurance Plan. Certified laboratories shall establish, maintain, and follow a written Quality Assurance (QA) Plan acceptable to the Department. Each laboratory's QA plan shall be made available to all analysts employed by the laboratory. At a minimum, QA plans shall include:
 - a. QA organization and responsibility;
 - b. QA objectives for precision and accuracy;

42.08: continued

c. Standard operating procedures (SOPs) that accurately reflect all phases of current laboratory activities. The standard operating procedures section of a laboratory's QA plan shall include the following:

- i. Sample receipt and handling procedures including sample custody and storage procedures;
- ii. Calibration procedures and frequencies;
- iii. Analytical procedures, including any modifications to published procedures;
- iv. Data reduction, validation and reporting procedures;
- v. Internal quality control procedures (type and frequency);
- vi. Provision for performance and system audits, both internal and external, and schedules;
- vii. Preventive maintenance procedures and schedules;
- viii. Specific procedures for assessing data precision and accuracy;
- ix. Procedures for taking corrective actions;
- x. Quality assurance reporting procedures; and
- xi. Laboratory safety plans.

A standard operating procedure for an analytical method or other laboratory procedure may be a separate document. The QA plan must include a list of all such standard operating procedures. Only the laboratory director or supervisor may make changes in standard operating procedures. Such changes shall be effective only when put in writing.

d. Record Maintenance. The record maintenance procedures section of a laboratory's QA plan shall include the procedures for creating, controlling, and maintaining the following records:

- i. Raw data (including, but not limited to, laboratory notebooks, instrument printouts, and electronic records);
- ii. Chain-of-custody records;
- iii. Calculations;
- iv. Quality control data; and
- v. Reports.

2. Temperature Records.

a. A laboratory shall measure and record the temperature of each drying oven and hot-air sterilizing oven for each day of use. The temperature measurement device must be immersed in sand or other suitable material and placed on one of the shelves. A laboratory may use a temperature-measuring device that can be read from outside the oven without the need to open the door provided that it has verified the accuracy of the device.

b. A laboratory shall measure and record the temperature of each refrigerator and incubator either continuously or each day of use. The thermometers must be immersed in liquid and placed on one of the shelves. A laboratory may use a temperature-measuring device that can be read from outside the refrigerator or incubator without the need to open the door provided that it has verified the accuracy of the device.

3. Laboratory Chemicals and Reagents. Analytical reagent (AR) grade or American Chemical Society (ACS) grade chemicals or better are required for analyses, unless otherwise required by the analytical method. In addition, laboratory chemicals and reagents shall meet the following requirements:

- a. All chemicals shall be labeled with the date of receipt by the laboratory to prevent the use of outdated reagents;
- b. Stock and working standard solutions shall be compared with check standards and inspected prior to use for signs of decomposition, such as formation of precipitates, evaporation, and/or discoloration;
- c. All reagents and standards shall be labeled with identification of the compound, concentration, solvent, date of preparation, date of expiration, and the name of the analyst who prepared the solution;
- d. Preparation of all stock standards and primary dilution standards shall be documented, and the concentration of stock and working calibration standards shall be verified against a primary dilution standard prepared from a source of reagents different from those used to prepare the calibration standards; and

42.08: continued

- e. The use of the acceptable grade of reagents and compressed gases required by the analytical procedure employed shall be documented.
4. Laboratory Glassware. The laboratory must follow cleaning procedures for glassware and other labware that are specified in the analytical methods. If no specifications are given in a method, then glassware and sample containers must be cleaned prior to use by washing in a warm detergent solution, followed by thorough rinsing with tap water and several additional rinses using deionized or distilled water. The laboratory must use a detergent designed for laboratory use. Commercially prepared glassware and sample containers may be used provided the laboratory documents the source and cleaning procedures utilized. Certain analytical methods may require additional glassware preparation procedures or the maintenance of a separate dedicated set of glassware.
 5. Maintenance of Laboratory Instrumentation and Equipment. Analytical instrumentation and equipment shall be maintained in accordance with the manufacturer's instructions, analytical method requirements, and good laboratory practices. A secure record of maintenance procedures shall be maintained for each instrument and piece of equipment.
 6. Instrumentation Calibration Requirements.
 - a. General Requirements.
 - i. Unless directed otherwise by the analytical method employed, all instruments shall be calibrated immediately prior to analysis using a minimum of a blank and three calibration standards that bracket the expected concentration range.
 - ii. Unless directed otherwise by the analytical method employed, all instrument calibrations shall be verified through the analysis of a calibration check sample that has been prepared using a source of reagents different from that used to prepare the calibration standards. Unless directed otherwise by the analytical method employed, the calibration check sample shall be analyzed at the beginning and at the conclusion of the analysis session and after every 20 or fewer samples. If the result does not agree within 20% of the original value, corrective action shall be taken.
 - iii. For instruments with a calibration curve that has been set by the instrument manufacturer, the laboratory shall verify the calibration curve using a minimum of three calibration check standards that bracket the expected concentration range. The check standards shall represent low, medium, and high concentrations and include a standard at the minimum reporting level (MRL). If the result of the calibration check does not agree within 10% of the assigned value of each check standard, instrument recalibration must be performed.
 - iv. The laboratory shall keep a secure record of instrument calibration procedures.
 - b. Analytical Balance. Each analytical balance shall be checked and adjusted annually by a qualified service person. The accuracy of each analytical balance shall be checked each day it is to be used using a minimum of two ASTM Class 1 weights, or equivalent, in ranges appropriate to the laboratory's weighing needs. The laboratory shall keep a secure record of the results of accuracy checks, the date performed, and the signature of the analyst who performed the check. The non-reference weights used for this check must be calibrated annually using reference weights and the results recorded. The accuracy of reference weights must be certified every five years. The balance level shall be checked prior to each use and adjusted if necessary.
 - c. pH Meters. Each pH meter shall be calibrated daily or prior to each use with pH 7.0 and pH 4.0 or 10.0 buffer standards that bracket the expected value of the sample, medium, or reagent being tested. The buffers used shall be recorded, including the date of calibration and the name of the analyst who performed the calibration.
 - i. The laboratory must use pH buffer aliquots only once.
 - ii. The laboratory must date commercial buffer solution containers upon receipt and when opened.
 - iii. The laboratory must record the pH meter slope monthly after calibration and take corrective action if the slope falls outside the range of 95% to 105%.

42.08: continued

- d. Conductivity Meters.
 - i. The conductivity meter must be calibrated at least monthly using a certified and traceable low-level standard. Alternatively, the laboratory must determine the cell constant monthly.
 - ii. An in-line meter may be used to check reagent-grade water provided that it is calibrated annually.
 - e. Thermometers. The accuracy of all temperature measurement devices used to monitor temperatures shall be verified by comparing the reading of each device with that of a certified reference thermometer that is graduated in degree increments no larger than those of the device whose accuracy is being verified. The laboratory must discontinue use of a thermometer graduated in 0.5°C increments or less that differs from the certified thermometer by more than 1°C. The accuracy of glass and electronic thermometers must be verified annually; metal thermometers must be verified quarterly; infrared detection devices must be verified every six months; and the certified reference thermometer must be calibrated at least once every five years. The correction factor and date of verification of accuracy must be indicated on the thermometers. The laboratory shall maintain a secure record that includes:
 - i. The identification number of each thermometer;
 - ii. The temperatures displayed on both the certified thermometer and the thermometer being verified;
 - iii. Any applicable correction factor;
 - iv. The date each check was performed; and
 - v. The signature of the analyst who performed each check.
 - f. On-line Monitors and Portable Equipment. Continuous on-line monitors and portable equipment used in obtaining on-site measurements must be calibrated in accordance with the manufacturer's instructions. The calibration must be verified through analysis of an independent check sample or use of an independent monitoring technique. Verification shall be recorded.
 - g. Spectrophotometer Wavelength Verification. The wavelength setting of the spectrophotometer shall be checked annually by comparing the wavelength setting to that of colored standards or filters, such as didymium glass. The wavelength observed, date of performance, and the name of the analyst or service person that performed the check shall be recorded.
 - h. Top-loader Balance. Each top-loader balance must be checked for accuracy monthly in its range of use with ASTM Class 1 weights or equivalent.
7. Sample Collection, Preservation and Handling.
- a. Acceptable procedures, as referenced or defined in current federal regulations shall be utilized for sample collection, handling and preservation.
 - b. The laboratory may reject the sample if it is not assured of the sample identification or of the validity of the sample collection, handling and preservation procedures. The laboratory must have a written policy listing its criteria for rejection of samples. When rejecting a specific sample, the laboratory must document the reason(s) for the rejection.
 - c. Samples shall be stored in such a way that cross-contamination from other samples, standards or reagents is avoided.
 - d. The laboratory shall adhere to the sample and extract holding times prescribed in the analytical methods.
 - e. Chain-of-custody information must include:
 - i. Sample number;
 - ii. Sample description including any preservation (*e.g.*, chemical, thermal, *etc.*) used;
 - iii. Date and time of sample collection;
 - iv. Specific location of sample collection;
 - v. Name of sample collector and intermediate custodians, if any;
 - vi. Date(s) and time(s) of custody transfer to the laboratory; and
 - vii. Name(s) and signature(s) of the individual(s) receiving the sample.
 - f. A chain-of-custody form must accompany all samples including those shipped by mail or courier.
 - g. The laboratory shall maintain a system of internal sample tracking that documents sample custody from the time of receipt at the laboratory to the time of disposal.

42.08: continued

8. Analytical Methodology. The laboratory shall utilize acceptable analytical methods. The acceptable methods shall be those defined or referenced in 40 CFR parts 136, 141 and 143, and 310 CMR 22.00: *Drinking Water*, for the environmental matrix being tested.

(b) Additional Requirements for Chemical and Radiochemical Laboratories.

1. Quality Control Procedures.

a. Unless directed otherwise by the analytical method or the Department standard employed, the laboratory shall prepare and analyze a laboratory reagent blank, sample duplicate, and laboratory fortified blank for every 20 or fewer samples processed as an analytical batch. Duplicates of radiochemical samples must be prepared and analyzed for every ten or fewer samples. In addition, a laboratory fortified sample matrix shall be run if required by the Department. Corrective action shall be taken if the results of these analyses do not meet acceptance criteria developed within the laboratory according to accepted analytical procedures. The preparation of blanks, laboratory fortified sample matrices, and duplicates and the results of their analyses shall be recorded.

b. Each laboratory must establish acceptance limits for precision and accuracy and maintain and use quality control charts for each of the analytes in the matrices, disciplines, and categories in which the laboratory is certified. These limits may not be less stringent than those defined in approved analytical methods or approved by the Department.

c. Certified laboratories shall utilize surrogate analytes as required by the analytical procedure employed. Acceptance limits for surrogate analyte recoveries shall be established by the laboratory. Quality control charts must be maintained and used for each surrogate.

d. Certified laboratories shall perform and document all quality control procedures in established analytical protocols or the quality control procedures the Department requires and specifies.

e. When integrating chromatography peaks, either automatically or manually, each laboratory must ensure that integrations are performed in a correct and consistent manner for standards and samples, including quality control samples. Each laboratory must maintain documentation of manual integrations that includes the following:

- i. The laboratory's written procedure for manual integration;
- ii. The original chromatogram and the manually integrated chromatogram; and
- iii. The analyst's initials, date of manual integration, and the reason(s) for the manual integration.

2. Determination of Method Detection Limit.

a. Each laboratory shall experimentally determine the method detection limit for analysis of each analyte, except pH, for each matrix in which the laboratory is certified.

b. The laboratory must document its procedure for determining the method detection limit. The laboratory must use the procedure for determining the method detection limit that is described in the analytical method being used. If the analytical method does not include a procedure for the determination of method detection limits, then the laboratory must determine the method detection limit using the procedure described in 40 CFR Part 136: *Appendix B* or other Department- or EPA-approved procedure. For those analytes requiring pattern recognition for identification (*e.g.*, chlordane, toxaphene), the method detection limit is defined as the lowest concentration at which pattern recognition is possible.

c. Calculations and supporting documentation used in determining limits must be available for inspection.

d. Detection limits shall be expressed in appropriate units.

e. The laboratory must achieve the method detection limits required by the applicable regulations.

f. Sample preparation and analyses for the method detection limit calculation must be made over a period of at least three days.

g. Method detection limits must be determined as part of a laboratory's initial demonstration of capability to perform an analysis, when any change occurs in the laboratory that could affect the method detection limits, and as required by an analytical method.

42.08: continued

- h. Method detection limits must be determined using analysts and instruments that are representative of those used in the performance of analyses.
 - i. The laboratory must verify its capability to analyze low level samples on an ongoing basis through the analysis of low level standards or through a method detection limit determination.
 - j. The laboratory shall determine the minimum reporting level for analysis of each analyte, except pH, for each matrix in which the laboratory is certified. The laboratory shall document the procedure used to determine the minimum reporting level. The laboratory shall verify the minimum reporting level on an ongoing basis.
3. Laboratory Reagent Water. The laboratory must demonstrate that its reagent water meets the specifications required by the analytical methods it uses including that it is free of analytes of interest above their method detection limits. When the method specifies the resistance or conductivity of the source of reagent water, verification of such quality shall be made and documented each day the water is used.
- (c) Additional Requirements for Microbiology Laboratories.
- 1. Autoclaves.
 - a. For each sterilization cycle, the signature of the analyst, date, sterilization time and temperature, the materials being autoclaved and their total time in the autoclave shall be recorded.
 - b. A maximum-temperature-registering thermometer, electronic temperature read-out device, or continuous recording device must be used during each autoclave cycle. The temperature must be recorded.
 - c. Automatic timing mechanisms must be checked quarterly with an accurate timepiece, such as a stopwatch, and the results recorded.
 - d. The laboratory must check the performance of the autoclave each week during which the autoclave is used with *Geobacillus stearothermophilus* spore strips, suspensions, or capsules and record the results.
 - e. Biological waste must be autoclaved for at least 30 minutes followed by proper disposal.
 - 2. Hot Air Sterilizing Ovens. The laboratory must check the performance of the hot air sterilizing oven each week during which the oven is used with *Bacillus subtilis* or *Bacillus atrophaeus* spore strips and record the results.
 - 3. Incubators.
 - a. Incubators, both air-type and water bath, must maintain the temperature specified by the method. On days when the incubator is in use, the temperature of each incubator must be recorded continuously or at least twice per day, with each reading separated by at least four hours and the times of each reading recorded. For air-type incubators, the thermometer shall be immersed in liquid and placed on one of the shelves in use.
 - b. If an aluminum block incubator is used, culture dishes and tubes must fit snugly.
 - c. Water bath incubators must be cleaned at least monthly.
 - d. The laboratory must record the date and time at the beginning and at the end of sample incubation.
 - 4. Germicidal Ultraviolet Lamps. Germicidal ultraviolet lamps shall be tested quarterly by exposing agar spread plates containing 200 to 250 microorganisms to the light for two minutes. If such irradiation does not reduce the count of control plates by 99%, the lamps shall be replaced. Alternatively, the laboratory shall use an ultraviolet light meter to ensure that the lamp emits at least 70% of its initial output. Cleaning of germicidal ultraviolet lamps shall be done at least monthly by disconnecting the unit and cleaning the lamps with a soft cloth moistened with ethanol.
 - 5. Microscopes. The optics and stage of microscopes shall be cleaned with lens paper prior to each use.
 - 6. Sterility of Rinse/Dilution Water and Sample Bottles.
 - a. Each batch or lot of dilution/rinse water must be checked for sterility by adding 50 mL of the water to a 50 mL volume of a double strength non-selective broth (e.g., tryptic soy broth, trypticase soy broth, or tryptose broth), which is then incubated at $35^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$ and checked for turbidity signifying growth at 24 and 48 hours and the results recorded.

42.08: continued

- b. After sterilization, at least one bottle per batch of sterilized sample bottles or per lot of commercially prepared sample containers shall be checked for sterility by adding approximately 25 mL of sterile non-selective broth medium to each bottle. The bottle shall be capped and rotated so that the broth comes in contact with all surfaces and shall be incubated at $35^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$ and checked for growth at 24 and 48 hours and the results recorded. Prepared sample bottles from each batch or lot shall not be used unless satisfactory results are obtained from the tested bottle.
7. Residue Testing of Glassware.
- a. Inhibitory Residue Test. With the initial use of each lot of a detergent or washing product, the rinsing process using distilled or deionized water shall be demonstrated to provide glassware that is free from toxic material based on the use of the Inhibitory Residue Test, as specified in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*, American Public Health Association, American Water Works Association, Water Environment Federation, Washington D.C. The results of the test must be recorded. Alternatively, the laboratory may obtain written, traceable certification from the product manufacturer that the inhibitory residue test has been performed on the lot of detergent or washing product according to the *Standard Methods* procedure. The actual test results must be included with the certification.
- b. Bromthymol Blue Test. Each batch of clean, dry glassware or plasticware shall be tested for residual alkaline or acid residue using bromthymol blue indicator and the results recorded. If the results of the indicator test are not within the desired color range of light green to dark blue, corrective action shall be taken by re-rinsing, air drying and retesting.
8. Microbiological Media - Quality Control Measures.
- a. The laboratory shall keep records that indicate the kind, amount, date received, lot number, expiration date, and date of opening of bottles of media. Media shall be stored in a desiccator or cool, dry location. If caking or discoloration of media occurs, media shall be discarded.
- b. Records shall be available for inspection on all batches of laboratory-prepared media showing lot numbers, date prepared, details of preparation, total volume prepared, sterilization time and temperatures, final pH, and the name of the individual who performed the work.
- c. Prior to first use of media, the laboratory shall test each batch of medium prepared in the laboratory and each lot of pre-prepared, ready-to-use medium with at least one pure culture of a known positive reaction.
- d. Prior to first use of media, the laboratory shall test each batch of medium prepared in the laboratory and each lot of pre-prepared, ready-to-use medium with one or more negative culture controls, *i.e.*, non-target organisms, as appropriate to the method.
- e. Prepared plates shall be refrigerated in sealed containers with a label containing the date of preparation or expiration and the name of the medium. Plates may be kept no more than two weeks following preparation. Broth media in loose-capped test tubes may be kept no more than two weeks following preparation. Broth media in tightly capped tubes may be kept three months from the date of preparation.
9. Dechlorination Sufficiency. If chlorinated water is to be analyzed, sufficient sodium thiosulfate must be added to the sample bottle before sterilization to neutralize any residual chlorine in the water sample. The laboratory may also use commercially prepared, pre-sterilized bags or bottles containing sodium thiosulfate.
10. Membrane Filter Procedure Quality Control Specifics.
- a. Only membrane filters recommended for water analysis by the manufacturer shall be used.
- b. Lot numbers of membrane filters and date of receipt shall be recorded.
- c. Procedural Contamination. A start and finish membrane filtration control test of rinse water, medium, and supplies shall be conducted for each filtration series. If sterile controls indicate contamination, all data on samples affected shall be rejected and a request made for immediate resampling of those waters affected.
- d. Verification of Membrane Filter Colonies on m-Endo medium.
Total Coliform Procedure. All sheen or borderline colonies up to ten on each membrane shall be verified in accordance with the accepted standard procedure contained in the latest edition of *Standard Methods for the Examination of Water and Wastewater (Standard Methods)*.

42.08: continued

11. Quality Control.

- a. When quality control samples are available, each analyst shall analyze at least one quality control sample per year for the categories to be certified.
- b. During the initial training of an analyst in a method requiring the identification and enumeration of colonies, the new analyst must count plates from at least ten positive samples having varying colony counts within the ideal counting range for the method. The laboratory supervisor must count the same plates. The replicate counts between the analysts must agree within 10%.
- c. For methods used for the enumeration of colonies, 10% of routine samples must be analyzed in duplicate and the range of logs determined. Corrective action shall be taken if the results of these analyses do not meet acceptance criteria developed within the laboratory according to accepted analytical procedures.

12. Laboratory Reagent Water. The laboratory shall use satisfactorily tested reagent water from a water purification system (*e.g.*, still, deionization unit, or a reverse-osmosis unit) to prepare media, reagents, and dilution/rinse water for performing microbial analyses.

- a. If the source water is chlorinated, the laboratory reagent water must be tested monthly for total chlorine residual and found to contain less than 0.1 mg/L of chlorine residual.
- b. The laboratory reagent water must be analyzed annually for the presence of lead, cadmium, chromium, copper, nickel, and zinc. The concentration of each metal must be no greater than 0.05 mg/L. The concentration of the metals collectively must be no greater than 0.1 mg/L.
- c. The conductivity of the laboratory reagent water must be monitored each day that the water is used and found to be less than 2 $\mu\text{S}/\text{cm}$ at 25°C or greater than 0.5 megohms-cm resistance at 25°C.
- d. A heterotrophic plate count must be performed on the laboratory reagent water monthly. The laboratory may use the reagent water only if the heterotrophic plate count is less than 500 CFU/mL.
- e. The test of the bacteriological quality of the laboratory reagent water must be performed annually. The ratio of the growth rate must be between 0.8 and 3.0. The test is described in Section 9020B of the 18th and 19th editions of *Standard Methods for the Examination of Water and Wastewater*. The bacteriological quality test is not required of laboratories that document that their laboratory reagent water meets the criteria for Type II water or better, as defined in *Standard Methods* (18th and 19th editions), Section 1080C or Medium quality water or better as defined in *Standard Methods* (20th edition), Section 1080C.

(6) On an annual basis, certified laboratories and laboratories seeking certification shall require all personnel to participate in a laboratory ethics training program. Training shall include the following topics: proper procedures to ensure data integrity, recognition and prevention of improper laboratory practices, the promotion of objectivity and impartiality in the generation and reporting of analytical data, and procedures for confidential reporting of data integrity concerns to a laboratory supervisor, director, or owner, as appropriate. The laboratory must document the content of the training and the date of participation in the training for each staff member and shall make this documentation and the materials used in the training available for review during an inspection.

42.09: Issuance of Certificate

(1) Upon satisfactory fulfillment of the criteria provided herein, the Department shall issue a certificate indicating the laboratory's certification rating for each matrix, discipline and category, including the acceptable analytical methods used by the laboratory. The certificate, which includes the list of certified analytes and methods, shall be conspicuously displayed at the location stated in the certificate.

(2) Certificates shall be valid for one year unless earlier downgraded or revoked in accordance with 310 CMR 42.12, or surrendered.

42.09: continued

(3) Certification status shall apply only to the laboratory located at the address stated in the certificate. Each affiliated or branch laboratory must obtain a separate certificate. Certificates are not transferable or assignable.

42.10: Requirements for Maintaining Certification Status

(1) To maintain certification status, a laboratory shall satisfactorily analyze samples from a proficiency testing program administered or approved by the Department and pass inspections conducted or approved by the Department.

(2) A laboratory must continue to meet the Department's minimum standards for certification set forth in 310 CMR 42.00 to maintain certification status.

(3) A laboratory shall not misrepresent its certification status on any document. On reports of sample analysis, the laboratory must clearly distinguish among analyses for which it is certified, analyses for which it is provisionally certified, and analyses for which it is not certified. The laboratory's certification status indicated on a report of sample analysis must be accurate as of the date of the analysis. For all other documents, including promotional materials, catalogues, advertising, Internet sites, business solicitation proposals, quotations, or other materials on which the laboratory's certification status appears, the laboratory, to the extent possible, must correct its certification status appearing on such documents within 30 calendar days of its receipt of a notice of revocation of certification or within 30 calendar days of its voluntary withdrawal from certification.

42.11: Renewal of Certificate

Filing. At least 45 calendar days prior to the expiration date noted on its certificate, a certified or provisionally certified laboratory must file an application for renewal of certification on forms provided by the Department. Timely filing of the application for renewal causes the certification to continue until the Department issues a final written decision regarding the laboratory's certification status. A laboratory that fails to file an application for renewal by the expiration date of the certification loses its certification, may not file an application for renewal, and must submit a new application for certification, including payment of the application fee, if it wishes to secure a new certification.

42.12: Denial, Downgrading, and Revocation of Certification

(1) Denial. The Department may deny a laboratory's request for certification, including a request for renewed certification, if:

- (a) the application does not meet the requirements of 310 CMR 42.00;
- (b) the laboratory's current or prior certification has been downgraded or revoked;
- (c) the laboratory or one of its owners or employees has been or currently is subject to an order issued pursuant to 310 CMR 42.17(1); or
- (d) the laboratory or one of its owners or employees has been or is currently in violation of 310 CMR 42.00.

(2) Provisional Certification. For minor deficiencies not affecting the laboratory's ability to produce Valid Data, the Department may downgrade a laboratory's certification status to provisional, in total or in part, for a period not to exceed 180 calendar days. If the Department determines that there are grounds for downgrading, the Department shall notify the laboratory in writing by certified mail.

(a) The following may be grounds for downgrading if the Department determines that the infraction is minor in nature and does not affect the laboratory's ability to produce Valid Data:

- 1. Failure to pass an inspection;
- 2. Failure to report compliance data to a public water system, the Department, or other responsible party in a manner so as to meet prescribed reporting time deadlines, or interfering with the reporting of such data produced by other entities;
- 3. Careless or inaccurate reporting of analytical measurements and supporting documentation;

42.12: continued

4. Failure to notify the Department in writing within the prescribed timelines listed in 310 CMR 42.13 regarding any change in ownership, laboratory name, laboratory location, personnel, equipment, or any other factor that could impair the analytic, reporting, or operational capability of the laboratory;
 5. Reporting sample results without indicating whether or not the laboratory is certified for that analysis;
 6. Reporting sample results for analyses for which the laboratory is certified without indicating whether or not the analyses were conducted in accordance with Department certification standards;
 7. Failure to use an approved method or to follow the approved method for sample analysis where the report issued for the analysis indicates that the analysis was conducted in accordance with Department certification standards;
 8. Handling samples in a manner so as to compromise sample integrity; and
 9. Failure to comply with any other requirement of 310 CMR 42.00.
- (b) A laboratory that has had its certification downgraded to provisional may request reinstatement within the time period prescribed in the notification of downgrading and in accordance with the requirements of 310 CMR 42.12(4). If the laboratory fails to correct the deficiencies listed in the notice of downgrading and request reinstatement within the time specified by the Department in the notification, the Department may revoke, in total or in part, the laboratory's certification, pursuant to 310 CMR 42.12(3).
- (3) Revocation. The Department may revoke a laboratory's certification, in total or in part, if the Department determines that there are grounds for revocation. The Department shall notify the laboratory in writing via certified mail in the event of a revocation.
- (a) Grounds for revocation are:
1. Failure to pass an inspection;
 2. Failure to report compliance data to a public water system, the Department, or other responsible party in a manner so as to meet prescribed reporting time deadlines or interfering with the reporting of such data produced by other entities;
 3. Failure to participate in or analyze proficiency test samples, or to meet the requirements for successful performance of such tests;
 4. Operating the laboratory in such a manner so as to endanger public health or safety;
 5. Making an intentionally false oral statement or written statement on any document issued by the laboratory or on any document associated with certification;
 6. Careless, inaccurate, or falsified reporting of analytical measurements and supporting documentation;
 7. Failure to notify the Department in writing within the prescribed timelines pursuant to 310 CMR 42.13 regarding any change in ownership, laboratory name, laboratory location, personnel, equipment, or any other factor that could impair the analytic, reporting, or operational capability of the laboratory;
 8. Unethical conduct in the operation of the laboratory;
 9. Fraudulent or deceptive practices;
 10. Reporting sample results without indicating whether or not the laboratory is certified for that analysis;
 11. Failure to use an approved method or to follow the approved method for sample analysis where the report issued for the analysis indicates that the analysis was conducted in accordance with Department certification standards;
 12. Reporting sample results for analyses for which the laboratory is certified without indicating whether or not the analyses were conducted in accordance with Department certification standards;
 13. Performing, reporting, or failing to report drinking water analyses in a manner so as to threaten public health or welfare;
 14. Failure to implement, report, or maintain corrective action related to any deficiencies found during a laboratory inspection or deficiencies otherwise identified by the Department;
 15. Failure to correct the deficiencies cited in a notice of downgrading to provisional certification and apply for reinstatement during the time frame specified by the Department;
 16. Handling samples in a manner so as to compromise sample integrity; and
 17. Failure to comply with any other requirement of 310 CMR 42.00.

42.12: continued

(b) A laboratory that has had its certification revoked must not advertise itself as certified for those matrices, disciplines, or categories for which the laboratory's certification has been revoked and, to the extent possible, must remove or replace any advertisements that indicate that the laboratory is certified within 30 calendar days of the laboratory's receipt of a notice of revocation of its certification.

(c) A laboratory that has had its certification revoked must not perform analyses in those disciplines and categories for which its certification was revoked where the Department or the laboratory's client requires that the analyses be performed by a Massachusetts-certified laboratory and/or that the Department's certification standards of analysis be used.

(d) The Department may impose a waiting period of up to three years in its notice of revocation, during which time the laboratory may not apply for recertification. After the waiting period ends, the laboratory must submit a new application for certification, including payment of the application fee, if it wishes to become recertified.

(e) A laboratory that has had its certification revoked, but no waiting period imposed, may request reinstatement within 180 days of the date of revocation in accordance with the requirements of 310 CMR 42.12(4). A laboratory that fails to request reinstatement within 180 days must submit a new application for certification, including payment of the application fee, if it wishes to become recertified.

(4) Reinstatement.

(a) A laboratory for which certification has been downgraded to provisional may request reinstatement within the time period prescribed in the notification of downgrading and in accordance with the requirements of 310 CMR 42.12(4)(c).

(b) A laboratory for which certification has been revoked and no waiting period imposed may request reinstatement within 180 days of the date of revocation and in accordance with the requirements of 310 CMR 42.12(4)(c).

(c) Laboratories seeking reinstatement shall submit a written report to the Department detailing corrective action that has been taken in regard to the deficiencies that resulted in the downgrading or revocation of the certification. At the same time, the laboratory shall submit a written request for reinstatement review by the Department. The corrective action report and the request for reinstatement must be submitted within the time frame specified in 310 CMR 42.12(4)(a) or (b), as applicable.

(d) The Department may reinstate a certification that has been downgraded or revoked if the laboratory has corrected all the deficiencies identified in the notice of downgrading or revocation to the Department's satisfaction and if the laboratory has applied for reinstatement in accordance with 310 CMR 42.12(4). The reinstatement of a laboratory's certification status following a downgrading or revocation is not effective until the Department has issued its decision in writing to the laboratory.

(e) If a laboratory's request for reinstatement after revocation is denied by the Department, the laboratory shall submit a new application for certification, including payment of the application fee, if it wishes to become recertified.

(f) A laboratory that has had its certification revoked and a waiting period imposed may not request reinstatement.

(5) Successor. The revocation of a laboratory's certification shall operate to prohibit any successor from applying for certification from the Department except in accordance with 310 CMR 42.12(4).42.13: Reporting Requirements

(1) No certified or provisionally certified laboratory shall report analytical results as a Department-certified laboratory unless:

(a) The laboratory conducted the analytical measurements at the laboratory's address as stated in its current certificate;

(b) The laboratory clearly distinguishes in the report among those analyses for which it is certified, provisionally certified, or not certified by the Department; and,

(c) For those analyses for which it is certified or provisionally certified, the laboratory clearly distinguishes in the report between those analyses that it conducted in accordance with Department certification standards and those that it did not conduct in accordance with Department certification standards.

42.13: continued

- (2) All reports of analytical measurements conducted by a Department-certified laboratory in accordance with the standards of 310 CMR 42.00 where such standards are required or otherwise specified by the laboratory's client must include the following information:
- (a) The Massachusetts Laboratory Certification identification number of each laboratory that performed the analytic measurements;
 - (b) The results of analysis of samples with the specific analytes measured by each laboratory that performed any of the analyses identified in the report;
 - (c) The results of analyses of reagent blanks, laboratory fortified blanks, laboratory fortified sample matrices, and duplicates, and surrogate analyte recovery data when requested by the Department;
 - (d) The analytical methods used to detect and quantify the analytes of interest. Sample preparation procedures, if not included in the referenced analytical procedures, must also be referenced or described; and
 - (e) The date of sample extraction, if applicable to the analytical method performed, and the date of sample analysis.
- (3) With the exception of reports submitted to the Department in a format approved by the Department, all reports of finished drinking water analyses must indicate the maximum contaminant level and/or the maximum residual disinfectant level for each analyte measured where a maximum contaminant level or maximum residual disinfectant level has been established by the EPA or by the Department. Where a maximum contaminant level or maximum residual disinfectant level has not been established, the laboratory must indicate the drinking water guideline for each analyte as published by the Department's Office of Research and Standards.
- (4) The actual format of the data submitted to the Department is left to the discretion of the laboratory unless otherwise specified. The Department encourages the use of summary tables that allow the reader to easily review and compare the data.
- (5) A certified laboratory shall be required to have current knowledge of all Federal and Massachusetts standards for all categories in which it has been certified or provisionally certified, and to report analytical results in a timely manner.
- (a) Upon obtaining Valid Data, a certified laboratory shall notify its clients of the results of all samples that exceed any EPA- or Department-established maximum contaminant level (MCL), maximum residual disinfectant level or reportable concentration, or that identify the presence of regulated microbiological organisms in potable water. Notification must clearly indicate that a regulatory limit has been exceeded. The date, time, and manner of notification must be documented and kept on file.
 - (b) A laboratory that accepts potable water samples for analysis must notify its client public water system of the results of all samples that exceed a regulatory limit. Data indicating an exceedance of a regulatory limit must be validated and the validated data reported as soon as possible, not to exceed 24 hours after the completion of sample analysis. Such notification must be given within 24 hours of the completion of the analysis of the sample whether or not the laboratory accepting the sample subcontracted the analysis to another laboratory.
 - (c) Laboratories must identify, in writing, those samples needing special reports (*e.g.*, MCL exceedance) when the laboratory subcontracts with another laboratory.
 - (d) Laboratories accepting samples to be analyzed for the purpose of determining regulatory compliance must ensure that analytical data are reported in a timely manner to meet their clients' reporting requirements. A laboratory that has had regulatory compliance samples subcontracted to it by another laboratory must release analytical data to the client laboratory within the timeline arranged by the laboratories.
 - (e) Laboratories must have written standard operating procedures in place which are designed to ensure that the requirements of 310 CMR 42.13(5)(a) through (d) are met.
 - (f) If preliminary data or data for which data quality objectives were not achieved are reported, they must be accompanied by a case narrative describing quality control outliers or any other factors affecting data usability.

42.13: continued

- (6) A laboratory shall notify the Department in writing upon any change in ownership, laboratory name, laboratory location, personnel, equipment, or any factor that could impair the analytic capability of the laboratory. Personnel changes must be reported within ten calendar days and shall be limited to loss or replacement of the Laboratory Director, Laboratory Supervisor, or any other personnel that results in the unavailability of trained and experienced analysts necessary to perform the analyses for which the laboratory has been certified. Changes affecting the availability of properly operating equipment to perform analyses for which the laboratory is certified, where the equipment has been, or will be, unavailable for a period of 14 calendar days or more, must be reported in writing to the Department within 14 calendar days of the onset of the change to the instrument's operational status.
- (7) The present owners of a certified or provisionally certified laboratory shall notify the Department in writing of a sale or change in ownership of the laboratory within ten calendar days of the same.
- (8) The owner of a certified or provisionally certified laboratory seeking to maintain its certification status while changing the laboratory location shall notify the Department in writing at least 30 calendar days prior to any such change. The Department may issue an amended certificate for the new location indicating the laboratory's certification rating for each matrix, discipline and category if it finds that the laboratory meets the Department's criteria for certification.
- (9) A laboratory that has been certified by EPA or by its resident state shall notify the Department upon receipt of notice from EPA or the resident state that its certification has been downgraded, suspended, or revoked.
- (10) A laboratory shall submit to the Department a copy of the following kinds of documents:
- (a) within 30 calendar days of receipt by a Department-certified laboratory of a citation, settlement agreement, judgment, order, enforcement notice or report, or inspection report that is issued by any local, state, or federal government agency that cites violations of that laboratory's conditions, equipment, or operations.
 - (b) a Department-certified laboratory must supply a copy within 30 calendar days of receipt of documents from its director, supervisor, and owner holding greater than 5% equity. The documents include a citation of violations or settlement agreement issued by any local, state, or federal government agency naming the individual and documents evidencing a civil or criminal conviction of that individual involving operations of any other environmental laboratory certified or accredited by EPA or any state. The Department-certified laboratory must ensure that its director, supervisor, and owner are required to submit a copy to it within 30 calendar days of receipt of such documents by the individual.
 - (c) a laboratory applicant for certification shall provide a copy pursuant to 310 CMR 42.13(10)(a) of documents received within the last five years, and pursuant to 310 CMR 42.13(10)(b) of documents received by a current owner, director, and/or supervisor within the past five years.

42.14: Maintenance of Records

- (1) Certified laboratories shall maintain copies of all analytical reports, logs, charts and records created in accordance with 310 CMR 42.00 for a minimum of ten years or as otherwise specified by the Department. Records related to performance on proficiency tests shall be maintained for a minimum of five years. Records shall include the results and supporting documentation of analyses of samples including proficiency test samples, reagent blanks, laboratory fortified blanks, laboratory fortified sample matrices and duplicates, and surrogate analyte recovery data. Records of analysis of samples shall include documentation of sample preparation procedures, including, but not limited to, pH adjustments, distillations, digestions, extractions, and turbidity measurements.
- (2) Certified laboratories shall record observations, data, and calculations at the time they are made. Handwritten records must be made in ink, not pencil. Mistakes in records shall be crossed out with a single line such that the original entry is still legible and the correct value entered. All alterations to records must be signed by the person making the correction. In the case of records stored electronically, equivalent measures must be taken to avoid loss or change of original data.

42.14: continued

(3) Certified laboratories shall maintain current records of personnel, including a resume documenting education, training, experience, description of duties and dates of relevant employment for each employee.

(4) Certified laboratories shall maintain all records in accordance with the Department approved QA plan for the laboratory. The laboratory must ensure that all records, including those stored electronically, are readable throughout the required retention time of the records.

42.15: Right of Entry

Agents and employees of the Department may make such inspections of laboratory property, facilities, or operations as the Department deems necessary to carry out its responsibilities under and ensure compliance with 310 CMR 42.00. The owner or operator of any laboratory subject to 310 CMR 42.00 shall allow such agent(s) or employee(s) free and unrestricted access at reasonable times to examine any property, facility, operation, equipment, or activity for determining compliance with 310 CMR 42.00. Such agent(s) and employee(s) may also inspect, conduct tests, and review books, papers, electronic documentation, data packages, and records relevant to the enforcement of 310 CMR 42.00.

42.16: Reciprocity

Certificates may be issued in a comparable classification without an inspection to any laboratory that holds a certification from the EPA or from its resident state if, in the opinion of the Department, the standards for certification under which such laboratory's certificate was issued are at least as stringent as those set forth in 310 CMR 42.00.

42.17: Orders, Violations, and Penalties

(1) Without limitation, the Department may issue orders or downgrade or revoke a certification as necessary to aid in the implementation and enforcement of M.G.L. c. 21, §§ 26 through 53; c. 21A, § 2(28); c. 21C, § 4; c. 21E, § 3; c. 111, §§ 142A through 142E, 150A, 160, or 310 CMR 42.00. Such orders may include, but shall not be limited to, orders requiring persons to cease any activity which is in violation of the aforementioned statutes or 310 CMR 42.00 or to carry out activities necessary to bring such persons into compliance. The Department may also require any person to submit such information as the Department may reasonably require to evaluate whether that person is subject to, in compliance with, or in violation of the aforementioned statutes or 310 CMR 42.00.

(2) Violations. Without limitation, it shall be a violation of 310 CMR 42.00 for any person to:

- (a) Fail to comply with any order of the Department;
- (b) Engage in any activity that is contrary to the terms and conditions of 310 CMR 42.00, or of any certificate or order issued pursuant to 310 CMR 42.00;
- (c) Make any false, inaccurate, incomplete, or misleading statement in any application, record, report, plan, file, data package, log, register, or other document submitted to the Department or required to be kept by 310 CMR 42.00 or the terms of a certificate; or
- (d) Make any false, inaccurate, incomplete, or misleading statement in any record, report, plan, file, data package, log, register, or other document issued by or on behalf of a laboratory; or
- (e) Fail to provide any information requested by the Department, in a timeframe the Department specifies, pursuant to 310 CMR 42.00.

(3) Penalties. Any person violating 310 CMR 42.00 shall be subject to the full range of legal actions authorized by M.G.L. c. 21, § 42; c. 21A, § 16; c. 111, §§ 142A and 150A, 310 CMR 5.00: *Administrative Penalty*, and any other applicable law or regulation including, without limitation, criminal fines, imprisonment, and civil and administrative orders and penalties.

42.18: Right to Appeal

Any person who has been denied certification or whose certification has been revoked may make a written request for an adjudicatory hearing before the Department pursuant to M.G.L. c. 30A and 310 CMR 1.01: *Adjudicatory Proceeding Rules for the Department of Environmental Protection*. The request for a hearing must be sent by certified mail or hand-delivered, and received by the Department within 21 calendar days of the date of receipt of the decision being appealed. The request for hearing shall state specifically, clearly, and concisely the facts which are the grounds for the appeal, the relief sought, and any additional information required by 310 CMR 1.01(6)(b) or other applicable law or regulation. In every proceeding the burden shall be on the applicant for, or the holder of, a certification to demonstrate compliance with 310 CMR 42.00.

42.19: List of Certified Laboratories

The Department shall publish or cause to be published at least annually a list of certified laboratories. This list shall include the name and location of the laboratory, the name of the director, and categories of analysis in which the laboratory has been granted certification.

42.20: Potable Water

(1) To receive certification to conduct analyses for antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, nitrate, nitrite, selenium, and thallium the laboratory must:

- (a) Analyze Proficiency Test samples provided by EPA, the Department, or by a Department-approved third party; and
- (b) Achieve quantitative results on the analyses that are within the following acceptance limits:

<u>Contaminant</u>	<u>Acceptance Limit</u>
Antimony	$\pm 30\%$ at ≥ 0.006 mg/L
Arsenic	$\pm 30\%$ at ≥ 0.003 mg/L
Asbestos	2 standard deviations based on study statistics
Barium	$\pm 15\%$ at ≥ 0.15 mg/L
Beryllium	$\pm 15\%$ at ≥ 0.001 mg/L
Cadmium	$\pm 20\%$ at ≥ 0.002 mg/L
Chromium	$\pm 15\%$ at ≥ 0.01 mg/L
Cyanide	$\pm 25\%$ at ≥ 0.1 mg/L
Fluoride	$\pm 10\%$ at 1 to 10 mg/L
Mercury	$\pm 30\%$ at ≥ 0.0005 mg/L
Nickel	$\pm 15\%$ at ≥ 0.01 mg/L
Nitrate	$\pm 10\%$ at ≥ 0.4 mg/L
Nitrite	$\pm 15\%$ at ≥ 0.4 mg/L
Selenium	$\pm 20\%$ at ≥ 0.01 mg/L
Thallium	$\pm 30\%$ at ≥ 0.002 mg/L

(2) To receive certification to conduct analyses for the contaminants in 310 CMR 42.20(2)(b), the laboratory must:

- (a) Analyze Proficiency Test samples provided by EPA, the Department, or by a third party with the approval of the Department; and
- (b) Achieve quantitative results on the analyses that are within the following acceptance limits:

<u>Contaminant</u>	<u>Acceptance Limit (percent)</u>
1,2-Dibromo-3-chloropropane (DBCP)	± 40
1,2-Dibromoethane (EDB)	± 40
Alachlor	± 45
Atrazine	± 45
Benzo[a]pyrene	2 standard deviations
Carbofuran	± 45
Chlordane	± 45

42.20: continued

Dalapon	2 standard deviations
Di(2-ethylhexyl)adipate	2 standard deviations
Di(2-ethylhexyl)phthalate	2 standard deviations
Dinoseb	2 standard deviations
Diquat	2 standard deviations
Endothall	2 standard deviations
Endrin	+ 30
Glyphosate	2 standard deviations
Heptachlor	+ 45
Heptachlor epoxide	+ 45
Hexachlorobenzene	2 standard deviations
Hexachlorocyclopentadiene	2 standard deviations
Lindane	+ 45
Methoxychlor	+ 45
Oxamyl(Vydate)	2 standard deviations
Polychlorinated biphenyls (as decachlorobiphenyl)	0-200
Picloram	2 standard deviations
Simazine	2 standard deviations
Toxaphene	+ 45
Aldicarb	2 standard deviations
Aldicarb sulfoxide	2 standard deviations
Aldicarb sulfone	2 standard deviations
Pentachlorophenol	+ 50
2,4-Dichlorophenoxyacetic acid (2,4-D)	+ 50
2-(2,4,5-Trichlorophenoxy)propionic acid (2,4,5-TP) (Silvex)	+ 50

(3) To receive certification to conduct analyses for benzene, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethylene, p-dichlorobenzene, 1,1,1-trichloroethane, trichloroethylene, o-dichlorobenzene, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, 1,2-dichloropropane, ethylbenzene, monochlorobenzene, styrene, tetrachloroethylene, toluene, xylenes (total), dichloromethane, 1,2,4-trichlorobenzene, and 1,1,2-trichloroethane, the laboratory must:

- (a) Analyze Proficiency Test (PT) samples provided by EPA, the Department, or by a Department-approved third party;
- (b) Achieve the quantitative acceptance limits on the analyses performed under 310 CMR 42.20(3)(a) for at least 80% of the regulated organic chemicals listed at 310 CMR 42.20(3);
- (c) Achieve quantitative results on the analyses performed under 310 CMR 42.20(3)(a) that are within $\pm 20\%$ of the actual amount of the substances in the PT sample when the actual amount is greater than or equal to 0.010 mg/L;
- (d) Achieve quantitative results on the analyses performed under 310 CMR 42.20(3)(a) that are within $\pm 40\%$ of the actual amount of the substances in the PT sample when the actual amount is less than 0.010 mg/L; and
- (e) Achieve a method detection limit of 0.0005 mg/L according to the procedures in Appendix B of 40 CFR Part 136.

(4) To receive certification for vinyl chloride, the laboratory must:

- (a) Analyze Proficiency Test (PT) samples provided by EPA, the Department, or by a Department-approved third party;
- (b) Achieve quantitative results on the analyses performed under 310 CMR 42.20(4)(a) that are within $\pm 40\%$ of the actual amount of vinyl chloride in the PT sample;
- (c) Achieve a method detection limit of 0.0005 mg/L according to procedures in 40 CFR Part 136: *Appendix B*; and
- (d) Obtain certification for the contaminants listed in 310 CMR 42.20(3).

42.20: continued

- (5) To receive certification for total trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform), haloacetic acids (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid, known collectively as HAA5), bromate, and chlorite, the laboratory must:
- (a) Analyze Proficiency Test (PT) samples approved by the Department at least once each calendar year by each method for which the laboratory desires certification;
 - (b) Achieve quantitative results within the acceptable limit for each analyte included in each PT sample and, for haloacetic acids, on a minimum of 80% of the analytes included in each PT sample. The acceptance limit is defined as $\pm 20\%$ of the true value for each of the trihalomethanes; $\pm 40\%$ of the true value for each of the haloacetic acids; $\pm 30\%$ of the true value for chlorite; and $\pm 30\%$ of the true value for bromate;
 - (c) Report quantitative data for concentrations at least as low as the regulatory minimum reporting level of 0.0010 mg/L for each of the trihalomethanes, 0.0020 mg/L for monochloroacetic acid, 0.0010 mg/L for dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid, 0.020 mg/L for chlorite, and 0.0050 mg/L for bromate (0.0010 mg/L for laboratories using EPA Methods 317 Revision 2.0, 326.0 or 321.8);
 - (d) Use calibration curves for the analysis of trihalomethanes, haloacetic acids, bromate, and chlorite that encompass the regulatory minimum reporting level (MRL) concentration. Data may be reported for concentrations lower than the regulatory MRL as long as the precision and accuracy criteria are met by analyzing an MRL check standard at the lowest reporting limit chosen by the laboratory. The laboratory must verify the accuracy of the calibration curve at the MRL concentration by analyzing an MRL check standard with a concentration less than or equal to 110% of the MRL with each batch of samples. The measured concentration for the MRL check standard must be $\pm 50\%$ of the expected value if any field sample in the batch has a concentration less than five times the regulatory MRL. Method requirements to analyze higher concentration check standards and meet tighter acceptance criteria for them must be met in addition to the MRL check standard requirement; and
 - (e) When adding the individual trihalomethane or haloacetic acid concentrations in order to calculate the total trihalomethane or HAA5 concentrations, respectively, use a zero for any analytical result that is less than the MRL concentration for that particular analyte.
- (6) To receive certification to conduct analyses for perchlorate, the laboratory must:
- (a) Analyze PT samples approved by the Department;
 - (b) Achieve quantitative results within the acceptable limit for this analyte in each PT sample. The acceptance limit is defined as the 95% confidence interval calculated around the mean of the PT study data;
 - (c) Use analytical methods acceptable to the Department; and
 - (d) Comply with specific Department policies regarding quality assurance/quality control and data reporting procedures for this analyte.
- (7) To receive certification to conduct analyses for 1,4-dioxane, the laboratory must:
- (a) Analyze PT samples approved by the Department;
 - (b) Achieve quantitative results within the acceptable limit for this analyte in each PT sample. The acceptance limit is defined as the 95% confidence interval calculated around the mean of the PT study data; and
 - (c) Use analytical methods, quality assurance/quality control protocols, and data reporting procedures acceptable to the Department.

42.21: Non-potable Water: (Reserved)

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

42.22: Severability

If any provision of 310 CMR 42.00, or its application to any person, is held invalid, such invalidity shall not affect other provisions or applications of 310 CMR 42.00 which can be given effect without the invalid provision or application, and to this end the provisions of 310 CMR 42.00 are declared to be severable.

REGULATORY AUTHORITY

310 CMR 42.00: M.G.L. c. 21, §§ 26 through 53; c. 21A, § 2(28); c. 21C, § 4; c. 21E, § 3; c. 111, §§ 142A through 142E, 150A and 160.

NON-TEXT PAGE

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 43.00: SITE SELECTION CRITERIA FOR LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT FACILITIES

Section

- 43.01: Purpose and Authority
- 43.02: Definitions
- 43.03: Applicability
- 43.10: Modeling Capability
- 43.20: Groundwater Drinking Supply and Resource Protection
- 43.21: Surface Water Drinking Water Supply and Resource Protection
- 43.22: Tectonic Processes
- 43.23: Surface Geologic Processes
- 43.24: Demography
- 43.25: Site Size and Facility Compatibility
- 43.26: Compliance with Department of Public Health Performance Objectives
- 43.27: Meteorology and Climatology
- 43.28: Transportation
- 43.29: General Land Use
- 43.30: Air Quality
- 43.31: Protected Lands and Environments
- 43.40: Application of Criteria Guidelines
- 43.41: Requirements for a Technically Superior Site
- 43.42: General Guidance in Site Selection and Characterization Methodology
- 43.43: General Guidance in Quality Assurance
- 43.44: Application Guidelines and Procedures for Use in Preparation of the Statewide Mapping and Screening Report
- 43.45: Specific Guidance for the Application of Particular Conditions for Statewide Mapping and Screening
- 43.50: Application Guidelines and Procedures for Use in Preparation of the Report Identifying Possible Locations
- 43.51: Specific Guidance for the Application of Particular Conditions for Report Identifying Possible Conditions
- 43.60: Guidelines and Procedures for Use in Preparation of the Candidate Site Identification Report
- 43.61: Specific Guidance for the Application of Particular Conditions for Candidate Site Identification Report
- 43.62: Quality Assurance Requirements
- 43.70: Application Guidelines and Procedures for Use in Preparation of the Detailed Site Characterization Report
- 43.71: Specific Guidance for the Application of Particular Conditions For Detailed Site Characterization
- 43.72: Quality Assurance Requirements

43.01: Purpose and Authority

(1) Purpose. 310 CMR 43.00 is composed of criteria for the selection of a superior site for a low-level radioactive waste management facility; guidelines for the application of the criteria; and procedures for conducting selection of a superior site. 310 CMR 43.00 shall be interpreted so as to be compatible with the federal regulatory program for the management of low-level radioactive waste and shall as a primary consideration be protective of the public health, safety and the environment.

310 CMR 43.01 through 43.09 establishes the Department's purpose and authority and the regulations' general applicability. 310 CMR 43.10 through 43.39 establishes location criteria for identifying a superior site for a low-level radioactive waste facility. The criteria are intended to identify site characteristics which will contribute to the isolation of the waste, minimize the likelihood of exposure to the public or the environment in the event of a release and mitigate the incidental adverse impacts from waste management activities at the site.

43.01: continued

310 CMR 43.40 through 43.72 specifies the procedures for selecting a superior site and guidelines for the collection, analysis and presentation of data necessary to evaluate and characterize a potential site at each stage of the site selection process specified by the Massachusetts Low-Level Radioactive Waste Management Act (M.G.L. c. 111H, §§ 19 through 24). 310 CMR 43.40 through 43.72 is intended to ensure that the characterization of a potential site is based on accurate, verifiable, comprehensive and well documented data and analytical procedures. 310 CMR 43.40 through 43.72 is also intended to ensure that the scope of data collection and site characterization is compatible with the level of decision making to be applied at each stage of the site selection process.

(2) Authority. 310 CMR 43.00 is promulgated by the Department of Environmental Protection pursuant to M.G.L. c. 111H, § 14.

43.02: Definitions

The following words and phrases when used herein shall have the following meaning:

Adverse Effect means an injurious impact which is reasonably significant in relation to the public health, safety, or environmental interest being protected.

Aquifer means a geologic formation, group of formations, or part of a formation that is capable of yielding significant quantities of ground water to wells or springs.

Board means the Low-Level Radioactive Waste Management Board established in M.G.L. c. 111H, § 2.

Buffer Zone means a parcel of land which is an integral part of a facility that is controlled by the facility licensee and acts as a surrounding boundary to the facility.

Chief Municipal Official means the city manager in any city having a city manager, the mayor in any other city, the town manager in any town having a town manager or the chairperson of the Board of Selectmen in any other town.

Coastal High Hazard Zone means coastal zones identified by the Office of Coastal Zone Management which are subject to any inundation caused by coastal storms up to and including that caused by the 100 year storm, surge of record or storm of record which ever is greater including coastal beaches, coastal dunes, barrier beaches, coastal banks and rocky intertidal shores as those terms are defined in 310 CMR 10.27 through 10.31.

Community means a city or town of the Commonwealth.

Community Water System means a public water system which serves at least 15 service connections used by year round residents or regularly serves at least 25 year round residents.

Department means the Department of Environmental Protection.

Detailed Site Characterization means the on-site investigatory and analytical step of site selection established in M.G.L. c. 111H, § 23 and conducted prior to the selection of any superior site.

DPH Performance Objectives means the performance objectives contained in regulations promulgated by the Department of Public Health at 105 CMR 120.811 through 120.814.

Dissolution means a space or cavity in or between rocks, formed by the solution of part of the rock material.

43.02: continued

Disposal means the isolation of low-level radioactive waste from the biosphere inhabited by human beings and their food chain.

Downgradient means in a direction exactly opposite to upgradient (q.v.).

DPH means the Department of Public Health.

Economically Recoverable Resources means oil, gas, fossil fuels, sulphur, metals, ores, minerals, rock, soil, sand and gravel which because of their high quality, economic superiority or quantity are being exploited or are likely to be exploited in the reasonably foreseeable future.

Engineered Barrier means a man-made structure or device that is intended to improve a facility's ability to meet DPH performance objectives.

Environmental Monitoring Program means a monitoring program established by DPH, after consultation with the Department and the board of health of each site community, pursuant to M.G.L. c. 111H, § 36 for the purpose of collecting and analyzing environmental data prior to construction and throughout the construction, operation, closure, post-closure observation and maintenance and institutional control of a facility.

Facility means a parcel of land, together with the structures, equipment and improvements thereon or appurtenant thereto, which pursuant to M.G.L. c. 111H, is being developed, is used, or has been used for the treatment, storage or disposal of low-level radioactive waste; but does not include any property used for temporary storage of low-level radioactive waste in sealed containers by a broker.

Fault means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.

500 Year Floodplain means the estimated maximum lateral extent of flood water rising from creeks, rivers, streams, ponds, or lakes as result of a flood discharge of a magnitude likely to occur on the average of once every 500 years or, more properly, has a 0.2% chance of being exceeded in any year.

Flammable Liquid means a liquid whose flash point is less than 100°F.

Geographic Information System [GIS] means a computer based information handling program maintained by the Commonwealth that can store and manipulate both map-based information and associated tabular data such as zip codes or population density.

Ground Water means all the water below the land surface in soils or geologic formations, specifically that part of the subsurface water in the saturated zone except as otherwise defined by 310 CMR 22.00.

Hazardous Waste means a waste or combination of wastes, which because of its quantity, concentration or physical, chemical or infectious characteristics may cause, or significantly contribute to an increase in serious irreversible or incapacitating reversible illness or pose a substantial present or potential hazard to human health, safety, public welfare or the environment when improperly treated, stored, transported, used or disposed of or otherwise managed, however not to include solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act of 1967 as amended, or source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as further described in 310 CMR 30.000.

53.02: continued

Holocene means the most recent epoch of the Quaternary period extending from the end of the Pleistocene Epoch to the present.

Horizontal Gradient means the change in static head per unit of distance along a flow path.

Hydraulic Conductivity means a characteristic property of a porous medium that measures the ability of water to move through it under a difference in hydraulic potential or head. If a porous medium is isotropic and the fluid is homogeneous, the hydraulic conductivity of the medium is the volume of water at the existing cinematic viscosity that will move in unit time under a unit hydraulic gradient through a unit area measured at right angles to the direction of flow.

Hydrogeologic unit means any soil or rock unit or zone which, by virtue of its porosity and permeability, or lack thereof, has a distinct influence on the storage or movement of groundwater.

Important to the Safety means those engineered structures, systems and components essential to the isolation of waste and prevention of a release of radioactivity which would result in an exposure in excess of DPH performance objectives.

Institutional Control means the continued observation, monitoring and care of a facility following transfer of the facility license from the operator to the Board.

Interim Wellhead Protection Area (IWPA) means:

- (a) with respect to public water supplies and well fields whose pumping rate is 100,000 gallons per day or greater and for which the Department has not approved a hydrologically delineated Zone II, the ½ mile radius surrounding such well or well field; and
- (b) with respect to public water supplies and well fields whose pumping rate is less than 100,000 gallons per day and for which the Department has not approved an hydrologically delineated Zone II, the radius calculated by multiplying the maximum pumping rate in gallons per minute for such well and well field by 32 and adding 400 feet thereto (*i.e.* IWPA = (32) X (y) + (400); where y = pumping rate in gallons per minute.

Liquefaction means the potential of certain soils to be transformed from a solid to liquid state as a result of increased pore pressure and reduced effective stress, such as might result from certain seismic loading conditions.

Lithified Earth Material means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock formed by crystallization of magma or by induration of loose sediments. This term does not include man-made materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil or regolith lying at or near the earth surface.

Low-Level Radioactive Waste means radioactive material that:

- (a) is neither high-level waste nor spent nuclear fuel, nor by-product material as defined in section 11(e)(2) of the Atomic Energy Act of 1954, as amended, 42 USC 2014(e); and
- (b) is classified by the Federal Government as low-level radioactive waste, but not including waste which remains a federal responsibility, as designated in section 3(b) of the Low-Level Radioactive Waste Policy Act, as amended, 42 USC 2021c(b), as in effect on the effective date of the Act.

Management means the storage, packaging, treatment, transportation or disposal, where applicable of low-level radioactive waste.

43.02: continued

Mass Wasting means the movement of rock or soil material under the influence of gravity either as the movement of the product of weathering down a slope or as mass movement of rock or soil along joint planes or bedding planes. Mass wasting includes but is not limited to creep, mud flows, earth flow, soil flow, rock avalanche, landslide, landslip and slumping.

Maximum Horizontal Acceleration in Lithified Earth Material means the maximum expected horizontal acceleration depicted on a seismic hazard map, with a 90% or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

Mixed Waste means low-level radioactive waste containing material that either:

- (a) is listed in 310 CMR 30.131 through 30.136; or
- (b) causes the waste to exhibit any of the characteristics identified in 310 CMR 30.120.

Model means a conceptual description and the associated mathematical, graphical and/or analogous representation of a system, subsystem, component or condition that is used to predict changes from a baseline state as a function of internal and/or external stimuli and as a function of time and space.

Monitoring means observing and making measurements to provide data on a facility, its site, its surrounding environment, and its health, safety and environmental impacts.

Outstanding Resource Waters means waters in the Commonwealth given a protected status due to their ecological, socioeconomic, recreational and/or aesthetic value pursuant to 314 CMR 4.04(3).

Non-Community Water System means a public water system that is not a community system.

100 Year Floodplain means the estimated maximum lateral extent of flood water rising from creeks, rivers, streams, ponds, or lakes as the result of a flood discharge of a magnitude likely to occur on the average of once every 100 years or, more properly, has a 1% chance of being exceeded in any year.

Overburden means all material that lies between the ground surface and bedrock.

Performance Assessment means a comprehensive analysis that:

- (a) identifies the processes and events that might affect the site, and, if practicable, the waste management area or facility;
- (b) examines the effects of these processes and events on the performance of the site, and, if practicable the waste management area and facility; and
- (c) estimates the cumulative releases of radionuclides, considering the associated uncertainties caused by all the significant processes and events. These estimates shall be incorporated into an overall probability distribution of the projected cumulative distributions to the greatest extent practicable.

Population Density means the number of people residing in one square mile, as averaged over an area designated by the U.S. Bureau of Census.

Possible Location means a location, identified in accordance with the procedures established in M.G.L. c. 111H, § 20, which will be the subject of a preliminary characterization.

Potential Non-Community Water System means a Class I aquifer, as defined in 314 CMR 6.03(1), capable of yielding water of sufficient quality and quantity for a non-community water system and which is located under a parcel of land that at the time of the issuance of the statewide mapping and screening report pursuant to M.G.L. c. 111H, § 20(a) is:

43.02: continued

- (a) capable of being developed as a non-community water system under applicable community land use controls; and
- (b) within the boundaries established by state regulations and guidelines for the location of a non-community water system.

Potential Private Ground Water Source means a Class I aquifer, as defined in 314 CMR 6.03(1), capable of yielding water of sufficient quality and quantity for a drinking water supply and which is located under a parcel of land that at the time of the issuance of the statewide mapping and screening report pursuant to M.G.L. c. 111H, § 20(a) is:

- (a) capable of being developed for residential use under applicable community land use controls; and
- (b) within the boundaries established by state regulations and guidelines for the location of private wells; and
- (c) not within an area being served by a public water system.

Potential Productive Aquifer means all aquifers delineated by the U.S. Geological Survey (USGS) as a high or medium yield aquifer, and all aquifers located east of the Cape Cod Canal (Cape Cod), on Martha's Vineyard, on Nantucket and on the Elizabeth Islands.

Preliminary Characterization means the investigatory and analytical step established in M.G.L. c. 111H, § 20, and conducted prior to the identification of candidate sites.

Protected Area means land or resources which have been restricted from siting a facility pursuant to state or federal laws or regulations in order to promote, protect or preserve its ecological, wilderness, historic, recreational, archeological, cultural or scenic value including, without limitation, the state and federal areas listed at Appendix A, provided that the designation of land as a protected area herein is not intended to expand, diminish or otherwise modify the scope of protection provided by said statutes or regulations in relation to the exercise of authority to acquire land or interests therein pursuant to M.G.L. c. 111H, § 23(g). Protected areas do not include lands or resources restricted from development pursuant to municipal by-laws, ordinances or regulations.

Public Water Supply means a source of ground water or surface water supplying a public water system.

Public Water System means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily for at least 60 days of the year.

Qualified for Development means a potential productive aquifer which the Department determines is capable of being developed into a public water system based upon the following demonstrations:

- (a) Geologic and hydrogeologic maps and, if available, local subsurface or hydrogeologic reports demonstrate that the aquifer meets the definition of a potential productive aquifer; provided, however, approved pump tests may be conducted to demonstrate that the source is incapable of yielding sufficient volumes of water to economically supply a public water system and is capable of yielding a quality which meets drinking water quality standards or can be cost efficiently treated;
- (b) The source is necessary to supply one or more communities with sufficient water based on a minimum 20 year planning criteria used by the Department in the event that, after appropriate water quality testing, the largest current ground water sources in each community in the affected water basin is shut down.
- (c) A site specific land use survey within the Interim Wellhead Protection Area demonstrates that existing or historical land uses will not preclude the use of the aquifer as a source.

43.02: continued

Radioactive Material means any solid, liquid or gas which emits radiation spontaneously.

Radioactivity means the transformation of unstable atomic nuclei by the emission of radiation.

Radionuclide means an isotope that eventually undergoes spontaneous disintegration, with the emission of radiation.

Saturated Zone means any portion of the earth below the land surface where every available opening (pore, fissure, joint, or solution cavity) is filled with water under pressure equal to or greater than atmosphere, except as otherwise defined by 310 CMR 22.00.

Seismic Impact Zone means an area with a 10% or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull, will exceed 0.10g within 250 years or such extended time period in which projections can be made within reasonably conservative confidence limits.

Sensitive Populations means persons who because of their age, health status or physical characteristics have a significantly higher probability of suffering an adverse effect to health than a member of the general public if exposed to a release of radioactivity or associated toxic materials managed at the facility. Examples of such sensitive populations may include, but are not limited to, children, infirm persons, pregnant women and persons who have experienced acute or chronic exposures to higher than normal doses of radioactivity due to occupational or geographic circumstances.

Sensitive Population Locations means structures or areas which are principally designated or designed to serve sensitive populations or which are predominantly used by sensitive populations for extended periods of time. Examples of such places may include: day care facilities, grammar and secondary schools, playgrounds, bedded hospitals or radiation or prenatal clinics.

Shallow Land Burial means a land disposal method that relies on the site's natural characteristics as the primary barrier for isolation of the waste.

Significantly Higher Than Normal Risk means a significantly greater degree of risk of an adverse effect to health than the degree of risk which the general population would be exposed to in the event of a release of radioactive or hazardous waste managed at the facility.

Site means a parcel of land which, pursuant to M.G.L. c. 111H, is being considered, developed or used or has been used as a location for a facility.

Slumping means landsliding characterized by movement of a generally independent mass of rock or earth along a slip surface and about an axis parallel to the slope rim which it descends and by backward tilting of the mass with respect to that slope so that the slump surface often exhibits a reversed slope facing uphill.

Sole Source Aquifer means an aquifer so designated by the U.S. Environmental Protection Agency, or by the Department under the authority of a state program as may be established, that supplies 50% or more of the drinking water for the aquifer service area, and the volume of water which could be supplied by alternative sources is insufficient to replace said aquifer should it become contaminated.

Storage means the holding of low-level radioactive waste for treatment or disposal.

Subsidence means the process by which the earth's surface sinks, either rapidly or slowly, with little or no horizontal motion.

43.02: continued

Subsurface Dissolution means a process of chemical weathering by which minerals and rocks are dissolved in groundwater; evidenced by subsidence, widened fractures, sinkholes, caverns and/or underground streams.

Suitable Technology means a management technology which is qualified by the Board pursuant to regulations promulgated pursuant to M.G.L. c. 111H, § 12 as being suitable to manage low level radioactive waste within the Commonwealth.

Superior site means any site selected by the Board, after detailed site characterization, pursuant to M.G.L. c. 111H, § 23.

Transient population means people who do not reside within an area, but do pass through or spend a limited amount of time within an area, including, but not limited to, tourists, seasonal workers or sportsmen.

Tributary means a body of running water, including a river, stream, brook and creek, which moves in a definite channel in the ground due to a hydraulic gradient and which flows ultimately into a free flowing surface water supply. A tributary shall include the land over which the water runs and the banks thereto.

Upgradient means:

- (a) in reference to surface water, the direction perpendicular to lines of equal water surface elevation over a distance in which elevation continuously increases, measured from the point or area in question; or
- (b) in reference to ground water, the direction perpendicular to lines of equal total hydraulic head over a distance in which total head continuously increases, measured at the water table.

Upland Drainage Area means areas or drainage basins that could discharge surface runoff to or through portions of the site, either by overland flow or by means of streams, rivers, and well defined drainage courses.

Urban Area means an area designated as such by the U.S. Census in accordance with its detailed published criteria.

Waste means low-level radioactive waste unless otherwise specifically designated herein.

Waste Management Area means that portion of a facility where low-level radioactive wastes has been, is being, or will be treated, stored or disposed of.

Watershed means a region or area measured in a horizontal topographic divide which directs surface runoff from precipitation, normally by gravity, into a stream or a body of impounded surface water, except as otherwise defined by 310 CMR 22.00.

Water Table means that surface in an unconfined water body at which the pressure is atmospheric. It is defined by the levels at which water stands in wells that penetrate the water body just far enough to hold standing water. In wells which penetrate to greater depths, the water level will stand above or below the water table if an upward or downward component of groundwater flow exists. For purposes of 310 CMR 43.00, unless otherwise stated, the elevation of the water table shall be taken to refer to its seasonal high level, which generally occurs in late winter or early spring.

Zone I means the protective radius required around a public supply well or well field.

43.02: continued

Zone II means that area of an aquifer which contributes water to a well under the most severe recharge and pumping conditions that can be realistically anticipated (*i.e.*, pumping at the approved safe yield of the well for 180 days without any natural recharge occurring); it is bounded by the groundwater divides which result from pumping the well and by contact of the edge of the aquifer with less permeable materials such as till and bedrock. In some locations, streams and lakes may form recharge boundaries. The Zone II shall extend up gradient to its point of intersection with prevailing hydrogeologic boundaries (a ground water flow divide, a contact with till or bedrock or a recharge boundary.) For the purposes of 310 CMR 43.00, a Zone II area is one which has been defined and delineated in accordance with the Department's Division of Water Supply *Guidelines and Policies for Public Water Systems*, November 1993 Addendum to the October 1991 edition or the most recent version thereof.

Zone III means that land area beyond the area of a Zone II from which surface water and groundwater drain into a Zone II. The surface drainage area as determined by the topography is commonly coincident with the groundwater drainage area and will be used to delineate the Zone III. In some locations, where surface and groundwater drainage are not coincident, the Zone III shall consist of both the surface drainage and the groundwater drainage area.

Zone of Contribution means the land area which provides recharge to the well.

43.03: Applicability.

The requirements of 310 CMR 43.01 through 43.09 applies to the selection of a superior site for a low-level radioactive waste facility in accordance with M.G.L. c. 111H.

43.10: Modeling Capability

(1) Exclusion Criteria. Exclude sites not capable of being adequately modeled, characterized, analyzed and monitored with respect to hydrogeology, geologic features and ground water flow characteristics as reasonably necessary to demonstrate compliance with DPH performance objectives and those provisions of applicable state and federal regulations governing environmental monitoring.

(2) Conditional Consideration Criteria.

Bedrock Structure. Consider sites containing bedrock structural features and lithologies that may provide significant pathways for groundwater flow or present very complex hydrologic conditions on compliance with 310 CMR 43.40(3).

(3) Preference Criteria. Prefer sites that can be modeled and characterized with a greater degree of certainty, over sites which can be characterized with a lesser degree of certainty.

43.20: Groundwater Drinking Supplies and Resource Protection

(1) Exclusion Criteria.

(a) Existing Public Water Systems Pumping More Than 100,000 Gallons per Day. Exclude sites located within the Zone III of an existing public water supply with a maximum approved pump rate of 100,000 gallons per day (gpd) or more.

(b) Existing Public Water Systems. Exclude sites located within the Zone II of an existing public water supply.

(c) Potential Productive Aquifer. Exclude sites located over a potential productive aquifer (PPA) which has been determined by the Department to be qualified for development as a public drinking water system prior to the issuance of the draft candidate site identification report pursuant to M.G.L. c. 111H, § 20(c). Notwithstanding this exclusion, a site may be located within a PPA qualified for development where the site is proposed to be located outside of the Zone II of any system and outside of the Zone III for systems pumping 100,000 gpd or more.

43.20: continued

- (d) Existing Private Ground Water Source or Non Community Water System. Exclude sites located within the Zone of Contribution of an existing private groundwater source or non-community system unless the source/system is located on the parcel of land that is designated to be acquired pursuant to M.G.L. c. 111H, § 23(g) and the source/system is secured from any use other than uses related to the construction, operation or environmental monitoring of the facility.
 - (e) Potential Private Groundwater Source or Non-Community Water System. Exclude sites located within the projected Zone of Contribution of a potential private groundwater source or non-community water system unless the source/system is located on the parcel of land to be acquired pursuant to M.G.L. c. 111H, § 23(g) and is secured from any use other than uses related to the construction, operation or environmental monitoring of the facility.
 - (f) Sole Source Aquifer. Exclude sites which are located over the areal extent of a sole source aquifer.
 - (g) Minimum Depth to Water Table. Exclude sites where the minimum depth to the water table is insufficient to prevent the intrusion of groundwater, perennial or otherwise, into the waste.
 - (h) Minimum Depth and Overburden to Bedrock Water Table. Exclude sites where the water table is below the bedrock surface and where between the bedrock and the bottom of the waste management unit there is less than a minimum total thickness of ten feet of (unsaturated) soil units (natural or placed) with a maximum saturated hydraulic conductivity of 1×10^{-4} cm/sec.
 - (i) Maximum Horizontal Gradient. Exclude sites where the average horizontal gradient in the uppermost aquifer underlying the site is more than 0.01.
- (2) Conditional Consideration Criteria.
- (a) Depth to Water Table. Consider sites where the minimum depth to the water table is ten feet or less from the ground surface or from the bottom of the waste management area, if the waste management area is below the ground surface, on compliance with 310 CMR 43.40(3).
 - (b) Horizontal Gradient. Consider sites where the average horizontal gradient in the uppermost aquifer underlying the site is 0.01. to 0.005 on compliance with 310 CMR 43.40(3).
 - (c) Below Bedrock Water Table. Consider sites where the water table extends below the bedrock surface on compliance with 310 CMR 43.40(3).
- (3) Preference Criteria.
- (a) Horizontal Gradient. Prefer sites with a lower average hydraulic gradient in the uppermost aquifer underlying the site, over sites with a higher average hydraulic gradient in the uppermost aquifer underlying the site.
 - (b) Depth to Water Table. Prefer sites with greater minimum depths to the water table below the ground surface, over sites with lesser minimum depths to the water table below the ground surface.
 - (c) Hydraulic Conductivity. Prefer sites with an average hydraulic conductivity in the saturated soil of 1×10^{-4} cm/sec. or less, over sites with an average hydraulic conductivity in the saturated soil of greater than 1×10^{-4} cm/sec.
 - (d) Groundwater Travel Time. Prefer sites with a predicted longer average travel time of ground water beneath the waste management area, over sites with a shorter predicted average travel time of ground water beneath the waste management area.

43.21: Surface Water Drinking Supplies and Resource Protection

- (1) Exclusion Criteria.
- (a) Class A Water Supplies. Exclude any site where the probable waste management area would be located within the watershed of a Class A public surface drinking water supply as defined in 314 CMR 4.05(3)(a).

43.21: continued

- (b) Class B Public Drinking Water Supplies. Exclude any site where the probable waste management area will be located within any of the following area of a Class B public surface drinking water supply as defined in 314 CMR 4.05(3)(b): 400 feet from the 100 year flood plain elevation extending ½ mile upgradient from the supply intake and extending 200 feet downgradient from the supply intake or to the physical spillway, whichever downgradient distance is less.
 - (c) Flood Plain, 100 year. Exclude any site in which the probable waste management area would be within any 100 year flood plain.
 - (d) Wetlands. Exclude sites where the probable waste management area would be located within 100 feet of a resource area protected by the Wetlands Protection Act, M.G.L. c.131, § 40 and 310 CMR 10.00.
 - (e) Poor Draining Areas. Exclude from the site any land that does not drain well and is subject to periodic flooding or frequent ponding.
 - (f) Runoff Retention. Exclude from the site upland drainage areas which, due to their size, geometry, and surface characteristics, are unable by natural drainage patterns and normal engineering drainage controls to reliably channel the surface runoff expected from a statistical 100 year precipitation event without significantly eroding or inundating the probable waste management area.
 - (g) Coastal High Hazard Zones. Exclude sites in coastal high hazard zones.
 - (h) Dams. Exclude sites in areas subject to inundation by the failure of an existing dam.
 - (i) Surface Water Discharges. Exclude sites in which a hydrogeologic unit within the probable waste management area discharges groundwater to the surface within the site.
- (2) Conditional Consideration Criteria.
500 Year Floodplain. Consider sites in which the probable waste management area would be located inside any 500 year flood plain on compliance with the provisions of 310 CMR 43.40(3).
- (3) Preference Criteria.
- (a) Minimizing Impact to Water Resources.
 1. Prefer sites with a lower potential for radioactive substances to impact tributaries and surface water bodies resulting in harm to human, animal or aquatic life or the most sensitive designated use, over sites with a higher potential for such impact.
 2. Prefer sites with a lower potential for radioactive substances to impact tributaries or surface water bodies resulting in radionuclides in aquatic life exceeding the recommended limits for consumption by humans, over sites with a higher potential for such impact.
 3. Prefer sites with a lower potential for radioactive substances to impact tributaries or surface water bodies resulting in exceeding Massachusetts drinking water standards, 310 CMR 22.09, over sites with a higher potential for such an impact.
 - (b) Distance from Environmentally Sensitive Surface Waters. Prefer sites further away from intakes and tributaries of free flowing surface water supplies, lakes, rivers not including intermittent streams, outstanding resource waters and resource areas protected by the Wetlands Protection Act (M.G.L. c. 131, § 40), over sites closer to such surface waters.

43.22: Tectonic Processes

- (1) Exclusion Criteria.
Tectonic Processes. Exclude sites where tectonic processes in the vicinity, such as faulting, folding, seismic activity or volcanism are reasonably likely to adversely affect the ability of the probable waste management area to meet DPH performance objectives or preclude adequate modeling and prediction of long term impacts.
- (2) Preference Criteria.
- (a) Earthquake History. Prefer sites further away than three miles from the epicenter of an earthquake which occurred within the last 300 years and which would measure four or more on the Richter magnitude or equivalent scale or Modified Mercalli Intensity V, over sites which are closer to such epicenter.

43.22: continued

(b) Minimizing Potential Tectonic Effects. Prefer sites with a lower potential for adverse effects from local or regional tectonic activity, over sites with a higher potential.

43.23: Surface Geologic Processes

(1) Exclusion Criteria.

(a) Surface Geologic Process. Exclude sites where the probable waste management area would be located in the vicinity of surface geologic processes such as mass wasting, erosion, slumping, landsliding, which occur with such frequency and extent that such events would be reasonably likely to adversely affect the ability of the site to meet any DPH performance objectives or preclude adequate modeling and prediction of long term impacts.

(b) Slope. Exclude sites where the probable waste management area would have an average slope greater than 20%.

(2) Conditional Consideration Criteria.

(a) Contaminant Migration. Consider sites with surficial deposits unlikely to substantially retard groundwater flow and radionuclide migration beneath the facility on compliance with 310 CMR 43.40(3).

(b) Seismic Impact Zone. Consider sites located in a seismic impact zone on the condition that it can be reasonably demonstrated that the engineered structures, systems and components important to waste isolation and release containment functions of suitable facilities are sufficiently capable of resisting the maximum horizontal acceleration in lithified earth material to prevent a release of radiation which results in a dose exposure in excess of DPH performance objectives.

(3) Preference Criteria.

(a) Liquefaction Performance Standard. Prefer sites with less potential to subject the probable waste management area to potential liquefaction, over sites with greater potential for liquefaction.

(b) Soil Stability. Prefer sites that provide a more stable foundation for engineered containment structures, over sites with a less stable foundation.

(c) Subsurface Dissolution. Prefer sites that demonstrate less significant past or active dissolution, over sites which demonstrate more dissolution.

(d) Overburden Deposition Process. Prefer sites where the overburden is composed of lesser amounts of varved clay or holocene lacustrine deposits, over sites with greater amounts of such materials. Prefer sites in which the overburden is composed of greater amounts of glacial till, over sites with lesser amounts of till.

(e) Overburden Composition and Depth. Prefer sites with thicker unconsolidated units and with a higher clay or silt content, over sites with thinner units or lower clay/silt content for facilities located above the ground or near to the surface.

(f) Seismic Impact Zone. Prefer sites that have a lower predicted maximum horizontal ground acceleration, expressed as a percentage of the earth gravitation pull (percent g), over sites with a higher percent g.

(g) Complexity and Uniformity. Prefer sites that have a less complex tectonic history and geologic structure, over sites that have a more complex tectonic history and geologic structure.

(h) Retarding Migration. Prefer sites where natural characteristics, including but not limited to the permeability and the sorptive potential of the subsurface materials, provide greater potential to retard the movement of radionuclides, over sites with less retardation capability.

(i) Erosion. Prefer sites exhibiting less potential erosion characteristics, over sites exhibiting greater potential erosion characteristics.

43.24: Demography

(1) Exclusion Criteria.

(a) Effect on Facility Performance. Exclude sites where the existing population density, projected population growth or future development in the vicinity of the site is reasonably likely to interfere with the ability of the facility to meet DPH performance objectives.

(b) Proximity to Sensitive Population Locations. Exclude sites where the probable waste management area would be located in proximity to sensitive population locations as a result of which:

1. It is reasonably likely that the site will not be able to meet the DPH performance objectives; or
2. The exposure to radiation or toxic materials, if mixed waste is to be accepted at the site, which a member of the affected sensitive population is reasonably likely to receive in the event of a release of radiation or hazardous waste from the site would result in a significantly higher than normal risk of adverse effect on the health of the sensitive population.

(2) Conditional Consideration Criteria.

(a) Proximity to Residences. Consider sites where, due to the proximity of the probable waste management area to residences, it is reasonably likely that the site will not be able to meet the DPH performance objectives on the condition that the land on which the residences are located is acquired and no further residential use of said land is permitted for such period of time as said performance objectives have a reasonable likelihood to be exceeded.

(b) Proximity to Population Centers. Consider sites where the probable waste management area would be within 1½ miles of the property limits of an urban area zoned to exclude industrial and commercial development on compliance with the provisions of 310 CMR 43.40(3).

(c) Proximity to Sensitive Population Location. Consider sites where the distance from the edge of the probable buffer zone to a sensitive population location is within ¼ of a mile on compliance with the provisions of 310 CMR 43.40(3).

(3) Preference Criteria.

(a) General Population Density. Prefer sites located in areas of lower population density, over sites located in areas of higher population density.

(b) General and Sensitive Populations. Prefer sites that are projected to release less radiation to the public and environment over sites that are projected to release radiation at higher levels.

(c) Population Growth. Prefer sites located where significant development or population growth is less likely to occur in surrounding areas, over sites located where development or population growth is more likely to occur in surrounding areas.

(d) Transient Populations. Prefer sites located in areas where smaller increases in transient population density occur on a regular basis, over sites located in areas subject to greater transient population increases.

43.25: Site Size and Facility Compatibility

(1) Exclusion Criteria.

(a) DPH Regulations. Exclude sites that are insufficient in size to contain a waste management area, a buffer zone and other facility components.

(b) Management Board Determination. Exclude sites that are insufficient in size to meet the minimum land areas determined by the Board to be required for suitable facilities.

(2) Preference Criteria.

Compatibility. Prefer sites with characteristics most compatible with suitable facilities, over less compatible sites.

43.26: Compliance with Department of Public Health Performance Objectives

Exclusion Criteria. Exclude sites which are not reasonably likely to meet DPH performance objectives based on a performance assessment that, at a minimum, incorporates the facility design standards of probable suitable technologies set forth at 105 CMR 120.815.

43.27: Meteorology and Climatology

Preference Criteria.

Weather Patterns. Prefer sites which are less likely to be subject to climatic and meteorological conditions which would adversely affect the ability of the site to meet DPH performance objectives over sites which are more likely to be subject to adverse weather conditions.

43.28: Transportation.

(1) Conditional Consideration Criteria.

(a) Quality of Mode. Consider sites that are not serviced by highways or rail lines that meet applicable state and federal low-level radioactive waste transportation laws and regulations on condition that the mode to be used for delivery of waste to the site is able to be constructed or otherwise upgraded to come into compliance with said laws or regulations prior to construction of the facility.

(b) Accidents and Congestion. Consider sites that are not serviced by sufficiently safe or uncongested highways or rail lines on the condition that the mode to be used for delivery of waste to the site is able to be constructed or otherwise upgraded to achieve reductions to a level of safety and lack of congestion necessary to adequately protect the public health and safety prior to construction of the facility.

(2) Preference Criteria.

(a) Distance from Major Routes. Prefer sites at shorter distances from the interstate highway system, other multi-lane, limited access roadways or existing rail lines, over sites at greater distances from such transportation routes.

(b) Congestion. Prefer sites served by routes which are not currently congested, over more congested routes.

(c) Multiple Modes. Prefer sites that are accessible by more modes of transportation, over sites with fewer available modes.

(d) Housing Density. Prefer sites that have primary access routes from the interstate highway system, other than multi-laned limited access roadways or existing rail lines, with a lower average number of residential dwellings per route mile, over sites having primary access roads with a higher average number of dwellings per route mile.

(e) Public Places Density. Prefer sites where the primary access routes to the facility from the entrance of an interstate or limited access highway has fewer public facilities such as schools, parks, or hospitals, over sites where the primary access roads abut more such facilities.

(f) Accident Rates. Prefer sites for which the access routes exhibit lower accident rates as measured by the actual number of accidents, resulting property damage, and lives lost over sites with higher accident rates.

43.29: General Land Use

(1) Exclusion Criteria.

(a) Incompatible Nearby Activities. Exclude sites where the probable location of the waste management area in relation to nearby activities is reasonably likely to adversely affect the ability of the site to meet DPH performance objectives.

(b) Interference with Monitoring. Exclude sites where the probable location of the waste management area in relation to nearby past or present activities is reasonably likely to significantly impair the environmental monitoring program including, without limitation, existing or past activities or natural sources that emit radioactivity or release non-radioactive material into the environment to the extent that it is reasonably likely to adversely affect the ability of the environmental monitoring program to detect or monitor the existence or magnitude of emissions or releases from the facility or the site.

43.29: continued

(c) Agricultural Land. Exclude sites located on prime agricultural land based on soil classification established by the U.S. Soil Conservation Services or on land designated as an agricultural incentive area pursuant to M.G.L. c. 40L, § 1 *et seq.* on or before December 31, 1992.

(d) Acquisition Potential. Exclude sites to which the Commonwealth cannot obtain title.

(2) Conditional Consideration Criteria.

Resource Exploitation. Consider sites which contain economically recoverable resources on the condition that the exploitation is reasonably likely not to adversely affect the ability of the site to meet DPH performance standards or significantly impair the environmental monitoring program.

(3) Preference Criteria.

(a) Incompatible Development. Prefer sites located farther away from areas where incompatible development is imminent, over sites in close proximity to areas subject to imminent development.

(b) Upstream Land Alterations. Prefer sites located in areas having less upstream land available for future development, over areas having more land upstream of the site which is suitable for development.

(c) Subsurface Exploitation. Prefer sites that contain areas which have undergone lesser subsurface resource exploitation, over sites which contain areas subjected to greater subsurface resource exploitation.

(d) Resource Exploitation. Prefer sites with less economically recoverable resource potential, over sites with greater resource exploitation potential.

(e) Local Planning and Zoning. Prefer sites at which a facility would be more compatible with existing local zoning restrictions or local or regional plans, over sites at which a facility would be less compatible with such restrictions or plans.

(f) State Land. Prefer land owned by the Commonwealth that has not been excluded from consideration by other criteria, over land owned by other public or private parties.

43.30: Air Quality

Preference Criteria.

Adverse Impact Potential. Prefer sites which have a lower potential for emissions from the construction or operation of a facility, over sites which have a higher potential to cause adverse impacts to air quality.

43.31: Protected Lands, Species and Resources

(1) Exclusion Criteria.

(a) Areas of Critical Environmental Concern. Exclude sites located in any area of critical environmental concern designated pursuant to M.G.L. c. 21A, § 2(7), St. 1974, c. 808, § 401(e) and 301 CMR 11.15.

(b) Scenic Rivers and Streams. Exclude sites located in scenic and recreational rivers and streams of the commonwealth" designated pursuant to 302 CMR 3.00;

(c) Federally Protected Resources. Exclude sites that are reasonably likely to adversely affect any national park, monument, lake shore, habitat of endangered species, or area protected by the Wilderness Act, 16 USC §§ 1131 through 1136, the Wild and Scenic Rivers Act, 16 USC §§ 1771 through 1287, and the Fish and Wildlife Coordination Act, USC §§ 661 through 666c; or the National Historic Preservation Act, 16 USC §§ 470 through 470m.

(2) Conditional Consideration Criteria.

(a) Consider sites located on any lands or resources which have been taken by the General Court pursuant to its authority set forth in Article 97 of the Constitution of Massachusetts, as amended prior to the date on which the Board affirmatively votes to initiate site selection pursuant to M.G.L. c. 111H, § 17, on the condition that, prior to the construction of the facility, a law is enacted by a $\frac{2}{3}$ vote, taken by yeas and nays, of each branch of the General Court, allowing such land or resource to be used for such purpose.

43.31: continued

(b) Consider sites located on protected areas provided that the area is not excluded under 310 CMR 43.31(1) and further provided that prior to the construction of the facility:

1. the laws or regulations establishing or controlling activities in protected areas do not expressly or by necessary implication preclude the siting of a low-level radioactive management facility; and
2. all applicable conditions contained in said laws or regulations that would continue to be applicable to the site if it were acquired pursuant to M.G.L. c. 111H, § 23(g) are satisfied; and
3. all applicable permits, licenses, approvals, notifications or waivers required for a facility on state-owned land are obtained.

(c) Consider sites located in proximity to protected areas on the condition that locating a facility in proximity to the protected area is not reasonably likely to adversely affect the protected area.

(3) Preference Criteria.

Adverse Impacts. Prefer sites which are less likely to have an adverse effect on a protected area over sites which are more likely to have an adverse effect.

43.40: Application of Criteria Categories

(1) General. There are three criteria categories under which a site characteristic may be evaluated: exclusion, conditional consideration and preference. A site characteristic may be included under more than one category in which case it is evaluated based upon the standards of review set forth at 310 CMR 43.40(2) through (4).

(2) Exclusion. An exclusion characteristic eliminates a site from further consideration. A superior site may not exhibit an exclusion characteristic.

(3) Conditional Consideration. A conditional consideration characteristic does not necessarily eliminate a site from consideration. A superior site may exhibit a conditional consideration characteristic where the site meets the conditions applicable to the criterion as follows:

- (a) The standards and/or modification required as a pre-condition for consideration of the site either are able to be satisfied at the time of site selection or are determined at the time of site selection to be reasonably likely to be able to be satisfied before facility construction commences; or
- (b) A site specific analysis demonstrates that the potential adverse effect of off-site migration or of public exposure to radioactivity which the criterion was intended to protect against will not reasonably affect the ability of the site to meet DPH performance objectives or that the criterion is inapplicable to the waste isolation capability of the site or the facility.

(4) Preference. A site exhibiting a preference characteristic is advantageous in that aspect as compared to a site which does not exhibit the preferred aspect. A site exhibiting a greater degree of a preferred characteristic is more advantageous in that aspect as compared to a site exhibiting less of the characteristic.

(5) Additional Preference Criteria. The listing of the preference criteria in 310 CMR 43.10 through 43.39 is not intended to prohibit the Board from applying additional preference criteria in accordance with the provisions of M.G.L. c. 111H provided that such criteria do not contravene the criteria contained in 310 CMR 43.00.

(5) Scaling Preference Criteria and Objectives. In order to assist in evaluating and comparing potential sites the Board may develop scaling methods that rank or weight preference criteria by, for example, assigning numerical or other quantitative or qualitative values to measure the relative degrees of importance among the different criteria and to measure the extent to which a particular site satisfies a specific criterion. If the Board determines to apply any method to compare among preference criteria the Board shall adopt

43.40: continued

said method prior to the issuance of the draft candidate site report and in accordance with the provisions in M.G.L. c. 111H. Nothing herein shall require the Board to base a site selection decision on a comparison of the relative advantages or disadvantages of preference criteria exhibited among technically superior sites.

43.41: Requirements for a Technically Superior Site

(1) A site shall be considered to meet the minimum qualifications to be selected as a superior site if, after detailed site characterization conducted in accordance with 310 CMR 43.00 and the applicable provisions of M.G.L. c. 111H, it satisfies all of the following requirements:

- (a) The site does not exhibit any exclusion criterion;
- (b) The site does not exhibit any conditional criterion unless the requirements set forth at 310 CMR 43.40(3) are satisfied; and
- (c) A performance assessment conducted in accordance with protocols approved by the Department of Public Health, or other applicable state or federal regulatory agency having jurisdiction over the licensing of a facility at the site demonstrates that the site will meet DPH performance objectives.

(2) The Board shall comply with the provisions set forth in 310 CMR 43.41 through 43.43 in the selection of a superior site provided that nothing herein is intended to prevent the Board from adopting standards that are intended to provide additional protection of the public health, safety and the environment or adopt procedures that supplement the data analysis or quality assurance procedures set forth herein.

(3) The provisions set forth in 310 CMR 43.44 through 43.72 are intended as recommended guidance for the Board in regard to the collection and analysis of data. No failure to comply with 310 CMR 43.44 through 43.72 shall be deemed a basis for the Department to disapprove the Board's selection of a superior site pursuant to 310 CMR 43.00 unless such failure:

- (a) constitutes a significant violation of a provision of any regulations of the Department or the Department of Public Health referenced in 310 CMR 43.00 in effect at the time the violation occurred; or
- (b) precludes a finding, based on substantial evidence, that the site satisfies the requirements of 310 CMR 43.43.

43.42: General Guidance in Site Selection and Characterization Methodology

(1) Except as may be otherwise expressly provided in M.G.L. c. 111H or 310 CMR 43.00 the Board should apply the standards, protocols, and procedures set forth in the most recent applicable guidance documents on low-level radioactive waste management facility site selection and characterization issued by or under the authority of the Nuclear Regulatory Commission [NRC], the Department of Energy, the Environmental Protection Agency or the Department of Public Health.

(2) Notwithstanding the provision of 310 CMR 43.42(1)(a), the Board may choose not to apply any standard, protocol or procedure as set forth in the federal documents (federal measure) described in said subsection provided the Board makes a finding and documents that:

- (a) the federal measure is not applicable to a site or waste management technology under consideration due to conditions particular to Massachusetts or the site and substitute measures will provide accurate and verifiable data necessary to determine that a superior site meets the requirements of 310 CMR 43.41; or
- (b) a standard, protocol, or procedure proposed as a substitute for the federal measure will provide accurate and verifiable data which is equivalent or superior to the data or analysis intended to be provided by the federal measure.

43.42: continued

(3) Data shall be collected, analyzed and applied in accordance with generally accepted practices in the fields of geology, soil science and soil engineering, hydrology, land use studies, transportation, meteorology, environmental engineering, civil engineering, performance assessment, air modeling and monitoring and such other related disciplines as are necessary to select a superior site. The Board shall apply the written guidance, protocols and procedures established by the Department for the investigation, characterization and modeling of water resources, wetlands and air quality except where the provisions of said documents contravene a Nuclear Regulatory Commission regulation in which case the NRC regulation shall govern.

(4) Except as otherwise provided in applicable state or federal regulations, where site compliance with a criterion is based upon its ability to meet DPH performance objectives or to avoid or minimize an adverse effect and it is accepted professional custom or practice to utilize assumptions or estimate probabilities in conducting an evaluation to determine a site characteristic or parameter, the Board shall at a minimum apply reasonable but conservative assumptions and probabilities to assess the site's performance and compliance. In applying the reasonably likely standard contained in the criteria the Board shall adopt reasonable but conservative confidence limits for statistically defined measures. Where compliance with a performance standard is evaluated, the evaluation may consider the performance of the waste containers and the facility in isolating the waste from the environment. In evaluating the long term waste isolation capability of the containers and the facility the Board shall incorporate design and performance requirements set forth in applicable federal and state laws and regulations including, without limitation 105 CMR 120.800.

(5) In determining whether or not a site meets a criterion which is based upon the site achieving a certain level of performance or compliance with DPH performance objectives, the Board may, in the preliminary screening phases set forth herein, adopt reasonable factors to eliminate, or set aside for later possible consideration, areas that the Board does not believe are likely to meet the criterion including, without limitation, minimum distances from the site or the waste management area to potential human or environmental receptors.

(6) If at any time during the course of the site selection process the chief executive officer of a municipality requests that the Board consider the suitability of land within the municipality's jurisdiction, the Board may at its discretion advance the assessment of the volunteered location(s) and defer or delay evaluation of other sites as it deems appropriate.

(7) If at any time during the course of evaluation of a particular site a determination is made that the site will not meet an exclusion or conditional consideration criterion the Board may terminate or suspend further evaluation of the site as it deems appropriate.

(8) The Board shall employ the Massachusetts Geographic Information System [GIS] or, at a minimum, an equivalent computerized mapping system in the evaluation and presentation of mappable data.

(9) The Board shall employ other relevant mapped or tabular data which is publicly available and obtained from its own investigation but may not be currently maintained within the GIS (*e.g.*, U.S. Geological Survey geologic maps and seismic, flood plain, soil and land conservation maps). The Board should make reasonable efforts to incorporate said data layers into the GIS commensurate with the applicable stage of site screening.

(10) Notwithstanding the provision of 310 CMR 43.45, 43.51 and 43.61, where during any preliminary stage of site characterization it is infeasible for a site characteristic to be adequately evaluated to determine if the site should be screened out, the Board may continue to collect data on and analyze the site in order to make the screening decision at a later stage of site characterization.

43.43: General Guidance in Quality Assurance

- (1) At each stage of the site evaluation process the Board shall develop and implement a quality assurance [QA] program designed to ensure data reliability, validity, traceability, retrievability, completeness and technical accuracy. The requirements set forth at 310 CMR 43.42(1) and (2) regarding the application of Nuclear Regulatory Commission and Department of Energy guidance, shall also apply to development and implementation of a quality assurance program. The scope of the quality assurance program shall be commensurate with the type of data being collected, the scope of the data collection and the analysis required by the Act and the regulations at each respective stage of the site screening process (4.63).
- (2) The analytical map work performed in the course of site selection shall be conducted by qualified professionals experienced in the use of the GIS, or equivalent system if applicable, and knowledgeable in the field of cartography. The collection and analysis of data performed in support of the site screening and site characterization required shall be conducted by qualified professionals experienced in the respective fields of geology, soil science and soil engineering, hydrology, land use studies, transportation, meteorology environmental engineering, civil engineering, performance assessment, air modeling and monitoring and such other related disciplines as are necessary to select a superior site. All field mapping and surveying shall be conducted by a registered surveyor.
- (3) The GIS and map work performed shall be done in substantial accordance with professional standards or generally accepted protocols and uniform procedures for the collection, analysis and presentation of mappable data. A detailed procedure for digitizing map data shall be developed to assure uniform performance and documentation of digitizing activities. Software quality assurance plans shall be developed and implemented to control verification and validation of the software packages being utilized for GIS or equivalent activities. Where data are entered into the GIS or equivalent system after the decision to initiate site selection, the Board shall ensure that records be maintained that, at a minimum, contain the name of person entering the data, the type and source of the data and the date the data were entered.
- (4) Records of qualifications should be obtained for all persons employed in data gathering and analysis, and said statements of qualifications should be maintained in the Board's files.

43.44: Application Guidelines and Procedures for Use in Preparation of the Statewide Mapping and Screening Report

- (1) Objective. The objective of the Statewide Mapping and Screening Report required to be issued under Section 20 of the Act is to exclude at the outset of the site selection process any areas of the Commonwealth that are obviously unable to satisfy the site selection criteria contained in 310 CMR 43.00. The purpose of 310 CMR 43.44 is to provide guidance on how, at a minimum, the requirements for a technically superior site pursuant to 310 CMR 43.41 are to be interpreted and applied for the purposes of this report.
- (2) Date Collection and Evaluation.
 - (a) The Statewide Mapping and Screening Report should identify those locations the Board determines are obviously unsuitable as a superior site. The Statewide Mapping and Screening Report should be prepared on the basis of data reasonably available on the date the Board votes to initiate site selection, pursuant to M.G.L. c. 111H, § 17, as may be obtained from public agencies, private not-for-profit land conservation associations and the published open literature.
 - (b) Lack of uniform coverage of the Commonwealth with respect to certain data should not be a cause to fail to use data that are available.
 - (c) The data collection and presentation should be limited to factors relevant to the exclusion criteria. The factors to be applied may reflect land areas that are of sufficient size and extent to be mapped on a statewide basis.
 - (d) The specific mapping accuracy should be commensurate with the map scales employed and the accuracy of the data sets. As a general matter the scale of the map should be consistent with the scale at which the data were entered. The map scales employed should be in the range of 1:100,000 to 1:250,000.

43.44: continued

(e) The Board shall not be responsible to verify the accuracy of data provided by federal and state agencies but it should identify the sources of all the data and discuss the estimated quality of data and the sensitivity of the results to data uncertainty and data gaps. The Board should specify that the boundaries of included areas are defined with an accuracy that is commensurate with the map scales and data sets used and may be subject to revision on the basis of more detailed characterization.

43.45: Specific Guidance for the Application of Particular Conditions

(1) General. 310 CMR 43.45 provides guidance on the application of particular conditions as part of the preparation of the Statewide Mapping and Screening Report.

(2) Modeling Capability-310 CMR 43.10. Hydrogeologic units containing faults, deeply weathered bedrock, buried river channels and sand lenses if capable of delineation at this stage should be screened out.

(3) Large Existing Community Water Systems-310 CMR 43.20(1)(a). In determining the Zone III of the supply, the drainage sub-basin of the area in which the well is located shall be delineated and screened out.

(4) Existing Community Water Systems-310 CMR 43.20(1)(b) and 2(a). In the absence of approved delineated Zone IIs, sites within the Interim Wellhead Protection Area [IWPA] of public water supplies shall be delineated and screened out.

(5) Potential Productive Aquifers-310 CMR 43.20(1)(c). The Board may choose to screen out sites located over potential productive aquifers without considering the likelihood that they will be determined to be qualified for development.

(6) Class A Public Drinking Water Supplies-310 CMR 43.21(1)(a). In determining the watershed of an impounded surface water supply the drainage sub-basin of the supply shall be delineated and screened out.

(7) 100 Year Flood Plains 310 CMR 43.21(1)(c). The evaluation of flood plains should be determined by reference to the most recently available flood profile data prepared under the National Flood Insurance Program (NFIP), currently administered by the Federal Emergency Management Agency. The boundary, as determined, shall be presumed accurate. This presumption may be overcome only by reliable evidence from a registered professional engineer or other professional competent in such matters.

(8) Coastal High Hazard Zones 310 CMR 43.21(1)(g). In determining the coastal high hazard zones the coastal areas within the 100 year flood plain as delineated in the most recently available profile data prepared under the NFIP and all barrier beaches should be delineated and screened out.

(9) Dams-310 CMR 43.21(1)(f). Sites located in an area which would be affected by the failure of a dam with a Hazard Classification Class I or Class II, as determined in accordance with 302 CMR 10.09(3), which are capable of delineation at this stage should be screened out. The downstream inundation flood zone may be determined on the basis of records maintained by the Dam Safety Division of the Department of Environmental Management.

(10) Interference with Monitoring 310 CMR 43.29(1)(b). Places where National Priority List sites, Resource Conservation and Recovery Act facilities, any locations of releases or sites as defined pursuant to M.G.L. c. 21E and the regulations promulgated thereunder, any solid waste disposal sites as defined pursuant to M.G.L. c. 111, § 150A and the regulations promulgated thereunder or Leaking Underground Storage Tanks as defined in M.G.L. c. 148, § 38B are identified and that are capable of delineation at this stage should be evaluated if there is reason to believe radioactive materials or mixed waste were used or disposed of at

43.45: continued

those locations. The Board may choose to defer elimination of an area described herein on the basis of further data on the extent to which existing potential contamination of the site will affect the performance of the site and its ability to be adequately monitored.

43.50: Application Guidelines and Procedures for Use in Preparation of the Report Identifying Possible Locations

- (1) Objective. The objective of the Report Identifying Possible Locations is to identify those areas of the Commonwealth where there is a reasonable likelihood, based on the data available to the Board at the time the report is issued, of identifying one or more sites that will meet the criterion at 310 CMR 43.41(1)(a) and (b).
- (2) Data Collection and Evaluation Protocols.
 - (a) The Report Identifying Possible Locations may be prepared on the basis of data available from any credible public or private source as well as data obtained by the Board on the basis of its own investigation. Such information may include, without limitation, the sources set forth at 310 CMR 43.44, municipal sources, aerial photography, windshield surveys, walkovers or other surficial field investigation to identify apparent exclusion factors not shown on existing maps. Installation of ground water wells is not required.
 - (b) Exclusion factors which were not applied in the Statewide Mapping and Screening Report because of size consideration, data availability or qualifications or interpretation of regulatory requirements should be applied to the extent those restrictions have been overcome by further investigation by the Board. In addition, conditional consideration criteria should also be evaluated to the extent that data is available and can be analyzed in accordance with the procedures established herein within the time limit established by M.G.L. c. 111H. The Board may include any site as a possible site even though it exhibits a conditional consideration criterion if the Board determines that further characterization of the site is advisable based on the likelihood that the condition will be satisfied upon further characterization.
 - (c) Lack of uniform coverage of the State with respect to certain data requirements shall not be a cause to fail to use data that are available provided that the Board should use reasonable efforts to obtain statewide data on criteria which form the basis of a decision to screen out a site. The further specific guidelines of 310 CMR 43.51 shall also be observed.
 - (d) Although the Report should reflect the data and analysis of only the exclusion and conditional consideration criteria the Board may collect and analyze preference data for future use.
 - (e) The factors to be applied may reflect land areas that are of sufficient size and extent to be mapped on a statewide or regional basis as deemed appropriate to most accurate delineation. The specific mapping accuracy should be commensurate with the map scales employed and the accuracy of the data sets. As a general matter the scale of the map should be consistent with the scale at which the data was entered. Mapping scales down to 1:24,000 may be utilized.
 - (f) The Board shall not be responsible to verify the accuracy of data provided through federal and state agencies but it should identify the sources of all the data and discuss the estimated quality of data and the sensitivity of the results to data uncertainty and data gaps. The Board should be responsible to verify through implementation of the quality assurance program all data collected through its own investigation.

43.51: Specific Guidance for the Application of Particular Conditions

- (1) General. 310 CMR 43.51 provides guidance on the application of particular conditions as part of the preparation of the Report Identifying Possible Locations.
- (2) Potential Productive Aquifer-310CMR 43.20(1)(c) The Board shall not consider for siting locations within the Zone II or Zone III, as applicable, of future community water systems which have received Department approval as a new source or have submitted the appropriate documentation to the Department for a new source approval in accordance with Department guidelines.

43.51: continued

- (3) Depth to Water Table-310 CMR 43.20(1)(g). Depth to the water table may be inferred by considering, but not limited to, any of the following: frequency and distribution of wetlands, location of surface water bodies, elevation and topography, soil types and relevant well drillers logs so long as:
- (a) the rationale for the method of inference is developed by responsible professionals experienced in the hydrogeology and geology of Massachusetts; and
 - (b) the rationale is explained in the report.
- (4) Distance from Surface Water Supplies-310 CMR 43.21(1)(a) and (b). Upgradient and down-gradient directions for groundwater flow may be inferred from surface topography in the absence of readily available subsurface data.
- (5) Site Size-310 CMR 43.25. In applying this condition, consideration should be taken of the substantial variability in natural environments and geologic conditions. The possible locations identified in the subject report must be large enough to allow the evaluation of a range of candidate sites during the subsequent phase of site investigation, including the preparation of the Candidate Site Identification Report. Consideration should also be given to the minimum land area determined by the Board to be required for suitable facilities.

43.60: Guidelines and Procedures for Use in Preparation of the Candidate Site Identification Report

- (1) Objective. The principal objective of the Candidate Site Identification Report is to identify at least two, but not more than five, candidate sites that have a high likelihood of satisfying the requirements of 310 CMR 43.41(1). In addition, the report is intended to present the results of a preliminary characterization of the meteorology, surface and ground water, geology, tectonics, geomechanics, air quality, ecology, land use, cultural resources and social and economic characteristics of each such candidate site; a description of the procedure used to identify the candidate sites based on such preliminary characterization; and draft plans for detailed site characterization of each candidate site. Installation of ground water wells is not required for sites which are not selected as candidate sites. The purpose of 310 CMR 43.60 is to provide guidance on how, at a minimum, the requirements for technically superior sites should be interpreted and applied in the preparation of this report.
- (2) Data Collection and Evaluation Protocols.
- (a) The Candidate Site Identification report should be prepared on the basis of the types of data sources described at 310 CMR 43.40 and 43.50, additional published and unpublished data and maps and additional field data obtained and technical analysis carried out during this or previous phases of the siting process.
 - (b) All exclusion, conditional consideration and, in the Board's discretion, preference criteria should be applied and evaluated in the preparation of the Candidate Site Identification Report.
 - (c) The Board may continue to use the GIS for data analysis and comparative evaluations of siting factors. Map scales should be employed, if reasonably available, which most accurately depict the characteristic being evaluated. Mapping accuracy should be commensurate with the map scales employed and the accuracy of the data sets.
 - (d) Computer modeling may be used in the site evaluation process for those factors for which computer models are determined to be reliable and valid in prediction, including, but not limited to, generally accepted performance assessment, hydrogeologic and hydraulic models. It is not required that the computer code be specifically developed for low-level radioactive waste management siting provided the code is applicable to the site/facility and the parameter being investigated. Where a code is not generally accepted a determination of reliability and validity should include, but not be limited to the following factors:
 - 1. The model should have supporting documentation that establishes its ability to represent the factors under investigation and any history of its previous applications;
 - 2. The set of equations representing the factor under investigation must be theoretically proven and must be well documented;

43.60: continued

3. The numerical solutions must be based on sound mathematical principles and supported by verification and checking techniques;
 4. The model must be calibrated against site specific field data developed in accordance with 310 CMR 43.00; and
 5. A sensitivity analysis should be conducted to measure the model's response to changes in the values assigned to major parameters, specified error tolerances and numerically assigned space and time discretizations.
- (e) Conceptual model uncertainty should be addressed by identifying a broad range of conceptual models, and using each in performance assessments. Revisions of these models should be made by accounting for progressive data collected that can be used to eliminate some models from consideration. Uncertainties about the future of the site should be addressed by projecting alternative future site conditions. Parameter uncertainty may be addressed by using Monte Carlo analysis in combination with other techniques (such as Latin Hypercube Sampling) to reduce the computation effort.
- (f) Despite the efforts to validate models, substantial uncertainties are likely to be encountered in making predictions. Sole reliance on these numerical predictions to determine compliance may not be appropriate; the Board may choose to supplement such predictions with qualitative judgments as well.
- (g) Any ground water wells that are installed to collect data and evaluate the extent to which the site meets the criteria for a superior site should be installed and maintained in accordance with Department guidance document, Standard Reference for Monitoring Wells, WSC-31-91.
- (h) In the absence of specific Department policy/guidance documents, the analysis of hydraulic factors necessary to calculate saturated and unsaturated groundwater flow paths including, without limitation, horizontal gradient, hydraulic conductivity, transmissivity, hydraulic head, porosity, geometry, boundary conditions and the time of travel of the flow shall be conducted in accordance with generally accepted standards, principles and protocols, including, without limitation, a pump test performed in accordance with generally accepted methods, if appropriate. Where an evaluation of these parameters is dependent upon measurement of soil or water samples the measurement may be done by direct measurement in situ or by the testing of laboratory samples. The use of both methods is highly desirable, but more extensive investigations may be deferred to the Detailed Site Characterization stage.
- (i) The site characterization activities should be consistent with the guidance set forth at 310 CMR 43.42(1) to the extent that the detail set forth in said guidance is consistent with and applicable to the scope of a site investigation necessary to conduct a valid preliminary site characterization. The Board should indicate in its report where further site characterizations are to be deferred to the Detailed Site Characterization stage. In addition to these guidelines the further guidelines of 310 CMR 43.61 and 43.62 should be applied.
- (j) Where the Board determines that adequate data exists and/or reasonable assumptions can be made on site characteristics, waste characterization and probable facility design, a preliminary performance assessment on likely sites may be conducted. The purpose of the assessments is to assist in the evaluation of how the site will perform by itself and in conjunction with suitable technologies to meet DPH performance objectives. The preliminary performance assessments should be used to estimate factors including, but not limited to:
1. The potential release of radioactivity from waste packages into the facility;
 2. The potential release of radioactivity through the engineered barriers into the ambient or geologic environment;
 3. The movement of radioactive materials through the environment to humans by ingestion or direct contact;
 4. The resulting exposure to humans in comparison to DPH performance objectives and among the sites.
- (k) Performance assessments need not provide complete assurance that DPH performance objectives will be met. Because of the long time periods which may be involved and the nature of the events and processes of interest, there will inevitably be substantial uncertainties in projecting site and facility performance. What is required is a reasonable expectation based on reasonably conservative assumptions in relation to the record before the Board that compliance with DPH dose performance objectives is reasonably likely to be achieved.

43.61: Specific Guidance for the Application of Particular Conditions

(1) General. 310 CMR 43.61 provides guidance on the application of particular conditions as part of the preparation of the Candidate Site Information Report.

(2) Modeling Capability-310 CMR 43.10.

(a) The depth to bedrock and the types of soils at the surface and in the subsurface should be determined according to accepted methods and principles. Hydrogeologic units should be delineated and the direction and rate of groundwater movement should be estimated on the basis of field data and quantitative models. Hydraulic conductivities should be estimated on the basis of lithologic classifications and direct measurement. Other characteristics, such as ground water discharge points, water table fluctuation, moisture potential, moisture content, hydraulic conductivity, porosity, geometry, boundary conditions and the physical and chemical properties of the water should be evaluated on the basis of field surveys or available data. The evaluation should also consider the results of hydrogeologic modeling. In evaluating this criterion the following factors should, at a minimum, be reviewed:

1. The presence and extent of permeable and impermeable anomalies, variability and complexity in the stratigraphic relationships and lithology of the site, including, but not limited to, significantly fractured bedrock, faults, or sand/gravel lenses/layers or buried river channels, which would complicate monitoring.
2. The extent to which the lateral flow of groundwater can be confidently predicted to flow to a defined discharge point rather than to multiple surface water bodies or down through bedrock;
3. The ability of the site to be adequately described with a reasonable number of monitoring points;
4. The presence or absence of upgradient, potentially leachable radioactive material.

(b) The feasibility of monitoring for the release of radionuclides via groundwater pathways should be analyzed. In evaluating the feasibility of monitoring the Board should consider, at a minimum, the amenability of the site to modeling by available and applicable computer codes including, without limitation, the ability to reproduce natural and steady state conditions in response to precipitation and pumping stresses.

(3) Existing Public Water Systems-310 CMR 43.20(1)(b) and (2)(a). A conceptual Zone II of all existing public systems within 15,000 feet upgradient of the site, which do not have Department approved Zone IIs, should be calculated in accordance with Department approved procedures.

(4) Potential Productive Aquifer-310 CMR 43.20(1)(c). Except as otherwise provided in regulations or written policy adopted by the Department subsequent to the effective date of 310 CMR 43.00, the following evaluation should be conducted to determine if a site is a potential productive aquifer (PPA):

(a) All of the following documents shall be reviewed:

1. Department Aquifer Information Overlays
2. USES Hydrologic Atlases-HA
3. USES Surficial Geologic Maps-GQ
4. USES Bedrock Geologic Maps-GQ
5. The Massachusetts 2°
6. The Bedrock Geologic Map of Massachusetts (Ean Zen)
7. Hydrogeologic or geophysical reports addressing local subsurface conditions and or hydrogeology located within the Department's files.

(b) In the event of discrepancies between the data in 310 CMR 43.61(4)(a)1. through 6. and 43.61(4)(a)7. the Department may review the data and make a determination on whether the site overlies a PPA.

(c) Where the site overlies a PPA the Board may proceed to determine if the PPA is qualified for development. In conducting the land use sanitary survey portion of the qualified for development evaluation the site boundary shall be considered the potential wellhead in demonstrating whether existing or historical land uses preclude the use of the aquifer as a public water system. The survey should include the presence or absence of the uses set forth at 310 CMR 22.21(2)(a) and (b), sewer lines and underground or above

43.61: continued

ground storage tanks. Where the majority of a high or medium yield aquifer is located in a municipality with a population density equal to or greater than 4,400 person per square mile (based on the most recent U.S. Census) the Board may presume the aquifer is not qualified for development. The Board may also install a well and conduct a pump test to confirm that the aquifer is actually capable of a high or medium yield.

(d) In the event that the source is qualified for development, the Board may proceed to determine if the site is located outside of the Zone II or Zone III, as applicable. Sites located within either the Zone II or Zone III of public water supplies that have either received Department approval as a new source or have submitted the appropriate documentation to the Department for a new source approval in accordance with Department guidelines shall be excluded. In the event that the Board desires to install a well to determine the Zone II or Zone III of a future water supply system it should do so in accordance with established Department procedures.

(5) Existing and Potential Private Drinking Water Sources-310 CMR 43.20(1)(d) and (e).

(a) An inventory of existing and potential ground water users should be conducted within a minimum 1½ miles of the waste management area. The inventory should be based on either existing documentation or field surveys or both and should provide information on all of the following: the location, type and amounts of use; the hydrogeologic unit used, typical well construction details and the identity of downgradient users within 1000 feet of the site.

(b) The Zone of Contribution (ZOC) should be calculated for the existing private wells within a minimum of 500 feet from of the site which are hydraulically connected to hydrogeologic units under the site except where substantial evidence demonstrates that a smaller radius will adequately protect the users. Zone of Contributions are not required to be calculated for private wells beyond 1000 feet from the site except where substantial evidence exists to indicate that a well beyond that point would be adversely affected by a release from the site.

(c) The Zone of Contribution should be calculated by determining the land area which is necessary to receive precipitation in sufficient quantity to meet the reasonable gallon per day yield of the well.

(6) Water Table Depth and Relation to Bedrock-310 CMR 43.21(1)(g),(h) and 43.21(2)(b).

(a) All significant hydrogeologic units underlying the proposed waste management area should be identified to a depth of 90 feet. The depth to the water table should be estimated by the installation of at least two monitoring wells at appropriate locations (on or off site) which shall be monitored through as many months of seasonal water table fluctuation as feasible consistent with the time limit established by M.G.L. c. 111H, § 20(c) in order for the Board to issue the draft candidate site identification report. Data available from existing regional water table information may also be used.

(b) The depth to bedrock should be determined according to accepted standards, protocols, and principles. Hydraulic conductivities shall be estimated on the basis of lithologic classifications, transmissivity correlations and direct measurement.

(7) Horizontal Gradient-310 CMR 43.20(1)(c). The number of wells to be installed to determine horizontal hydraulic gradient should be based on an evaluation of the complexity of the site, provided that a minimum of one upgradient and two downgradient wells should be used to determine the gradient.

(8) Groundwater Travel Time-310 CMR 43.20(3)(d). In assessing a site's capability to retard migration of contaminants, the travel time of groundwater should be compared to groundwater travel of less than 100 years along a 100-ft flow path from a point of potential release to the edge of the waste management area. The potential adverse effect relative to the projected travel time should be estimated consistent with the likely source term of the waste.

43.61: continued

(9) Surface Water Impact Evaluations. In assessing the surface water regime of a site the following parameters should, at a minimum, be preliminarily characterized on a site specific basis and within five miles of the site: the hydrologic system; past, present and projected surface water usage; flood studies; drought studies; precipitation and infiltration; runoff; discharge; channel characteristics; flow velocity; erosion; and sedimentation. In addition, if a sufficient number of site specific samples are obtained or adequate regional data are available, then chemical and physical properties of the waters should be evaluated.

(10) 100 and 500 Year Flood Plains-310 CMR 43.21(1)(c) and (2)(a). When NFIP profile data is unavailable, the extent of this zone should be calculated by methods described in 310 CMR 10.57(2)(a)3. adjusting, as necessary, for the appropriately designed storm event.

(11) Runoff Retention-310 CMR 43.21(1)(f). In assessing the sites the following factors should, at a minimum, be investigated:

- (a) The presence and extent of poor runoff characteristics such as depressions, swampy areas, ponded water, or evidence of frequent flooding; and
- (b) The extent to which engineered structures are required to protect from ponding or flooding.

(12) Dams-310 CMR 43.21(1)(h)- Sites downstream from dams which were not excluded in the previous report shall be evaluated for potential risk of inundation based upon the probable maximum flood as defined in 302 CMR 10.06. The area subject to inundation should be based on published analysis from the U.S. Army Corps of Engineers or the Dam Safety Division of the Department of Environmental Management. When such analyses are not available, they should be carried out by generally accepted engineering methods.

(13) Surface Water Discharges-310 CMR 43.21(1)(a). Sites with surface water features sustained by groundwater discharges such as perennial and ephemeral streams, springs, seeps, swamps, marshes, and bogs within the potential waste management area should be delineated and screened out.

(14) Distances from Significant Surface Waters-310 CMR 43.21(3)(b). Class A, Class SA and Outstanding Resource Waters as defined and delineated in 314 CMR 4.04 and vernal pool habitats certified by the Division of Fisheries and Wildlife on or near sites should be delineated. The decision on the location and extent of a tributary should be made by reference to the most recent edition of maps generated by the Massachusetts geographic information service based on the United States Geological Survey 1:25,000 scale quadrangle maps unless more accurate maps are adopted by the Department pursuant to notice and public hearing as provided in M.G.L. c. 30A.

(15) Tectonic Processes-310 CMR 43.22(1)(a) and (2). In assessing the geologic regime of a site the following parameters should be investigated on a site specific and regional basis: geomorphology, stratigraphy, lithology, structure, tectonics, seismology and geologic hazards. Geologic hazards include, without limitation, landslides, collapse, liquefaction, significant alteration by surficial processes in last 500-1000 years and other unstable elements in near-surface stratigraphic units and soils.

(16) Slope-310 CMR 43.23(1)(b). The slope should be estimated on the basis of USGS 7.5 minute quadrangles using a scale of 1:24,000 with a contour interval of either ten feet or 20 feet.

(17) Surface Geologic Process-310 CMR 43.23(1)(a). Areas mapped on the USGS maps of Landslides and Related features should be delineated and screened out. The estimation of past rates of occurrence of geologic processes and events may be carried out primarily on the basis of general regional understanding of the evolution of the geologic environment over the past thousand years, in combination with limited site or locality-specific field data for confirmation of important uncertainties. Issues that may require more extensive field investigation may be deferred to the site characterization phase.

43.61: continued

(18) Seismic Impact Zone-310 CMR 43.23(3)(c).

(a) Seismic impact zones should be delineated based on a review of the most recent and relevant seismic acceleration maps maintained by Department of the Interior, U.S. Geological Survey and other reasonably available public or private seismic impact investigations that are considered reliable and relevant conducted on locations in Massachusetts or other areas in the Northeast region including, without limitation, sites analysis conducted in relation to the siting of nuclear power plants or radioactive waste storage or disposal facilities. Geotechnical stability may be determined by the use of computer models to approximate the dynamic vertical and horizontal forces caused by bedrock acceleration taking into account local soil conditions. In considering estimating seismic impacts beyond 250 years the Board should consider the source term of the disposed waste and the time period during which its potential release would likely result in dose exposures in excess of DPH performance objectives.

(b) Where sufficient information is available to project the suitable technology which may be located at a site, a preliminary performance assessment of the facility's ability to meet the performance standard of this criterion should be conducted. The performance standard is met if, based on reasonable but conservative assumptions of the estimated useful life of the engineered structures, systems and components important to the safety of suitable facilities and foundation engineering, said engineered barriers are projected to be capable of complying with the standards for earthquake resistance set forth in the State Building Code at 780 CMR 1113.0, *et seq.* In projecting the potential seismic impact the preliminary assessment may consider the applicable NEHRP Recommended Provisions for the Development of Seismic Regulations for New Buildings.

(19) Contaminant Migration-310 CMR 43.23(2)(a). In evaluating the ability of a site to retard contaminant migration the extent of unconsolidated stratigraphic units that have a high clay or silt content should be determined through published sources, regional boring logs and site specific field investigations.

(20) Liquefaction Resistance and Soil Stability-310 CMR 43.23(3)(b)(1) and (2). In evaluating the ability of the site to resist liquefaction and provide suitable soil for engineered barriers, site soil samples may be correlated to standards provided in the State Building Code at 780 CMR 1113.0, *et seq.* Available testing may be conducted in accordance with the guidance documents on geotechnical investigation referred to at 310 CMR 43.42(1) if appropriate site specific data is available.

(21) Erosion-310 CMR 43.23(3)(j). General assessment of the erosional process should be accomplished by reviewing published soil maps, evaluating topography, assessing regional geomorphology, evaluating meteorological conditions and assessing local slope conditions.

(22) Dissolution-310 CMR 43.23(3). In evaluating sites, the existence and extent of significant past or present subsurface dissolution areas including, but not limited to, sinkholes, caverns, or underground streams should be investigated.

(23) Demographic Effect on Site Performance-310 CMR 43.24(a). In evaluating the potential for current or changing residential, commercial or industrial patterns in the area that affect a site's performance the following parameters should, at a minimum, be evaluated and considered: current land use, land use and subdivision plans, zoning restrictions, utility land uses, proximity to industrially developed areas and recreational areas that are reasonably likely to experience future growth, agricultural areas and the documented existence of mineral resources at the site. The survey should be conducted within a minimum five mile radius of the site. Estimates on future impacts should be based on time periods coinciding with the expected first year of operating life of the facility through the operation lifetime of the facility.

(24) Proximity to Population Centers-310 CMR 43.24(2)(b). Population size and boundary locations of population places should be defined in accordance with the U.S. Census Bureau published definitions.

43.61: continued

(25) Proximity to Residences and Sensitive Population Locations-310 CMR 43.24(b) and (c). The survey should be conducted within a minimum of a one mile radius of the site.

(26) Site Size and Facility Compatibility-310 CMR 43.25.

(a) The candidate sites should be drawn and labelled so as to delineate between the waste management area and that portion of the site to be designated as a buffer zone. There is considerable flexibility in how such a site may be subdivided into distinct zones and utilized, and this process can affect the suitability of the site. For the purpose of characterization the site should include the estimated waste management area and the buffer zone. The designations chosen during this phase of site identification should not be regarded as final or irrevocable, but should be intended to make best use of a site in terms of satisfying the siting requirements.

(b) In assessing the compatibility of the site with suitable facilities the following parameters should, at a minimum, be based upon:

1. SCS soil classification maps,
2. surficial and bedrock geology maps and topographic maps
3. presence of a well defined (granular) surface layer,
4. the degree of the slope,
5. allowable bearing pressure of foundation soils and clearly defined surface drainage; and, if available, from on-site wells,
6. soil thickness, and water table depth.

(27) Meteorology-310 CMR 43.27. In evaluating the frequency, probability and potential consequences for severe weather conditions affecting the site's performance, existing historical records should be reviewed and an on-site environmental monitoring program may be established to obtain preliminary data. The parameters to be analyzed should, at a minimum, include temperature, severe weather incidents such as heavy snowfalls, hurricanes and tornadoes and the annual amount of precipitation. Additional parameters which may be required to establish the site's water budget, facility design loads and airborne release of contaminants may be deferred to the Detailed Site Characterization stage pursuant to 310 CMR 43.71.

(28) Transportation-310 CMR 43.28.

(a) Existing and projected access routes from sites to the point of exit off existing interstate or limited access highways or rail lines should be identified, described and evaluated with respect to:

1. Total travel distance from the site to the point of exit from the highway and/or commercial railway station/siding.
2. The current volume to capacity [V/C] ratio of the access routes(s) and whether the additional projected traffic from the construction or operation of the facility would cause the V/C ratio to exceed 1.0.
3. The current structural status of the access route(s) relative to applicable state and federal transportation laws and regulation governing the transportation of low-level radioactive waste;
4. The need for and the level of effort required to bring the access route into compliance with said law or regulations;
5. The average number of dwellings and public places per mile determined by dividing the total number of occupied permanent residential dwellings and public places on the primary access route by the total distance in route miles from the projected facility entrance to the access point of the interstate or limited access highway or commercial railway station/siding.
6. The yearly average number of serious traffic accidents on the access route(s) in comparison to the statewide yearly average as determined by records maintained by state and local public safety/highway departments.
7. The average number of intersections per mile maintained by local or state highway departments and railroad crossings per mile determined by dividing the total number of said intersection on the primary access route from the projected facility entrance to the access point of the interstate or limited access highway or commercial railway station/siding.

43.61: continued

(b) In addition to the field measurement described at 310 CMR 43.61 (28)(a), the Board may assess the level of transportation risk on the basis of the relevant data contained in the NRC guidance document, *The Final Environmental Statement on the Transportation of Radioactive Material by Air and Other Modes*, NUREG-0170 or subsequent updated transportation risk analysis.

(29) Inconsistent Land Uses-310 CMR 43.29(1)(a) and (b).

(a) In assessing the potential adverse effect of inconsistent land uses, the following land uses in existence or having received a permit to construct in effect within six miles of the site from the governing state or federal agency should, at a minimum, be evaluated:

1. Airports. Sites and/or waste management areas within one mile from an airport runway should be delineated and may be screened out considering the size of the aircraft accommodated, frequency of use and flight paths.
 2. Operations storing large quantities of flammable liquids. Sites within one half mile from any single aboveground storage tank regularly used for the storage of flammable liquids and having a capacity of at least 500,000 gallons, or from any aboveground storage tank or vessel for liquefied natural gas (LNG) or liquefied petroleum gas (LPG) and having a capacity of at least 25,000 gallons should be delineated and may be screened out;
- (b) Measurements of gamma rays emitted by radionuclides in the surface and subsurface soil should be conducted in situ or in the laboratory by generally accepted techniques in assessing the potential of the site to interfere with monitoring.

(30) Protected Lands and Environments-310 CMR 43.31.

(a) Protected resources, lands and species located within a one mile radius of the site should be described and evaluated to determine the nature, extent and likelihood of potential adverse effects from facility construction, operation and maintenance.

(b) All applicable state and federal statutes and regulations that govern the protected resources, lands and species should be reviewed to determine the likelihood that the construction, operation and maintenance of a facility can proceed in light of restrictions or permit requirements contained in said laws or regulations, including, but not limited to, those statutes and regulations listed in Appendix A of 310 CMR 43.00. In evaluating potential adverse effect the following factors may be relevant:

1. The type and size of the facility as it relates to disruption and/or permanent or temporary alteration of the original conditions of the area that contains the protected resource, lands or species from construction and operation;
2. The abundance and characteristics of potentially affected species, lands and resources;
3. The importance of the protected species, land or resources relative to its commercial or recreational value, including but not limited to, its status as threatened or endangered;
4. The importance of the protected resource, land or species to other protected resources, lands or species;
5. The importance of the protected resource, land or species to the structure and functioning of the ecological system;
6. The importance of the protected resource, land or species as a biological indicator of radiological and non-radiological constituents in the environment;
7. Seasonal and migratory patterns of species within the area; and
8. Existing natural and human induced effects such as farming, logging or recreational uses.

43.62: Quality Assurance Requirements

(1) In addition to the general requirements set forth at 310 CMR 43.43, the Candidate Site Identification Report should be prepared in accordance with the following quality assurance requirements:

43.62: continued

- (a) The quality assurance program should specify the structure of the organization performing the work, the division of responsibilities, and the location of project personnel within the organization. Persons responsible for the implementation or oversight of the quality assurance program and for technical oversight, review and approval should also be indicated on the organization chart.
- (b) The quality assurance program should include procedures to ensure quality in both the data acquisition and analysis program (*e.g.*, sampling and testing methods, equipment calibration, sample custody, verification and validation of models) and information management (*e.g.*, data management, tracking of changes, protection against transcription error). In general, procedures should be included for every phase of work whose output has the potential to affect the results of the investigations or the conclusions to be drawn from the investigations.
- (c) The quality assurance program should provide for independent technical review, verification, and approval by persons not directly involved in the performance of the work.
- (d) The quality assurance program should provide for the ability to trace and audit all calculations, analyses, deductions, inferences, and project data.
- (e) The quality assurance program should provide for internal reviews and audits to verify that the program is functioning according to the written description.
- (f) The quality assurance program should provide a method for initiating corrective actions and verifying that they have been implemented.
- (g) The quality assurance requirements of 310 CMR 41.63 should apply to all data and analyses used in the Candidate Site Identification Report, irrespective of whether such data and analysis have been previously applied or accepted in connection with the Statewide Mapping and Screening Report or the Report Identifying Possible Locations.

43.70: Application Guidelines and Procedures for Use in Preparation of the Detailed Site Characterization Report

- (1) Objective. The objective of a Detailed Site Characterization Report is to provide a definitive evaluation of the merits of a candidate site with respect to the requirements for a technically superior site, as defined in 310 CMR 43.10, and to provide such additional site data as may be required for any and all of the following: design of the facility, evaluation of the facility with respect to the performance objectives of the Department of Public Health, and provision of baseline environmental data for subsequent comparisons with monitoring data, and use for related purposes. The Site Characterization Report will be developed in response to a detailed site characterization plan as specified in M.G.L. c. 111H, § 23. The purpose of 310 CMR 43.70 is to provide guidance on how the requirements for a technically superior site are to be applied during this phase of investigation and evaluation.
- (2) Data Collection and Evaluation Protocols.
 - (a) The Report should be prepared in compliance with the provision of 310 CMR 43.42 regarding conformity with relevant Nuclear Regulatory Commission and Department of Energy guidance documents governing the characterization of low-level radioactive waste sites and the site-related issues of the facility. Nothing herein should prevent the Board from conducting further investigations and assessments as a result of the plan developed in accordance with M.G.L. c. 111H, § 20.
 - (b) The Report should be prepared in compliance with the provisions of 310 CMR 43.60(2) except to the extent that said provisions are limited to the preliminary aspect of the prior stage of data collection and analysis. Preliminary evaluations which were commenced in connection with prior stages should be expanded in scope and level of detail and accuracy, as necessary to comply with the regulations herein, and completed.
 - (c) The Board may adopt a reasonable but conservative sensitivity factor in conducting performance assessments of the candidate sites for the purpose of determining whether a candidate site can meet the DPH performance objectives and for comparing the relative performance of candidate sites.

43.71: Specific Guidance for the Application of Particular Conditions

- (1) Potential Productive Aquifers-310 CMR 43.20(1)(c). Sites located over potential productive aquifers should be eliminated unless the Department has determined that the potential source is not qualified for development.
- (2) Existing and Potential Private Drinking Water Sources-310 CMR 43.20(1)(d) and (e). Based on a complete characterization of the site and the surrounding existing and potential water uses, Zones of Contribution studies should be conducted on private drinking water sources with a reasonable potential to be adversely affected by the siting of a low-level radioactive waste facility.
- (3) Water Table Depth-310 CMR 43.20(2)(b). Final determination on depth to the water table should be based on a minimum of a full year of quarterly sampling data.
- (4) Minimizing Violations of Water Quality Standards 310 CMR 43.21(3)(a). Compliance with this criterion will be determined based on the results of the analytical and numerical hydraulic and hydrologic modeling of surface water of surface water flow and transport.
- (5) Transportation-310 CMR 43.28. In addition to the analysis previously conducted to assess the potential transportation risk, the Board may use a computer-based transportation risk analysis. The analysis should consider reliance on the risk-based guidelines for selecting preferred highway routes set forth in the Code of Federal Regulations at 49 CFR 177.825.
- (6) Air Quality 310 CMR 43.30. The potential adverse effects from construction shall be evaluated in accordance with 310 CMR 7.00. The potential impacts from operation of the facility should be evaluated as part of the performance assessment conducted in accordance with 310 CMR 43.00.

43.72: Quality Assurance Requirements

The quality assurance requirements for the development of a Site Characterization Report are the same as the requirements applicable to the development of the Candidate Site Identification Report, as set forth at 310 CMR 43.63.

REGULATORY AUTHORITY

310 CMR 43.00: M.G.L. c. 111H, § 14.

APPENDIX A

- (1) MONUMENTS, HISTORIC SITES and CONSERVATION AREAS.
 - (a) NATIONAL AND INTERNATIONAL MONUMENTS AND MEMORIALS, 16 USC §431, and all applicable regulations.
 - (b) HISTORIC SITES ACT, 16 USC § 461, including, but not limited to, 36 CFR Parts 61, 1205, 1212; § 470h-2.(b) *et. seq.*
 - (c) NATIONAL HISTORIC PRESERVATION ACT, 16 USC § 470, including, but not limited to, 36 CFR Ch.I § 60.00 *et. seq.*
 - (d) ARCHAEOLOGICAL RESOURCE PROTECTION ACT, 16 USC § 470aa, including, but not limited to, 43 CFR Subtitle A § 7.1 *et. seq.* Uniform Regulations and 36 CFR Ch. II Part 296 *et. seq.*
 - (e) THE ANTIQUITIES ACT, 16 USC § 432-33, including, but not limited to, 25 CFR 261.
 - (f) CEMETERY ACT, M.G.L. c. 114, § 17 and M.G.L. c. 79, § 79, including, but not limited to, 950 CMR 71.05.
 - (g) MASSACHUSETTS ENVIRONMENTAL POLICY ACT (MEPA), M.G.L. c. 30, §§ 61 and 62, and any applicable regulations.
 - (h) HISTORIC DISTRICTS ACT, M.G.L. c. 40C, and any applicable regulations.
 - (i) STATE HIGHWAYS ACT, M.G.L. c. 81 § 7M, and any applicable regulations..
 - (j) GENERAL PROVISIONS RELATIVE TO REAL PROPERTY, M.G.L. c. 184, §§ 31 and 32, and any applicable regulations.
 - (k) MASSACHUSETTS HISTORICAL COMMISSION ACT, M.G.L. c. 9 §§26 through 28, including, but not limited to, 950 CMR 71.00 *et. seq.*
 - (l) WATERWAYS ACT, M.G.L. c. 91, § 63 and M.G.L. c. 6, § 179 *et. seq.*, including, but not limited to, applicable 312 CMR 2.00 *et. seq.*

- (2) NATIONAL PARKS; WILDERNESS
 - (a) NATIONAL FORESTS, 16 USC § 471; MULTIPLE USE SUSTAINED YIELD ACT (National Forests), 16 USC §§ 528-531; and FOREST AND RANGELAND RENEWABLE RESOURCES PLANNING ACT, 16 USC § 1600, and 84 USC § 31, and any applicable regulations.
 - (b) NATIONAL WILDERNESS PRESERVATION SYSTEM ACT, 16 USC § 1131, including, but not limited to, 36 CFR Part 251 (Land uses), 36 CFR Part 293 (Wilderness/Primitive Areas), 43 CFR Part 19, 50 CFR Part 35 (Wilderness Preservation).
 - (c) NATIONAL TRAILS SYSTEM ACT, 16 USC §§ 1241 *et. seq.* and M.G.L. c. 132A, § 12, and any applicable regulations.
 - (d) HISTORIC PARKS, 16 USC § 410 *et. seq.*, and any applicable regulations.
 - (e) STATE RECREATION AREAS, M.G.L. c. 132A, §§ 11A *et. seq.* and M.G.L. c. 184, § 31, and any applicable regulations.
 - (f) PUBLIC PARKS ACT, M.G.L. c. 45, § 7, and any applicable regulations
 - (g) FORESTRY ACT, M.G.L. c. 132, and any applicable regulations.
 - (h) STATE RECREATION AREAS, M.G.L. c. 132A, §§ 2A, 2B, and any applicable regulations.
 - (i) PLAYGROUNDS ACT, M.G.L. c. 45, §§ 14 *et. seq.*, and any applicable regulations.
 - (j) SHADE TREE ACT, M.G.L. c. 87, and any applicable regulations.
 - (k) PROTECTION OF WATERSHED RESOURCES AND PRESERVATION OF NATURAL SCENERY IN THE BERKSHIRE MOUNTAINS, M.G.L. c. 131, § 39A, and any applicable regulations.
 - (l) MONUMENTS AND MARKS, M.G.L. c. 41, §§ 79, 81C, 81D, and any applicable regulations.
 - (m) EMINENT DOMAIN ACT, M.G.L. c. 79 *et. seq.*, and any applicable regulations.
 - (n) DESIGNATION OF SCENIC ROADS, M.G.L. c. 40, § 15C, and any applicable regulations.

Appendix A: continued

- (3) ENDANGERED SPECIES, PROTECTION OF FISH AND WILDLIFE.
- (a) FISH AND WILDLIFE COORDINATION ACT, 16 USC § 661-666C, and any applicable regulations.
 - (b) BALD AND GOLDEN EAGLE PROTECTION ACT, 16 USC § 668-668(d), and any applicable regulations.
 - (c) ENDANGERED SPECIES OF FISH AND WILDLIFE (including Migratory Birds), 16 USC § 668dd *et. seq.*; M.G.L. c. 131 §§ 74 through 76, and any applicable regulations.
 - (d) ENDANGERED SPECIES ACT, 16 USC § 1531-43, including, but not limited to, 50 CFR Part 17 (endangered and threatened wildlife and plants); 50 CFR Part 23 (endangered species convention); 50 CFR Part 81, 50 CFR Part 225 (conservation of endangered and threatened species of fish, wildlife, and plants -- cooperation with the states); 50 CFR Part 424 (listing endangered and threatened species and designating critical habitat), and M.G.L. c. 131A, §§ 1 through 6.
 - (e) NATIONAL ESTUARY PROGRAM, 33 USC §§ 1330 *et. seq.*, and any applicable regulations.
 - (f) FISH AND GAME LAW, M.G.L. c. 131, § 1 *et. seq.*, and any applicable regulations.
 - (g) WILDLIFE SANCTUARIES, M.G.L. c. 131, §§ 7 through 10, including, but not limited to, 321 CMR 7.01.
 - (h) PROTECTION OF INLAND WETLANDS, M.G.L. c. 131, § 40A, and any applicable regulations.
 - (i) DIVISION OF FISHERIES AND WILDLIFE, M.G.L. c. 21, §7 *et. seq.*, including, but not limited to, 321 CMR 2.01 *et. seq.*
- (4) WILD AND SCENIC RIVERS, LAKES.
- (a) WILD AND SCENIC RIVERS ACT, 16 USC § 1271, and any applicable regulations.
 - (b) COASTAL ZONE MANAGEMENT ACT, 16 USC § 1451, and any applicable regulations.
 - (c) EXECUTIVE ORDER 11990, PROTECTION OF WETLANDS, 42 USC § 4321, and any applicable regulations.
 - (d) CAPE COD NATIONAL SEASHORE PROTECTION, 16 USC § 459b, and any applicable regulations.
 - (e) COASTAL WETLANDS PROTECTION, M.G.L. c. 130, § 105, including, but not limited to, 310 CMR 10.01 *et. seq.*
 - (f) STATE RECREATION AREAS, M.G.L. c. 132A, including, but not limited to, 302 CMR 5.00 *et. seq.*
 - (g) WETLANDS PROTECTION ACT, M.G.L. c. 131, § 40 *et. seq.*, including, but not limited to, 310 CMR 10.00.
 - (h) SCENIC & RECREATIONAL RIVERS, M.G.L. c. 21, § 17B, and any applicable regulations.
 - (i) WATER AND WATERWAYS, M.G.L. c. 91, §§1 through 59, and any applicable regulations.
 - (j) WATER MANAGEMENT ACT, M.G.L. c. 21G, and any applicable regulations.
 - (k) MASSACHUSETTS CLEAN LAKES AND GREAT POND PROGRAM, M.G.L. c. 21, § 30A, and any applicable regulations.
 - (l) LOWLANDS AND SWAMPS, M.G.L. c. 252, § 1 *et. seq.*, and any applicable regulations.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 44.00: DEP SELECTION, APPROVAL AND REGULATION OF WATER POLLUTION ABATEMENT PROJECTS RECEIVING FINANCIAL ASSISTANCE FROM THE STATE REVOLVING FUND

Section

- 44.01: Introduction
- 44.02: Purpose
- 44.03: Definitions
- 44.04: Eligible Projects
- 44.05: Priority System
- 44.06: Project Selection Criteria
- 44.07: Financing Criteria
- 44.08: Eligible Project Costs
- 44.09: Planning Requirements
- 44.10: Environmental Review and Federal Cross-cutter Requirements
- 44.11: Affirmative Action and Disadvantaged Business Enterprise Requirements
- 44.12: Project Approval and Regulation

44.01: Introduction

The federal Clean Water Act amendments of 1987 authorized the Clean Water State Revolving Fund program to finance protection and improvement of water quality. The Massachusetts Clean Water State Revolving Fund (CWSRF) Program is a federal-state partnership that provides below-market-rate financing to assist municipalities in complying with federal and state water quality requirements. The CWSRF Program is jointly administered through the Clean Water Trust by the Commissioner of the Department of Environmental Protection (Department), the State Treasurer, and the Secretary of Energy and Environmental Affairs pursuant to M.G.L. c. 29C, § 2. Every summer, the Department solicits projects from Massachusetts municipalities and wastewater districts for consideration for subsidized State Revolving Fund (SRF) loans. The current standard subsidy is provided *via* a 2% interest, 20-year loan, but there are opportunities for some projects to receive 30 year loans, or lower interest rates. The SRF Program continues to emphasize public health needs and watershed management priorities. A major goal is to provide incentives to communities to undertake projects with meaningful water quality and public health benefits and which address the needs of the communities and the watersheds. After evaluating the project requests submitted in response to the annual solicitation, the Department develops a list of projects eligible to receive financial assistance. From this annual list, and on the basis of projects' readiness to proceed and priority rating, the Department assigns projects to a fundable list called the Intended Use Plan Project Listing (IUP). Projects placed on the IUP are eligible to apply for financing in the coming year, with the total cost of all projects on the IUP not to exceed the amount of funding available for that year. To qualify for placement on the IUP, a project must have a high enough ranking, have received a local funding appropriation or be scheduled for funding appropriation by June 30th of the coming year, and the applicant must be able to file a complete loan application no later than October 15th of the coming year.

44.02: Purpose

310 CMR 44.00 implements the CWSRF Program. Under federal and state law, the primary purpose of the CWSRF Program is to provide financing for eligible projects to protect and promote the health, safety, and welfare of the inhabitants of the state. 310 CMR 44.00 sets forth the Department's authority and responsibilities to select, approve and regulate water pollution abatement projects receiving financial assistance under the SRF Program. The Department may issue supplemental policies, guidelines, guidance documents and/or administrative procedures to assist in the implementation and administration of 310 CMR 44.00.

44.03: Definitions

For the purposes of 310 CMR 44.00, the following terms shall have the meaning set forth in 310 CMR 44.00 unless the context clearly requires otherwise.

208 Plan. An Areawide Waste Treatment Management Plan certified by the Governor or his or her designee and approved by EPA pursuant to § 208 of the Clean Water Act (CWA), 33 U.S.C. § 1288.

44.03: continued

Best Management Practices (BMPs). A method, measure or practice in water management, or a combination thereof, established and published by the Trust pursuant to St. 2014, c. 259, § 55. The Trust's BMPs can be found on the Official Website of the Treasurer and Receiver General of Massachusetts.

Clean Water Act (CWA). The Federal Water Pollution Control Act, Public Law 92-500, 33 USC § 1251, *et seq.*

Collection System Projects. Projects for the construction of a collection system or its related components. Collection systems generally consist of each and all of the common lateral sewers and appurtenances of publicly owned treatment works which are primarily installed to receive wastewaters from individual structures or from private property, and which include service connection "Y" fittings and service connections within the boundary of the public way or easement.

Community Septic Management Program. As authorized by St. 1996, c. 15, § 2, or by any other applicable law, a loan program to Local Governmental Units administered within the Fund and under 310 CMR 44.00 to assist eligible homeowners to upgrade failed septic systems in compliance with 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage* through underlying betterment agreements between the Local Governmental Unit and such homeowners pursuant to M.G.L. c. 111, § 127B½.

Comprehensive Water Resource Management Plan (CWMP). In accordance with the Department's *Guide to Water Resource Management Planning*, a CWMP identifies all of a community's needs/problems in one sector of its water resource structure, evaluates alternative means of meeting those needs, selects the most cost-effective and environmentally appropriate remedy, and proposes an implementation plan and schedule. There are three types of CWMPs: Comprehensive Wastewater Management Plans that evaluate a community's wastewater infrastructure/management needs, Comprehensive Water Supply Management Plans that focus on the community's water supply infrastructure and management issues, and Comprehensive Stormwater Management Plans that focus on the community's stormwater management needs.

Cost. As applied to any water pollution abatement project, any or all costs, whenever incurred, approved by the Department in accordance with M.G.L. c. 21, § 27A, of carrying out a project including, without limiting the generality of the foregoing: costs for planning, preparation of studies and surveys, design, construction, expansion, facilities, improvement and rehabilitation, acquisition of real property, personal property, materials, machinery or equipment, start-up costs, demolitions and relocations, reasonable reserves and working capital, interest on loans, local governmental obligations and notes in anticipation thereof prior to and during construction of such project or prior to the date of such loan, if later, administrative, legal and financing expenses, and other expenses necessary or incidental to the aforesaid.

Department. The Massachusetts Department of Environmental Protection.

District. Any county, regional or local district, commission, board or other political subdivision or instrumentality of the Commonwealth, howsoever named, which is authorized to provide itself or through an officer, board, department or division thereof local water pollution abatement, sewer or stormwater services, or public water supply services, whether established under general law or special act.

EPA. The U.S. Environmental Protection Agency.

Federal Cross-cutters. Federal laws and authorities that apply by their own terms to projects receiving federal financial assistance such as the federal SRF. Such federal cross-cutters include, but are not limited to, environmental laws and authorities such as the Clean Air Act, Safe Drinking Water Act, Endangered Species Act, Coastal Zone Management Act, Wild and Scenic Rivers Act and the National Historic Preservation Act of 1966, and economic and miscellaneous authorities such as the procurement and contractor requirements associated with financial assistance programs under the CWA and Clean Air Act.

44.03: continued

Fiscal Sustainability Plan. A plan prepared in compliance with § 603(d)(1)(E) of the CWA, 33 U.S.C. § 1383, for treatment works proposed for repair, replacement, or expansion, that includes at a minimum the following four items:

- (a) inventory of critical assets that are part of the treatment works;
- (b) evaluation of the condition and performance of inventoried assets or asset groupings;
- (c) certification that the applicant has evaluated and will be implementing water and energy conservation efforts as part of the plan; and
- (d) a plan for maintaining, repairing, funding, and as necessary, replacing the treatment works.

Green Infrastructure Projects. Products, technologies, and practices that use natural systems or processes, or engineered systems that use natural systems or processes, to enhance overall environmental quality. Such projects include, but are not limited to, decentralized wastewater systems that infiltrate treated water; water reuse for beneficial purposes; low impact development projects; the conservation, enhancement and restoration of natural upland, wetland and submerged landscape features that naturally filter and remove silt, nutrients and pollution from surface waters, maintain or restore natural hydrologic cycles, minimize imperviousness in a watershed through preservation and restoration of natural landscape buffers such as forests, floodplains, wetlands and other natural systems and restoration of natural stream channels and submerged habitat; land acquisition and restoration projects that protect and filter drinking water supplies and buffer reservoirs or support ecological restoration in fresh or marine waters; and the mitigation of risks of flooding and erosion using the restoration of saltmarsh, oyster reefs and eelgrass beds from sea-level rise, storm surges and extreme weather events, including the protection and restoration of natural coastal landscapes; provided, that Green Infrastructure Projects may be stand-alone and may also be used to complement built water management infrastructure technologies such as pipes, dikes and treatment facilities; and provided, further, that Green Infrastructure Projects may include innovative technologies that further achievement of the mandates under the CWA.

Indirect Discharge. Means the introduction of pollutants into a POTW from any non-domestic source regulated under § 307(b), (c) or (d) of the CWA.

Infiltration. Water other than wastewater that enters a sewer system (including sewer service connections and foundation drains) from the ground through means which include, but are not limited to, defective pipes, pipe joints connections, or manholes. Infiltration does not include, and is distinguished from, inflow.

Infiltration/Inflow Projects. Projects which remove infiltration and inflow (*i.e.* water other than wastewater) from a sewer system, including construction associated with infiltration/inflow rehabilitation.

Infiltration/Inflow Rehabilitation. Construction associated with the rehabilitation of a sewer system to remove or reduce infiltration/inflow.

Inflow. Water other than wastewater that enters a sewer system (including sewer service connections) from sources which include but are not limited to, roof leaders, cellar drains, yard drains, area drains, drains from springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers catch basins, cooling towers, storm waters, surface runoff, street wash waters or drainage. Inflow does not include, and is distinguished from infiltration.

Innovative Technologies. New products and processes, and significant technological changes of products and processes, which have not been commercially deployed or are in limited deployment.

44.03: continued

Integrated Water Resources Management Plan. In accordance with the Department's *Guide to Water Resource Management Planning*, an Integrated Water Resource Management Plan is a plan that identifies all of a community's/(ies') water resource infrastructure and management needs/problems including wastewater, water supply and stormwater, evaluates alternative means of meeting those needs, selects the most environmentally appropriate and cost-effective remedy, and proposes an implementation plan and schedule.

Intended Use Plan. An annual plan submitted by the Trust to EPA pursuant to § 606(c) of the CWA which identifies the intended use of the amounts available to the Fund as determined by the Trust and derived from the federal capitalization grant, state match amounts, loan repayments, investment earnings and any other moneys deposited by the Trust available to fund projects eligible for funding under Title VI of the CWA. The Intended Use Plan includes a project listing, a description of short and long term goals for the use of the funds, information on the activities to be supported, assurances for meeting certain Title VI requirements, and the criteria and method for the distribution of funds.

Intended Use Plan Project Listing. Those projects identified by the Department for inclusion on the fundable portion of the calendar year priority list pursuant to 310 CMR 44.05(2).

Land Use Controls. Local and regional government zoning ordinances and by-laws and health and sewer use regulations for wastewater.

Loan. Any form of financial assistance subject to repayment, in whole or in part, which is provided by the Trust to a Local Governmental Unit for all or any part of the cost of a water pollution abatement project.

Loan Agreement. Any agreement entered into between the Trust and a Local Governmental Unit pertaining to a loan or local governmental obligations.

Loan Commitment. A written commitment by the Trust to make a loan to a Local Governmental Unit to finance a project approved by the Department on terms consistent with the Department's Project Approval Certificate.

Local Government Unit or Local Governmental Unit. Any town, city, district, commission, agency, authority, board or other instrumentality of the commonwealth or of any of its political subdivisions, including any regional local governmental unit defined in M.G.L. c. 29C, which is responsible for the ownership or operation of a water pollution abatement project and is authorized by a bond act to finance all or any part of the cost thereof through the issue of bonds.

MEPA. The Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61 through 62H.

NEPA. The National Environmental Policy Act, 42 U.S.C. 4321 *et seq.*

Nonpoint Source Project. Projects which implement or are consistent with the Nonpoint Source Management Plan, developed and updated by the Department pursuant to § 319 of the CWA, which may include, but are not limited to, the repair, replacement and/or upgrading of subsurface sewage disposal systems regulated under 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*, landfill capping and closure, remediation of leaking underground storage tanks, erosion control, the control of stormwater runoff, brownfields remediation projects, and other water pollution prevention projects.

Nutrient Removal Project. A water pollution abatement project that is being undertaken by a Local Governmental Unit primarily to remediate or prevent nutrient enrichment of a surface water body or a source of water supply to comply with effluent limitations established under a NPDES permit or an EPA-approved TMDL or to otherwise implement a nutrient management plan approved by the Department. Nutrient Removal Projects include those portions of such projects approved by the Department as reasonably necessary for cost-effective nutrient removal or recovery, and as evidenced by the Local Governmental Unit's CWMP or a corresponding engineering report or a 208 Plan or watershed restoration plan that is consistent therewith, as determined by the designated areawide planning agency that prepared the 208 Plan.

44.03: continued

Nutrient Sensitive Watershed. Any watershed or sub-watershed containing a water body impaired by nutrients that has been listed, accordingly, on Massachusetts' list of impaired waterbodies under § 303(d) of the CWA or that has been designated as nutrient sensitive by the Department.

Policy on Eligible Project Costs. The Department's document entitled *Policy on Eligible Project Costs*, which identifies the specific types of project costs determined by the Department to be generally within the eligible project categories identified in 310 CMR 44.08(1) and (2).

POTW Treatment Plant. That portion of a POTW which is designed to provide treatment (including recycling and reclamation) of municipal sewage and industrial waste.

Project Approval Certificate. A certificate issued by the Department to the Trust certifying that a project is approved for financing by the Trust and that the costs of the project are eligible for financial assistance pursuant to M.G.L. c. 29C, § 6.

Project Regulatory Agreement. An agreement between the Department and a Local Governmental Unit, executed and delivered to the Trust on or prior to the date of a loan from the Trust to the Local Governmental Unit to finance a project approved by the Department, which includes a disbursement schedule, procedures for approval and payment of requisitions, conditions related to the borrower's compliance with the Department's regulations and other federal and state statutes and regulations applicable to the construction and operation of the project, and provision for the Department's supervision of the project in accordance with 310 CMR 44.00.

Publicly Owned Treatment Works (POTW). A treatment works as defined by § 212 of the CWA, 33 U.S.C. § 1292, which is owned by a State or municipality (as defined by § 502(4) of the CWA, 33 U.S.C. § 1362(4)). Publicly Owned Treatment Works (POTW) includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. Publicly Owned Treatment Works (POTW) also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. Publicly Owned Treatment Works (POTW) also means the municipality as defined in § 502(4) of the CWA, 33 U.S.C. § 1362(4), which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

Regional Land Use Planning Agency. Any one of the public bodies corporate established as a regional planning district commission pursuant to M.G.L. c. 40B, § 3.

Regional Local Government Unit. Any Local Government Unit which is responsible for the ownership or operation of a Regional System.

Regional System. Any District serving two or more municipalities, any private water system serving two or more municipalities, and any other entity established by mutual agreement of two or more municipalities, or by a county in which all municipalities of the county have an agreement to provide public water supply or wastewater services, or both, through shared facilities, sources or distribution networks, and which has authority to set rates and charges for the consumers of such services.

State Revolving Fund (SRF) Program. The financial assistance program for water pollution abatement projects authorized under M.G.L. c. 21, § 27A, and the CWA, including the Clean Water State Revolving Fund Program established pursuant to M.G.L. c. 29C, the Department's related authority and responsibilities set forth in M.G.L. c. 21, § 27A, and elsewhere in M.G.L. c. 21, and the Water Pollution Abatement Revolving Fund established pursuant to M.G.L. c. 29, § 2L.

Title 5. 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage.*

44.03: continued

Trust. The Massachusetts Clean Water Trust established by M.G.L. c. 29C. The Trust administers the Commonwealth's SRF programs, which are authorized by federal legislation - the Water Quality Act of 1987 for the clean water SRF and the Safe Drinking Water Act of 1996 for the drinking water SRF - to provide financial assistance to borrowers for wastewater projects and drinking water projects.

Wastewater. Sewage, industrial waste, other wastes or any combination of the three, as defined in 314 CMR 3.00: *Surface Water Discharge Permit Program* and 5.00: *Ground Water Discharge Permit Program*.

Wastewater Treatment Project. Abatement facilities eligible for SRF assistance under the CWA providing, or being upgraded or rehabilitated to provide, secondary or more stringent wastewater treatment (or any cost effective alternatives), including conveyance components (such as interceptors) and appurtenances related to such facilities as well as the correction of combined sewer overflows. Wastewater treatment project does not, however, include activities and/or facilities within the definitions of an Infiltration and Inflow Project or a Collection System Project under 310 CMR 44.03.

Water Pollution Abatement Project. Any abatement facilities, including without limitation rehabilitation of abatement facilities to remove, curtail or otherwise mitigate infiltration and inflow, collection system, treatment works and treatment facilities as defined in M.G.L. c. 21, § 26A, and any eligible facilities for implementation of a nonpoint source pollution control management program or estuary conservation and management plan pursuant to the CWA.

Watershed Benchmark Flow. The existing wastewater facility total flow amount in a planning area, including flow amounts from on-site subsurface disposal systems, collection systems, and wastewater treatment plants, as set forth in a Local Governmental Unit's Department-approved CWMP.

Watershed Management Plans. Plans developed, updated and/or approved by the Department to assess and manage the water resources of any watershed or subwatershed, including plans which implement or are consistent with the Department's Nonpoint Source Management Plan. Watershed Management Plans may include watershed related plans developed and updated by other parties which, as approved by the Department, implement or are consistent with the Department's Nonpoint Source Management Plan.

44.04: Eligible Projects

(1) Any water pollution abatement project, as defined in 310 CMR 44.03, is eligible to receive financial assistance from the Trust pursuant to 310 CMR 44.00. More specifically, eligible projects fall into the following categories:

- (a) Wastewater Treatment Projects, as defined in 310 CMR 44.03;
- (b) Infiltration Inflow (I/I) Projects, as defined in 310 CMR 44.03;
- (c) Collection System Projects, as defined in 310 CMR 44.03, provided, however, that at least 85% of the expected wastewater flow into the proposed collection system will be for wastewater flows in existence as of July 1, 1995, except, subject to the approval of the Department, in areas designated as city or town centers, rural village districts, or brownfields redevelopment areas, areas designated under M.G.L. c. 40R as "smart growth districts" or projects in Growth Districts designated by the Executive Office of Housing and Economic Development with the concurrence of the Executive Office of Energy and Environmental Affairs;
- (d) Nonpoint Source Projects, as defined in 310 CMR 44.03, including but not limited to projects financed under the Community Septic Management Program within the Fund to assist eligible homeowners to upgrade failed septic systems in compliance with 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage* through underlying betterment agreements between a Local Governmental Unit and such homeowners;

44.04: continued

- (e) The planning and/or design for any one of the project categories identified in 310 CMR 44.04(1)(a) through (d), including but not limited to comprehensive wastewater management planning under 310 CMR 44.09(2) and (3) and planning projects which implement the Nonpoint Source Management Plan, as developed and updated by the Department pursuant to § 319 of the CWA, provided that the total funding allocated for planning and/or design projects shall not exceed 10% of the total financial assistance authorized on the calendar year Intended Use Plan Project Listing portion of the priority list. The Department may modify the allocation of funds consistent with its identification of planning and/or design projects as a funding priority in a particular calendar year pursuant to 310 CMR 44.06(3);
- (f) Any project in the categories identified in 310 CMR 44.04(1)(a) through (d) which utilizes a single contractor to design, build and/or operate the project facilities, provided the procurement and use of such contractor is authorized by law, the project conforms with the state constitutional requirements governing the use of Commonwealth funds for public purposes, and the project otherwise meets the requirements of 310 CMR 44.00. The operational costs of such projects shall be ineligible for SRF assistance;
- (g) Projects for the development and implementation of a conservation and management plan under § 320 of the CWA, 33 U.S.C. § 1330;
- (h) The construction, repair, or replacement of publicly- or privately-owned decentralized wastewater treatment systems that treat municipal wastewater or domestic sewage;
- (i) Publicly and privately owned, permitted and unpermitted projects that manage, reduce, treat, or recapture stormwater or subsurface drainage water;
- (j) Projects that reduce the demand for POTW capacity through water conservation, efficiency, or reuse, regardless of whether the activity takes place at publicly or privately owned properties;
- (k) Projects that develop and implement a watershed pilot project related to at least one of the six areas identified in § 122 of the CWA, 33 U.S.C. § 1274: watershed management of wet weather discharges, stormwater best management practices, watershed partnerships, integrated water resource planning, municipality-wide stormwater management planning, or increased resilience of treatment works;
- (l) Projects that reduce energy consumption needs for POTWs and related planning activities, such as energy audits and optimization studies;
- (m) Projects that include the equipment and piping required to reuse or recycle wastewater, stormwater, or subsurface drainage water;
- (n) Projects that provide financial assistance to any qualified nonprofit entity to provide assistance to small- and medium-sized POTWs for training activities, planning, design, and associated preconstruction activities and to assist POTWs in achieving compliance with the CWA. Ongoing operation and maintenance activities are not eligible;
- (o) Acquisition of land that is an integral part of the treatment system (*e.g.*, land for spray irrigation or subsurface disposal) and that is necessary for construction of POTWs, including surface and subsurface easements, a place to store equipment and material during construction, land needed to locate eligible projects (*e.g.*, pumping stations), and land integral to the treatment process;
- (p) Projects that increase the security of POTWs; and
- (q) Projects that use regional water resources to offset, by at least 100%, the impact of water withdrawals on local water resources in the watershed basin of the receiving community.

44.05: Priority System

- (1) Establishment of Calendar Year Priority List.
 - (a) Prior to the beginning of each calendar year, the Department shall establish a single, annual list of projects prioritized to receive financial assistance pursuant to 310 CMR 44.00. The Department will prioritize projects in the order of their numerical rating, as determined by the Department based on the proponent's responses to questions in the Project Evaluation Form. For the purpose of prioritizing projects financed under the Community Septic Management Program, which has its own legislatively dedicated funding allotment, the Department may distinguish the priority and the funding status of Community Septic Management Program projects from other projects on the priority list.

44.05: continued

(b) In establishing the priority list, the Department may require Local Governmental Units to submit a Project Evaluation Form containing information deemed necessary by the Department for project evaluation, including but not limited to, information which addresses the proposed project's compliance with the Intended Use Plan Project Listing criteria in 310 CMR 44.03(2) and the Project Selection Criteria in 310 CMR 44.06. The Department may establish a reasonable deadline for its receipt of such information, and may decline to evaluate and prioritize a project if the Department determines that the Local Governmental Unit has failed to provide sufficient information.

(c) Prior to adopting the priority list, the Department shall conduct a public hearing to receive and consider public comment on the proposed list. The Department will ensure that notice of the public hearing will be published in one or more newspapers of general circulation 30 days prior to the date of the hearing.

(2) Intended Use Plan Project Listing.

(a) Eligible projects which the Department finds are ready to proceed and for which funds are available in the calendar year in which the priority list is established shall be placed on the Intended Use Plan Project Listing portion of the priority list. The Department reserves the right to expand the Intended Use Plan Project Listing during the course of the relevant calendar year based on an additional allocation of available funding.

(b) The Local Governmental Unit proposing the project must show that its project meets each of the following criteria in order for the Department to place the project on the Intended Use Plan Project Listing:

1. As determined by the Department, the project's environmental, and/or public health benefits, as evidenced by its ranking on the priority list, are sufficiently high to warrant its funding as a priority in the relevant calendar year;
2. As determined by the Department, based on a review of reliable and relevant information, the project's environmental and/or public health benefits outweigh any expected negative impacts to water quality or water quantity or to the public health which are directly attributable to the project;
3. The Local Governmental Unit has already obtained its local funding authorization for the project, or has committed to a specific schedule to obtain such funding authorization by June 30th of the relevant calendar year; and
4. The Local Governmental Unit demonstrates to the Department's satisfaction that its project is sufficiently advanced in its implementation such that the Local Governmental Unit will file a complete loan application with the Department for the project by October 15th of the relevant calendar year.

A complete application includes, as applicable, approvable plans and specifications for the project and evidence that the Local Governmental Unit has, at a minimum, filed applications for any permits or environmental reviews applicable to the project. As provided in 310 CMR 44.12(1)(b), the Department may deny any application which it determines to be incomplete.

(c) In the event that a project placed on Intended Use Plan Project Listing fails during the course of the calendar year to meet one or more of the criteria in 310 CMR 44.05(2)(b), the project may be removed from the Intended Use Plan Project Listing. In such event, the Department reserves the right to raise one or more project(s) which are determined by the Department to be of the highest priority and which meet the criteria in 310 CMR 44.05(2)(b), consistent with available funding, to the Intended Use Plan Project Listing. Subject to the availability of funding and the project's priority, the Department further reserves the right to restore any project removed from the Intended Use Plan Project Listing for failure to meet the criteria in 310 CMR 44.05(2)(b) if the project thereafter meets those criteria prior to the end of the relevant calendar year.

(d) The implementation of some projects on the Intended Use Plan Project Listing will take place over two years or more. For such multi-year projects, the Department will limit the amount of actual funding reserved for the project on each annual Intended Use Plan Project Listing to the amount needed to fund the project for two years. In the event that a multi-year project receives a project approval certificate from the Department by the end of the relevant calendar year, the Department will reserve another annual increment(s) of funding for the project on subsequent calendar year Intended Use Plan Project Listings, subject to the

44.05: continued

availability of funding, and provided the project is implemented in accordance with the schedule in the project approval certificate, as determined by the Department. The limitation on financial assistance in 310 CMR 44.05(3) shall apply to any amounts reserved as annual increments of funding for a multi-year project on subsequent calendar year Intended Use Plan Project Listings.

(3) Limitation on Financial Assistance.

(a) No Local Governmental Unit shall receive Department approval for financial assistance from the Trust for a project or projects in a calendar year in any amount in excess of 33% of the total financial assistance authorized on the Intended Use Plan Project Listing portion of the priority list in that calendar year, including any amounts reserved as annual increments of funding for a multi-year project on subsequent calendar year Intended Use Plan Project Listings.

(b) The Department reserves the right to waive the borrower limitation on financial assistance set forth in 310 CMR 44.05(3)(a) if the Department determines that one or more projects on the Intended Use Plan Project Listing portion of the applicable priority list has failed or will fail to meet the criteria in 310 CMR 44.05(2)(b) by October 15th in the relevant calendar year, or if the Department allocates additional available funding to the Intended Use Plan Project Listing during the course of the relevant calendar year.

(c) The Trust reserves the right to call due the unpaid loan balance of any loan and/or other form of financial assistance at the financial equivalent of a loan made at an interest rate at zero per cent if the Local Governmental Unit awarded such loan amends, or suffers the amendment of, any Land Use Control upon which approval of such loan and/or other form of financial assistance was based, unless the Local Governmental Unit demonstrates to the Department's satisfaction that such amended Land Use Controls will ensure that overall wastewater flow in the community will not increase as a result of sewerage beyond the flow authorized under the Land Use Controls that were in effect on the date the Secretary issued a MEPA certificate for the CWMP or the date of a 208 Plan.

44.06: Project Selection Criteria

(1) Except as provided for in 310 CMR 44.06(2) through (4), the Department will use the evaluation criteria in 310 CMR 44.06(1)(a) and (b) to determine a project's priority and ranking on the calendar year priority list. The Department, through written guidance, will assign a numerical point range to each of the evaluation criteria in 310 CMR 44.06(1) which will be used to further determine a project's ranking on the priority list.

(a) Environmental Criteria.

1. The extent to which the project will eliminate or mitigate a risk to public health. Relevant factors to consider may include but are not limited to:

- a. The extent to which the project is needed to improve, restore or protect a public or private drinking water supply.
- b. The size and character of the population threatened or negatively impacted by the identified risk to public health (*e.g.*, users of a community public water system, owners of private wells, the number of children, the elderly, persons with pre-existing health risks), and the extent to which the project will eliminate or mitigate the public health risk to the identified population.
- c. The extent to which the project will eliminate or mitigate a public health hazard or public nuisance, as determined by the local health authority and/or the Department (*e.g.*, sewerage surcharging; failed 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage* systems).

2. The severity of the environmental problem which the project is intended to address. Relevant factors to consider may include but are not limited to:

- a. The severity of the specific water quality or sediment parameter problems in the relevant water body (*e.g.*, biochemical oxygen demand, suspended solids, pH, temperature, nitrogen, phosphorus, metals).
- b. Whether the relevant water body has been identified on the Commonwealth's § 303(d) list as failing to meet water quality standards for specific parameters.

44.06: continued

- c. Whether the relevant water body currently meets water quality standards and its designated water quality uses under 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*, including any Total Maximum Daily Load (TMDL) established by the Department for the relevant water body.
 - d. Whether the relevant water body is a significant public recreation resource, a state Area of Critical Environmental Concern, an outstanding resource water as determined by the Commonwealth, a federally designated river, *etc.*
 - e. Whether there are adverse impacts to living resources such as commercial or recreational fisheries, or endangered or wildlife species and their habitats.
 - f. The extent to which there are other sensitive environmental resources (such as wetlands, Zones I and II of public water supplies, shellfish or cold water fisheries) or water dependent recreational uses which are threatened or negatively impacted by the identified environmental problem.
3. The extent to which the project will have demonstrable water quality benefits which will effectively address the identified environmental problems. Relevant factors to consider may include, but are not limited to, the extent to which the Local Governmental Unit's jurisdiction and the project's objectives, scope and proposed implementation demonstrate the project's capability to eliminate or significantly mitigate the identified environmental problems.
 4. The extent to which the project is needed to come into or maintain compliance with applicable federal and/or state discharge permit(s) or other federal and/or state water pollution control requirements, and the effect of compliance on water quality and/or public health. Relevant factors to consider may include but are not limited to:
 - a. The extent to which the project is needed to ensure compliance with an existing federal or state court or administrative order.
 - b. The extent to which the project is needed to ensure compliance with a federal or state discharge permit (*e.g.*, NPDES permit limits) or federal or state water pollution control regulations and requirements (*e.g.*, 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage* control of stormwater discharges, compliance with Total Maximum Daily Load Limitations).
 - c. The extent to which the project's maintenance of compliance with an order, discharge permit or regulation demonstrably benefits or protects the water quality and/or public health (*e.g.*, projects which rehabilitate or upgrade existing facilities and are designed to keep a facility in compliance and/or to prevent water resource degradations).
- (b) Program and Implementation Criteria.
1. The extent to which the project implements or is consistent with one or more current watershed management plans (*e.g.*, DEP basin plans) and/or watershed protection plans (*e.g.*, local Zone II land use controls, comprehensive conservation management plans), or otherwise effectively addresses a watershed priority, as determined by the Department.
 2. The extent to which the capacity provided by the project is needed, including, more specifically, whether the project will duplicate existing treatment or disposal capacity available at an economic cost within the relevant region.
 3. The extent to which, as determined by the Department based on a review of reliable and relevant information, the project's environmental and/or public health benefits outweigh any expected negative impacts to water quality, water quantity or to the public health which are directly attributable to the project.
 4. The extent to which the project is consistent with local and regional growth and/or infrastructure plans, and promotes the rehabilitation and revitalization of infrastructure, structures, sites, and areas previously developed and still suitable for economic (re)use.
 5. Whether the project constitutes or is a component of a multi-community or regional approach to addressing the identified environmental problem.
 6. The extent to which the project utilizes Department-approved innovative/alternative technology to effectively address the identified environmental problem.
 7. Whether the Local Governmental Unit has implemented a pricing system for sewer services in accordance with the provisions of M.G.L. c. 40, § 39J and St. 1985, c. 275.

44.06: continued

8. The extent to which the Local Governmental Unit has implemented the guidelines for best management practices in water management established by the board of the Trust.
- (2) Certain of the project selection criteria in 310 CMR 44.06(1) do not apply to planning projects (e.g., the extent to which the project will have demonstrable water quality benefits which will effectively address the identified problem). The Department will limit its evaluation of planning projects to the relevant criteria.
 - (3) In establishing the calendar year priority list pursuant to 310 CMR 44.05(1), the Department may:
 - (a) identify project categories and/or watersheds as funding priorities warranting a high priority status in a particular calendar year, consistent with the Project Selection Criteria in 310 CMR 44.06(1); and
 - (b) modify and/or further specify the factors or point system to be used to evaluate the extent to which a project meets the Project Selection Criteria in 310 CMR 44.06(1), including any project or program priorities identified by the Department as a funding priority in a particular calendar year pursuant to 310 CMR 44.06(3) and (4).
 - (4) Before finally adopting substantial modifications to the Project Selection Criteria and/or the related point system, the Department will notice such modifications in the *Environmental Monitor* and provide an opportunity for public comment for a period of not less than 30 days, including conducting a minimum of one public hearing.

44.07: Financing Criteria

- (1) In general, the Trust is authorized to structure the debt service costs on loans and other forms of financial assistance for Eligible Projects that provide the financial equivalent of a loan made at an interest rate equal to 2%. Notwithstanding the foregoing, subject to the limits on contract assistance provided in M.G.L. c. 29C, § 6, the Trust may provide additional financial assistance that is the financial equivalent of a loan made at an interest rate equal to 0%, as provided in 310 CMR 44.07(1)(a) for Nutrient Removal Projects in communities that have established Flow Neutral Land Use Controls, as provided in 310 CMR 44.07(2). Notwithstanding the foregoing, subject to the limits on contract assistance provided in M.G.L. c. 29C, § 6, the Trust may provide additional financial assistance that is the financial equivalent of a loan made at an interest rate less than 2%, which may include principal forgiveness, as determined by the Trust, for Qualifying Designated Projects, as provided in 310 CMR 44.07(4).
- (2) Nutrient Removal Projects. Subject to the limits on contract assistance provided in M.G.L. c. 29C, § 6, a Local Governmental Unit applying for financial assistance for a Nutrient Removal Project, as defined in 310 CMR 44.03, on the Intended Use Plan for calendar year 2009 to calendar year 2069, is eligible for loans and other forms of financial assistance at the financial equivalent of a loan made at an interest rate at 0% if the Local Governmental Unit demonstrates to the Department's satisfaction that it meets all of the following criteria:
 - (a) the Local Governmental Unit is not currently subject, due to a violation of a nutrient-related total maximum daily load standard or other nutrient based standard, to a Department enforcement order, administrative consent order or unilateral administrative order, enforcement action by the EPA or subject to a state or federal court order relative to the proposed project, excluding any such order or action establishing a schedule for coming into compliance with more stringent effluent limitations contained in a NPDES renewal permit or permit modification;
 - (b) the Local Governmental Unit has a CWMP that has been approved by the Department or the Department determines that the project is consistent with a 208 Plan;
 - (c) the project is consistent with the regional water resources management plan including, but not limited to, a 208 Plan, if such a plan exists, as evidenced by written notice of such by the Regional Land Use Planning Agency for the region where the Local Governmental Unit is located; and

44.07: continued

(d) the Local Governmental Unit demonstrates in accordance with 310 CMR 44.07(3) to the Department's satisfaction, in consultation with the Massachusetts Department of Housing and Community Development and, where applicable, the Regional Land Use Planning Agency for the region where the Local Governmental Unit is located, that it has adopted Land Use Controls that ensure the overall wastewater flow amount in the community will not increase as a result of sewerage beyond the flow amount authorized under the Land Use Controls that were in effect on the date the Secretary issued a MEPA certificate for the CWMP or, if none exists, the date of a 208 Plan, if such a plan exists.

(3) Flow Neutral Land Use Controls. To demonstrate that it has adopted adequate Land Use Controls to ensure that the overall wastewater flow in the community will be "flow neutral", as required by M.G.L. c. 29C, § 6, and 310 CMR 44.07(2)(d), a Local Governmental Unit must estimate wastewater flow volume to demonstrate that overall wastewater flow in the sewerage watershed will not increase as a result of the project for which a zero rate of interest is sought. A Local Governmental Unit will be deemed to have established such "flow neutral" Land Use Controls if the Local Governmental Unit has a Department-approved CWMP or 208 Plan that includes a watershed benchmark flow, and the Local Governmental Unit has established Land Use Controls that limit future wastewater flow volume to the watershed benchmark flow contained in the Department-approved CWMP or 208 Plan. Such Land Use Controls must be in effect prior to closing to receive zero rate of interest loans. In demonstrating that it has established such "flow neutral" Land Use Controls, a Local Governmental Unit may use either one of the two methods in 310 CMR 44.07(3)(a) or (b). In doing so, the Local Governmental Unit should express all flow volumes as an annual average in gallons per day per acre.

(a) Method 1: Presumptive Determination of Flow Neutrality. To demonstrate that the Local Governmental Unit has established Land Use Controls that limit future wastewater flow volume to the watershed benchmark flow, the Local Governmental Unit shall establish as the watershed benchmark flow the total flow volume for all parcels of land within the nutrient sensitive watershed subject to the Local Governmental Unit's jurisdiction, as identified in the CWMP or 208 Plan, excluding only those parcels whose owners have been allowed to opt out in accordance with M.G.L. c. 83, § 1B, calculated as follows:

1. Flow Volume for the Developed Residential Parcels. The Local Governmental Unit shall utilize actual water meter flow data to establish the annual average flow volume for the developed residential parcels. If no actual water meter flow data exists to establish an annual average residential flow, then the Local Governmental Unit shall utilize actual water meter flow data for comparable developed residential parcels in the same or similarly-sized city or town or watershed to estimate the annual average flow volume for the developed residential parcels.

2. Flow Volume for the Undeveloped Residential Parcels. The Local Governmental Unit shall utilize actual water meter flow data for comparable developed residential properties in the same city or town or watershed to estimate the annual average flow volume for the undeveloped residential properties under the local Land Use Controls in effect as of the date the Secretary issued a MEPA certificate for the CWMP or the date of a 208 Plan.

3. Flow Volume for the Developed Non-residential Parcels. The Local Governmental Unit shall utilize actual water meter flow data to establish the annual average flow volume for the developed non-residential parcels. If no actual water meter flow data exists to establish such annual average flow volumes, then the Local Governmental Unit shall utilize actual water meter flow data for comparable developed non-residential parcels in the same city or town or watershed to estimate the annual average flow volume for the developed non-residential parcels under the local Land Use Controls in effect as of the date the Secretary issued a MEPA certificate for the CWMP or the date of a 208 Plan.

4. Flow Volume for the Undeveloped Non-residential Parcels. The Local Governmental Unit shall utilize actual water meter flow data for comparable developed non-residential parcels in the same city or town or watershed to estimate an annual average flow volume for the undeveloped non-residential properties under the local Land Use Controls in effect as of the date the Secretary issued a MEPA certificate for the CWMP or the date of a 208 Plan.

44.07: continued

(b) Method 2: Non-presumptive Determination of Flow Neutrality. As an alternative to Method 1, a Local Governmental Unit may elect to establish flow neutrality by demonstrating that future total wastewater flow volume under full build-out conditions will not exceed the total wastewater flow volume under full build-out conditions in effect as of the date the Secretary issued a MEPA certificate for the CWMP or the date of a 208 Plan. Under this alternative, the watershed benchmark flow is considered the total wastewater flow volume under full build-out conditions in effect as of the date the Secretary issued the MEPA certificate for the CWMP or the date of a 208 Plan. To demonstrate that the Local Governmental Unit has established Land Use Controls that limit future wastewater flow volume to the watershed benchmark flow, the Local Governmental Unit shall prepare two separate build-out analyses for all parcels of land within the nutrient sensitive watershed subject to the Local Governmental Unit's jurisdiction, as identified in the CWMP or the 208 Plan, excluding only those parcels whose owners have been allowed to opt out in accordance with M.G.L. c. 83, § 1B, as follows:

1. The first build-out analysis shall establish wastewater flows based on a full build-out under the local Land Use Controls in effect as of the date the Secretary issued a MEPA certificate for the CWMP or the date of a 208 Plan (*i.e.*, the "pre-sewer build-out").
2. The second build-out analysis shall establish wastewater flows based on a full build-out under the local Land Use Controls in effect at the time construction of the project for which a zero rate of interest is sought is expected to be completed (*i.e.*, the "post-sewer build-out").
3. For both the pre-sewer and post-sewer build-out analyses, the residential and non-residential flows must be calculated utilizing actual water meter flow data to establish the annual average flow volume. For the pre-sewer build-out analyses, if no actual water meter flow data exists, then the Local Governmental Unit shall utilize actual water meter flow data for comparable parcels in the same city or town or watershed to estimate the annual average flow volume or the flow volume allowable under local Land Use Controls in effect as of the date the Secretary issued a MEPA certificate for the CWMP or the date of the 208 Plan, whichever is less. For the post-sewer build-out analysis, if no actual water use data exists, then the Local Governmental Unit shall utilize actual water meter flow data for comparable parcels in the same city or town or watershed or the flow volume allowable under local Land Use Controls at the time construction of the project for which a zero rate of interest is sought is expected to be completed, whichever is less.
4. Each build-out analysis shall include an analysis of all built and buildable parcels, including redevelopment potential, and a rigorous analysis of typical exceptions to Land Use Controls, such as use/dimensional variances, special permits, waivers, expansion and change of use in preexisting nonconforming uses, M.G.L. c. 40A, § 3, exempt uses, municipal uses and vested rights.
5. All assumptions made in the build-out analyses shall be clearly identified and explained. Future infrastructure needs, such as parking, wastewater infrastructure, landscape, and driveways, shall be factored into the build-out analyses and include the source and rationale for any ratios, multipliers or variables used in calculating such needs.

(4) Qualifying Designated Projects.

(a) Subject to the limits on contract assistance provided in M.G.L. c. 29C, § 6, a Local Governmental Unit applying for financial assistance for a Qualifying Designated Project, as set forth in 310 CMR 44.07(4), on the Intended Use Plan for calendar year 2017 or later, unless otherwise authorized by the Legislature, is eligible for additional financial assistance in accordance with 310 CMR 44.07(4)(b) that may include loans and other forms of subsidies at the financial equivalent of a loan made at an interest rate less than 2% or other additional subsidies such as principal forgiveness, as determined by the Trust, if the Local Governmental Unit demonstrates to the Department's satisfaction that it meets all of the following criteria:

1. the project is consistent with the current priorities established by the Trust, as set forth in the Department's annual project solicitation;
2. the project implements Best Management Practices; and

44.07: continued

3. the Local Governmental Unit meets the Trust's affordability criteria established pursuant to the CWA § 603(i), and 33 U.S.C. § 1383(i), but only to the extent required by federal law.
- (b) Projects considered for the additional subsidies described in 310 CMR 44.07(4)(a) may include the following:
1. projects developed pursuant to a regional water resources management plan including, but not limited to, a 208 Plan, if such a plan exists, as evidenced by written notice of such by the Regional Land Use Planning Agency for the region where the Local Governmental Unit is located;
 2. projects that are necessary to connect a local or Regional Local Governmental Unit to a facility of the Massachusetts Water Resources Authority, if the local or regional Local Governmental Unit has paid or committed to pay the entry fee of that authority;
 3. Green Infrastructure Projects;
 4. projects that are a direct result of a disaster affecting the service area that is the subject of a declaration of emergency by the governor; or
 5. innovative water projects that utilize new technology and which improve environmental or treatment quality, reduce costs, increase access and availability of water, conserve water or energy or improve management in the areas of wastewater, storm water, groundwater or coastal resources; provided, that the technology has not been commercially deployed, other than as a pilot project, previously in the Commonwealth.

44.08: Eligible Project Costs

- (1) Costs which the Department determines are necessary for the completion of the project are eligible for financing in the loan and to receive a subsidy under the loan.
- (2) Costs which the Department determines are not necessary for completion of the project are ineligible for financing in the loan.
- (3) The Department will base its eligible project cost determinations on its "Policy on Eligible Project Costs", which identifies the specific types of costs that are within the two categories under 310 CMR 44.08(1) and (2).
- (4) Project costs incurred by an applicant prior to the date of issuance of the Department's project approval certificate are not eligible for a subsidy under the loan, except as follows:
 - (a) Preliminary engineering, comprehensive wastewater management planning, design or related professional services and construction work, may be approved by the Department prior to the issuance of a project approval certificate as project costs eligible for subsidy if:
 1. the applicant has submitted a written and adequately substantiated request for approval;
 2. written approval by the Department is obtained before initiation of the project and award of any loan for the project; and
 3. the project is included and maintains its status on the current calendar year priority list.
 - (b) The Department's prior approval of costs in accordance with 310 CMR 44.08(4)(a) does not constitute a commitment to approve financial assistance for any project. Instead, such costs will be considered eligible project costs only if a loan is made by the Trust for the project. Accordingly, an applicant receiving the Department's prior approval of costs in accordance with 310 CMR 44.08(4)(a) proceeds at its own risk.
- (5) Costs incurred in excess of the approved project costs are not eligible for financing by the loan, unless the project approval certificate and the loan are both amended to include the cost increase.
- (6) A loan recipient shall exercise its best efforts to accomplish the work program set forth in the loan within the loan amount. Whenever a loan recipient reasonably believes that its project costs will exceed or be substantially less than the approved loan amount, it must promptly notify the Department in writing. The loan recipient must submit revised cost estimates for the project to the Department as soon thereafter as practicable. Neither the Department, nor the Trust, is under any obligation to approve costs in excess of the amount previously approved in the project approval certificate and loan.

44.08: continued

(7) The final eligible project costs shall be the eligible costs approved by the Department upon completion of the project, unless audited. If such project costs are audited, the final eligible costs shall be the eligible costs approved by the Department at the completion of the audit.

44.09: Planning Requirements

(1) Introduction. 310 CMR 44.09 addresses requirements related to planning. 310 CMR 44.09 requires a Local Governmental Unit to demonstrate that its proposed SRF project is consistent with existing state, regional and local water resource and wastewater planning requirements. The Department's *Guide to Water Resource Management Planning* identifies three levels of planning (Project Evaluation or Engineering Reports, CWMPs and Integrated Water Resource Management Plans) which may be used to evaluate different types of SRF projects. Unless determined otherwise by the Department, Comprehensive Wastewater Management Plans or Integrated Water Resource Management Plans are required only for controversial or complex wastewater projects. Unless otherwise determined by the Department, a less comprehensive report, the Project Evaluation Report or Engineering Report, is required for all other wastewater projects eligible for financial assistance from the SRF.

(2) Consistency of SRF Projects with Water Resource and Wastewater Planning Requirements.

(a) As provided in M.G.L. c. 21, § 27A(d), a Local Governmental Unit applying for assistance from the Trust must demonstrate that its project is consistent with existing state, regional and local water resource and wastewater planning requirements, including but not limited to:

1. river basin water quality plans pursuant to § 303(e) of the CWA, 33 U.S.C. § 1313;
2. nonpoint source management plans pursuant to § 319 of the CWA, 33 U.S.C. § 1329;
3. estuaries management plans pursuant to § 320 of the CWA, 33 U.S.C. § 1330;
4. local water resource management plans pursuant to policies of the Water Resources Commission;
5. water emergency planning pursuant to M.G.L. c. 21G; and
6. areawide waste treatment management plans approved by EPA pursuant to § 208 of the CWA, 33 U.S.C. § 1288.

(b) Applicants shall also certify that land use and other controls in place (*e.g.*, zoning bylaws) are consistent with the wastewater system service populations projected in any CWMP of the applicant. An applicant's certification shall include a description of all such land use and other controls in place as supporting documentation for its certification.

(3) Planning Required for SRF Projects.

(a) Comprehensive Wastewater and Integrated Water Resource Management Planning. Unless otherwise determined by the Department, major, complicated or controversial wastewater projects shall be the result of a CWMP or an Integrated Water Resource Management Plan that systematically:

1. assesses the need for the project;
2. examines alternatives to the project;
3. proposes a plan and schedule for the project;
4. evaluates all the environmental impacts of the project including without limitation secondary growth impacts and impacts of the overall water balance in the watershed or subwatershed;
5. identifies means of mitigating those impacts;
6. demonstrates that the project is not only environmentally appropriate and cost-effective, but also implementable from a legal, institutional, financial and management standpoint. The Department will determine the scope of work for any CWMP or Integrated Water Resource Management Plan used to fulfill the requirements in accordance with the Department's *Guide to Water Resource Management Planning*. The Scope of Work for all CWMPs and Integrated Water Resource Management Plans must provide for a public participation program that includes at a minimum one public meeting to discuss the alternatives to the project and their environmental impacts and a public hearing on the environmental impacts, plan, and schedule of the project.

44.09: continued

(b) Project Evaluation or Engineering Report. Unless otherwise determined by the Department, planning for projects other than the project categories identified in 310 CMR 44.09(3)(a) shall be limited to the development of a Project Evaluation or Engineering Report. Based on the nature and duration of the proposed project, the Department will determine the required scope of the Project Evaluation or Engineering Report in accordance with the Guide to Water Resource Management Planning. Unless otherwise determined by the Department, a complete Project Evaluation or Engineering Report for a wastewater project shall include:

1. A description of the proposed project;
2. An analysis of the cost-effectiveness of the project and the alternatives considered;
3. For the selected alternative, a concise description at an appropriate level of detail, of at least the following:
 - a. the relevant design parameters for the project;
 - b. the estimated capital construction and operation and maintenance costs of the project;
 - c. the cost impacts on system users and non-users, or where the project is not user-based, cost impacts on the Local Governmental Unit budget; and
 - d. the institutional, financial, legal and management arrangements necessary for successful implementation of the project.
4. A public participation program that includes, at a minimum, one public meeting on the proposed project.

(c) Targeted Watershed Management Plans. Notwithstanding 310 CMR 44.09(3)(a), an applicant may submit to the Department for approval a targeted watershed management plan that is consistent with a 208 Plan, as determined by the designated areawide planning agency under § 208 of the CWA, in lieu of a CWMP or an Integrated Water Resource Management Plan for projects that will be carried out under a watershed-based permit issued by the Department.

(d) Fiscal Sustainability Plan. Starting October 1, 2015 the Department will require all applicants to submit a FSP for projects that involve the repair, replacement, or expansion of a treatment works. 310 CMR 44.09(3)(d) does not apply to a loan if, prior to this date, the project was listed on a CWSRF Intended Use Plan or the loan recipient has submitted an application for CWSRF funding assistance.

(e) Cost Effectiveness Study. Starting October 1, 2015, the Department will require all applicants to certify that they have studied and evaluated the cost and effectiveness of the processes, materials, techniques, and technologies for the funded project and that they have selected, to the maximum extent practicable, a project that maximizes the potential for efficient water and energy conservation, taking into consideration capital cost, operation and maintenance, and replacement cost. 310 CMR 44.09(3)(e) does not apply to a loan if, prior to October 1, 2015, the project was listed on a CWSRF Intended Use Plan or the loan recipient submitted an application for CWSRF funding assistance. Prior to October 1, 2015, the Department will be finalizing the cost and effectiveness analysis requirements and guidance and will post them on the Department's CWSRF website at www.mass.gov/eea/agencies/massdep/water/grants/clean-water-state-revolving-fund.html.

44.10: Environmental Review and Federal Cross-cutter Requirements(1) Environmental Review Requirements.

(a) All projects approved by the Department to receive a loan from the Trust shall, at a minimum, comply with the requirements of MEPA and 301 CMR 11.00: *MEPA Regulations*. In addition, a public hearing shall be held on the project if the Department determines that the project is controversial, or if the Department otherwise determines that a hearing is in the public interest. The Department may also require the Local Governmental Unit to consider project alternatives and to provide the public an opportunity to comment on such alternatives.

(b) Projects required to be the result of comprehensive wastewater management planning, as provided in 310 CMR 44.09(2)(a) and (3), shall also comply with the environmental review and process requirements in the Department's Guide to Water Resource Management Planning.

44.10: continued

(2) Federal Cross-cutter Requirements. All projects to be funded by funds directly made available by federal capitalization grants shall comply with all federal cross-cutters applicable to the project, as determined by the Department. The Department may require any other project to comply with one or more of the federal cross-cutters deemed applicable to the project by the Department.

44.11: Affirmative Action and Disadvantaged Business Enterprise Requirements

(1) Local Governmental Units receiving financial assistance from the Trust shall comply with applicable federal and state anti-discrimination laws and requirements, including the Department's requirements in the areas of Affirmative Action in employment and Disadvantaged Business Enterprise (DBE) utilization in contracting.

(a) In the area of Affirmative Action, such Local Governmental Units shall adopt, for use in all contracts for \$50,000 or more, an adapted version of the Commonwealth of Massachusetts' "Supplemental Equal Employment Opportunity Anti-discrimination and Affirmative Action Program." The contracts may include minority workforce percentages greater than those required for the geographical locations of the construction project as set forth in the Supplemental Program.

(b) In the area of DBE utilization, such Local Governmental Units shall make positive efforts to use DBEs for use in all construction, service and supply subagreements for the project financed by the loan. Such efforts should achieve the applicable federal and/or state goals established for DBE participation, but, at a minimum, should allow DBEs the maximum feasible opportunity to compete for project subagreements.

(2) A Local Governmental Unit receiving a loan from the Trust shall promptly notify the Department in writing when it has good reason to believe that its positive efforts to use DBEs in the subagreements for the project will not achieve one or both of the applicable DBE utilization goals.

44.12: Project Approval and Regulation

(1) Application.

(a) A Local Governmental Unit whose project is on the Intended Use Plan Project Listing portion of the calendar year priority list must first apply to the Department to receive a loan from the Trust to finance costs of the project. The Local Governmental Unit must file a complete application with the Department containing the following information and documentation:

1. General Information which must include evidence of a funding authorization by the Local Governmental Unit sufficient to cover the project cost, and certification of the authority of the Local Governmental Unit to file the application.
2. Financial Information pertinent to the Trust's evaluation of the applicant's ability to repay the loan.
3. Project Information which demonstrates to the Department's satisfaction that the project is sufficiently advanced in its implementation, including, as applicable:
 - a. approvable plans and specifications for the project;
 - b. evidence that the Local Governmental Unit has, at a minimum, filed applications for any permits or environmental reviews applicable to the project;
 - c. the project scope of work, project evaluation report or the comprehensive wastewater management planning for the project; and
 - d. the project schedule that demonstrates to the Department's satisfaction that the project will commence no later than six months from the expected date of issuance of a project approval certificate, assuming the Department determines that the project is approvable.
4. Supplemental Information such as title to project site or evidence of some other appropriate property interest in the project site, any necessary inter-municipal agreements, documentation related to the user charge system, *etc.*
5. Applicant Certification as to the completeness of the application in accordance with the Department's application form and requirements, and as to the accuracy and completeness of the information provided by the applicant in its application.

44.12: continued

(b) The Department may deny any application which it determines to be incomplete. Prior to taking final action on an application, the Department may request the applicant to clarify and/or supplement information contained in its application, or to attend an informal conference(s) with the Department to discuss the application.

(2) Project Approval Certificate.

(a) The Department's approval of an applicant's project shall be contained in a Project Approval Certificate issued to the Trust. As provided in the Act, the Department's issuance of a Project Approval Certificate is a prior necessary condition to the award of a loan by the Trust to finance the costs of a project.

(b) The Department shall not approve a project for a loan from the Trust unless the Local Governmental Unit:

1. demonstrates that its project is consistent with existing state, regional and local water resource and wastewater planning requirements as described in 310 CMR 44.09(2) ("Consistency of SRF Projects with Water Resource and Wastewater Planning Requirements"); and
2. adopts a user charge system in accordance with the Department guidance which is designed to provide adequate revenues required for operation and maintenance, including replacement, of the project.

The Department reserves the discretion to determine that the user charge system requirement does not apply to certain Nonpoint Source Projects (*e.g.*, a stormwater control project that is not providing ongoing service to an identified set of users).

(c) In addition to approving the project, the Project Approval Certificate shall certify those costs of the project determined by the Department to be eligible for assistance from a loan, and those costs determined to be eligible for a subsidy or interest rate under the loan. The Project Approval Certificate shall also identify the level of subsidy applicable to the project in accordance with M.G.L. c. 29C and, as applicable, any additional subsidy applicable to the project authorized by special law. Subsidy is expressed as an interest rate in the Project Approval Certificate.

(d) The Project Approval Certificate may also contain such other conditions and limitations as the Department deems necessary to ensure compliance by a Local Governmental Unit with 310 CMR 44.00 and with all other federal and state statutes and regulations applicable to the construction and operation of the project. Such conditions shall include, but are not limited to, a project completion schedule which shall require the Local Governmental Unit to initiate the project, as determined by the Department, no later than six months from the date of the Department's issuance of the Project Approval Certificate. The Department, at its sole discretion, may extend this six-month deadline based on evidence demonstrating to the Department's satisfaction that the delay is beyond the reasonable control of and without the fault of the Local Governmental Unit or its contractors or other agents.

(e) The Department shall issue the Project Approval Certificate to the Trust for its action and forward a copy of such certificate to the Local Governmental Unit concurrently. The Trust shall thereafter enter into a loan commitment with a Local Governmental Unit consistent with the terms of the Project Approval Certificate. Following entry into a binding loan commitment, the Trust shall prepare and deliver a loan agreement for execution by the Local Governmental Unit, consistent with the terms of the Project Approval Certificate as incorporated into the Department's Project Regulatory Agreement.

(3) Project Regulatory Agreement.

(a) On or prior to the date of a loan from the Trust for a project approved by the Department, the Local Governmental Unit and the Department shall execute and deliver to the Trust a Project Regulatory Agreement relating to the Department's regulation and supervision of the project in accordance with 310 CMR 44.00. The Project Regulatory Agreement shall be in form and substance satisfactory to the Department. The Project Regulatory Agreement shall be incorporated by reference in the Trust loan agreement and failure by the Local Governmental Unit to comply with the Project Regulatory Agreement shall constitute an event of default under the loan agreement.

44.12: continued

(b) The Project Regulatory Agreement shall contain provisions consistent with the Project Approval Certificate. In addition to incorporating pertinent conditions in the Project Approval Certificate, the Project Regulatory Agreement may also contain such other conditions and limitations as the Department deems necessary for its regulation and supervision of the project in accordance with 310 CMR 44.00, including but not limited to:

1. the schedule for disbursement of loan proceeds;
2. the payment requisition requirements and procedures;
3. the requirements and procedures for the Department's audit of payment requisitions;
4. covenants by the Local Governmental Unit related to the project, including a covenant to comply with all federal and state statutes and regulations applicable to the Local Governmental Unit's construction and operation of the project;
5. the measures available to the Department to remedy a default by the Local Governmental Unit under the Project Regulatory Agreement;
6. any requirements regarding certification of a project's performance in accordance with the Department's approval;
7. compliance with the Department's guidance on the use of and requirements for professional subagreements.

REGULATORY AUTHORITY

310 CMR 44.00: M.G.L. c. 21, § 27A.

NON-TEXT PAGE

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 45.00: DEP SELECTION, APPROVAL AND REGULATION OF DRINKING WATER PROJECTS RECEIVING FINANCIAL ASSISTANCE FROM THE STATE REVOLVING FUND

Section

- 45.01: Introduction
- 45.02: Purpose and Applicability
- 45.03: Definitions
- 45.04: Eligible Projects
- 45.05: Priority System
- 45.06: Project Selection Criteria
- 45.07: Financing Criteria
- 45.08: Eligible Project Costs
- 45.09: Project Evaluation Report
- 45.10: Environmental Review and Federal Cross-cutter Requirements
- 45.11: Affirmative Action and Disadvantaged Business Enterprise Requirements
- 45.12: Project Approval and Regulation

45.01: Introduction

The federal Safe Drinking Water Act amendments of 1996 authorized a Drinking Water State Revolving Fund program to assist eligible public water systems to finance the cost of the infrastructure needed to achieve or maintain compliance with the SDWA requirements and protect public health. The Massachusetts Drinking Water State Revolving Fund (DWSRF) Program is a federal-state partnership that provides low-cost financing to help community public water suppliers. The DWSRF Program is jointly administered through the Clean Water Trust by the Commissioner of the Department of Environmental Protection (Department), the State Treasurer, and the Secretary of Energy and Environmental Affairs pursuant to M.G.L. c. 29C, § 2. Financial assistance is available for engineering, design, and construction of drinking water projects. Every summer, the Department solicits projects from Massachusetts municipalities and community water systems (with at least 15 residential connections) to be considered for subsidized loans for infrastructure projects. After evaluating the project requests submitted in response to the annual solicitation, the Department develops a list of projects eligible to receive financial assistance. From this annual list, and on the basis of projects' readiness to proceed and priority rating, the Department assigns projects to a fundable list called the Intended Use Plan Project Listing (IUP). Projects placed on the IUP are eligible to apply for financing in the coming year, with the total cost of all projects on the IUP not to exceed the amount of funding available for that year. To qualify for placement on the IUP, a project must have a high enough ranking, have received a local funding appropriation or be scheduled for funding appropriation by June 30th of the coming year, and the applicant must be able to file a complete loan application no later than October 15th of the coming year.

45.02: Purpose and Applicability

310 CMR 45.00 implements the DWSRF Program. Under federal and state law, the DWSRF Program's goals are to protect public health and strengthen compliance with drinking water requirements, while addressing the Commonwealth's drinking water needs. The DWSRF Program incorporates affordability and watershed management priorities. 310 CMR 45.00 sets forth the Department's authority and responsibilities to select, approve and regulate drinking water projects receiving financial assistance from the DWSRF.

310 CMR 45.00 does not apply to the use of set-asides by the Department and the Trust, which is addressed in the pertinent portion of the IUP submitted by the Department and the Trust to EPA on an annual basis after public review and comment. In the event that the set-aside portion of the IUP allocates funding for loans to systems to acquire land or conservation easements or to implement source water protection measures or to implement recommendations in source water quality protection partnership petitions submitted to the Department, the project selection criteria for such loans will also be subject to public review and comment as a component of the IUP. The Department reserves the right to use relevant requirements and procedures contained in 310 CMR 45.00 in its selection, approval and administration of projects receiving loans pursuant to the set-aside portion of the IUP.

The Department may issue supplemental policies, guidelines, guidance documents and/or administrative procedures to assist in its implementation and administration of 310 CMR 45.00 and its use of set-asides.

45.03: Definitions

For the purposes of 310 CMR 45.00, the following terms shall have the meaning set forth in 310 CMR 45.00 unless the context clearly requires otherwise.

310 CMR 22.00: *Drinking Water*. The Department's regulations governing the approval, use and operation of drinking water sources and public water systems.

Best Management Practices (BMPs). A method, measure or practice in water management, or a combination thereof, established and published by the Trust pursuant to St. 2014, c. 259, § 55. The Trust's BMPs can be found on the Official Website of the Treasurer and Receiver General of Massachusetts.

Community Water System. A community water system is a Public Water System as defined in 310 CMR 22.02: *Definitions*, which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

Cost. Any or all costs, whenever incurred, approved by the Department in accordance with M.G.L. c. 21, § 27A, of carrying out a drinking water project, including, without limiting the generality of the foregoing: the costs for planning, preparation of studies and surveys, design, construction, facilities, improvement and rehabilitation, acquisition of real property, personal property, materials, machinery or equipment, start-up costs, demolitions and relocations, reasonable reserves and working capital, interest on loans, local governmental obligations and notes in anticipation of thereof prior to and during construction of such project or prior to the date of such loan, if later, administrative, legal and financing expenses, and other expenses necessary or incidental to the aforesaid.

Department. The Massachusetts Department of Environmental Protection.

Drinking Water Project. Any project of a type or category which the Department has determined, consistent with guidance issued by EPA in accordance with the SDWA, will facilitate compliance with national primary drinking water regulations under § 1412 of the SDWA, 42 U.S.C. § 300g-1 or otherwise significantly further the health protection objectives of the SDWA or 310 CMR 22.00: *Drinking Water*.

Eligible Borrower. Any LGU or other community water system which is authorized to own, operate, finance or otherwise implement a drinking water project.

EPA. The U.S. Environmental Protection Agency.

Federal Cross-cutters. Federal laws and authorities that apply by their own terms to projects receiving federal financial assistance such as the federal SRF. Such federal cross-cutters include, but are not limited to, environmental laws and authorities such as the Clean Air Act, Safe Drinking Water Act, Clean Water Act, Endangered Species Act, Coastal Zone Management Act, Wild and Scenic Rivers Act and the National Historic Preservation Act of 1966, and economic and miscellaneous authorities such as the procurement and contractor requirements associated with financial assistance programs under the Safe Drinking Water Act, Clean Water Act and Clean Air Act.

Grant Equivalency or Financial Equivalent of a Grant. The standard measure used by the Department and the Trust to determine the amount of subsidy applicable to the eligible costs of a project under the loan in accordance with St. 1998, c. 78.

Intended Use Plan or IUP. An annual plan submitted by the Trust to EPA pursuant to § 1452(b) of the SDWA, 42 U.S.C. § 300j-12(b), which identifies the intended use of the amounts available to the Fund as determined from time to time by the Trust and derived from the federal capitalization grant, state match amounts, loan repayments, investment earnings and any other moneys deposited by the Trust available to fund projects eligible for funding under St. 1998, c. 78. The IUP includes a listing of projects to receive financial assistance from the Fund, the distribution and use of the funds for set-aside activities, and a description of the short and long term goals for the use of project and set-aside funds.

45.03: continued

Intended Use Plan Project Listing. Those projects identified by the Department for inclusion on the fundable portion of the calendar year priority list pursuant to 310 CMR 45.05(2).

Loan. Any form of financial assistance subject to repayment, in whole or in part, which is provided by the Trust to an eligible borrower for all or any part of the cost of a drinking water project. A loan may provide for planning, construction, bridge or permanent financing.

Loan Agreement. Any agreement entered into between the Trust and an eligible borrower pertaining to a loan or the purchase and delivery of local governmental obligations or other instruments evidencing or securing a loan.

Loan Commitment. A written commitment by the Trust to make a loan to a LGU or public water system to finance a project approved by the Department on terms consistent with the Department's Project Approval Certificate.

Local Government Unit (LGU). Any town, city, district, commission, agency, authority, board or other instrumentality of the Commonwealth or of any of its political subdivisions, including any regional local governmental unit as defined in M.G.L. c. 29C, § 1, which is responsible for the ownership or operation of a drinking water project and is authorized by a bond act to finance all or any part of the cost thereof through the issue of bonds.

Maximum Contaminant Level (MCL). The maximum permissible level of a contaminant in water which is delivered to any user of a public water system, as published in 310 CMR 22.00: *Drinking Water*.

MEPA. The Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61 through 62H.

Project Approval Certificate. A certificate issued by the Department to the Trust certifying that a project is approved for financing by the Trust and that the costs of the project are eligible for financial assistance pursuant to M.G.L. c. 29C, § 6.

Project Regulatory Agreement. An agreement between the Department and an eligible borrower, executed and delivered to the Trust on or prior to the date of a loan from the Trust to the eligible borrower to finance a drinking water project approved by the Department, which includes a disbursement schedule, procedures for approval and payment of requisitions, conditions related to the borrower's compliance with the Department's regulations and other federal and state statutes and regulations applicable to the construction and operation of the project, and provision for the Department's supervision of the project in accordance with 310 CMR 45.00.

Public Water System. A system for the provision to the public of water for human consumption, through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year, as further defined in 310 CMR 22.02: *Definitions*.

Safe Drinking Water Act or SDWA. Title XIV of the Federal Public Health Service Act, commonly known as the Safe Drinking Water Act, 42 U.S.C. 300f *et seq.*

Set-asides. The use of DWSRF federal capitalization grant funds and matching state funds, as applicable, for a range of specific activities identified in § 1452 of the SDWA to encourage source water protection and other Department drinking water program activities.

Small System. A public water system which regularly serves fewer than 10,000 persons.

Trust. The Massachusetts Clean Water Trust established by M.G.L. c. 29C. The Trust administers the Commonwealth's SRF programs, which are authorized by federal legislation, the Water Quality Act of 1987 for the clean water SRF and the Safe Drinking Water Act of 1996 for the drinking water SRF, to provide financial assistance to borrowers for wastewater projects and drinking water projects.

45.04: Eligible Projects

(1) Any drinking water project of an eligible borrower is eligible to receive financial assistance from the Trust pursuant to M.G.L. c. 29C, § 18 and 310 CMR 45.00. The Department has determined that such eligible projects include, but are not limited to:

- (a) Projects to address or prevent violations of the public health standards in 310 CMR 22.00: *Drinking Water* and the SDWA, including projects to come into or maintain compliance with MCLs and other requirements for contaminants with acute health effects (e.g., the Surface Water Treatment Rule, the Total Coliform Rule, and nitrate standards) and for contaminants with chronic health effects (e.g., the Lead and Copper Rule and the Disinfection Byproducts Rule), including the costs of system activities determined by the Department to constitute an effective alternative to providing treatment to come into or maintain compliance with 310 CMR 22.00: *Drinking Water* and the SDWA;
- (b) Projects to replace aging infrastructure, if such projects are needed to maintain compliance or further the public health goals and requirements in 310 CMR 22.00: *Drinking Water* and the SDWA, including projects to rehabilitate or develop sources to replace contaminated sources, install or upgrade treatment or storage facilities, and install or replace transmission and distribution pipes to prevent contamination or improve water pressure to safe levels;
- (c) Projects to consolidate and/or restructure a public water system (e.g., to address a system with contaminated water supply or when a system is in noncompliance or lacks adequate technical, managerial and financial capability to maintain compliance);
- (d) Land acquisition, but only if the Department determines that such land is integral to a project and necessary to meet or maintain compliance and further the protection of public health (e.g., land needed to locate eligible treatment or distribution projects);
- (e) The planning and/or design for any eligible project;
- (f) Any eligible project which uses a single contractor to design, build and/or operate the project facilities, provided the procurement and use of such contractor is authorized by law, the project conforms with the state constitutional requirements governing the use of Commonwealth funds for public purposes, and the project otherwise meets the requirements of 310 CMR 45.00. The operation and maintenance costs of such projects shall be ineligible for DWSRF assistance;
- (g) Projects that use regional water resources to offset, by at least 100%, the impact of water withdrawals on local water resources in the watershed basin of the receiving community;
- (h) Projects that are intended to provide public water supply to consumers whose groundwater or public or private wells are impacted by contamination that poses an unacceptable health risk, as determined by the Department;
- (i) Innovative water projects that utilize new technology and which improve environmental or treatment quality, reduce costs, increase access and availability of water, conserve water or energy or improve management of drinking water; provided, that the technology has not been commercially deployed, other than as a pilot project, previously in the Commonwealth;
- (j) Projects that are necessary to connect an LGU to a facility of the Massachusetts Water Resources Authority, if the LGU has paid or committed to pay the entry fee; and
- (k) Projects that are a direct result of a disaster affecting the service area that is the subject of a declaration of emergency by the Governor.

(2) Unless otherwise determined by the Department consistent with 310 CMR 45.03: Drinking Water Project, the following projects and activities are not eligible to receive financial assistance pursuant to 310 CMR 45.00:

- (a) The construction, rehabilitation or maintenance of dams;
- (b) The purchase of water rights, unless the water rights are owned by a public water system that is being purchased by an eligible borrower through consolidation as part of the eligible borrower's capacity development strategy;
- (c) Reservoirs, except for finished water reservoirs and those reservoirs that are part of the treatment process and are located on the treatment facility property;
- (d) Laboratory fees for monitoring;
- (e) Operation and maintenance costs;
- (f) Projects needed primarily for fire protection;
- (g) Projects for systems which the Department determines lack adequate technical, managerial and financial capability, unless the Department determines that financial assistance from the DWSRF will ensure compliance over the long term;

45.04: continued

- (h) Projects for systems in significant noncompliance, as determined by the Department, unless the Department determines that the project will enable the system to return to compliance and that the system will maintain an adequate level of technical, managerial and financial capability to maintain compliance; and
- (i) Projects primarily intended solely to serve future growth.

45.05: Priority System

(1) Establishment of Calendar Year Priority List.

- (a) Prior to the beginning of each calendar year, the Department shall establish a single, annual list of projects prioritized to receive financial assistance pursuant to 310 CMR 45.00.
- (b) In establishing the priority list, the Department may require eligible borrowers to submit any information deemed necessary by the Department for project evaluation, including but not limited to, information which addresses the proposed project's compliance with the IUP Project Listing criteria in 310 CMR 45.05(2) and the Project Selection Criteria in 310 CMR 45.06. The Department may establish a reasonable deadline for its receipt of such information, and may decline to evaluate and prioritize a project if the Department determines that the eligible borrower has failed to provide sufficient information.
- (c) Prior to adopting the priority list, the Department shall conduct a public hearing to receive and consider public comment on the proposed list. The Department will ensure that notice of the public hearing will be published in one or more newspapers of general circulation 30 days prior to the date of the hearing.

(2) Intended Use Plan Project Listing.

- (a) Eligible projects which the Department finds are ready to proceed and for which funds are available in the calendar year in which the priority list is established shall be placed on the IUP Project Listing portion of the priority list. The Department reserves the right to establish an IUP Project Listing that contains fewer projects than would use the total amount of funding available in the relevant calendar year, or, alternatively, to expand the IUP Project Listing during the course of the relevant calendar year based on an additional allocation of available funding.
- (b) The eligible borrower proposing the project must show in its application that its project meets each of the following criteria in order for the Department to place the project on the IUP Project Listing:
 - 1. As determined by the Department, the project's benefits to public health and/or drinking water quality, as evidenced by its ranking on the priority list, are sufficiently high to warrant its funding as a priority in the relevant calendar year;
 - 2. The eligible borrower has already obtained its local funding authorization or otherwise committed funding for the project, or has provided a specific schedule to obtain such funding authorization or funding commitment by June 30th of the relevant calendar year; and
 - 3. The eligible borrower demonstrates to the Department's satisfaction that its project is sufficiently advanced in its implementation such that the LGU or public water system will file a complete loan application with the Department for the project by October 15th of the relevant calendar year.

A complete application includes, as applicable, approvable plans and specifications for the project and evidence that the eligible borrower has, at a minimum, filed applications for any permits or environmental reviews applicable to the project. As provided in 310 CMR 45.12(1)(b), the Department may deny any application which it determines to be incomplete.

- (c) In the event that a project placed on an IUP Project Listing fails during the course of the calendar year to meet one or more of the criteria in 310 CMR 45.05(2)(b), the project may be removed from the IUP Project Listing and returned to the applicable priority level on the priority list. In such event, the Department reserves the right to raise one or more project(s) which are determined by the Department to be of the highest priority and which meet the criteria in 310 CMR 45.05(2)(b), consistent with available funding, to the IUP Project Listing, provided the Department shall raise a small system project which meets the criteria in 310 CMR 45.05(2)(b) before an otherwise higher ranked project if the funding of such

45.05: continued

small system project is needed to meet the 15% allocation of funds for small systems, as provided in the SDWA. Subject to the availability of funding and the project's priority, the Department further reserves the right to restore any project removed from the IUP Project Listing for failure to meet the criteria in 310 CMR 45.05(2)(b) if the project thereafter meets those criteria prior to the end of the relevant calendar year.

(d) The implementation of some projects on the IUP Project Listing will take place over two years or more. For such multi-year projects, the Department will limit the amount of actual funding reserved for the project on each annual IUP Project Listing to the amount needed to fund the project for one year. In the event that a multi-year project receives a project approval certificate from the Department by the end of the relevant calendar year, the Department will reserve another annual increment(s) of funding for the project on subsequent calendar year IUP Project Listings, subject to the availability of funding, and provided the project is implemented in accordance with the schedule in the project approval certificate, as determined by the Department. The limitation on financial assistance in 310 CMR 45.05(3) shall apply to any amounts reserved as annual increments of funding for a multi-year project on subsequent calendar year IUP Project Listings.

(3) Limitation on Financial Assistance.

(a) No eligible borrower shall receive Department approval for financial assistance from the Trust for a project or projects in a calendar year in any amount in excess of 25% of the total financial assistance authorized on the IUP Project Listing portion of the priority list in that calendar year, including any amounts reserved as annual increments of funding for a multi-year project on subsequent calendar year IUP Project Listings.

(b) The Department reserves the right to waive the limitation on financial assistance set forth in 310 CMR 45.05(3)(a), in whole or in part, if the Department determines that one or more projects on the IUP Project Listing portion of the applicable priority list has failed or will fail to meet the criteria in 310 CMR 45.05(2)(b) by October 15th in the relevant calendar year, or if the Department allocates additional available funding to the IUP Project Listing during the course of the relevant calendar year.

45.06: Project Selection Criteria

(1) Except as provided in 310 CMR 45.06(2) through (4), the Department will use the evaluation criteria set forth in 310 CMR 45.06(1)(a) through (d) to determine a project's placement on the calendar year priority list. The Department, through written guidance, will assign a numerical point range to each of the evaluation criteria in 310 CMR 45.06(a) which will be used to further determine a project's placement on the priority list. Such Department guidance may also address tie breakers for projects with the same point score rating.

(a) Public Health Criteria.

1. The extent to which the project will eliminate or mitigate a serious risk to public health. Relevant factors to consider may include but are not limited to:

- a. The severity of the public health problem the project is intended to address (*e.g.*, the nature and frequency of MCL violations).
- b. The size and character of the population threatened or negatively impacted by the identified risk to public health (*e.g.*, the number of children, the elderly or persons with pre-existing health risks served by the system), and the extent to which the project will eliminate or mitigate the public health risk to the identified population.
- c. The extent to which the project demonstrably eliminates or mitigates the identified serious risk to public health in an effective and timely manner.

(b) Compliance Criteria.

1. The extent to which the project is needed to come into or maintain compliance with 310 CMR 22.00: *Drinking Water*, the SDWA or other required or related federal and/or state permit(s), approvals, regulations and requirements, and the effect of compliance on public health and drinking water quality. Relevant factors to consider may include but are not limited to:

- a. The extent to which the project is needed to ensure compliance with an existing federal or state court or administrative order.
- b. The extent to which the project is needed to come into or maintain compliance with 310 CMR 22.00: *Drinking Water*, the SWDA, or other required or related federal or state permit or approval, including the Department's approval of a new drinking water source.

45.06: continued

c. The extent to which the project's maintenance of compliance with 310 CMR 22.00: *Drinking Water*, the SDWA, or other required or related federal or state order, permit, approval demonstrably benefits or protects drinking water quality and/or public health (e.g., projects which upgrade or rehabilitate water treatment or distribution facilities and are designed to keep a system in compliance on an ongoing basis).

(c) Affordability Criteria.

1. The extent to which DWSRF financial assistance for the project will assist systems whose service area consists of users with median household income (MHI) of 80% or less of the state median household income for non-metropolitan areas or as otherwise established by the Trust.

2. The extent to which the cost of the project will result in increased water rates to users of the system of an eligible borrower. Relevant factors to consider may include, but are not limited to, whether the annual user charges will fall within a range of 1% to 1.75% of such users' MHI.

(d) Other Program and Implementation Criteria.

1. Whether the project is to consolidate and/or restructure a public water system (e.g., to address a system with a contaminated water supply or when a system is in noncompliance or lacks adequate technical, managerial and financial capability to maintain compliance).

2. The extent to which the project implements or is consistent with one or more current watershed management plans (e.g., DEP basin plans) and/or watershed protection plans (e.g., local Zone II land use controls, comprehensive conservation management plans), or otherwise effectively addresses a watershed priority, as determined by the Department.

3. The extent to which the project is consistent with local and regional growth and/or infrastructure plans, and promotes the rehabilitation and revitalization of infrastructure, structures, sites, and areas previously developed and still suitable for economic (re)use, as provided in Executive Order 385: *Growth Planning*.

4. Whether the project constitutes or is a component of a multi-community or regional approach to addressing the identified public health or drinking water quality problem.

(2) Since certain of the Project Selection Criteria in 310 CMR 45.06(1) do not apply to eligible planning and/or design projects, the Department will limit its evaluation of such projects to the relevant criteria.

(3) In establishing the calendar year priority list pursuant to 310 CMR 45.04(1), the Department may:

(a) identify project categories and/or watersheds as funding priorities in a particular calendar year, consistent with the Project Selection Criteria in 310 CMR 45.06(1); and

(b) modify and/or further specify the factors or point system to be used to evaluate the extent to which a project meets the Project Selection Criteria in 310 CMR 45.06(1), including any project or program priorities identified by the Department as a funding priority in a particular calendar year pursuant to 310 CMR 45.06(3) and (4).

(4) Before finally adopting any substantial modification to the Project Selection Criteria and/or the related point system, the Department will notice such modifications in the Environmental Monitor and to the regulated community and provide an opportunity for public comment for a period of not less than 30 days, including conducting a minimum of one public hearing.

45.07: Financing Criteria

(1) In General. The Trust is authorized to structure the debt service costs on loans and other forms of financial assistance for Eligible Projects that provide the financial equivalent of a loan made at an interest rate equal to 2%, which may include principal forgiveness. Notwithstanding the foregoing, subject to the limits on contract assistance provided in M.G.L. c. 29C, § 6, the Trust may provide additional financial assistance that is the financial equivalent of a loan made at an interest rate less than 2%, which may include principal forgiveness, as determined by the Trust, for Qualifying Designated Projects, as provided in 310 CMR 45.07(2).

45.07: continued

(2) Qualifying Designated Projects.

(a) Subject to the limits on contract assistance provided in M.G.L. c. 29C, § 6, a LGU applying for financial assistance for a Qualifying Designated Project on the IUP for calendar year 2017 or later, unless otherwise authorized by the Legislature, is eligible for additional financial assistance in accordance with 310 CMR 45.07(2) that may include loans and other forms of subsidies at the financial equivalent of a loan made at an interest rate less than 2% or other additional subsidies such as principal forgiveness, as determined by the Trust, if the LGU demonstrates to the Department's satisfaction that it meets all of the following criteria:

1. the project is consistent with the current priorities established by the Trust, as set forth in the Department's annual project solicitation;
2. the project implements Best Management Practices; and
3. the LGU meets the Trust's affordability criteria established pursuant to § 1452(d) of the SDWA, 42 U.S.C. § 300j-12(d), but only to the extent required by federal law.

(b) Projects considered for the additional subsidies described in 310 CMR 45.07(2)(a) may include eligible projects described in 310 CMR 45.04(1)(g) through (k).

45.08: Eligible Project Costs

(1) Costs which the Department determines are necessary for the completion of the project are eligible for financing in the loan and to receive a subsidy under the loan.

(2) Costs which the Department determines are not necessary for completion of the project are ineligible for financing in the loan.

(3) Project costs incurred by an eligible borrower prior to the date of issuance of the Department's project approval certificate are not eligible for a subsidy under the loan, except as follows:

(a) project design, including preliminary engineering and a project evaluation report, project construction or related professional services may be approved by the Department prior to the issuance of a project approval certificate as project costs eligible for subsidy if:

1. The eligible borrower has submitted a written and adequately substantiated request for approval;
2. The Department's written approval is obtained before initiation of the project and award of any loan for the project; and
3. The project is included and maintains its status on the current calendar year Intended Use Plan Project Listing.

(b) The Department's prior approval of costs in accordance with 310 CMR 45.08(3)(a) does not constitute a commitment to approve financial assistance for any project. Instead, such costs will be considered eligible project costs only if a loan is made by the Trust for the project. Accordingly, an eligible borrower receiving the Department's prior approval of costs in accordance with 310 CMR 45.08(3)(a) proceeds at its own risk.

(4) Costs incurred in excess of the approved project costs are not eligible for financing by the loan unless the project approval certificate and the loan are both amended to include the cost increase.

(5) As a loan recipient, an eligible borrower shall exercise its best efforts to accomplish the work program set forth in the loan within the loan amount. Whenever a loan recipient reasonably believes that its project costs will exceed or be substantially less than the approved loan amount, it must promptly notify the Department in writing. The loan recipient must submit revised cost estimates for the project to the Department as soon thereafter as practicable. Neither the Department nor the Trust is under any obligation to approve costs in excess of the amount previously approved in the project approval certificate and loan.

(6) The final eligible project costs shall be the eligible costs approved by the Department upon completion of the project, unless audited. If such project costs are audited, the final eligible costs shall be the eligible costs approved by the Department at the completion of the audit.

45.09: Project Evaluation Report

- (1) Unless otherwise determined by the Department, the planning information required for projects receiving financial assistance pursuant to 310 CMR 45.00 shall be contained in a Project Evaluation Report.
- (2) The Department will determine the required scope of a Project Evaluation Report based on the nature and duration of the proposed project. Unless otherwise determined by the Department, a complete Project Evaluation Report generally must include:
 - (a) A description of the proposed project;
 - (b) An analysis of the cost-effectiveness of the project and the alternatives considered;
 - (c) For the selected alternative, a concise description which addresses, at a minimum, the following areas:
 1. the relevant design parameters for the project;
 2. the estimated capital construction and operation and maintenance costs of the project (identifying possible federal, state, local, and other shares), and a description of the manner in which costs will be financed;
 3. the cost impacts on users of the system; and
 4. the institutional, financial, legal and management arrangements necessary for successful implementation of the project.
 - (d) A public participation program that includes, at a minimum:
 1. a public informational meeting to discuss the project alternatives and their environmental impact; and
 2. a subsequent public hearing on the selected proposed project, including its environmental impact.

45.10: Environmental Review and Federal Cross-cutter Requirements

- (1) Environmental Review Requirements. All projects approved by the Department to receive a loan from the Trust shall, at a minimum, comply with the requirements of MEPA and 301 CMR 11.00: *MEPA Regulations*. In addition, a public hearing shall be held on the project if the Department determines that the project is controversial, or if the Department otherwise determines that a hearing is in the public interest. The Department may also require the eligible borrower to consider project alternatives and to provide the public an opportunity to comment on such alternatives.
- (2) Federal Cross-cutter Requirements. All projects to be funded by funds directly made available by federal capitalization grants shall comply with all federal cross-cutters applicable to the project, as determined by the Department. The Department may require any other project to comply with one or more of the federal cross-cutters deemed applicable to the project by the Department.

45.11: Affirmative Action and Disadvantaged Business Enterprise Requirements

- (1) Eligible borrowers receiving financial assistance from the Trust shall comply with applicable federal and state anti-discrimination laws and requirements, including the Department's requirements in the areas of Affirmative Action in employment and Disadvantaged Business Enterprise (DBE) use in contracting.
 - (a) In the area of Affirmative Action, such eligible borrowers shall adopt, for use in all contracts for \$50,000 or more, an adapted version of the Commonwealth of Massachusetts' *Supplemental Equal Employment Opportunity Anti-discrimination and Affirmative Action Program*. The contracts may include minority workforce percentages greater than those required for the geographical locations of the construction project as set forth in the Supplemental Program.
 - (b) In the area of DBE utilization, eligible borrowers shall make positive efforts to use DBEs for use in all construction, service and supply subagreements for the project financed by the loan.

Such efforts should achieve the applicable federal and/or state goals established for DBE participation, but, at a minimum, should allow DBEs the maximum feasible opportunity to compete for project subagreements.

45.11: continued

(2) An eligible borrower receiving a loan from the Trust shall promptly notify the Department in writing when it has good reason to believe that its positive efforts to use DBEs in the subagreements for the project will not achieve one or both of the applicable DBE utilization goals.

45.12: Project Approval and Regulation

(1) Application.

(a) An eligible borrower whose project is on the IUP Project Listing portion of the calendar year priority list must first apply to the Department to receive a loan from the Trust to finance costs of the project. The eligible borrower must file a complete application with the Department containing the following information and documentation:

1. General Information which must include evidence of a funding authorization or commitment by the eligible borrower sufficient to cover the project cost, and, as applicable, certification of the authority of the eligible borrower to file the application.
2. Financial Information pertinent to the Trust's evaluation of the eligible borrower's ability to repay the loan.
3. Project Information which demonstrates to the Department's satisfaction that the project is sufficiently advanced in its implementation, including, as applicable:
 - a. approvable plans and specifications for the project;
 - b. evidence that the eligible borrower has, at a minimum, filed applications for any permits or environmental reviews applicable to the project; and
 - c. a project schedule that demonstrates to the Department's satisfaction that the project will commence no later than six months from the expected date of issuance of a project approval certificate, assuming the Department determines that the project is approvable.
4. Supplemental Information such as title to the project site or evidence of some other appropriate property interest in the project site, any necessary intermunicipal agreements, documentation related to the user charge system, *etc.*
5. Applicant Certification as to the completeness of the application in accordance with the Department's application form and requirements, and as to the accuracy and completeness of the information provided by the eligible borrower in its application.

(b) The Department may deny any application which it determines to be incomplete. Prior to taking final action on an application, the Department may request the eligible borrower to clarify and/or supplement information contained in its application, or to attend an informal conference(s) with the Department to discuss the application.

(2) Project Approval Certificate.

(a) The Department's approval of an applicant's project shall be contained in a Project Approval Certificate issued to the Trust. The Department's issuance of a Project Approval Certificate is a necessary prior condition to the award of a loan by the Trust to finance the costs of a project.

(b) The Department shall not approve a project for a loan from the Trust unless the eligible borrower adopts a user charge system which is designed to provide adequate revenues required for operation and maintenance, including replacement, of the project, and is based on a flat or on an ascending unit rate per volume. This requirement does not apply to any project for which a user charge system is inapplicable, as determined by the Department.

(c) In addition to approving the project, the Project Approval Certificate shall certify those costs of the project determined by the Department to be eligible for assistance from a loan, and those costs determined to be eligible for a subsidy under the loan. The Project Approval Certificate shall also identify the level of subsidy applicable to the project in accordance with M.G.L. c. 29C and, as applicable, any additional subsidy applicable to the project authorized by special law. Subsidy is expressed as a grant equivalency percentage in the Project Approval Certificate.

(d) The Project Approval Certificate may also contain such other conditions and limitations as the Department deems necessary to ensure compliance by an eligible borrower with 310 CMR 45.00 and with all other federal and state statutes and regulations applicable to the construction and operation of the project. Such conditions shall include, but are not limited to, a project completion schedule which shall require the eligible borrower to initiate the project, as determined by the Department, no later than six months from the date of the Department's issuance of the Project Approval Certificate.

45.12: continued

(e) The Department shall issue the Project Approval Certificate to the Trust for its action and concurrently forward a copy of such certificate to the eligible borrower. The Trust shall thereafter enter into a loan commitment with an eligible borrower consistent with the terms of the Project Approval Certificate. Following entry into a binding loan commitment, the Trust shall prepare and deliver a loan agreement for execution by the eligible borrower, consistent with the terms of the Project Approval Certificate as incorporated into the Department's Project Regulatory Agreement.

(3) Project Regulatory Agreement.

(a) On or prior to the date of a loan from the Trust for a project approved by the Department, the eligible borrower and the Department shall execute and deliver to the Trust a Project Regulatory Agreement relating to the Department's regulation and supervision of the project in accordance with 310 CMR 45.00. The Project Regulatory Agreement shall be in form and substance satisfactory to the Department. The Project Regulatory Agreement shall be incorporated by reference in the Trust loan agreement and failure by the LGU or public water system to comply with the Project Regulatory Agreement shall constitute an event of default under the loan agreement.

(b) The Project Regulatory Agreement shall contain provisions consistent with the Project Approval Certificate. In addition to incorporating pertinent conditions in the Project Approval Certificate, the Project Regulatory Agreement may also contain such other conditions and limitations as the Department deems necessary for its regulation and supervision of the project in accordance with 310 CMR 45.00, including but not limited to:

1. the schedule for disbursement of loan proceeds;
2. the payment requisition requirements and procedures;
3. the requirements and procedures for the Department's audit of payment requisitions;
4. covenants by the eligible borrower related to the project, including a covenant to comply with all federal and state statutes and regulations applicable to the eligible borrower's construction and operation of the project;
5. the measures available to the Department to remedy a default by the eligible borrower under the Project Regulatory Agreement;
6. any requirements regarding certification of a project's performance in accordance with the Department's approval; and
7. compliance with the Department's guidance on the use of and requirements for professional subagreements.

REGULATORY AUTHORITY

310 CMR 45.00: M.G.L. c. 29C, § 18.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 46.00: CERTIFICATION OF WELL DRILLERS AND FILING OF WELL COMPLETION REPORTS

Section

46.01: General

46.02: Certification Requirements

46.03: Certification Contents and Responsibilities

46.04: Criteria for Suspension or Revocation of Certification, Penalties and Other Actions

46.05: Severability

46.01: General

(1) Authority and Purpose. The Department of Environmental Protection (Department) promulgates 310 CMR 46.00 pursuant to the authority granted to it under M.G.L. c. 21G, §§ 14 and 20. 310 CMR 46.00, among other things, establish the qualifications for certification, information to be filed upon well completion, certification responsibilities, and criteria whereby a certification can be revoked.

(2) Definitions.

Abandoned Well means productive or non productive well, use of which has been permanently discontinued or has been out of service at least three years, is no longer suitable or used for monitoring purposes, or is a potential hazard to public health or safety and the situation cannot be corrected, such as well construction terminated before completion.

Alteration means changing the structural or hydraulic characteristics of a well, including well deepening, hydrofracturing, well casing extension, replacement, or repair.

Business of Well Drilling means charging a fee or advertising for hire the availability to drill productive or nonproductive wells in Massachusetts. The term drilling shall include both digging and drilling.

Casing means impervious durable pipe placed in a boring to prevent the walls from caving and to serve as a vertical conduit for water in the well.

Certified Well Driller means an individual authorized by certification with the Department, or under the predecessor regulations, 313 CMR 3.00, by registration with the Department of Conservation and Recreation, to engage in the business and supervise the drilling, altering, or decommissioning of wells in Massachusetts, and who signs and submits the well completion report to the Department and the municipal board of health.

Commissioner means the Commissioner of the Department of Environmental Protection.

Decommissioning means plugging of an abandoned well so that it will not serve as a conduit for movement of water to or from the well or between water bearing zones.

Department means the Department of Environmental Protection.

Drawdown means extent of lowering of the water surface in a well resulting from discharge of water in the well.

Engage in the Business means having a principal financial interest in the firm doing business.

Hydrofracturing means the science of entering a dry or low yield water well with special mechanical or inflatable well packers, used in conjunction with high pressure volume pumps to inject water for cleaning out existing seams and breaking into new aquifers.

46.01: continued

Immediate Field Supervision means providing sufficient onsite direction to the drilling crew and oversight of the drilling operation to ensure compliance with state regulations, municipal codes, and permit requirements on well location, drilling operation, use of equipment, materials, personnel, and quality of workmanship. For productive wells, this includes making certain that any required municipal permit has been obtained and state dig-safe regulations are complied with before starting the drilling operation, as well as performing onsite supervision of drilling startup, setting of casing, installing the protective well seal, and testing for well yield. For nonproductive wells, this includes the certified well driller inquiring with the municipality about regulations, and either obtaining or ensuring that any required municipal permit is obtained before starting the drilling operation, making certain that state dig-safe regulations are complied with, and providing sufficient technical oversight to ensure that guidelines contained in the Department's Standard References for Monitoring Wells are followed.

Municipal Board of Health means the municipal board established in compliance with M.G.L. c. 41, § 21 and M.G.L. c. 111, § 26. For purposes of 310 CMR 46.00, board of health includes a department of health established pursuant to M.G.L. c. 111, §§ 26A through 26E.

Nonproductive Well means either a well not having sufficient water available for its intended use or a well used for groundwater monitoring purposes or any well installation tool which is left in the ground for more than 48 hours after the installation. Guidelines for locating, drilling, installing, sampling, and decommissioning monitoring wells are contained in the Department's Standard References for Monitoring Wells.

Productive Well means a well having sufficient water available for its intended use.

Protective Well Seal means device or arrangement which seals the annular space between casing and rock, or between casing and unconsolidated formations, to prevent pollutants from entering the well.

Recovery means the time required after well pumping ceases for the water level in the well to rise to pre-pumping level.

Static Water Level means the distance from established ground surface to the stabilized water surface in a well which is neither being pumped nor under the influence of pumping.

Well or Waterwell means any hole or shaft constructed into the ground for the purpose of injecting or extracting water and other fluids, or to monitor groundwater levels and water quality. Not included are wells used on a temporary basis for the purpose of dewatering excavations, stabilizing hillsides or earth embankments, sampling soil vapors, or sampling groundwater if the installation tool is left in the ground less than 48 hours.

Well Completion means a well for which well data required for the well completion report has been obtained and the drilling rig is moved off the site at the end of the drilling operation.

Well Driller means any individual, corporation, company, association, trust, or partnership that drills, constructs, alters, or decommissions a well for a fee, or advertises for hire to provide such services in Massachusetts.

Well Drilling Rig means any power driven, percussion, rotary, digging, jetting, direct push, vibrating, hydrofracturing, or augering machine used in the construction, alteration or decommissioning of a well.

Well Yield means the smaller of two well test measurements to determine:

- (a) gallons per minute of water discharged while being pumped over a four hour period; and
- (b) gallons per minute of water discharged after a minimum of 1½ hours of well recovery.

46.02: Certification Requirements

- (1) Certification Required. Unless a holder of a certificate in accordance with 310 CMR 46.02, or a registration in accordance with the predecessor regulations, 313 CMR 3.00, no person shall engage in the business of well drilling in the Commonwealth. This certification requirement does not include wells used on a temporary basis for the purpose of dewatering excavations, stabilizing hillsides or earth embankments, sampling soil gases, or sampling groundwater if the installation tool is left in the ground less than 48 hours.
- (2) Requirements for Certification. To obtain a certificate, an applicant must show satisfactory evidence that the applicant has attained:
 - (a) experience in drilling wells in Massachusetts by being actively engaged in drilling of productive wells in Massachusetts under the immediate field supervision of a Massachusetts certified well driller for at least 36 months prior to application date;
 - (b) knowledge of well drilling by passing a written general examination, prepared and administered by the National Ground Water Association (NGWA), or by the Department; and
 - (c) competency in the drilling of wells sufficient to assume the function and duties of a certified well driller, attested to in a sworn affidavit by a Massachusetts certified well driller who supervised the applicant's work.
- (3) Waiver. The Department may waive certain requirements set forth in 310 CMR 46.02(2) when the Department receives satisfactory evidence under one of the following options that the applicant:
 - (a) is certified in another state with comparable certification requirements and well drilling conditions, has been certified in that state for a period of at least three years, and is in good standing. If certification requirements are not comparable, the Department shall require at least one year additional experience of being actively engaged in the drilling of productive wells in Massachusetts under the immediate field supervision of a Massachusetts certified well driller.
 - (b) was previously certified in Massachusetts within two years of receipt of application for reinstatement, and submits payment of fees in arrears as determined by the Department.
 - (c) is certified by NGWA as a Certified Well Driller, and beyond NGWA certification requirement, has at least one year additional experience of being actively engaged in drilling productive wells in Massachusetts under the immediate field supervision of a Massachusetts certified well driller.
- (4) Special Certification for Drilling Monitoring Wells Only. An applicant may apply for a special certificate for drilling monitoring wells only if the applicant has either:
 - (a) certification as a NGWA Certified Well Driller, including having passed the specialty examination on monitoring well construction; or
 - (b) equivalent certification from National Drilling Contractors Association (NDCA) and meets equivalent qualification requirements.
- (5) Temporary Certification. The Department may issue a temporary certificate for administrative purposes, provided the applicant has met qualifications set forth in 310 CMR 46.02(2), 310 CMR 46.02(3) or 310 CMR 46.02(4). A temporary certificate shall be valid for up to 90 days. The fee for a temporary certificate shall be the same as for an annual certification.

46.03: Certification Contents and Responsibilities

- (1) Certified Well Driller Identification.
 - (a) Certificate. To provide documentation of valid well driller certification, following the applicant's payment of the applicable fee, the Department will issue a Certificate to qualified applicants containing the name, address, and certification number of the certified well driller, type of well drilling for which the certification is valid, annual period of validation, and the signature of the Commissioner, or the Commissioner's designee. The Certificate is nontransferable, and the certification number shall not be re-assigned if a certification is not renewed.

46.03: continued

(b) Advertisement. Any advertising of availability for hire to drill wells in Massachusetts shall include the name and certification number of the certified well driller engaged in the business being advertised.

(c) Rig Permit and Rig Markings for Field Identification. For each well drilling rig used to engage in the well drilling business in Massachusetts, a certified well driller shall apply to the Department for a rig permit. Following the applicant's payment of the applicable fee, the Department will issue a rig decal designating the annual period for which the permit is valid. The decal shall be affixed to the well drilling rig for which it is issued; in no case shall a well drilling rig be operated without the decal affixed. For field identification, the certified well driller shall display in a conspicuous location on both sides of each well drilling rig the words "Massachusetts Certified Well Driller" or "Massachusetts Certified Monitoring Well Driller" (as specified on the Certificate), as well as the certification number. Letters in these words shall be at least two inches high. If a certification is not renewed or is suspended or revoked, or if a well drilling rig is no longer used by the certified driller, all rig markings referring to Massachusetts certification shall be removed.

(2) Immediate Field Supervision. A certified well driller engaged in, or assigned to the business of drilling a well, shall provide immediate field supervision as defined in 310 CMR 46.01(2), and as specified by the municipal board of health.

(3) Well Completion Report. The certified well driller who provided immediate field supervision on drilling of a well shall submit a report to the Department, with a copy to the municipal board of health, within 30 days of well completion. The report shall be on a form furnished by the Department, and shall contain information on, at minimum, well location; well owner name and address; municipal board of health permit; well use; well completion date; casing type, size, length, and depth into bedrock; protective well seal; well depth; depth to bedrock and water bearing zones; well screen and setting; static water level; well yield from productive wells, including drawdown, recovery, and testing method used; drilling log describing materials penetrated; hydrofracturing; well abandonment; and well driller business. The certified well driller who provided immediate field supervision shall sign the report, thereby attesting to information accuracy and completeness. For installation of groups of monitoring wells, the certified well driller shall submit one well completion report containing data on a typical well and noting the number of wells installed in the group, unless individual well completion reports are required by the municipality.

(4) Annual Renewal. A certified well driller shall submit annually to the Department an application for certification and rig permit renewal at least 30 days prior to the expiration of the certification, accompanied by the applicable certification fee. The application shall contain, at minimum, the applicant's current address, name of the business for which the applicant is engaged in drilling wells, number of wells drilled under the applicant's supervision during the current certification period, and the applicant's signature. If a certification renewal application is received subsequent to expiration of the annual certification period, the certification fee shall then be twice the established certification fee. Subsequent to renewal, a certified well driller shall notify the Department of any changes in address or business entity.

46.04: Criteria for Suspension or Revocation of Certification, Penalties and Other Actions

(1) Any failure to comply with 310 CMR 46.00, or any act or failure to act which endangers public health or safety, shall be considered sufficient criterion for the suspension or revocation of certification and for other action by the Department and the Commonwealth, pursuant to applicable law, including, but not limited to, civil, administrative and other penalties and fines.

(2) Any well driller who fails to certify with the Department and offers services for hire, or any certified well driller who either fails to submit a well completion report in accordance with 310 CMR 46.03(3), submits a report that includes false, misleading or inaccurate statements, or falsifies a certification application, is subject to suspension or revocation of certification by the Department and to other action by the Department and the Commonwealth, pursuant to applicable law, including, but not limited to, civil, administrative and other penalties and fines.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

46.04: continued

(3) The Department may require any person to provide information as the Department deems necessary to determine whether such person is subject to, in violation of, or has violated M.G.L. c. 21G, § 14, M.G.L. c. 21G, § 20 or 310 CMR 46.00.

46.05: Severability

If any provision of 310 CMR 46.00 or its application is held to be invalid, such invalidity shall not affect any provisions of 310 CMR 46.00 not specifically held invalid.

REGULATORY AUTHORITY

310 CMR 46.00: M.G.L. c. 21G, §§ 14 and 20.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 50.00: TOXICS USE REDUCTION

Section

- 50.01: Authority
- 50.02: Purpose
- 50.03: Severability
- 50.04: Noncompliance with 310 CMR 50.00
- 50.05: Computation of Time
- 50.10: Definitions
- 50.20: Rules for Determining Amount of Toxic Substance Manufactured, Processed, or Otherwise Used
- 50.21: Duty to Provide Information
- 50.30: Toxics Use Reports
- 50.31: Applicability
- 50.32: Reporting Requirements
- 50.33: Content of Report
- 50.34: Toxics Use Fee Worksheet
- 50.35: Other (Reserved)
- 50.36: Recordkeeping Requirements
- 50.40: Toxics Use Reduction Plans
- 50.41: Applicability and Schedule
- 50.42: General Plan Requirements
- 50.43: Facility-wide Information Required in Each Plan
- 50.44: Production Unit Information Required in Each Plan
- 50.45: Procedures for Identifying Potential Toxics Use Reduction Techniques
- 50.46: Technical Evaluation of Toxics Use Reduction Techniques
- 50.46A: Economic Evaluation of Toxics Use Reduction Techniques
- 50.47: Plan Summary
- 50.48: Plan Updates
- 50.50: Toxics Use Reduction Planners
- 50.51: Required Skills for Certification as a Toxics Use Reduction Planner
- 50.52: Work Experience Requirements for All Toxics Use Reduction Planners
- 50.53: General Application Requirements and Procedures
- 50.54: Exam-track Application Procedure
- 50.55: Certification through Experience in Toxics Use Reduction Activities
- 50.56: Certification of Toxics Use Reduction and Resource Conservation Plans
- 50.57: Disclosure Requirements
- 50.58: Recertification Renewal
- 50.59: Procedure Governing Disciplinary Proceedings
- 50.60: Appeal Rights and Procedures
- 50.61: Procedures for Reviewing the Uniform Certification Examination
- 50.62: Requirements for Toxics Use Reduction Planners to Certify Environmental Management Systems
- 50.63: Requirements for Toxics Use Reduction Planners to Certify Resource Conservation Plans
- 50.70: User Segments
- 50.71: Criteria for Establishing User Segments
- 50.72: List of User Segments
- 50.80: Environmental Management Systems
- 50.81: Applicability and Schedule
- 50.82: Requirements for an Environmental Management System
- 50.83: EMS Progress Report
- 50.84: Certification of an EMS Progress Report
- 50.90: Resource Conservation Plans
- 50.91: Applicability and Schedule
- 50.92: General Resource Conservation Plan Requirements
- 50.93: Facility-wide Information Required in Each Resource Conservation Plan
- 50.94: Information Required for Selected Operations in Each Resource Conservation Plan
- 50.95: Procedures for Identifying Resource Conservation Techniques
- 50.96: Technical Evaluation of Resource Conservation Techniques
- 50.96A: Economic Evaluation of Resource Conservation Techniques
- 50.97: Resource Conservation Plan Summary

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

50.01: Authority

The Department of Environmental Protection adopts 310 CMR 50.00 pursuant to M.G.L. c. 21I, §§ 3, 10, 11 and 12.

50.02: Purpose

(1) The Department of Environmental Protection promulgates 310 CMR 50.00 to carry out its authority and responsibility:

- (a) to promote toxics use reduction as the preferred means for preventing risks associated with the production and use of toxic substances, including risks to workers, consumers, the public and the environment;
- (b) to promote toxics use reduction as the preferred means for achieving compliance with any state or federal law or regulation pertaining to toxics production and use, hazardous waste, industrial hygiene, worker safety, public exposure to toxics, or releases of toxics into the environment;
- (c) to promote resource conservation and implementation of environmental management systems;
- (d) to promote the coordination and enforcement of federal and state laws and regulations pertaining to chemical production and use, hazardous waste, industrial hygiene, worker safety, public exposure to toxics and the release of toxics into the environment;
- (e) to coordinate state programs in order to promote most effectively toxics use reduction in the commonwealth;
- (f) to minimize unnecessary duplication of reporting requirements concerning chemical or hazardous substance production, use, release, disposal, and worker exposure;
- (g) to provide up-to-date and consistent information about manufacturing, worker exposure, distribution, process, sale, storage, release or other use of chemicals on a facility, regional and statewide basis;
- (h) to protect the public health, safety and welfare;
- (i) to provide for the proper administration of and to otherwise effectuate the purposes of M.G.L. c. 21I.

50.03: Severability

It is hereby declared that the provisions of 310 CMR 50.00 are severable, and if any provisions hereof or the application thereof to any person or any circumstance is held invalid, such invalidity shall not affect other provisions hereof or applications thereof which can be given effect without the invalid provision or application.

50.04: Noncompliance with 310 CMR 50.00

Any noncompliance with, failure to comply with, or violation of any provision of 310 CMR 50.00 shall constitute a violation of 310 CMR 50.00 for which the Department may take an enforcement action pursuant to M.G.L. c. 21A, § 16 and 310 CMR 50.00.

50.05: Computation of Time

Unless otherwise specifically provided by law, 310 CMR 50.00, or any determination issued pursuant to 310 CMR 50.00, any time period prescribed or referred to in 310 CMR 50.00 or in any determination issued pursuant to 310 CMR 50.00 shall begin with the first day following the act which initiates the running of the time period, and shall include every calendar day, including the last day of the time period so computed. If the last day is Saturday, Sunday, legal holiday, or any other day in which the offices of the Department are closed, the deadline shall run until the end of the next business day. If the time period prescribed or referred to is less than seven days, only days when the offices of the Department are open shall be included in the computation.

50.10: Definitions

As used in 310 CMR 50.00, the following terms shall have the following meanings, unless the context otherwise clearly requires.

Agency means state agency.

Appellant means an individual or organization who requests an adjudicatory hearing pursuant to M.G.L. c. 21I and 310 CMR 50.00.

Applicant means an individual who submits an application for certification as a toxics use reduction planner in accordance with 310 CMR 50.50.

Article means a manufactured item, other than an item which is manufactured at the facility:

- (a) which is formed to a specific shape or design during manufacture;
- (b) which has end use functions dependent in whole or in part upon its shape or design during end use; and
- (c) which does not release a toxic substance under normal conditions of processing or use of that item at the facility or establishments.

Board means the Science Advisory Board of the Toxics Use Reduction Institute at the University of Massachusetts Lowell.

Byproduct means nonproduct outputs of toxic or hazardous substances generated by a production unit, before handling, transfer, treatment or release. "Otherwise used" substances shall be counted as byproduct when they leave a production unit.

CERCLA means the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 *et seq.* (Public Law 92-500).

Commissioner means the Commissioner of the Department of Environmental Protection (pursuant to St. 1989, c. 240, § 101, "... the Department of Environmental Quality Engineering shall be known as the Department of Environmental Protection") or his designee.

Council means the Administrative Council on Toxics Use Reduction as established by M.G.L. c. 21I, § 4.

Covered Toxic means:

- (a) a toxic substance that is manufactured, processed, or otherwise used at a facility in amounts, determined in accordance with 310 CMR 50.20, equal to or greater than the applicable threshold amount.
- (b) A "covered toxic" also means a toxic substance manufactured, processed, or otherwise used by a toxic user within a priority user segment designated pursuant to M.G.L. c. 21I, § 14 for which the Department requires reporting or planning pursuant to M.G.L. c. 21I, §§ 14 and 10 or 11.

Customs Territory of the United States means the 50 States, the District of Columbia, and Puerto Rico.

Department means the Department of Environmental Protection (pursuant to St. 1989, c. 240, § 101, "... the Department of Environmental Quality Engineering shall be known as the Department of Environmental Protection").

Emission means a release of a toxic or hazardous substance to the environment or a transfer of a toxic or hazardous substance in waste to an off-site location.

Environmental Aspect means an element of a facility's products, activities, or services that can interact with the environment.

Environmental Impact means any change in the environment resulting from a facility's products, activities, or services.

50.10: continued

Environmental Management System (EMS) means a quality-based management system that effectively integrates environmental considerations into an organization's day-to-day operations and management culture. In order to be eligible to be an alternative to toxic use reduction planning, the environmental management system shall, at a minimum, meet the following criteria:

- (a) include all production units that use Toxics Use Reduction Act (TURA)-listed chemicals used in reportable quantities as part of the environmental management system;
- (b) identify all TURA-listed chemicals used in reportable quantities as significant aspects;
- (c) consider toxics use reduction when identifying significant aspects and developing associated objectives and targets;
- (d) emphasize source reduction in achieving objectives; and
- (e) incorporate appropriate environmental performance metrics when developing objectives and targets.

Environmental Management System Professional or EMS Professional means a person accredited or certified under a national, international or other recognized EMS standard or a person who has at least two years of experience in developing or auditing EMSs.

EPCRA means the Emergency Planning and Community Right-to-know Act, 42 U.S.C. § 11001 *et seq.* (Public Law 99-499).

Establishment means an economic unit, generally at a single physical location, where business is conducted or where services or industrial operations are performed.

Facility means all buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person, or by any person who controls, is controlled by, or is under common control with, such person. A facility may consist of more than one establishment if the establishments are operated by persons who have a common corporate or business interest (including, without limitation, common ownership or control) in the establishments. If the facility consists of more than one establishment where the establishments are operated by persons who do not have a common corporate or business interest (including, without limitation, common ownership or control) in the establishments, then each such person shall treat the establishments it operates as a facility.

For purposes of 310 CMR 50.10: Facility, a "common corporate or business interest" includes ownership, partnership, joint ventures, ownership of a controlling interest in one person by the other, or ownership of a controlling interest in both persons by a third person.

Form A means the report authorized by 40 CFR, part 372.27 and containing the data elements specified in 40 CFR, part 372.95.

Form R means the report required by Section 313 of EPCRA and 40 CFR part 372.

Form S means the form required by M.G.L. c. 21I and 310 CMR 50.30.

Full-time Employee means each 2,000 hours worked per year by an employee or combination of employees.

Full-time Individual Employed or Full-time Equivalent means each 2,000 hours worked per year by an employee or combination of employees.

Full-time Work Experience means experience during full-time employment which extends over an uninterrupted period of three months or more with a minimum of 37.5 hours per week.

General Practice Toxics Use Reduction Planner means an individual who has a valid certification issued by the Department pursuant to 310 CMR 50.54 to certify toxics use reduction plans for any toxics user.

Higher Hazard Substance means a substance designated by the Council as a higher hazard substance pursuant to M.G.L. c. 21I, § 9 and 301 CMR 41.00.

50.10: continued

Import means to cause a toxic substance (including a mixture containing a toxic substance) to be imported into the customs territory of the United States. For purposes of 310 CMR 50.10: Import, "to cause" means to intend that the toxic substance be imported and to control the identity of the imported toxic substance and the amount to be imported. For purposes of 310 CMR 50.10: Import, "to cause" includes, without limitation situations where a person orders a toxic substance from a foreign supplier, and situations where the person uses an import brokerage firm as an agent to obtain the toxic substance.

Independent Auditor means a person qualified by experience and/or training to audit an EMS. This person may be a third-party auditor or an employee of a facility provided that the employee is not the person who has responsibility for implementing the EMS.

Institute means the Toxics Use Reduction Institute at the University of Massachusetts Lowell.

Intermediate Product means

- (a) in chemical manufacturing, any chemical substance that is consumed, in whole or in part, in chemical reactions used for the intentional manufacture of another chemical substance or mixture, or that is intentionally present for the purpose of altering the rate of chemical reactions, other than a non-isolated intermediate as defined in M.G.L. c. 21I;
- (b) in any other setting, any manufactured substance, compound, or product that is consumed, in whole or in part, in a chemical or physical process for the intentional manufacture of another product, or that is intentionally present for the purpose of aiding the manufacture of another product, other than a non-isolated intermediate as defined in M.G.L. c. 21I and 310 CMR 50.00.

Large Quantity Toxics User means any toxics user who manufactures, processes or otherwise uses any toxic or hazardous substance in an amount, determined in accordance with 310 CMR 50.20, the same as or greater than the applicable threshold amount in a calendar year at a facility. When more than one threshold applies to a facility's manufacturing, processing, or other use of a toxic substance, the toxics user is a large quantity toxics user if the facility exceeds any applicable threshold.

Limited Practice Toxics Use Reduction Planner means an individual who has a valid certification issued by the Department pursuant to 310 CMR 50.54 or 50.55 to certify toxics use reduction plans for facilities owned or operated by his or her employer.

Lower Hazard Substance means a substance designated by the Council as a lower hazard substance pursuant to M.G.L. c. 21I, § 9 and 301 CMR 41.00.

Manufacture means to produce, prepare, import or compound a toxic or hazardous substance. Manufacture shall also mean to produce a toxic or hazardous substance coincidentally during the manufacture, processing, use or disposal of another substance or mixture of substances, including a toxic substance that is separated from such other substance or mixture of substances as a byproduct, and a toxic substance that remains in such other substance or mixture of substances as an impurity.

Mixture means any combination of two or more chemicals, if the combination is not, in whole or in part, the result of a chemical reaction. However, if the combination was produced by a chemical reaction but could have been produced without a chemical reaction, it is also treated as a mixture. A mixture also includes any combination which consists of a chemical and associated impurities.

Multi-media means having to do with all environmental media including, but not limited to, water, land and air and workplaces within facilities.

NAICS means the North American Industry Classification System developed under the auspices of the United States Office of Management and Budget.

50.10: continued

Natural Asset or Asset means the natural resource or toxic substance targeted in a resource conservation plan pursuant to 310 CMR 50.90.

Non-isolated Intermediate means any intermediate which is not intentionally removed from the equipment in which it is manufactured, including any reaction vessel in which it is manufactured, equipment which is ancillary to the reaction vessel or similar equipment, and any equipment through which the intermediate passes during a continuous flow process, but not including tanks or other vessels or equipment in which the substance or product is stored after manufacture.

Office means Office of Technical Assistance and Technology within the Executive Office of Environmental Affairs.

Operation means a process or activity including, but not limited to, production processes, administrative activities, maintenance activities, food service, and other facility based activities performed at a facility.

Otherwise Use or Other Use means any use of a toxic substance that is not covered by the terms "manufacture" or "process" and includes use of a toxic substance contained in a mixture or trade name product. Relabeling or redistributing a container of a toxic substance where no repackaging of the toxic substance occurs does not constitute use or processing of the toxic substance.

Person means any individual, trust, firm, joint stock company, corporation, partnership, or association engaged in business or in providing service, excluding the Commonwealth of Massachusetts, and any authority, district, municipality or political subdivision of the Commonwealth of Massachusetts.

Plan Summary or Summary means the plan summary that a toxics user is required to submit to the Department pursuant to M.G.L. c. 21I, § 11(F) and 310 CMR 50.40.

POTW (Publicly-owned Treatment Works) Operators means holders of discharge permits for any devices and systems owned by the Commonwealth or any of its political subdivisions and used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature to implement 33 U.S.C. § 1281, or necessary to recycle or reuse water at the most economical cost under the estimated life of the works, including intercepting sewers, outfall sewers, sewage collection systems, pumping, power, and other equipment, and the appurtenances; extensions, improvements, remodeling, additions, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities; any works, including the land that will be an integral part of the treatment process (including the land used for the storage of treated wastewater in land treatment systems prior to land application) or is used for ultimate disposal of residues resulting from such treatment; any other method or system for preventing, abating, reducing, storing, treating, separating, or disposing of municipal waste, including storm water runoff, or industrial waste, including waste in combined storm water and sanitary sewer systems.

Process means the preparation of a toxic or hazardous substance, including, without limitation, a toxic substance contained in a mixture or trade name product, after its manufacture, for distribution in commerce:

- (a) in the same form or physical state, or in a different form or physical state from, that in which it was received by the toxics user so preparing such substance; or
- (b) as part of an article containing the toxic or hazardous substance.

Product means a product, a family of products, an intermediate product, a family of intermediate products, or a desired result or a family of results. "Product" also means a byproduct that is used as a raw material without treatment. If a byproduct is treated before it is used as a raw material, then it is not a product.

Production Unit means a process, line, method, activity, or technique, or a combination or series thereof, used to produce a product.

50.10: continued

Resource Conservation means an action that decreases the use or consumption of a natural asset such as water, energy, or raw materials, or increases the efficiency of the use of the asset, without increasing the risk to the public, including workers and consumers, or the environment and without increasing the amount of waste generated.

Resource Conservation Plan means the plan a toxics user may develop as an alternative to a toxics use reduction plan pursuant to M.G.L. c. 21I, § 11(D) and 310 CMR 50.90.

Senior Management Official means an official who has management responsibility for the person or persons completing the report or plan, and who has authority to act as an agent for the toxics user.

SIC Code or Standard Industrial Classification Code means a specific identification code, within the identification code system developed by the United States Chamber of Commerce, assigned to a facility.

Small Quantity Toxics User means any toxics user who is not a large quantity toxics user.

Source Reduction means any change in the design, manufacture, purchase, or use of materials, products, or energy to reduce their amount or toxicity before they become a waste (*i.e.*, before recycling, treatment, release or disposal). Source reduction includes toxics use reduction.

State Agency means any agency or authority of the Commonwealth as defined in M.G.L. c. 30A, § 1.

Thresholds Amounts or Threshold Amount mean the following:

- (a) for those toxics users that manufacture or process a toxic or hazardous substance, as the terms "manufacture" and "process" are defined in 310 CMR 50.10, the threshold amount for a toxic or hazardous substance shall be 25,000 pounds each year at any one facility, except the threshold will be 1,000 pounds each year at any one facility for a higher hazard substance; and
- (b) for those toxics users that otherwise use a toxic or hazardous substance, the threshold amount for a toxic or hazardous substance shall be 10,000 pounds each year at any one facility, except the threshold will be 1,000 pounds each year at any one facility for a higher hazard substance;
- (c) if the administrator of the United States Environmental Protection Agency sets a threshold quantity for facility reporting on a toxic or hazardous substance under Section 313 of EPCRA which is lower than a corresponding threshold amount specified in 310 CMR 50.10: Thresholds Amounts or Threshold Amount(a) or (b), then the corresponding threshold for that substance pursuant to M.G.L. c. 21I and 310 CMR 50.00 shall be the same as the federal threshold.
- (d) if the Council sets a threshold amount in 301 CMR 41.00 for a higher hazard substance below that which is specified in 310 CMR 50.10: Thresholds Amounts or Threshold Amount(a) and (b), that lower threshold shall apply for that higher hazard substance.

Toxic means toxic or hazardous.

Toxic or Hazardous Substance means a substance in a gaseous, liquid, solid or other form which is identified on the toxic or hazardous substance list established pursuant to M.G.L. c. 21I, § 9 and 301 CMR 41.00, but which will not include any substance when it is:

- (a) present in an article;
- (b) used as a structural component of a facility;
- (c) present in a product used for routine janitorial or facility grounds maintenance;
- (d) present in foods, drugs, cosmetics or other personal items used by employees or other toxics users at a facility;
- (e) present in a product used for the purpose of maintaining motor vehicles operated by a facility;

50.10: continued

- (f) present in process water or non-contact cooling water as drawn from the environment or from municipal sources, or present in air used either as compressed air or as part of combustion;
- (g) present in a pesticide or herbicide when used in agricultural applications;
- (h) present in crude, lubricating or fuel oils or other petroleum materials being held for direct wholesale or retail sale; or
- (i) present in crude or fuel oils used in combustion to produce electricity, steam or heat except when production of electricity, steam or heat is the primary business of a facility.

Toxic or Hazardous Substance List means the list of toxic or hazardous substances in 301 CMR 41.00 and established pursuant to M.G.L. c. 21I, § 9.

Toxics means toxic or hazardous substances.

Toxics Use Fee means the fee in 301 CMR 40.00 established under, and assessed pursuant to, M.G.L. c. 21I, § 19.

Toxics User means the following:

- (a) a person who owns or operates a facility that manufactures, processes or otherwise uses any toxic or hazardous substance that is classified in SIC Codes 10 through 14, 20 through 40, 44 through 51, 72, 73, 75 or 76, or the corresponding NAICS codes.
- (b) If a person owns a facility, and that person's only interest in the facility is ownership of the real estate upon which the facility is operated, then, with respect to that facility, that person is not a toxics user. This includes, without limitation, owners of facilities such as industrial parks, all or part of which are leased to persons who operate establishments within SIC codes 10 through 14, 20 through 40, 44 through 51, 72, 73, 75 or 76, or the corresponding NAICS codes where the owner has no other business interest in the operation of the facility or establishment.

Toxics Use Reduction means in-plant changes in production processes or raw material that reduce, avoid, or eliminate the use of toxic or hazardous substances or generation of hazardous byproducts per unit of product, so as to reduce risks to the health of workers, consumers, or the environment, without shifting risks between workers, consumers, or parts of the environment. Toxics use reduction shall be achieved through any of the following techniques:

- (a) Input substitution, which refers to replacing a toxic or hazardous substance or raw material used in a production unit with a non-toxic or less toxic substance;
- (b) Product reformulation, which refers to substituting for an existing end-product an end product which is non-toxic or less toxic upon use, release or disposal;
- (c) Production unit redesign or modification, which refers to developing and using production units of a different design than those currently used;
- (d) Production unit modernization, which refers to upgrading or replacing existing production unit equipment and methods with other equipment and methods, based on the same production unit;
- (e) Improved operation and maintenance of production unit equipment and methods, which refers to modifying or adding to existing equipment or methods including, but not limited to, such techniques as improved housekeeping practices, system adjustments, product and process inspections, or production unit control equipment or methods; or
- (f) Recycling, reuse, or extended use of toxics by using equipment or methods which become an integral part of the production unit of concern, including but not limited to filtration and other closed loop methods.

However, toxics use reduction shall not include or in any way be inferred to promote or require incineration, transfer from one medium of release or discharge to other media, off-site or out-of-production unit waste recycling, or methods of and-of-pipe treatment of toxics as waste.

Toxics Use Reduction Institute or Institute mean the Toxics Use Reduction Institute established pursuant to M.G.L. c. 21I, § 6.

50.10: continued

Toxics Use Reduction Plan or Plan means the plan or update to the plan that a toxics user is required to develop in accordance with M.G.L. c. 21I, § 11 and 310 CMR 50.40.

Toxics Use Reduction Planner or Planner means an individual certified by the Department in accordance with 310 CMR 50.50.

Toxics Use Report means the report that a toxics user is required to submit to the Department pursuant to M.G.L. c. 21I, § 10 and 310 CMR 50.30.

Toxics Use Reduction Planning Program means an educational program in toxics use reduction developed by the Institute in accordance with M.G.L. c. 21I, § 6(E).

Trade Secret means any formula, plan, pattern, process, production data, device, information, or compilation of information which is used in a toxics user's business, and which gives said toxics user an opportunity to obtain an advantage over competitors who do not know or use it.

TURA Toxic Use Reduction Act, M.G.L. c. 211.

Uniform Certification Examination, Examination or Exam means an examination prepared by the Department pursuant to M.G.L. c. 21I, § 12.

Unit of Product means a measure that reflects the level of production or activity associated with the use of the toxic or the generation of the toxic as byproduct.

User Segment means a set of no fewer than five toxics users who employ a similar production unit, classified by the department pursuant to 310 CMR 50.70. Production units grouped into a user segment must contain similar products and processes.

50.20: Rules for Determining Amount of Toxic Substance Manufactured, Processed, or Otherwise Used

(1) Toxics users shall follow the rules set forth in 310 CMR 50.20 for purposes of determining the amount or quantity of a toxic substance manufactured, processed, or otherwise used at a facility. This includes, without limitation, the following purposes:

- (a) to determine whether the toxics user is a large quantity toxics user or a small quantity toxics user, or,
- (b) to determine the amount of a covered toxic manufactured, processed, or otherwise used at a facility.

(2) When a facility manufactures, processes, or otherwise uses more than one member of a chemical category listed in 40 CFR Part 372.65(c), the toxics user shall add together each member of the chemical category in order to determine the total amount of the toxic substance manufactured, processed, or otherwise used at the facility.

(3) A facility may process or otherwise use a toxic substance in a recycle/reuse operation. To determine the amount of such toxic substances, the toxics user shall count the amount of the toxic substance added to the recycle/reuse operation during the calendar year. In particular, if the facility starts up such an operation during a calendar year, or in the event that the contents of the whole recycle/reuse operation are replaced in a calendar year, the toxics user shall also count the amount of the toxic substance placed into the system at these times.

(4) A toxic substance may be listed in 40 CFR Part 372.65 with the notation that only persons who manufacture the toxic substance, or manufacture it by a certain method, are required to report. In that case, in determining the quantity of the toxic substance manufactured at the facility, the toxics user shall consider only the amount of the toxic substance as described in 40 CFR Part 372.65.

50.20: continued

(5) A toxic substance may be listed in 40 CFR Part 372.65 with the notation that it is in a specific form (*e.g.*, fume or dust, solution, or friable) or of a specific color (*e.g.* yellow or white). In that case, in determining the amount of the toxic substance manufactured, processed, or otherwise used at the facility, the toxics user shall consider only the amount of such toxic substances that the facility manufactures, processes, or otherwise uses in the form or of the color specified in 40 CFR Part 372.65.

(6) Metal compound categories are listed in 40 CFR Part 372.65(c). For purposes of determining the amount of the metal compound category manufactured, processed, or otherwise used at the facility, the toxics user shall consider the total amount of all members of the metal compound category manufactured, processed, or otherwise used at the facility.

(7) With respect to toxic substances present as a component of a mixture or trade name product, toxics users shall consider the quantity of the toxic substance if the toxics user knows that the toxic substance is present as a component of the mixture or a trade name product. In determining the amount or quantity of a toxic substance manufactured, processed, or otherwise used at a facility, the toxics user shall not consider the amount of the toxic substance if it is present in a mixture in concentrations equal to or below the *de minimus* concentration for that toxic substance set forth in 40 CFR Part 372.38(a); provided, however, that this *de minimis* exemption shall not apply for any toxic or hazardous substance specified as a chemical of special concern in 40 CFR Part 372.28.

(a) The toxics user knows that a toxic substance is present as a component of a mixture or trade name product

1. if the toxics user knows or has been told the chemical identity or Chemical Abstracts Service Registry Number of the substance and the identity or number corresponds to an identity or number in 40 CFR Part 372.65, or
2. if the toxics user knows or has been told by the supplier of the mixture or trade name product, that the mixture or trade name product contains a toxic substance subject to M.G.L. c. 21I, § 313 of EPCRA or 40 CFR Part 372.65, or Sections 101(14) or 102 of CERCLA.

(b) To determine whether a toxic substance which is a component of a mixture or trade name product has been imported, processed, or otherwise used in excess of an applicable threshold at the facility, the toxics user shall consider only the portion of the mixture or trade name product that consists of the toxic substance and that is imported, processed, or otherwise used at the facility as follows:

1. If the toxics user knows the specific chemical identity of the toxic substance and the specific concentration at which it is present in the mixture or trade name product, the toxics user shall determine the weight of the toxic substance imported, processed, or otherwise used as part of the mixture or trade name product at the facility and shall combine that with the weight of the toxic substance manufactured (including imported) processed, or otherwise used at the facility other than as part of the mixture or trade name product.
2. If the toxics user knows the specific chemical identity of the toxic substance and does not know the specific concentration at which the toxic substance is present in the mixture or trade name product, but has been told the upper bound concentration in the mixture or trade name product, the toxics user shall assume that the toxic substance is present in the mixture or trade name product at the upper bound concentration, and shall determine the quantity of the toxic substance manufactured, processed, or otherwise used at the facility in accordance with 310 CMR 50.20(7)(b)1.
3. If the toxics user knows the specific chemical identity of the toxic substance, does not know the specific concentration at which the toxic substance is present in the mixture or trade name product, has not been told the upper bound concentration of the toxic substance in the mixture or trade name product, and has not otherwise developed information on the composition of the toxic substance in the mixture or trade name product, then the toxics user need not consider that toxic substance in that mixture or trade name product in determining the amount of the toxic substance manufactured, processed, or otherwise used at the facility.

50.20: continued

4. If the toxics user has been told that a mixture or trade name product contains a toxic substance, does not know the specific chemical identity of the toxic substance and knows the specific concentration at which it is present in the mixture or trade name product, the toxics user shall determine the weight of the toxic substance imported, processed, or otherwise used as part of the mixture or trade name product at the facility. Since the toxics user does not know the specific identity of the toxic substance, with respect to that toxic substance, the toxics user shall determine whether the facility is a large quantity toxics user or a small quantity toxics user based on the weight of that toxic substance present in the mixture or trade name product.

5. If the toxics user has been told that a mixture or trade name product contains a toxic substance, does not know the specific chemical identity of the toxic substance, and does not know the specific concentration at which the toxic substance is present in the mixture or trade name product, but has been told the upper bound concentration of the toxic substance in the mixture or trade name product, the toxics user shall assume that the toxic substance is present in the mixture or trade name product at the upper bound concentration, and shall determine the quantity of the toxic substance manufactured, processed, or otherwise used at the facility in 310 CMR 50.20(7)(b)1.

6. If the toxics user has been told that a mixture or trade name product contains a toxic substance, does not know the specific chemical identity of the toxic substance, does not know the specific concentration at which the toxic substance is present in the mixture or trade name product, including information they have themselves developed, and has not been told the upper bound concentration of the toxic substance in the mixture or trade name product, the toxics user need not consider such toxic substance for purposes of determining quantities of toxic substances manufactured, processed, or otherwise used at the facility.

(8) A facility may consist of more than one establishment. In determining the amount of a toxic substance manufactured, processed, or otherwise used at a facility, the toxics user shall consider the amount of the toxic substance manufactured, processed, or otherwise used at each establishment within the facility.

(9) In determining the amount of a toxic substance manufactured, processed, or otherwise used in a laboratory at a facility, the toxic user need not consider the quantity of such toxic substances if, pursuant to 40 CFR Part 372.38(d), the toxic substance is manufactured, processed, or otherwise used in a laboratory at a facility under the supervision of a technically qualified individual as defined in 40 CFR Part 720.3(ee). This exemption does not apply in the following circumstances:

- (a) Specialty chemical production;
- (b) Manufacture, processing, or use of toxic substances in pilot plant scale operations;
- (c) Activities conducted outside the laboratory.

50.21: Duty to Provide Information

(1) A toxics user shall provide to the Department, within a reasonable time, any information the Department may request and that is deemed by the Department to be relevant in determining whether the toxics user is subject to the requirements of 310 CMR 50.00 or is in compliance with 310 CMR 50.00.

(2) A toxics user shall allow personnel or authorized agents of the Department, upon presentation of credentials or other documents as may be required by law, to, without a warrant:

- (a) Enter at all reasonable times any premises, public or private, for the purpose of investigating, sampling, or inspecting any records, condition, equipment, practice, or property relating to activities subject to M.G.L. c. 21I;
- (b) Enter at any time such premises for the purpose of protecting the public health, safety, or welfare, or to prevent damage to the environment;
- (c) Have access to and copy at all reasonable times all records that are required to be kept pursuant to the requirements of 310 CMR 50.00.

50.30: Toxics Use Reports

310 CMR 50.30 - 50.39, cited collectively as 310 CMR 50.30, establishes reporting requirements for toxics users.

50.31: Applicability

- (1) For facilities that are classified by SIC codes 20 through 39, large quantity toxics users shall submit to the Department a toxics use report in accordance with 310 CMR 50.32(1) on or before July 1, 1991.
- (2) For facilities that are classified by SIC codes 10 through 14, 40, 44 through 51, 72, 73, 75 and 76, large quantity toxics users shall submit to the Department a toxics use report in accordance with 310 CMR 30.31(2) on or before July 1, 1992.
- (3) Toxics users need not submit reports for facilities that have less than ten full-time employees unless:
 - (a) the facility is within a priority user segment pursuant to M.G.L. c. 21I, § 14, and
 - (b) the Department requires the toxics user to submit a report for the facility in accordance with M.G.L. c. 21I, §§ 10 and 14.
- (4) Small quantity toxics users need not submit reports for facilities unless:
 - (a) the facility is within a priority user segment pursuant to M.G.L. c. 21I, § 14, and
 - (b) the Department requires the toxics user to submit a report for the facility in accordance with M.G.L. c. 21I, §§ 10 and 14.

50.32: Reporting Requirements

- (1) On or before July 1st of each year, toxics users shall submit a toxics use report including information associated with each covered toxic manufactured, processed, or otherwise used at a facility in accordance with 310 CMR 50.00.
- (2) For facilities that consist of more than one establishment, and that manufacture, process, or otherwise use a covered toxic, the toxics user may submit a separate report for each establishment or for each group of establishments, provided that information associated with the manufacturing, processing, or other use of that covered toxic at all the establishments within the facility is reported in accordance with 310 CMR 50.00, including, without limitation, 310 CMR 50.20 and 310 CMR 50.30. If each establishment or group of establishments files separate reports then for all other covered toxics at that facility they must also submit separate reports.
- (3) With respect to activities at a facility involving a covered toxic, when more than one threshold amount applies to the activities, the report shall include information associated with all activities involving that covered toxic at the facility. Such information shall be reported in accordance with 310 CMR 30.50, including, without limitation, 310 CMR 50.20 and 310 CMR 50.30.
- (4) With respect to metal compounds that are covered toxics, the toxics user need only include in the report information associated with the parent metal, and need not include in the report information associated with other components of the metal compound in the metal compound category.
- (5) A senior management official of the facility shall certify the accuracy and completeness of the report by signing a certification statement that accurately identifies the report. Falsification of information in the report, including the certification statement, shall be a violation of 310 CMR 50.00 for which the Department may take an enforcement action.
- (6) A toxics use report shall include information based on the quantity of each covered toxic manufactured, processed, or otherwise used at the facility during the calendar year preceding the date on which the toxics use report is due.

50.32: continued

(7) In calculating, measuring, or estimating quantities of a toxic or hazardous substance to be reported pursuant to 310 CMR 50.30, toxic users shall report with the maximum accuracy that is feasible and practicable. Toxics users shall report quantities with accuracy to two significant digits.

(8) If a toxics user discovers, after submitting a report, that there is a gross error in any or all of the information contained in the report, the toxics user shall, in writing, so notify the Department within 14 days of the date of discovery. The toxics user shall submit corrections to the report within 30 days of such notification. Nothing in 310 CMR 50.32(8) shall preclude the Department from taking any other appropriate action, including, without limitation, an enforcement action.

(9) The Department may require the toxics user to amend or supplement any report submitted prior to the current reporting year if the toxics user changes any of the following:

- (a) the unit of product;
- (b) an estimating method used to determine information in the toxics use report if using the new method would significantly alter information in a previously submitted report.

Nothing in 310 CMR 50.32(9) shall preclude the Department from taking any other appropriate action, including, without limitation, an enforcement action.

(10) Each toxics use report shall contain the information set forth in 310 CMR 50.33, and shall be submitted on forms prescribed by the Department.

(11) Each toxics use report shall consist of one completed Form R and one completed Form S for each covered toxic. A Form A may be submitted in *lieu* of a Form R if the requirements of 40 CFR Part 372.27 are met and the Form A includes a production ratio or activity index. A Form A may not be submitted in *lieu* of a Form R for a higher hazard substance.

(12)(a) With respect to the information required pursuant to 310 CMR 50.33(3) to be reported on the Form S, toxic users need not report information associated with the following entities.

1. pilot plants
2. pilot production units
3. start-up production units for a time period equal to the shorter of either the time period from the date of initial operation until required operational efficiency is achieved, or two years from the date of initial operation.

(b) With respect to all other information required pursuant to 310 CMR 50.33 to be reported on the Form S, toxics users shall include information associated with the entities set forth in 310 CMR 50.32(12)(a)1., 2. and 3.

50.33: Content of Report

Each toxics use report shall contain the following information:

(1) the information required to be submitted under regulations promulgated pursuant to section 313 of EPCRA;

(2) the quantities of the toxic or hazardous substance at the facility which are: manufactured; processed; otherwise used; generated as byproduct prior to any handling, transfer, treatment or release; and shipped as or in products from the facility; and,

(3) if the sum of the quantities of the toxic or hazardous substance which are manufactured, processed and otherwise used are not approximately equal to the sum of the quantities shipped in product and generated as byproduct, a general explanation of why there is not an approximate materials balance.

(4) whether anything non-routine occurred at the facility that affected the data reported and an explanation of how it affected the data.

50.33: continued

- (5) whether the toxic or hazardous substance is used to treat waste or control pollution and, if so, the amounts used.
- (6) for each production unit at the facility in which the toxic or hazardous substance is manufactured, processed or otherwise used, each toxics use report shall also include the following information:
 - (a) the information necessary to identify the toxics user, the facility, the toxic or hazardous substance, and the production unit. The production unit shall be identified by providing a description of the process, the product, the unit of product, and the SIC code or corresponding NAICS code that best describes the product.
 - (b) whether the toxic or hazardous substance was used in the production unit in amounts:
 1. greater than zero pounds but less than or equal to 5,000 pounds;
 2. greater than 5,000 pounds but less than or equal to 10,000 pounds;
 3. greater than 10,000 pounds, but less than or equal to 100,000 pounds;
 4. greater than 100,000 pounds, but less than or equal to 500,000 pounds; or
 5. greater than 500,000 pounds.
 - (c) Amounts used in waste treatment shall not be included in determining the amount used in the production unit.
 - (d) whether the use of any toxic substance or the generation of byproduct increased or decreased by more than 10% compared to the previous reporting year and/or the toxics user implemented toxics use reduction, and, if so, identification of where in the process the change and/or toxics use reduction occurred and an explanation for the change and/or toxics use reduction, including any toxics use reduction techniques implemented.
- (7) Each report shall also indicate any of the following changes:
 - (a) a change in a unit of product;
 - (b) a change in the estimating method used to determine information in the toxics use report if using the new method would significantly alter information in a previously submitted report; and
 - (c) whether or not the production unit was included in the report due on the previous July 1st.

50.34: Toxics Use Fee Worksheet

With each report submitted pursuant to 310 CMR 50.32, the toxics user shall also submit to the Department a Toxics Use Fee Worksheet on forms prescribed by the Department.

(50.35: Other: Reserved)

50.36: Recordkeeping Requirements

- (1) The toxics user shall establish and maintain at the facility documentation which is necessary to substantiate all information submitted in each report, including, but not limited to, the following:
 - (a) documentation required by 40 CFR Part 372.10;
 - (b) documentation supporting the toxics user's determination of the quantity of the toxic substance manufactured, processed, or otherwise used at the facility. If, in determining the quantity of the toxic substance manufactured, processed or otherwise used at the facility, the toxics user does not consider any or all of a toxic substance pursuant to 310 CMR 50.20, the toxics user shall maintain documentation necessary to support the exclusion;
 - (c) documentation supporting the toxics user's determination of the quantity of the covered toxic generated as byproduct, prior to any handling, treatment, transfer, or release, by the facility;
 - (d) documentation supporting the toxics user's determination of the quantity of the covered toxic shipped from the facility as or in product;
 - (e) documentation supporting the toxics user's determination of the amount of the covered toxic manufactured, processed, or otherwise used in each production unit at the facility;
 - (f) documentation supporting the toxics user's determination of the quantity of the covered toxic generated as byproduct by each production unit;

50.36: continued

- (g) documentation supporting the toxics user's determination of the quantity of the covered toxic used to treat waste or control pollution;
- (h) for each production unit included in the report, documentation supporting and explaining the toxics user's designation of the production unit;
- (i) documentation supporting the toxics user's determination of the number of units of product produced by each production unit and documentation that describes and defines the unit of product.
- (j) for each production unit in which the use of a toxic substance or generation of byproduct increased or decreased by more than 10% from the previous reporting year the following documentation:
 - 1. documentation supporting the toxics user's determination that implementation of a specific toxics use reduction technique, management technique, combination of techniques, or other factors resulted in the change in toxics use or byproduct generation for a specific production operation;
 - 2. an explanation and description of each toxics use reduction technique, management technique, combination of techniques, or other factors that resulted in the change in toxics use or byproduct generation, including a description of how the toxics use reduction technique, management technique, or combination of techniques was used on the production operation.

(2) If a toxics user claims that the facility has less than ten full-time employees and is exempt from the reporting requirements of 310 CMR 50.30 pursuant to 310 CMR 50.31(3), the toxics user shall maintain documentation at the facility supporting such claim.

(3) If a toxics user does not include in the toxics use report information associated with a pilot plant, a pilot production unit, or a start-up production unit pursuant to 310 CMR 50.32(12)(a)1., 2., or 3., the toxics user shall maintain documentation necessary to support the determination that the pilot plant, pilot production unit, or start-up production unit is excluded pursuant to 310 CMR 50.32(12)(a)1., 2. or 3. The toxics user shall also maintain documentation necessary to explain any discrepancy between the total quantity of the covered toxic manufactured, processed, or otherwise used by the facility as reported in the report and the aggregate quantity of the covered toxic manufactured, processed, or otherwise used by all production units for which information is included in the report attributable to the pilot plant, pilot production unit, or start-up production unit for which information is not included in the report.

(4) The toxics user shall maintain at the facility a copy of each toxics use report, and supporting documentation, for a period of at least five years after the date that the report was due.

(5) All records and documentation established or maintained pursuant to 310 CMR 50.36 shall be readily available for purposes of inspection and copying by the Department.

50.40: Toxics Use Reduction Plans

310 CMR 50.40 through 50.49, cited collectively as 310 CMR 50.40, establishes requirements for developing toxics use reduction plans.

50.41: Applicability and Schedule

(1) Large quantity toxics users shall prepare and complete a toxics use reduction plan for each facility by July 1st of each even-numbered calendar year in which they are required to file a toxics use report pursuant to 310 CMR 50.30, provided the even-numbered year is not the same year in which a toxics user first files a toxics use report.

(2) Toxics users need not prepare plans for facilities that have less than ten full-time employees unless:

- (a) the facility is within a priority user segment pursuant to M.G.L. c. 21I, § 14, and
- (b) the Department requires the toxics user to submit a report for the facility in accordance with M.G.L. c. 21I, §§ 11 and 14.

50.41: continued

- (3) Small quantity toxics users need not prepare plans for facilities unless:
 - (a) the facility is within a priority user segment pursuant to M.G.L. c 21I, § 14, and
 - (b) the Department requires the toxics user to submit a report for the facility in accordance with M.G.L. c. 21I, §§ 11 and 14.
- (4) On or before the date that a plan must be complete pursuant to 310 CMR 50.41(1), toxics users shall submit to the Department a plan summary in accordance with 310 CMR 50.47.
- (5) Toxics users shall complete plan updates every two years beginning with the date on which the initial plan is due pursuant to 310 CMR 50.41(1) by July 1st of the applicable year in accordance with 310 CMR 50.48.
- (6) After a toxics user has completed one toxics use reduction plan and two plan updates, the toxics user may choose to implement an environmental management system pursuant to 310 CMR 50.80 or prepare a resource conservation plan pursuant to 310 CMR 50.90.
- (7) A toxics user who has chosen to implement an environmental management system shall submit an EMS progress report to the Department by July 1st of the applicable year in *lieu* of a toxics use reduction plan summary in accordance with 310 CMR 50.83.
- (8) A toxics user who has chosen to develop a resource conservation plan shall submit a resource conservation plan summary to the Department by July 1st of the applicable year in *lieu* of a toxics use reduction plan summary in accordance with 310 CMR 50.97. A toxics user may only substitute a resource conservation plan for a toxics use reduction plan every other planning year.

50.42: General Plan Requirements

- (1) All plans and plan summaries shall include each covered toxic required, pursuant to 310 CMR 50.30, to be included in the facility's toxics use report due on the same date that the plan summary is due.
- (2) All plans and plan summaries shall include each production unit required, pursuant to 310 CMR 50.30, to be included in the facility's toxics use report due on the same date that the plan summary is due.
- (3) Each plan shall include the following written statement signed by a certified toxics use reduction planner: "Based on my independent professional judgment as a toxics use reduction planner, I certify under penalty of law that the following is true:
 - (a) I have examined and am familiar with this toxics use reduction plan;
 - (b) the plan satisfies the requirements of 310 CMR 50.40; and
 - (c) the plan demonstrates a good faith and reasonable effort to identify and evaluate toxics use reduction options."Notwithstanding any professional designation held by a certified toxics use reduction planner or any trade organization of which that planner is a member by way of license, registration, certification, or similar qualification, the signed certification statement shall not mean that such planner signs in the capacity of anything other than a toxics use reduction planner.
- (4) Each plan shall include the following written statement signed by the senior management official of the facility: "I certify under penalty of law that the following is true:
 - (a) I have personally examined and am familiar with this toxics use reduction plan;
 - (b) I am satisfied that any supporting documentation used in the development of the plan exists and is consistent with the plan;
 - (c) based on my inquiry of those individuals immediately responsible for the development of this plan, I believe that the information in the plan and any supporting documentation used in the development of the plan is true, accurate, and complete;
 - (d) the plan, to the best of my knowledge and belief, meets the requirements of 310 CMR 50.40;
 - (e) I am aware that there are penalties for submitting false information, including possible fines and imprisonment."

50.42: continued

- (5) Six months prior to the date when the plan must be complete, the toxics user shall notify all of its employees of the requirements of the plan, identify the toxics and production units for which a plan will be submitted, provide the criteria for plans, and solicit in the notice comments or suggestions from all employees on toxics use reduction options. The plan shall include a description of the steps taken by the toxics user in order to comply with 310 CMR 50.42(5).
- (6) In determining the amounts pursuant to 310 CMR 50.43(3), 50.44(2), 50.44(5), 50.44(6), 50.46(1)(b), and 50.46(4)(c), the plan shall:
- (a) refer to documents or other information used to determine these amounts, and shall specify the location of such documents or information;
 - (b) include calculations of the amounts; and,
 - (c) state any assumptions made by the toxics user.
- (7) Toxics users shall maintain plans for a facility on the premises of that facility, and shall make plans available to the Department upon request. Toxics users shall also make supporting documentation referred to in 310 CMR 50.42(6) available to the Department upon request. Toxics users shall maintain plans and supporting documentation for at least five years after the date that the plan summary is due.
- (8) Toxics users shall develop information required by 310 CMR 50.40 in accordance with standard accounting practices;
- (9) Toxics users shall develop information required by 310 CMR 50.40 in accordance with standard engineering practices;
- (10) Toxics users shall develop information required by 310 CMR 50.40 in good faith.
- (11) Toxics users shall demonstrate a good faith and reasonable effort to identify and evaluate toxics use reduction options.

50.43: Facility-wide Information Required in Each Plan

Toxics users shall develop and include in the plan the following facility-wide information:

- (1) a statement of the management policy of the facility regarding toxics use reduction. This statement shall include, but not be limited to, a description of the ways in which the toxics user encourages toxics use reduction and a description of any policy applicable to the facility that encourages or discourages toxics use reduction. This statement may include, without limitation, the following information:
- (a) a description of how toxics use reduction affects the facility's policy or decisions concerning research and development;
 - (b) a description of how toxics use reduction affects the facility's policy or decisions concerning financial investments or capital investments;
 - (c) a description of how toxics use reduction affects the facility's policy or decisions concerning hiring, promotions or bonuses, or other incentives, for facility employees;
 - (d) any other policy applicable to the facility that encourages or discourages toxics use reduction.
- (2) a statement of the scope of the plan. This statement shall include but not be limited to the following:
- (a) a description of each production unit included in the plan. The description of each production unit shall include the following information as reported in the facility's toxics use report due on the same date that the plan summary is due:
 1. the number assigned to the production unit;
 2. the process or processes associated with the production unit;
 3. the product produced by the production unit; and,
 4. the chemical name and CAS number of each covered toxic manufactured, processed, or otherwise used in the production unit.
 - (b) a summary of the identification process pursuant to 310 CMR 50.45(1);
 - (c) a brief description of the technologies, procedures, or training programs identified pursuant to 310 CMR 50.46(3), (4) and (5).

50.43: continued

- (3) the expected change in the use of each covered toxic and in the amount of each covered toxic generated as byproduct. The expected change shall be based on toxics use reduction techniques chosen to be implemented as identified in the plan, and shall be stated as:
 - (a) the amount in pounds by which the toxics user plans to increase or decrease the use of the toxic; and,
 - (b) the amount in pounds by which the toxics user plans to increase or decrease the amount of the toxic generated as byproduct.

50.44: Production Unit Information Required in Each Plan

For each production unit, toxics users shall determine or develop, and include in the plan, the following information:

- (1) a process flow diagram in accordance with the following:
 - (a) The process flow diagram shall be a visual representation of the movement of covered toxics through the process or processes within the production unit, including, but not limited to, covered toxics that flow into the process or processes and covered toxics that flow out of the process or processes as byproducts or products and covered toxics that are released to the environment as emissions or transferred off-site as emissions. The process flow diagram shall account for each manufacturing or process step in the production unit, and shall include waste treatment activities, and recycling activities that are not integral to the production unit, associated with the production unit. The process flow diagram may represent the movement of substances or other materials that are not covered toxics through the process or processes within the production unit.
 - (b) The number assigned to the production unit as reported in the facility's toxics use report due on the same date that the plan summary is due shall appear on the process flow diagram.
 - (c) The process flow diagram shall present the movement of each covered toxic through the production unit, including, but not limited to, each general location at which the covered toxic enters the production unit and each general location at which the covered toxic exits the production unit as a byproduct, emission, or product.
- (2) the following amounts, and a statement of the estimation methods used to determine these amounts:
 - (a) the total amount, and the amount per unit of product, of each covered toxic manufactured, processed, or otherwise used;
 - (b) the total amount, and the amount per unit of product, of each covered toxic generated as a byproduct;
 - (c) the total amount, and the amount per unit of product, of each covered toxic released or transferred off-site as an emission.
- (3) the unit of product associated with the production unit as reported in the toxics use report due on the date that the plan summary is due.
- (4) for each toxic, a statement explaining the purpose that the toxic serves in the production unit;
- (5) for each byproduct identified on the process flow diagram developed pursuant to 310 CMR 50.44(1), toxics users shall determine the amount of byproduct treated on-site, treated off-site, recycled on-site, recycled off-site, disposed of on-site, disposed of off-site, or released.
- (6) for each emission identified in the process flow diagram developed pursuant to 310 CMR 50.44(1), toxics users shall determine, for each environmental media, the amount of emissions released to the environment or transferred off-site, and the amount of emissions treated off-site treatment, recycled off-site, disposed of on-site or disposed of off-site.
- (7) the cost of the use of each covered toxic calculated in accordance with 310 CMR 50.46A.

50.45: Procedures for Identifying Potential Toxic Use Reduction Techniques

- (1) Toxics users shall describe the procedure used by the toxics user to identify technologies, procedures, or training programs for potentially achieving toxics use reduction in each production unit. This procedure shall include, but not be limited to, a consideration of each type of toxics use reduction technique specified in the definition of “toxics use reduction” set forth in 310 CMR 50.10 and M.G.L. c. 21I, a list of personnel involved in the procedure, a description of information sources consulted, and a description of information gathering techniques.
- (2) Toxics users shall list technologies, procedures, and training programs identified as potentially achieving toxics use reduction in each production unit pursuant to 310 CMR 50.45(1).

50.46: Technical Evaluation of Toxics Use Reduction Techniques

- (1) Toxics users shall evaluate the technical feasibility of each technology, procedure, or training program listed in the plan pursuant to 310 CMR 50.45(1) and (2) in accordance with the following requirements:
 - (a) Toxics users shall evaluate whether the technology, procedure, or training program constitutes toxics use reduction as defined in 310 CMR 50.10 and M.G.L. c. 21I, § 2.
 - (b) Toxics users shall calculate the expected reductions resulting from implementation of the technology, procedure, or training program in accordance with 310 CMR 50.46(1)(b)1. through 4.:
 1. toxics users shall calculate expected reductions in the amount of toxics used in each production unit;
 2. toxics users shall calculate expected reductions in the amount of toxics used per unit of product for each production unit;
 3. toxics users shall calculate expected reductions in the amount of toxics generated by each production unit;
 4. toxics users shall calculate expected reductions in the amount of toxics generated as byproduct per unit of product for each production unit.
 - (c) Toxics users shall evaluate the relationship between the technology, procedure, or training program being evaluated, and other applicable laws and regulations, including but not limited to, whether implementation of the technology, procedure, or training program will violate any other law or regulation.
- (2) Toxics users need not complete the evaluation of a particular technology, procedure, or training program if, during the evaluation, the toxics user determines that the technology, procedure, or training program being evaluated is not appropriate for any of the following reasons:
 - (a) the technique is clearly technically infeasible;
 - (b) the technique is clearly economically infeasible, as determined pursuant to 310 CMR 50.46A;
 - (c) implementation of the technology, procedure, or training program is not likely to result in a decrease in the amount of toxics used per unit of product or the amount of toxics generated as byproduct per unit of product.
- (3) For technologies, procedures, or training programs that the toxics user decides not to implement, the plan shall include:
 - (a) a description of the technology, procedure, or training program; and,
 - (b) the reason for deciding not to implement the technology, procedure, or training program.
- (4) For technologies, procedures, or training programs that the toxics user decides to implement, the plan shall include:
 - (a) a description of the technology, procedure, or training to be implemented;
 - (b) the anticipated costs and savings associated with the technology, procedure, or training program, as determined pursuant to 310 CMR 50.46A;
 - (c) the expected reductions in the amount of toxics and the amount of toxics generated as byproduct resulting from implementation of the technology, procedure, or training program calculated pursuant to 310 CMR 50.46(1)(b).
 - (d) an implementation schedule.

50.46: continued

- (5) If the evaluation required for a particular technology, procedure, or training program identified pursuant to 310 CMR 50.45(1) cannot be completed by the date that the plan is due, the plan shall include the following:
- (a) a description of the technology, procedure, or training program;
 - (b) a description of steps to be taken in order to further evaluate the technique and a schedule for taking these steps;
 - (c) an explanation as to why the evaluation cannot be complete by the date that the plan is due.

50.46A: Economic Evaluation of Potential Toxics Use Reduction Techniques

- (1) Toxics users shall evaluate the economic feasibility of each technology, procedure, or training program identified as technically feasible pursuant to 310 CMR 50.46 as compared to the current operations involving the toxic. In that analysis, the following items must be considered if they are relevant:
- (a) indirect and direct labor and materials costs (which shall be stated in the plan);
 - (b) purchase or manufacturing cost of the toxic and its alternative chemical;
 - (c) capital and equipment costs;
 - (d) storage, accumulation, treatment, disposal, and handling costs associated with toxics and byproducts;
 - (e) costs associated with activities required to comply with local, state, or federal laws or regulations, including but not limited to, fees, taxes, and costs associated with treatment, disposal, reporting and labeling;
 - (f) worker health or safety costs associated with the toxic and its alternative chemical, including but not limited to, protective equipment, and lost employee time due to accidents or routine exposure to the toxic;
 - (g) insurance;
 - (h) potential liability costs that may arise from intentional, unintentional, or accidental activities or occurrences; and
 - (i) loss of community goodwill and product sales lost to competing non-toxic products.
- (2) In determining costs and savings, toxics users shall consider items other than those set forth in 310 CMR 50.46A(1) if such other items are relevant and shall describe such items in the plan.
- (3) Toxics users shall determine the total cost per year and the cost per unit of product associated with the use of the toxic in the toxics user's current operations. Toxics users shall determine such costs for the calendar year preceding the date on which the plan is due. Toxics users shall include these total costs and the calculations in the plan.
- (4) Toxics users shall explain in the plan how costs associated with the use of the covered toxic were allocated to the production unit. The allocation of such costs to the production unit shall be accurate to the extent possible.
- (5) Toxics users shall state in the plan costs set forth in 310 CMR 50.46A(1) that are not relevant in determining the cost associated the covered toxic or cannot be reliably quantified. The toxics users shall explain in the plan why such costs are not relevant or cannot be quantified and shall state in the plan an estimated impact of the unquantified cost.
- (6) In evaluating the costs and savings associated with the technology, procedure, or training program identified as technically feasible pursuant to 310 CMR 50.46, toxics users shall state in the plan the discount rate, cost of capital, depreciation rate, or payback period, if any, used in each analysis. The discount method, depreciation rate, and payback period shall be consistent with the toxics user's current capital budgeting procedures. The decision concerning the economic feasibility of a technology, procedure, or training program shall be made at least consistent with the toxics user's current business decision making practices; provided, however, that a user may modify those practices to adopt a technology, procedure, or training program.
- (7) If no technologies, procedures, or training programs are identified pursuant to 310 CMR 50.45, or if these techniques are determined to be technically infeasible pursuant to 310 CMR 50.46, the toxics user shall identify, but is not required to quantify, the costs of using the toxic chemical in each production unit.

50.47: Plan Summary

- (1) Toxics users shall submit to the Department a plan summary on or before July 1st of the applicable year. Such summary shall include:
 - (a) a copy of the certification statement required pursuant to 310 CMR 50.42(3);
 - (b) the information required pursuant to 310 CMR 50.43(3) and 310 CMR 50.44(8); and
 - (c) toxics use reduction techniques considered and techniques selected to be implemented.
- (2) Toxics users may include other information in the summary, including, but not limited to, the information required pursuant to 310 CMR 50.43(2).
- (3) The Department may require that the plan summary be submitted on a form prescribed by the Department.

50.48: Plan Updates

- (1) Toxics users shall complete plan updates every two years beginning with the date on which the initial plan is due pursuant to 310 CMR 50.41(1) by July 1st of the applicable year.
- (2) Plan updates shall include an explanation as to why the toxics user failed to implement a technology, procedure, or training program identified pursuant to 310 CMR 50.46(4) or failed to meet the schedule developed pursuant to 310 CMR 50.46(4)(d) or 310 CMR 50.46(5)(b).

50.50: Toxics Use Reduction Planners

310 CMR 50.50 through 50.63, cited collectively as 310 CMR 50.50, set forth the requirements for toxics use reduction planners.

50.51: Required Skills for Certification as a Toxics Use Reduction Planner

- (1) In order to become certified as a toxics use reduction planner, an applicant shall demonstrate to the Department that he or she possesses sufficient skills and knowledge to evaluate whether a plan was developed in accordance with 310 CMR 50.40. An applicant shall do so by complying with either 310 CMR 50.54 or 310 CMR 50.55.
- (2) In determining whether an applicant possesses sufficient skills and knowledge to evaluate whether a plan was developed in accordance with 310 CMR 50.40, the Department may consider, without limitation, whether the applicant has sufficient skills or knowledge to evaluate whether the following analyses were conducted in accordance with 310 CMR 50.40:
 - (a) analysis of toxic chemical use, byproduct generation, and emissions in a process or method of producing a product or service, including but not limited to analysis of whether a process flow diagram developed pursuant to 310 CMR 50.44(1) reflects actual facility operations;
 - (b) analysis of the technical feasibility and potential impacts of a change to an existing process or method of producing a product or service;
 - (c) analysis of the economic feasibility and potential impacts of a change to an existing process or method of producing a product or service;
 - (d) analysis of the potential effects on the facility's operation, function, and business activities due to a change to an existing process or method of producing a product or service;
 - (e) analysis of the potential effects on worker health and safety at the facility due to a change to an existing process or method of producing a product or service;
 - (f) analysis of the potential effects on toxic chemical use, byproduct generation and emissions to all environmental media due to a change to an existing process or method of producing a product or service;
 - (g) analysis of the potential effects of a change to an existing process or method of producing a product or service on compliance with other applicable laws and regulations; and,
 - (h) evaluation of whether a potential change to an existing process or method of producing a product or service constitutes toxics use reduction.

50.52: Work Experience Requirements for All Toxics Use Reduction Planners

- (1) Except as provided in 310 CMR 50.52(2),(3) and (4), an applicant shall have seven years of full-time work experience in any or all of the following areas:
 - (a) engineering or process control;
 - (b) manufacturing, production, or quality control;
 - (c) environmental compliance or worker health and safety;
 - (d) planning, industrial design, or research and development;
 - (e) accounting, business administration, or product marketing; or
 - (f) managerial or legal.
- (2) Part-time work experience in the areas set forth in 310 CMR 50.52(1) may count, on pro-rated basis, toward the requirements set forth in 310 CMR 50.52(1).
- (3) Education may substitute for up to five years of the work experience required in 310 CMR 50.52(1) as follows, provided that the degree or certificate is from an accredited educational institution:
 - (a) certificate from a technical or vocational school may substitute for up to one year of work experience;
 - (b) a degree, concentration program, or major directly related to the work experience categories set forth in 310 CMR 50.52(1)(a) through (c), including, without limitation, a degree, concentration program, or major in biology, chemistry, or physics may substitute for experience as follows:
 1. an associate's degree may substitute for up to two years of work experience;
 2. a bachelor's degree may substitute for up to four years of work experience;
 3. a master's or doctorate degree may substitute for up to five years of work experience;
 - (c) a degree, concentration program, or major directly related to the work experience categories set forth in 310 CMR 50.52(1)(d) through (f), may substitute for experience as follows:
 1. a bachelor's degree may substitute for up to three years of work experience;
 2. a master's or doctorate degree may substitute for up to four years of work experience;
 - (d) a bachelor's, master's, or doctorate in a degree, concentration program, or major not directly related to the work experience categories set forth in 310 CMR 50.52(1)(a) through (f) may, at the Department's discretion, substitute for up to two years of work experience.
- (4) The Department may, at its discretion, allow work experience in areas other than those set forth in 310 CMR 50.52(1) to count toward work experience required by 310 CMR 50.52(1) if the applicant demonstrates to the Department that such work experience is related to the skills or knowledge required pursuant to 310 CMR 50.51(2).
- (5) Work experience, acquired by an applicant while he or she is enrolled as a full-time student in an accredited educational institution, for which the applicant receives educational course credit shall not contribute to the work experience required by 310 CMR 50.52(1).

50.53: General Application Requirements and Procedures

- (1) The Department may require applicants to apply for certification on a form specified by the Department.
- (2) The Department may certify an applicant as a toxics use reduction planner for no more than two years. Toxics use reduction planners seeking recertification shall apply for recertification in accordance with 310 CMR 50.58. Failure to meet recertification requirements shall constitute grounds for denial of an application.
- (3) Upon submission of an application, each applicant shall pay to the Department an application fee determined as follows:
 - (a) The fee for an applicant that applies for certification pursuant to 310 CMR 50.54 and intends to certify plans for toxics users other than his or her employer shall be \$500.
 - (b) Applicants employed by any authority, district, municipality, or political subdivision of the Commonwealth of Massachusetts whose job duties are related to toxics use reduction shall be exempt from paying the fee.
 - (c) The fee for applicants other than those set forth in 310 CMR 50.53(3)(a) or (b) shall be \$100.

50.53: continued

(4) The schedule for timely action on an application shall be as set forth in 310 CMR 50.53(4). The schedule shall be applied in accordance with 310 CMR 4.00. As used in 310 CMR 50.00, the terms "administrative completeness review" and "technical review" shall be defined and applied as set forth in 310 CMR 4.00.

(a) Within 30 days of receipt of an application and payment of the application fee, the Department shall complete an administrative completeness review.

(b) Within 180 days of making a determination of administrative completeness, the Department shall complete a technical review.

(5) Following the technical review, the Department shall issue a written decision granting or denying certification. A decision denying certification shall state the grounds for denial. An applicant whose certification is denied may request an adjudicatory hearing in accordance with M.G.L. c. 30A and 310 CMR 1.00, 310 CMR 4.00, and 310 CMR 50.60.

50.54: Exam-track Application Procedure

(1) An applicant may become certified as a toxics use reduction planner if he or she meets the following requirements:

(a) no more than two years before applying for certification, he or she completes, to the satisfaction of the educational institution presenting the program, a toxics use reduction planning program; and,

(b) no more than two years before applying for certification, he or she obtains a passing score on the uniform certification examination.

(2) An applicant certified pursuant to 310 CMR 50.54, who paid the application fee required by 310 CMR 50.52(3)(c), shall be considered a limited practice toxics use reduction planner and may certify toxics use reduction plans in accordance with 310 CMR 50.00 for facilities owned or operated by his or her employer. The word "employer", as it is used in 310 CMR 50.54(2), shall be defined in accordance with 310 CMR 50.55(6).

(3) An applicant who becomes certified pursuant to 310 CMR 50.54, who paid the application fee required by 310 CMR 50.53(3)(a), shall be considered a general practice toxics use reduction planner and may certify toxics use reduction plans in accordance with 310 CMR 50.00 for any toxics user or other person.

(4) An applicant certified pursuant to 310 CMR 50.54, who paid the application fee required by 310 CMR 50.52(3)(c), may, upon payment of \$400 to the Department, certify toxics use reduction plans in accordance with 310 CMR 50.54(3).

50.55: Certification through Experience in Toxics Use Reduction Activities

(1) The Department may certify an applicant as a limited practice toxics use reduction planner if he or she has at least two years of full-time work experience in toxics use reduction activities. Part-time work experience in toxics use reduction activities may be pro-rated in accordance with 310 CMR 50.52(2) and (4).

(2) As used in 310 CMR 50.00, "toxics use reduction activities" include, but are not limited to, activities in which the individual uses the skills or knowledge necessary to conduct the analyses set forth in 310 CMR 50.51(2) or activities in which the individual uses the skills or knowledge necessary to evaluate whether the analyses set forth in 310 CMR 50.51(2) were conducted in accordance with 310 CMR 50.40. Successful completion of the toxics use reduction planner certification course shall also constitute a toxics use reduction activity, and shall count for six months of the two years of work experience required pursuant to 310 CMR 50.55(1).

(3) In order to become certified under 310 CMR 50.55, an applicant shall demonstrate to the Department that he or she understands how the skills or knowledge referred to in 310 CMR 50.51(2) relate to toxics use reduction plans.

50.55: continued

(4) In determining whether an applicant satisfies 310 CMR 50.55(1) and (3), the Department may consider, without limitation, whether, through work experience, the applicant used or gained skills or knowledge that enable the applicant to conduct or evaluate the analyses set forth in 310 CMR 50.51(2).

(5) A planner certified pursuant to 310 CMR 50.55 may certify plans for any facility owned or operated by his or her employer, provided that he or she demonstrates to the Department that at least one year of his or her experience in toxics use reduction activities is related to the operations of the facility. In determining whether the planner's experience in toxics use reduction activities is related to the operations of the facility at which the planner seeks to certify a plan, the Department may consider, without limitation, the similarity of the production units, products, or processes at facilities where the planner received his or her experience in toxics use reduction activities to those at the facility at which the planner seeks to certify a plan.

(6) As it is used in 310 CMR 50.50, "employer" means an individual or organization for whom the planner works and receives wages on a regular basis. For purposes of 310 CMR 50.50, a planner may not have more than one employer within the same time period. If a planner is an independent contractor and performs work for an individual or organization under a contract, for purposes of 310 CMR 50.50, the individual or organization is not the planner's employer.

50.56: Certification of Toxics Use Reduction and Resource Conservation Plans

(1) A toxics use reduction planner shall certify a toxics use reduction plan or a resource conservation plan only if, in his or her independent professional judgment, the plan satisfies the requirements of 310 CMR 50.40 or 310 CMR 50.90, as applicable, and demonstrates a good faith and reasonable effort to identify and evaluate toxics use reduction and/or resource conservation options.

(2) In certifying a plan, a toxics use reduction planner shall make a good faith and reasonable effort to identify and obtain relevant data or other information needed to comply with 310 CMR 50.56(1).

(3) In certifying a plan, a toxics use reduction planner shall maintain records of the procedures used to review the plan. The planner shall maintain such records for at least five years from the date that the planner certifies the plan.

50.57: Disclosure Requirements

A toxics use reduction planner shall disclose the following to his or her client or employer:

(1) any financial interest he or she has in any technique or equipment evaluated in the toxics use reduction plan; and,

(2) any business association, affiliation, or other relationship he or she has with a direct competitor of the client or employer.

50.58: Recertification Renewal

(1) A toxics use reduction planner may apply to the Department for recertification in accordance with 310 CMR 50.58. A toxics use reduction planner seeking recertification shall apply prior to the date on which his or her certification expires. Failure to do so shall result in the expiration of his or her certification, unless the Department extends the planner's certification pursuant to 310 CMR 50.58(4)(d). Timely submittal of an application for recertification shall extend the planner's certification until the Department issues a final decision denying recertification, or a final decision suspending or revoking the planner's certification pursuant to 310 CMR 50.50.

50.58: continued

(2) In order to be recertified, a general practice toxics use reduction planner shall, during the time period of his or her first certification, complete at least 30 continuing education credits. For each subsequent recertification, such a planner shall complete 24 continuing education credits. In order to be recertified, a limited practice toxics use reduction planner shall, during the time period of his or her first certification, complete at least 24 continuing education credits. For each subsequent recertification, such a planner shall complete 20 continuing education credits. Recertification credits may include credits related to environmental management systems and resource conservation planning as defined in 310 CMR 50.62 and 50.63. The Department shall grant continuing education credits for completion of courses, seminars, or other educational or professional programs in the following areas:

- (a) toxics use reduction activities as defined in 310 CMR 50.55(2);
- (b) environmental management systems as specified in 310 CMR 50.80;
- (c) resource conservation planning as specified in 310 CMR 50.90; or
- (b) other environmental laws or regulations, or laws of regulations pertaining to worker health or safety, except that such education may not count for more than four credits.

(3) Professional activities related to toxics use reduction, including but not limited to presenting or publishing papers, teaching, participation in professional or trade associations, or participation in advisory committees for government agencies, may, at the Department's discretion, count toward up to eight credits of the coursework required in 310 CMR 50.58(2).

(4) The Department shall determine whether to recertify a planner in accordance with 310 CMR 50.58 and the following:

- (a) Courses, seminars, or any other educational or professional programs relating to toxics use reduction activities sponsored by the Department, the Office of Technical Assistance, the Toxics Use Reduction Institute, other state or federal pollution prevention agencies, or the Environmental Protection Agency shall be considered "approved by the Department" for the purposes of 310 CMR 50.58(2).
- (b) Individuals, sponsors or presenters of courses, seminars, or programs, or planners who wish to count courses, seminars, or any other educational or professional programs other than those set forth in 310 CMR 50.58(4) toward the recertification requirements of 310 CMR 50.58 may apply to the Department for approval of such courses, seminars, or other educational or professional programs. The Department may approve such courses, seminars, or other educational or professional programs at its discretion.
- (c) In general, one hour of coursework in topics specified in 310 CMR 50.58(2) shall equal one credit. In unusual cases, the Department may, at its discretion, specify that one hour of coursework in topics specified in 310 CMR 50.58(2) equals more than one credit, not to exceed two credits, if the Department determines that a particular course, seminar or other program, or a particular topic, is especially relevant or important to the responsibilities of toxics use reduction planners.
- (d) If the Department disapproves a course, seminar, or other educational or professional program, the Department may, at its discretion, extend a planner's certification so that the planner may attend other courses, seminars or programs.
- (e) Topics in pollution treatment or control shall not count toward the coursework required pursuant to 310 CMR 50.58(2)(a).
- (f) The Department may deny recertification for any of the reasons set forth in 310 CMR 50.59(1).

(5) Following review of an application for recertification, the Department shall issue a written decision granting or denying recertification. A decision denying certification shall state the grounds for such denial. An planner whose application for recertification is denied may request an adjudicatory hearing in accordance with M.G.L. c. 30A and 310 CMR 1.00, and 310 CMR 50.60.

(6) If the Department decides to deny recertification, the Department may, at its discretion, specify conditions that the applicant shall fulfill in order to be certified or recertified. Such conditions may include, without limitation, the following:

- (a) satisfactory completion of coursework pursuant to 310 CMR 50.58(2);

50.58: continued

- (b) satisfactory completion of remedial education in accordance with 310 CMR 50.59(4);
- (c) a deadline for satisfying any conditions imposed by the Department pursuant to 310 CMR 50.58(6);
- (d) a time period, not to exceed three years, during which the individual may not apply to the Department for certification as a toxics use reduction planner.

(7) A planner may apply to the Department for modification of the requirements set forth in 310 CMR 50.58. The Department may, at its discretion, modify the requirements of 310 CMR 50.58 for a planner. In determining whether to do so, the Department may consider, without limitation, whether satisfying the requirements set forth in 310 CMR 50.58 constitute undue hardship for the planner, or whether the nature of toxics use at the facility warrants modification of the requirements set forth in 310 CMR 50.58.

(8) The Department may establish a fee for recertification.

(9) The Department may establish a deadline for recertification.

(10) The Department may require applicants for recertification to apply on a form specified by the Department.

(11) The Department may suspend or revoke a toxics use reduction planner's certification for failure to meet the recertification requirements set forth in 310 CMR 50.58. The Department may preclude such individuals from reapplying for certification for up to three years. In determining whether to suspend or revoke a toxics use reduction planner's certification for failure to meet the recertification requirements set forth in 310 CMR 50.58, the Department may consider whether the failure was due to serious illness or other circumstances beyond the planner's control.

50.59: Procedure Governing Disciplinary Proceedings

(1) The Department may suspend, deny, or revoke a planner's certification, or deny recertification for any good cause, including, but not limited to:

- (a) gross negligence in complying with 310 CMR 50.50;
- (b) fraud or misrepresentation in complying with 310 CMR 50.50;
- (c) unethical conduct in complying with 310 CMR 50.50;
- (d) failure to meet the recertification requirements set forth in 310 CMR 50.58;
- (e) noncompliance with any provision of M.G.L. c. 21I or 310 CMR 50.00.

(2) As part of an action taken by the Department pursuant to 310 CMR 50.59(1) to deny, suspend or revoke certification or recertification, the Department may specify a time period, not to exceed three years, during which the planner may not apply to the Department for certification as a toxics use reduction planner.

(3) A planner may appeal a decision by the Department to suspend or revoke that planner's certification in accordance with M.G.L. c. 30A and 310 CMR 1.00, 310 CMR 4.00, and 310 CMR 50.60.

(4) Nothing in 310 CMR 50.59(1) shall constitute or be construed as limiting the Department's authority to take enforcement actions pursuant to other applicable laws and regulations.

(5) The Department may request that the toxics use reduction planner who is potentially the subject of an enforcement action pursuant to 310 CMR 50.59(1) or (2) to attend an informal conference.

(6) Whenever the Department determines that a planner has violated any provision of 310 CMR 50.50, the Department may require that the toxics use reduction planner attend and successfully complete a course of remedial education proscribed by the Department. Failure to successfully complete such a course of remedial education may be grounds for the Department to suspend or revoke certification, or to deny recertification.

50.60: Appeal Rights and Procedures

(1) Within 21 days of the date of issuance of the Department's decision pursuant to 310 CMR 50.53(5), 310 CMR 50.55(5), 310 CMR 50.58(5), or 310 CMR 50.59(1), an appellant may request, in writing, an adjudicatory hearing in accordance with M.G.L. c. 30A, 310 CMR 1.00, and 310 CMR 4.00. In an adjudicatory hearing, the appellant bears the burden of persuading the Department that its decision was in error. Each request for an adjudicatory hearing filed pursuant to 310 CMR 50.60 shall state all reasons why the appellant believes that the Department's decision is erroneous. If the Department does not receive the appellant's request within 21 days of the date of issuance of the Department's decision, the appellant shall be deemed to have waived his or her rights to an adjudicatory appeal.

(2) If the Department denies an application for certification, the grounds upon which the appellant may claim that the Department's decision was in error shall be based on the information submitted to the Department by the applicant during the application process, and shall be limited to the following:

- (a) The applicant possesses the skills and knowledge required by 310 CMR 50.51.
- (b) The applicant possesses work experience required by 310 CMR 50.52.
- (c) The applicant satisfactorily completed the toxics use reduction planning program as required by 310 CMR 50.54.
- (d) The applicant possesses at least two years of work experience in toxics use reduction activities in accordance with 310 CMR 50.55.
- (e) The applicant's experience in toxics use reduction activities is related to the operations of the facility at which he or she seeks to certify a plan.

(3) If an applicant is denied certification because he or she fails to obtain a passing score on the uniform certification examination, the procedures set forth in 310 CMR 50.61 shall apply.

50.61: Procedures for Reviewing the Uniform Certification Examination

(1) If an applicant is denied certification because he or she fails to obtain a passing score on the uniform certification examination, the applicant may, within 21 days of the date of issuance of a notice containing the applicant's exam score, submit to the Department a written request to review his or her exam. If the Department does not receive the appellant's request within 21 days of the date of issuance of the Department's notice containing the applicant's exam score, the appellant shall be deemed to have waived his or her rights pursuant to 310 CMR 50.61.

(2) If, after reviewing his or her exam, the applicant believes that it was scored incorrectly, he or she may, within 42 days of the date of issuance of a notice containing the applicant's exam score, submit to the Department a written request for an informal conference with the Department for purposes of reviewing the scoring. If the Department does not receive the appellant's request within 21 days of the date of issuance of the Department's notice containing the applicant's exam score, the appellant shall be deemed to have waived his or her rights pursuant to 310 CMR 50.61. The request shall state all reasons why the applicant believes that the scoring was incorrect. Such reasons shall be limited to the following:

- (a) the score is incorrect due to a mistake in arithmetic.
- (b) the score is incorrect because an answer deemed incorrect is, in fact, correct.
- (c) the score is incorrect because question(s) deemed to have been answered incorrectly do not test whether the applicant possesses the skills required by 310 CMR 50.51.

(3) If a request pursuant to 310 CMR 50.61 is based on 310 CMR 50.61(2)(c), the request shall identify the specific questions being challenged and state reasons why the applicant believes that each question does not test whether the applicant possesses the skills required by 310 CMR 50.51.

(4) If the Department believes that the applicant's examination was scored incorrectly, the Department shall either recalculate the applicant's score, or require the applicant to answer a substitute question, as the Department deems appropriate.

(5) A request pursuant to 310 CMR 50.61 shall not constitute a request for an adjudicatory hearing pursuant to 310 CMR 50.60, and the Department's determination pursuant to 310 CMR 50.61 shall not be appealable pursuant to M.G.L. c. 30A or 310 CMR 50.60.

50.62: Requirements for Toxics Use Reduction Planners to Certify Environmental Management Systems

- (1) In order for a general practice toxics use reduction planner to certify an environmental management system for any facility, the planner shall:
 - (a) complete an initial 16 continuing education credits in environmental management systems, including auditing such systems, as approved by the Department; or
 - (b) be accredited or certified under a national, international or other recognized EMS standard.
- (2) In order for a limited practice toxics use reduction planner to certify an environmental management system for a facility owned by his or her employer, the planner shall:
 - (b) complete an initial 16 continuing education credits in environmental management systems, including auditing such systems, as approved by the Department; or
 - (b) have at least two years of experience in implementing environmental management systems, including auditing environmental management systems; or
 - (c) be accredited or certified under a national, international or other recognized EMS standard.
- (3) Each planner shall submit documentation to the Department that he or she meets the requirements of 310 CMR 50.62(2) with the first EMS Progress Report that the planner certifies.
- (4) Each planner who certifies an environmental management system shall, for a period of three years, maintain documentation of his or her efforts to obtain knowledge of current EMS practices and techniques that are generally accepted by the professional and trade communities implementing and auditing EMSs and shall provide such documentation upon request to the Department or to any facility for which the planner has certified or intends to certify an EMS.

50.63: Requirements for Toxics Use Reduction Planners to Certify Resource Conservation Plans

- (1) Except as provided in 310 CMR 50.63(2), in order for a toxics use reduction planner to certify a resource conservation plan, the planner shall demonstrate to the Department that:
 - (a) The planner has completed 12 initial continuing education credits in resource conservation planning, including at least six credits in applying toxics use reduction planning methods to resource conservation planning, as approved by the Department; and
 - (b) Every four years thereafter, the planner has completed nine additional credits in resource conservation planning, including at least three credits each in energy conservation, water conservation, and solid waste reduction.
- (2) A planner may certify a resource conservation plan that only focuses on the asset listed in 310 CMR 50.92(2)(d) or (e) without meeting the requirements of 310 CMR 50.63(1).
- (3) For resource conservation plans developed by July 1, 2008, toxics use reduction planners shall submit documentation of resource conservation continuing education credits as specified in 310 CMR 50.63(1) with the resource conservation plan summary. The Department shall grant continuing education credits in resource conservation for any applicable course completed in the two years prior to July 1, 2008.
- (4) For resource conservation plans developed by July 1, 2010 and thereafter, planners shall submit documentation of continuing education credits in resource conservation with their application for recertification submitted pursuant to 310 CMR 50.58.

50.70: User Segments

310 CMR 50.70 through 50.72, cited collectively as 310 CMR 50.70, set forth the criteria for classifying production units into user segments and designate user segments.

50.71: Criteria for Establishing User Segments

- (1) Production units grouped into a user segment must contain similar products and processes.

50.71: continued

(2) For purposes of grouping similar products and processes into user segments, the department may consider, without limitation, the following criteria:

- (a) transferability or potential applicability of toxics use reduction techniques;
- (b) chemical use, byproduct, or emission;
- (c) potential health or environmental impact;
- (d) potential for improvement in environmental performance; or
- (e) type of equipment used.

(3) User segments may be designated according to process codes set by the department and their associated products, or by other groupings of processes (*e.g.*, Clean Water Act categories, processes subject to MACT standards under the Clean Air Act) and their associated products. For purposes of 310 CMR 50.70, the department may, consistent with the definition of “product” in 310 CMR 50.10, designate the result of the process as the “product.”

50.72: List of User Segments

User Segment Name	Process Code* or Process Description	Product
(1) power generation	JJ-01	Electricity or Steam
(2) electroplating (barrell and rack)	AA12, AA13	plated part
(3) deionization, demineralization	HH-01	treated water
(4) forging	CC-03	forged metal part
(5) smelting	DD-07	smelted metal
(6) welding	CC-09	welded metal part
(7) heat treating of metal	CC-04	metal part
(8) refrigeration material	II-01	chilled fluid
(9) pH adjustment solution	EE-08, HH-03	treated water
(10) jet printing	AA-11	printed material
(11) screen printing	AA-08	printed material
(12) pad printing	AA-09	printed material
(13) printing (letterpress, flexographic, lithographic)	AA-05, AA-06, AA-07	printed material
(14) equipment cleaning	FF-01, FF-02, FF-03	clean equipment
(15) parts cleaning	BB-01, BB-02, BB-03	clean part
(16) casting/molding plastic	CC-01	plastic part
(17) casting molding	CC-01	metal part
(18) adhesives or sealant blending, mixing, compounding	GG-01	adhesive or sealant products produced by toxics users classified by sic code 2891

*DEP’S instructions for completing toxics use reports contains a list of process codes.

50.80: Environmental Management Systems

310 CMR 50.80 through 50.84, cited collectively as 310 CMR 50.80, establish the requirements for implementing environmental management systems (EMSs) as an alternative to developing toxics use reduction plans.

50.81: Applicability and Schedule

- (1) Large quantity toxics users and other toxics users may implement an environmental management system in *lieu* of a toxics use reduction plan once they have completed one toxics use reduction plan and two plan updates.
- (2) An EMS shall be considered suitable if it was developed in conformance with the standards of ISO 14001, US EPA's Performance Track Program, or other EMS standard adopted by a trade association or other standard-setting organization, provided that the EMS shall:
 - (a) contain the elements specified in 310 CMR 50.82;
 - (b) cover all the production units identified in the most recent toxics use report;
 - (c) consider toxics use reduction when identifying significant aspects and establishing associated objectives and targets;
 - (d) emphasize source reduction as the means of achieving objectives and targets; and
 - (e) have been in place for at least one full EMS cycle (*i.e.*, plan-do-check-act) and have undergone an independent EMS audit.
- (3) If the Department determines that an environmental management system developed pursuant to 310 CMR 50.80 has not proven to be effective as evidenced by significant noncompliance with any of the Department's regulations or permit conditions, the Department may, in addition to any enforcement action it takes with respect to such non-compliance with any of the Department's regulations or permit conditions, require that the toxics user take any or all of the following actions:
 - (a) provide information to the Department about any apparent deficiencies in the environmental management system;
 - (b) modify the environmental management system to prevent future deficiencies and non-compliance;
 - (c) audit the environmental management system; and/or
 - (d) prepare a toxics use reduction plan for all covered toxics and production units.

50.82: Requirements for an Environmental Management System

An environmental management system developed in *lieu* of a toxics use reduction plan shall contain the following elements:

- (1) A written environmental policy that expresses management for, and makes a commitment to:
 - (a) compliance with environmental legal requirements;
 - (b) pollution prevention through source reduction and toxics use reduction; and
 - (c) continual improvement of the EMS and environmental performance.
- (2) A process for identifying significant environmental aspects and impacts from current and future activities at the facility. All covered toxics shall be identified as significant environmental aspects.
- (3) Identification of environmental legal requirements, including a system for tracking compliance and learning about and integrating changes to legal requirements into the EMS.
- (4) A process for establishing measurable objectives and targets that address significant environmental aspects and other EMS commitments and that emphasize preventing pollution at its source.
- (5) Environmental management programs designed to make progress toward achieving objectives, targets, and commitments in the EMS, including the means and time-frames for their completion.

50.82: continued

- (6) Established roles and responsibilities of the facility's staff and management, on-site service providers, and contractors for meeting objectives and targets and complying with legal requirements, including a senior management representative with authority and responsibility for the EMS.
- (7) Environmental and compliance training for employees and contractors whose jobs and responsibilities involve activities directly related to significant aspects, achieving objectives and targets and compliance with legal requirements, and initiation training for new personnel.
- (8) Procedures for communicating environmental and EMS information throughout the facility, including EMS awareness programs for all employees.
- (9) Operational controls to ensure that equipment and other operations comply with legal requirements and address significant environmental aspects.
- (10) Documentation of key EMS elements and procedures for document control and records management.
- (11) Emergency preparedness and response procedures.
- (12) Procedures for monitoring and measuring key operations and activities to assess environmental performance.
- (13) Procedures for preventing and detecting non-conformance with legal and other requirements of the EMS, including an established compliance audit program and an EMS audit program, and procedures for corrective actions to ensure timely compliance and commitment to continual improvement. The EMS audit program shall require independent auditing on at least a two-year cycle and senior management review of audit results.
- (14) Documented management review of performance against objectives and targets and the effectiveness of the EMS in meeting policy commitments.

50.83: EMS Progress Report

- (1) A toxics user who has chosen to implement an EMS in *lieu* of a toxics use reduction plan shall submit to the Department an EMS progress report by July 1st of every even-numbered calendar year.
- (2) The EMS progress report shall include a brief description of:
 - (a) objectives and targets that have been established for covered toxics,
 - (b) measures being taken to incorporate source reduction into compliance and other activities; and
 - (c) information on the progress made toward meeting objectives and targets relative to covered toxics; if applicable, an explanation of why anticipated progress was not achieved, and, if applicable, the actions that have or will be taken to ensure that facility operations conform to the EMS.
- (3) The Department may require that the EMS progress report be submitted on a form prescribed by the Department.

50.84: Certification of an EMS Progress Report

- (1) Each EMS progress report shall include the certification statements set forth in 310 CMR 50.84.
- (2) The certification statement shall be signed by a toxics use reduction planner who meets the requirements of 310 CMR 50.62 or an EMS professional who meets the following requirements:
 - (a) An EMS professional may certify an EMS progress report for any toxics user or other person if the professional has completed 16 hours of toxics use reduction training, and has maintained documentation of such training.

50.84: continued

(b) An EMS professional may certify an EMS progress report for a facility owned or operated by his or her employer if the professional has two years of documented experience in toxics use reduction.

(c) After meeting the requirements in 310 CMR 50.84(2)(a) and (b), all EMS professionals who continue to certify EMSs pursuant to 310 CMR 50.80 shall complete at least 16 hours of toxics use reduction continuing education training every six years.

(d) An EMS professional shall submit documentation to the Department that he or she meets the requirements of 310 CMR 50.84 with the first EMS Progress Report that the EMS professional certifies.

(e) Any EMS professional who certifies an EMS progress report shall, for a period of three years, maintain documentation of having met the continuing education requirements in 310 CMR 50.84(2)(c) and shall provide such documentation, upon request, to the Department or to any facility for which the professional has certified or intends to certify an EMS.

(3) Each EMS progress report shall include the following written statement signed by either an EMS professional who meets the requirements of 310 CMR 50.84(2) or a toxics use reduction planner who meets the requirements of 310 CMR 50.62: "Based on my independent professional judgment, I certify under penalty of law that the following is true:

(a) I have examined and am familiar with this EMS;

(b) The EMS satisfies the requirements of 310 CMR 50.80; and

(c) The EMS demonstrates a good faith and reasonable effort to integrate toxics use reduction planning into the EMS."

(4) The EMS progress report shall include the following written statement signed by a senior management official of the facility: "I certify under penalty of law that the following is true:

(a) I have examined and am familiar with this EMS;

(b) The EMS meets the requirements of 310 CMR 50.82 and the elements specified therein are being implemented;

(c) The EMS is actively addressing environmental compliance issues;

(d) The individual who has certified the EMS pursuant to 310 CMR 50.84(3) has provided me with documentation that he or she meets the requirements of 310 CMR 50.84(2).

(e) These statements are based upon answers to queries made by me to individuals who have been designated to implement the EMS, and I have made my best effort to ensure that they are being held accountable for implementing the system in good faith. I understand that by choosing to implement an EMS in *lieu* of a toxics use reduction plan, I am responsible for maintaining documentation to evidence a good faith effort to implement all elements of the EMS.

(f) I am aware that there are penalties for submitting false information, including possible fines and imprisonment."

50.90: Resource Conservation Plans

310 CMR 50.90 through 310 CMR 50.99, cited collectively as 310 CMR 50.90, establishes requirements for developing a resource conservation plan as an alternative to developing a toxic use reduction plan.

50.91: Applicability and Schedule

(1) Large quantity toxics users and other toxics users may prepare a resource conservation plan in accordance with 310 CMR 50.90 in *lieu* of a toxics use reduction plan once the toxics user has completed one toxics use reduction plan and two plan updates.

(2) By July 1st of the applicable even-numbered calendar year, a toxics user that elects to prepare a resource conservation plan must complete a resource conservation plan and submit a resource conservation plan summary to the Department.

(3) Toxics users who choose to prepare a resource conservation plan pursuant to 310 CMR 50.90 shall:

(a) by July 1st of the following even-numbered calendar year, prepare a toxics use reduction plan pursuant to 310 CMR 50.40 and submit a toxics use reduction plan summary to the Department; and

50.91: continued

(b) Include with the plan summary a progress report on the resource conservation plan on a form prescribed by the Department.

(4) After completing a resource conservation plan, toxics users may elect to prepare another resource conservation plan four years later, after meeting the requirements of 310 CMR 50.91(3).

50.92: General Resource Conservation Plan Requirements

(1) All toxics users that prepare a resource conservation plan shall select at least one natural asset listed in 310 CMR 50.92(2) as the focus of the plan.

(2) Natural assets shall include at least one of the following:

- (a) Energy use;
- (b) Water use;
- (c) Other materials and products that contribute to solid waste;
- (d) Toxic substances that are identified on the list of toxic or hazardous substances established pursuant to 301 CMR 41.00 but are used below threshold amounts as defined in 310 CMR 50.10;
- (e) Chemical substances that are exempt from reporting under TURA, including toxic substances in articles or janitorial products used at a facility.

(3) Resource conservation plans may cover existing operations or products under development.

(4) Each resource conservation plan shall include the following written statement signed by a certified toxics use reduction planner who meets the requirements of 310 CMR 50.63: "Based on my independent professional judgment as a toxics use reduction planner, I certify under penalty of law that the following is true:

- (a) I have examined and am familiar with this resource conservation plan;
- (b) the resource conservation plan satisfies the requirements of 310 CMR 50.90; and
- (c) the resource conservation plan demonstrates a good faith and reasonable effort to identify and evaluate resource conservation options."

Notwithstanding any professional designation held by a certified toxics use reduction planner or any trade organization of which that planner is a member by way of license, registration, certification, or similar qualification, the signed certification statement shall not mean that such planner signs in the capacity of anything other than a toxics use reduction planner.

(5) Each resource conservation plan shall include the following written statement signed by the senior management official of the facility: "I certify under penalty of law that the following is true:

- (a) I have personally examined and am familiar with this resource conservation plan;
- (b) I am satisfied that any supporting documentation used in the development of the resource conservation plan exists and is consistent with the plan;
- (c) based on my inquiry of those individuals immediately responsible for the development of this resource conservation plan, I believe that the information in the resource conservation plan and any supporting documentation used in the development of the resource conservation plan is true, accurate, and complete;
- (d) the resource conservation plan, to the best of my knowledge and belief, meets the requirements of 310 CMR 50.90;
- (e) I am aware that there are penalties for submitting false information, including possible fines and imprisonment."

(6) At least six months prior to the date when the resource conservation plan must be complete, the toxics user shall notify all of its employees of the requirements of the resource conservation plan, identify the natural asset being considered as the focus of the resource conservation plan, and solicit in the notice comments or suggestions from all employees on resource conservation options for that asset. The resource conservation plan shall include a description of the steps taken by the toxics user in order to comply with this provision.

(7) In determining the amounts pursuant to 310 CMR 50.93(3), 50.94(2), 50.96(1)(b), and 50.96(4)(c), the resource conservation plan shall:

50.92: continued

- (a) refer to documents or other information used to determine these amounts, and shall specify the location of such documents or information;
- (b) include calculations of the amounts; and
- (c) state any assumptions made by the toxics user.

(8) Toxics users shall maintain resource conservation plans for a facility on the premises of that facility, and shall make resource conservation plans available to the Department upon request. Toxics users shall also make supporting documentation referred to in 310 CMR 50.92(5) available to the Department upon request. Toxics users shall maintain resource conservation plans and supporting documentation for at least five years after the date that the plan is due.

(9) Toxics users shall develop information required by 310 CMR 50.90 in accordance with standard accounting practices;

(10) Toxics users shall develop information required by 310 CMR 50.90 in accordance with standard engineering practices;

(11) Toxics users shall develop information required by 310 CMR 50.90 in good faith.

(12) Toxics users shall demonstrate a good faith and reasonable effort to identify and evaluate resource conservation options.

50.93: Facility-wide Information Required in Each Resource Conservation Plan

Toxics users shall develop and include in the resource conservation plan the following facility-wide information:

(1) a statement of the management policy of the facility regarding resource conservation. This statement shall include, but not be limited to, a description of the ways in which the toxics user encourages resource conservation and a description of any policy applicable to the facility that encourages or discourages resource conservation. This statement shall include the following information, as applicable:

- (a) a description of resource conservation in the facility's policy or decisions concerning research and development;
- (b) a description of how resource conservation affects the facility's policy or decisions concerning financial investments or capital investments;
- (c) a description of how resource conservation affects the facility's policy or decisions concerning hiring, promotions or bonuses, or other incentives, for facility employees; and
- (d) any other policy applicable to the facility that encourages or discourages resource conservation.

(2) a statement of the scope of the plan. This statement shall include, but not be limited to, the following:

- (a) a description of the natural asset selected as the focus of the resource conservation plan;
- (b) a summary of the facility's use of the selected natural asset, including a description of all the facility operations in which the selected asset is used;
- (c) a statement identifying and ranking opportunities for resource conservation regarding the selected natural asset;
- (d) a description of which operations were selected for more detailed evaluation pursuant to 310 CMR 50.94;
- (e) a summary of the identification process pursuant to 310 CMR 50.95(1); and
- (f) a brief description of the technologies, procedures, or training programs identified pursuant to 310 CMR 50.96(3), (4) and (5) and those selected for implementation.

(3) the expected change in the amount of use of the selected natural asset by July 1st of the next even-numbered calendar year pursuant to 310 CMR 50.94.

50.94: Information Required for Selected Operations in Each Resource Conservation Plan

Toxics users shall determine or develop, and include in the resource conservation plan, the following information specific to the chosen natural asset and selected operations:

- (1) a process flow diagram in accordance with the following: The process flow diagram shall be a visual representation of the movement of the asset through selected operations, including, but not limited to, how assets flow into and out of operations and where assets are lost or become waste. The process flow diagram also may represent the movement of substances or other materials that are not assets through the operations;
- (2) the total amount of each asset used, which may be reported as an absolute amount or an amount per unit of product, and a statement of the estimation methods used to determine amounts;
- (3) the unit of product associated with selected operations, if applicable;
- (4) a statement explaining the purpose that the asset serves in the operations;
- (5) the cost of the use of each asset calculated in accordance with 310 CMR 50.96A; and
- (6) goals for reducing the use of the asset.

50.95: Procedures for Identifying Resource Conservation Techniques

- (1) Toxics users shall describe the procedure used by the toxics user to identify technologies, procedures, or training programs for achieving resource conservation for the selected asset and the selected operations. This procedure shall include, but not be limited to, a list of personnel involved in the procedure, a description of information sources consulted, and a description of information gathering techniques.
- (2) Toxics users shall list technologies, procedures, and training programs identified as potentially achieving resource conservation for the asset pursuant to 310 CMR 50.95(1).

50.96: Technical Evaluation of Resource Conservation Techniques

- (1) Toxics users shall evaluate the technical feasibility of each technology, procedure, or training program listed in the resource conservation plan pursuant to 310 CMR 50.95(2) in accordance with the following requirements:
 - (a) Toxics users shall evaluate whether the technology, procedure, or training program constitutes resource conservation as defined in 310 CMR 50.10.
 - (b) Toxics users shall calculate the expected reductions resulting from implementation of the technology, procedure, or training program in accordance with 310 CMR 50.96(1)(b)1. and 2.:
 1. toxics users shall calculate expected reductions in the amount of the asset used in each operation;
 2. toxics users shall evaluate the relationship between the technology, procedure, or training program being evaluated, and other applicable laws and regulations, including but not limited to, whether implementation of the technology, procedure, or training program will violate any other law or regulation.
- (2) Toxics users need not complete the evaluation of a particular technology, procedure, or training program if, during the evaluation, the toxics user determines that the technology, procedure, or training program being evaluated is not appropriate for any of the following reasons:
 - (a) the technique is clearly technically infeasible;
 - (b) the technique is clearly economically infeasible, as determined pursuant to 310 CMR 50.96A;
 - (c) implementation of the technology, procedure, or training program is not likely to result in a decrease in the use of the natural asset or has adverse environmental impacts.

50.96: continued

- (3) For technologies, procedures, or training programs that the toxics user decides not to implement, the plan shall include:
 - (a) a description of the technology, procedure, or training program; and,
 - (b) the reason for deciding not to implement the technology, procedure, or training program.

- (4) For technologies, procedures, or training programs that the toxics user decides to implement, the plan shall include:
 - (a) a description of the technology, procedure, or training to be implemented;
 - (b) the anticipated costs and savings associated with the technology, procedure, or training program, as determined pursuant to 310 CMR 50.46A;
 - (c) the expected reductions in the amount of the asset resulting from implementation of the technology, procedure, or training program calculated pursuant to 310 CMR 50.96(1)(b). The amounts determined pursuant to 310 CMR 50.96(1)(b) and stated in the plan pursuant to 310 CMR 50.96(4)(b) shall be projected for two years from the date the plan is due; and
 - (d) an implementation schedule.

- (5) If the evaluation required for a particular technology, procedure, or training program identified pursuant to 310 CMR 50.95(2) cannot be completed by the date that the plan is due, the plan shall include the following:
 - (a) a description of the technology, procedure, or training program;
 - (b) a description of steps to be taken in order to further evaluate the technique and a schedule for taking these steps; and
 - (c) an explanation as to why the evaluation cannot be complete by the date that the plan is due.

50.96A: Economic Evaluation of Potential Resource Conservation Techniques

- (1) Toxics users shall evaluate the economic feasibility of each technology, procedure, or training program listed in the resource conservation plan and calculate the:
 - (a) cost to implement each technology, procedure, or training program;
 - (b) all associated savings for each technology, procedure, or training program.

- (2) If no technologies, procedures, or training programs are identified pursuant to 310 CMR 50.95, or if these techniques are determined to be technically infeasible pursuant to 310 CMR 50.96, the toxics user is not required to quantify the costs or savings of these techniques.

50.97: Resource Conservation Plan Summary

- (1) Toxics users shall submit to the Department a resource conservation plan summary on or before July 1st of the applicable year. Such summary shall include:
 - (a) a copy of the certification statements required pursuant to 310 CMR 50.92(4) and (5);
 - (b) the natural asset identified in 310 CMR 50.93(2)(a);
 - (c) the resource conservation techniques identified pursuant to 310 CMR 50.95(2);
 - (d) the resource conservation techniques identified to be implemented pursuant to 310 CMR 50.96(4)(a);
 - (e) the plan goals identified in 310 CMR 50.94(6);
 - (f) the baseline amount of the asset used identified in 310 CMR 50.94(2);
 - (g) the expected change in the amount of the asset used identified in 310 CMR 50.93(3)

- (2) The Department may require that the summary be submitted on a form prescribed by the Department.

REGULATORY AUTHORITY

310 CMR 50.00: M.G.L. c. 21I, §§ 3, 10, 11 and 12.

310 CMR 60.00: AIR POLLUTION CONTROL FOR MOBILE SOURCES

Section

- 60.01: General Regulations to Prevent Air Pollution
- 60.02: Massachusetts Motor Vehicle Emissions Inspection and Maintenance Program
- 60.03: U Conformity to the State Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act
- 60.04: MB City of Cambridge Vehicle Trip Reduction
- 60.05: Global Warming Solutions Act Requirements for Transportation
- 60.06: CO₂ Emission Limits for State Fleet Passenger Vehicles

60.01: General Regulations to Prevent Air Pollution

(1) No person owning, leasing, or controlling the operation of any air contamination source shall willfully, negligently, or through failure to provide necessary equipment or to take necessary precautions, permit any emission from said air contamination source or sources of such quantities of air contaminants which will cause, by themselves or in conjunction with other air contaminants, a condition of air pollution.

(2) (a) Accurate Submittal to the Department No person shall make any false, inaccurate, incomplete, or misleading statements in any application, record, report, plan, design, statement or document which that person submits to the Department pursuant to M.G.L. c. 111, §§ 142A through 142M, 150A, c. 21H, or 310 CMR 60.00.

(b) Accurate and Complete Record Keeping No person shall make any false, inaccurate, incomplete, or misleading statements in any record, report, plan, file, log, or register which that person is required to keep pursuant to M.G.L. c. 111, §§ 142A through 142M, 150A, c. 21H, or 310 CMR 60.00. Such records shall be made available to the Department for inspection upon request.

(c) Certification Any person providing information required to be submitted to the Department pursuant to M.G.L. c. 111, §§ 142A through 142M, 150A, c. 21H, or 310 CMR 60.00 shall make the following certification: "I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

60.02: Massachusetts Motor Vehicle Emissions Inspection and Maintenance Program

(1) Introduction.

(a) Authority. 310 CMR 60.02 is promulgated by the Commissioner of the Department of Environmental Protection pursuant to M.G.L. c. 111, § 142M and c. 21A, §§ 2(28) and 16.

(b) Headings are for convenience only and do not affect the substance of 310 CMR 60.02.

(c) Purpose. 310 CMR 60.02 establishes a program to inspect the emissions of motor vehicles and to ensure that a vehicle that fails an emissions inspection is repaired properly in a reasonable time period, the motorist obtains a waiver for the vehicle, or the vehicle's registration is suspended in accordance with 540 CMR 4.00: *Annual Safety and Combined Safety and Emissions Inspection of All Motor Vehicles, Trailers, Semi-trailers and Converter Dollies.*

(d) Severability. Each subsection of 310 CMR 60.02 shall be deemed severable, and in the event that any subsection of 310 CMR 60.02 is held invalid, the remainder shall continue in full force and effect.

(2) Definitions. The following words and phrases when used in 310 CMR 60.00, except as otherwise required by the context, have the following meanings.

All Wheel Drive Vehicle means a motor vehicle in which all four wheels are constantly and automatically connected to the drive train.

Assembled Vehicle means a unique vehicle constructed from parts of other motor vehicles.

60.02: continued

Certified Configuration means the constituent parts of a motor vehicle necessary to maintain the vehicle in conformance with any approval or order issued by the U.S. Environmental Protection Agency or the California Air Resources Board certifying the vehicle as meeting applicable emissions standards.

Commissioner means the commissioner of the Department of Environmental Protection or his or her designee.

Custom Vehicle means a motor vehicle for which the year of manufacture is after 1948, for which the model year is at least 25 years old and that has been altered from the manufacturer's original design or has a body constructed, in whole or in part, from non-original materials.

Cutpoint means the motor vehicle emissions level above which a vehicle fails an emissions inspection and at or below which a vehicle passes an emissions inspection.

Data Link Connector means the connector where diagnostic scan tools interface with the vehicle's on-board diagnostic system.

Department means the Massachusetts Department of Environmental Protection.

Diagnostic Trouble Code means a code stored in the On-board Diagnostics (OBD) system indicating the reason the malfunction indicator light is (or was) illuminated.

Diesel Engine means an engine using a compression ignition thermodynamic cycle.

Diesel Vehicle means a vehicle powered by a diesel engine.

Dynamometer means a device which applies a load to a vehicle's drive wheels during an emissions inspection while the vehicle is being operated in a stationary and secure position to simulate actual driving conditions.

Emission Control System means any device or combination of parts designed by the manufacturer to control the emissions of a motor vehicle.

Emissions Certification Category means the category of vehicles certified to the same emissions standard within a vehicle class.

Emissions Inspection or Inspection means the procedures specified by the Department that determine whether a vehicle meets emissions inspection standards provided in 310 CMR 60.02(12).

Emission Repair means repair of a motor vehicle for the purpose of such vehicle passing or attempting to pass an emissions inspection.

Glider Kit means a vehicle body, including cab, which is placed upon the chassis with its original drive train, of a vehicle with a Gross Vehicle Weight Rating (GVWR) of more than 10,000 pounds that changes the function or capacity of the original chassis, and which creates a need for a change to the Vehicle Identification Number (VIN) because the cab has been replaced. Modifications to the original chassis may be necessary to allow installation of the glider kit.

Gross Vehicle Weight Rating (GVWR) means the maximum loaded weight for which the vehicle is designed, as specified by the vehicle manufacturer.

Heavy Duty Diesel Vehicle means a motor vehicle with a GVWR greater than 14,000 pounds, equipped with a diesel engine, and operating on any fuel or combination of fuels.

Heavy Duty Nondiesel Vehicle means a motor vehicle with a GVWR greater than 14,000 pounds, not equipped with a diesel engine, and operating on any fuel or combination of fuels.

60.02: continued

Initial Inspection means the first inspection of a vehicle under 310 CMR 60.02 or any subsequent inspection where the vehicle passed the previous inspection, received a waiver, or received an economic hardship failure repair extension.

Inspection See definition for emissions inspection.

Inspection Certificate means a written statement indicating:

- (a) that the required inspection for a motor vehicle has been performed and the motor vehicle inspected has passed or failed said inspection; or
- (b) that the motor vehicle is exempt from the inspection.

Said certificate shall be in a form prescribed by the Registrar and the Commissioner.

Inspection Fee means the fee established by the Commonwealth and paid by the motorist for a motor vehicle inspection pursuant M.G.L. c. 7, § 3B.

Inspection Station means a facility that is licensed by the Registry to conduct motor vehicle safety and emissions inspections.

Inspector means any properly trained person with a valid certification from the Department and licensed by the Registry to perform motor vehicle safety and emissions inspections.

Kit Vehicle means a specially-constructed vehicle or a replica vehicle, the production volume of which is less than 500 vehicles per year.

Light-duty Diesel Vehicle means a vehicle with a GVWR of 8,500 pounds or less, equipped with a diesel engine, and operating on any fuel or combination of fuels.

Light-duty Nondiesel Vehicle means a vehicle with a GVWR of 8,500 pounds or less, not equipped with a diesel engine, and operating on any fuel or combination of fuels.

Malfunction Indicator Light means the instrument panel light used by the OBD system to notify the vehicle operator of an emissions related problem.

Medium-duty Diesel Vehicle means a vehicle with a GVWR greater than 8,500 and less than or equal to 14,000 pounds, equipped with a diesel engine, and operating on any fuel or combination of fuels.

Medium-duty Nondiesel Vehicle means a vehicle with a GVWR greater than 8,500 and less than or equal to 14,000 pounds, not equipped with a diesel engine, and operating on any fuel or combination of fuels.

Model-year means the vehicle manufacturer's annual production period for each engine family which includes January 1st of a calendar year or, if the manufacturer has no annual production period for the engine family, the year in which the vehicle was manufactured. If a motor vehicle is manufactured in two or more states, the model-year shall be determined by the date on which the chassis is completed.

Motor Vehicle or Vehicle means any equipment or mechanical device propelled primarily on land by power other than muscular power, including passenger vehicles and trucks operating on any fuel type. "Motor vehicle" or "vehicle" does not mean railroad or railway engines or cars, vehicles operated by the system known as trolley motor or trackless trolley, vehicles used primarily for off roadway use such as construction and farm equipment, or devices used for domestic purposes such as a lawnmower or snowblower.

Motor Vehicle Inspection and Maintenance Program means the program for the inspection and repair of motor vehicles conducted in accordance with the combined emissions and safety regulations established by the Department and the Registry pursuant to 310 CMR 60.02 and 540 CMR 4.00: *Annual Safety and Combined Safety and Emissions Inspection of All Motor Vehicles, Trailers, Semi-trailers and Converter Dollies*, respectively.

60.02: continued

Motorist means the person in control of a vehicle subject to the motor vehicle inspection and maintenance program.

New Vehicle means a motor vehicle to which the equitable or legal title has never been transferred to an ultimate purchaser.

Non-manufacturer means a person constructing or assembling a specially-constructed vehicle or a replica vehicle for personal use and not for resale.

On-board Diagnostics System (OBD System) means a system, as installed and programmed by the original equipment manufacturer or its designee, or by a vendor recognized or authorized by the U.S. Environmental Protection Agency or the California Air Resources Board or the original equipment manufacturer to install or program such system according to the requirements of the U.S. Environmental Protection Agency or the California Air Resources Board of vehicle components and condition monitors and sensors controlled by an on-board computer running software designed to signal the motorist when a problem is detected with an emissions control system or component, or with the on-board diagnostic system.

On-board Diagnostics Test (OBD Test) means an assessment of the condition of a vehicle's emissions control system, including the vehicle's OBD system, pursuant to Department inspection procedures established pursuant to 310 CMR 60.02, including workstation software prompts.

Opacity Test means an emissions test of a diesel vehicle's exhaust performed by measuring the density of the smoke that the vehicle emits. Such test may be performed while the vehicle is under load on a dynamometer according to Department-approved inspection procedures.

Original Equipment Manufacturer means the entity that originally manufactured the motor vehicle or motor vehicle engine prior to sale to the ultimate purchaser.

Person means an individual, agency or other government entity, corporation, partnership, association, or similar entity.

Readiness Codes means the codes stored by a vehicle's OBD system that indicate whether a vehicle's OBD system has been able to complete its checks for proper functioning of the vehicle's emissions-related components and systems.

Registered Repair Technician means any person registered with the Department who meets the Department's standards for registration.

Registrant means the person to whom a certification of registration is issued pursuant to 540 CMR 2.00: *Motor Vehicle Regulations*.

Registrar means the Registrar of the Registry of Motor Vehicles.

Registry means the Registry of Motor Vehicles.

Reinspection means any emissions inspection performed on a motor vehicle after it has failed an emissions inspection and repair has been attempted.

Repair Form means the form provided by the inspector to the motorist whose vehicle has failed the emissions inspection to record the type and cost of emissions repairs performed on the vehicle.

Replica Vehicle means a motor vehicle constructed or assembled by a non-manufacturer from new or used parts that, when assembled, replicates an earlier year, make and model vehicle.

SAE JI667 Opacity Test means *The Snap-Acceleration Smoke Test Procedure for Heavy-Duty Diesel Powered Vehicle*, 1996-02, issued by the Society of Automotive Engineers (SAE), as modified by the Department.

60.02: continued

Specially Constructed Vehicle means a motor vehicle reconstructed or assembled by a non-manufacturer from new or used parts, the exterior of which does not replicate or resemble any other manufactured vehicle.

Street Rod means a motor vehicle for which the year of manufacture is prior to 1949, and which has been altered from the manufacturer's original design or has a body constructed from non-original materials.

Tampering means the act of a person to remove or render inoperative any device or element of design installed on or in a motor vehicle in compliance with regulations under § 203(a) of the federal Clean Air Act, or to cause a vehicle to operate using a fuel which the vehicle is not certified to use, or to operate on a fuel not approved or certified by the U.S. Environmental Protection Agency or the California Air Resources Board.

Transient Loaded-mode Test means the portion of the emissions inspection administered while the vehicle is operating on a dynamometer.

Two-speed Idle Test means an emissions measurement taken while a vehicle is operating first at idle, then while the engine is operating at 2500 revolutions per minute with the transmission in neutral, and a final time when the vehicle is again operating at idle.

Ultimate Purchaser means, with respect to a motor vehicle or motor vehicle engine, the first person who in good faith purchases or leases the motor vehicle or motor vehicle engine for purposes other than resale.

Used Motor Vehicle means a motor vehicle owned or leased by any person other than the ultimate purchaser for purposes other than resale.

Vehicle Class means a category to which a vehicle is assigned by the U.S. Environmental Protection Agency or the California Air Resources Board pursuant to their requirements for certifying the vehicle as meeting applicable emissions standards.

Vehicle Identification Number or VIN means a unique number assigned to each vehicle by the vehicle manufacturer or the Registry.

Workstation means the complete set of inspection equipment approved by the Department and required by the Registrar by or pursuant to 540 CMR 4.00: *Annual Safety and Combined Safety and Emissions Inspection of All Motor Vehicles, Trailers, Semi-trailers and Converter Dollies* for an inspection station.

(3) Applicability.

(a) The following motor vehicles are subject to emissions inspection except as otherwise provided at 310 CMR 60.02(3)(b):

1. all motor vehicles registered in Massachusetts;
2. any motor vehicle owned or operated by a federal agency in Massachusetts (regardless of whether such vehicles are registered in Massachusetts); and
3. diesel vehicles with a GVWR greater than 10,000 pounds operating on Commonwealth roads but not registered in Massachusetts.

(b) The following motor vehicles are exempt from the emissions inspection:

1. any diesel vehicle with a model year earlier than 1984;
2. any light duty diesel vehicle with a model year earlier than 1997 or 15 or more model years old;
3. any medium duty diesel vehicle with a GVWR of not more than 10,000 pounds and with a model year earlier than 2007 or 15 or more model years old;
4. any light duty nondiesel vehicle with a model year earlier than 1996 or 15 or more model years old;
5. any medium duty nondiesel vehicle with a model year earlier than 2008 or 15 or more model years old;

60.02: continued

6. any heavy duty nondiesel vehicle not equipped with an OBD system or 15 or more model years old;
7. any new vehicle registered first in Massachusetts for the motor vehicle inspection upon its initial registration to the ultimate purchaser, except a kit vehicle;
8. tactical military vehicles;
9. any motor vehicle or class of motor vehicles determined by the Department to present prohibitive emissions inspection problems or to be inappropriate for emissions inspection;
10. any motor vehicle operated exclusively by electric power;
11. any vehicle that has been granted a waiver or exemption by the U.S. Environmental Protection Agency or the California Air Resources Board from emissions standards or equipment requirements to the extent of said waiver or exemption;
12. any motorcycle or moped;
13. any vehicle registered with the Registry on or before April 30, 2012, as a replica vehicle or as a specially-constructed vehicle pursuant to M.G.L. c. 90, § 2H; and
14. any vehicle registered with the Registry as a street rod or custom vehicle pursuant to M.G.L. c. 90, § 2H.

(4) Scheduling of Emissions Inspections Prior to October 1, 2008 (Reserved).

(5) Scheduling of Emissions Inspections.

(a) Motor Vehicles Registered in Massachusetts. The registrant of each motor vehicle shall obtain an emissions inspection every time the vehicle is submitted for a motor vehicle inspection in accordance with 310 CMR 60.02. Registrants shall submit their vehicles for inspection no later than the last day of the month and year of expiration on the previously issued inspection certificate.

(b) Initial Inspection of New Kit Vehicles. When any kit vehicle is first registered in Massachusetts, including upon sale or lease to the ultimate purchaser or completion of assembly, the registrant shall obtain a visual inspection in accordance with 310 CMR 60.02(12)(c). If the certified configuration installed in the kit vehicle is from a model year vehicle subject to an OBD test, the kit vehicle shall also receive an OBD test for the model year of the certified configuration installed in the kit vehicle.

(c) Initial Registration of Motor Vehicles. A motorist shall obtain an emissions inspection as part of the motor vehicle inspection for the vehicle within seven days from the date the vehicle is first registered in Massachusetts unless exempt under 310 CMR 60.02(3)(b).

(d) Inspections upon Transfer. For any used motor vehicle, the motorist shall obtain an emissions inspection as part of his or her motor vehicle inspection for the vehicle within seven days of the date on which the motor vehicle is registered in Massachusetts to the new owner unless exempt in accordance with 310 CMR 60.02(3)(b).

(e) Massachusetts Vehicles not Located in State. For any motor vehicle which is not garaged or operated in Massachusetts at the time that vehicle's emissions inspection was due, a motorist may operate the vehicle for 15 days after the vehicle's return to Massachusetts, provided said motor vehicle bears proof satisfactory to the Department of an adequate emissions inspection from another jurisdiction. The motorist shall obtain the vehicle's initial emissions inspection within said 15 days.

(f) Diesel Vehicles with a GVWR Greater Than 10,000 Pounds. Diesel vehicles with a GVWR greater than 10,000 pounds registered in Massachusetts are subject to 310 CMR 60.02(5)(a) through (e), (g) and (h). In addition, all diesel vehicles with a GVWR greater than 10,000 pounds operating on Massachusetts roads are subject to emissions testing during roadside inspections, and emissions inspection standards are applicable to emissions testing conducted during roadside inspections.

(g) Inspections for Program Evaluation. The Department may require a registrant to have his or her vehicle inspected upon notice from the Department for program evaluation. If the vehicle fails such inspection, the registrant may choose not to have the vehicle repaired and present the vehicle for inspection as provided at 310 CMR 60.02(5)(a).

(h) A motorist may obtain an initial inspection at any time prior to the month and year of expiration on the inspection certificate previously issued where the vehicle passed the previous inspection, received a waiver, or received an economic hardship failure repair extension.

60.02: continued

(6) Motorist Requirements.

(a) Inspection Documents. When presenting a motor vehicle for an inspection, a motorist shall provide the following documents to the inspector to identify the vehicle by make, model-year, vehicle identification number, and license plate number:

1. a valid certificate of registration; and
2. if the inspection is a reinspection, a valid and completed emissions repair form.

(b) Inspection Fee. The motorist shall pay the inspection fee when presenting a motor vehicle for an inspection. No fee is required for an inspection that is not completed.

(c) Inspection Failure. If a vehicle fails an initial inspection, the motorist either shall repair the vehicle such that it passes a reinspection, or shall obtain a waiver or an economic hardship repair extension within 60 days.

(d) Referrals. The motorist shall present the vehicle to a location as instructed by the Registry, the Department, or via printed instructions from a workstation, for purposes related to emissions inspection.

(7) Emission Test Applicability Prior to October 1, 2008 (Reserved).(8) Emission Test Applicability.

(a) On-board Diagnostics Test. Unless exempt pursuant to 310 CMR 60.02(3)(c), the following motor vehicles are subject to the on-board diagnostic test in accordance with Department-approved inspection procedures:

1. all light-duty nondiesel motor vehicles model year 1996 or newer;
2. all light-duty diesel motor vehicles model year 1997 or newer;
3. all medium-duty diesel motor vehicles model year 2007 or newer;
4. all medium-duty nondiesel motor vehicles model year 2008 or newer; and
5. all heavy-duty diesel and nondiesel motor vehicles equipped with OBD systems.

(b) SAE J1667¹ Opacity Test. Unless exempt pursuant to 310 CMR 60.02(3)(b), diesel vehicles with a GVWR greater than 10,000 pounds and not otherwise subject to an OBD test are subject to the SAE J1667 opacity test. The Department may exempt from roadside emissions inspection such vehicles if the vehicle has been tested in another state or jurisdiction.

(c) Engine Switching. A motor vehicle with an exchanged or replaced engine shall be subject to the engine switching requirements in 310 CMR 60.02(12)(d).

(d) Assembled Vehicles. An assembled or reconstructed vehicle, including a vehicle with a prefabricated body, is subject to the emissions inspection applicable to the fuel type, model year, and type of vehicle chassis indicated on the vehicle's certificate of registration.

(e) Kit Vehicles. Unless exempt pursuant to 310 CMR 60.02(3)(b), kit vehicles are subject to an emissions test based on the year of the certified configuration installed in the kit vehicle:

1. if the certified configuration installed in the kit vehicle is from a model year vehicle subject to an OBD test, then the kit vehicle shall be subject to the kit vehicle visual test upon initial registration and to annual OBD testing requirements for the model year of the certified configuration installed in the kit vehicle, including any exclusions or exemptions otherwise granted to that certified configuration; or
2. if the certified configuration installed in the kit vehicle is from a model year vehicle not subject to an OBD test, then the kit vehicle shall be subject to the kit vehicle visual test upon initial registration and transfer of ownership.

(f) Glider Kits. Vehicles with glider kits are subject to an emissions test based on the year of the chassis on which the glider kit is installed:

1. if the chassis is subject to an OBD test, then the vehicle shall be subject to a visual inspection upon initial registration to verify that the OBD system is properly installed and to OBD testing requirements for the model year of the chassis, or
2. if the chassis is not subject to an OBD test, then the vehicle shall be subject to an opacity test if the year of the chassis and fuel type of the engine are subject to an opacity test.

¹ Copies of SAE J1667 may be obtained from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001.

60.02: continued

(9) Advisory Scan of New Motor Vehicles. For any vehicle required to be equipped with an OBD system and registered first in Massachusetts after sale or lease to the ultimate purchaser, except a kit vehicle, the registrant shall obtain an advisory scan of the vehicle's OBD system. The advisory scan is not an emissions inspection. The scan may be performed as part of the pre-delivery motor vehicle inspection performed by the seller if the seller is so authorized by the Registry. The items or characteristics to be scanned and the properties that constitute a problem shall be established by the Department. The items or characteristics to be scanned and the properties that constitute a problem shall be based on: the type of vehicle, the vehicle fuel type(s), the model year of the vehicle, vehicle certification requirements of the U.S. Environmental Protection Agency or the California Air Resources Board, and the vehicle's OBD system design. A list of the items or characteristics to be scanned and the properties that constitute a problem shall be published by the Department on the web site for the Enhanced Emissions and Safety Test Program. Upon completion of the advisory scan of a new motor vehicle, the inspector, or a person authorized by the Registry if the seller is authorized to perform the advisory scan as part of the pre-delivery motor vehicle inspection, shall provide to the motorist a printed report of the vehicle's advisory scan results in the format required by the Department.

(10) Inspector Procedures.

(a) The inspector shall perform emissions inspections in accordance with 310 CMR 60.02 and all Department-approved inspection procedures, including all workstation software prompts, at inspection stations licensed by the Registry.

(b) The inspector shall perform emissions inspections using Department-approved equipment and shall perform all Department-required quality control and maintenance procedures on the equipment and adhere to all safety procedures as provided in the Department-approved inspection procedures.

(c) The inspector shall record the information identified as provided in the Department's emissions inspection procedures and the workstation software prompts.

(d) Once initiated, the inspector shall complete an emissions inspection. The inspector shall terminate the inspection if an unsafe condition or workstation error or inspector error arises during the inspection process.

(e) The inspector shall refuse to perform an emissions inspection on a motor vehicle if:

1. the motorist fails to present the documentation specified at 310 CMR 60.02(6)(a)1.;
2. the vehicle is carrying explosives or other materials considered to be a safety hazard by the inspector;
3. fuel, oil, or other leaks are observed by the inspector that are considered a safety hazard by the inspector; or
4. the inspector observes any other hazard that would compromise the safe conduct of the inspection.

(f) Upon completion of the emissions inspection, the inspector shall provide to the motorist a printed inspection report of the vehicle's inspection results in the format required by the Department.

(g) Upon completion of the motor vehicle inspection, the inspector shall affix an inspection certificate to the windshield of the vehicle inspected indicating the proper results of the inspection.

(11) Emissions Inspection Standards Prior to October 1, 2008. (Reserved)

(12) Emissions Inspection Standards. A motor vehicle shall fail the emissions inspection if it does not meet the applicable standards established in 310 CMR 60.02(12).

(a) Opacity Standards for Diesel Vehicles. Any vehicle subject to an opacity test shall have emissions opacity no greater than the cutpoints in Table A as indicated for that vehicle's class and model year.

60.02: continued

TABLE A
Opacity Test Cutpoints

	Percent Opacity
Diesel trucks greater than 10,000 pounds GVWR	
1984 – 1990 model years	40%
1991 – 1996 model years	30%
1997 and newer model years	20%
Diesel buses greater than 10,000 pounds GVWR	
1984 – 1987 model years	40%
1988 – 1993 model years	30%
1994 and newer model years	20%

- (b) On-board Diagnostics Test. A vehicle shall fail the on-board diagnostics test if:
1. the data link connector is missing, has been tampered with, or malfunctions, or the OBD system has been altered in such a way as to make OBD system testing impossible;
 2. the malfunction indicator light is commanded by the OBD system to be illuminated;
 3. the malfunction indicator light does not illuminate properly when commanded on by the OBD system;
 4. the vehicle's OBD system reveals insufficient readiness codes, for light-duty nondiesel vehicles as prescribed in 40 CFR 85.2222 or as otherwise determined by the Department in consultation with the U.S. Environmental Protection Agency, and as determined by the Department for all other vehicles, are set for the components of the OBD system except as provided for reinspections at 310 CMR 60.02(14)(b); or
 5. the vehicle's OBD system reveals other OBD system malfunctions or conditions as identified by the Department.
- (c) Kit Vehicle Visual Test. A kit vehicle shall be registered with the Registry as a replica vehicle or a specially-constructed vehicle and subject to a visual test to verify compliance with the following emissions requirements; and kit vehicle registrants shall supply any documentation required by the inspector, the Department, or the Registry:
1. The engine installed in the kit vehicle shall meet one of the following requirements. For purposes of this subdivision, "used" means the component has been in a vehicle that has been titled to an ultimate purchaser, a "rebuilt component" means a used component which has been refurbished with new or other used parts, and a "new engine" means an engine that has not been previously installed in a vehicle.
 - a. The engine block and cylinder head(s) shall be used; other components of the engine may be new.
 - b. The engine may be a new engine of the same or newer model year of a vehicle that has been permanently retired and its engine destroyed, provided the following criteria are met:
 - i. the vehicle shall be permanently retired and the engine of that vehicle destroyed solely for the purpose of compliance with 310 CMR 60.00;
 - ii. both the destroyed engine and the new engine are of the same fuel type and made for either a passenger car or light duty truck;
 - iii. the permanently retired vehicle has been registered in Massachusetts for at least one year within five years of the year in which the kit vehicle is first registered in Massachusetts; and

60.02: continued

iv. the displacement of the new engine is in the same or smaller Nominal Displacement Group as the destroyed engine, as specified in 310 CMR 60.02(12)(c)1.a.iv.: *Table B*:

TABLE B	
Nominal Displacement Groups	
<u>Destroyed and New Engine</u> Number of Cylinders	<u>Nominal Displacement Group</u>
3- or 4-cylinder	up to 3.0 liters
5- or 6-cylinder	3.0- 5.0 liters (up to 302 cu in)
8-cylinder	Small - 4.0-5.4 liters (up to 327)
8-cylinder	Medium - 5.5-6.7 liters (up to 409)
8-cylinder	Large - 6.8 liters or more (over 409)
The destroyed engine or the new engine may have more than 8 cylinders provided both engines are in the same 8-cylinder nominal displacement group.	

c. The engine may be a new engine if it is part of a certified configuration that is certified by the California Air Resources Board, the model year of which is no more than one model year older than the year in which the kit vehicle is first registered.

2. If the certified configuration installed in the kit vehicle is for a model year vehicle subject to the OBD test, then the transmission installed in the vehicle shall be monitored by the OBD system consistent with the OBD system for the certified configuration;
3. All emissions-related components and settings shall conform in all material respects to those of the certified configuration applicable to the engine model year (*i.e.*, all emissions-related components shall match or be traceable to only one certified configuration);
4. All catalytic converters, oxygen sensors, and charcoal canisters shall be new, original equipment parts, or replacement parts equivalent to the original equipment parts;
5. If the originally certified configuration required unleaded fuel, then the vehicles shall have fuel filler neck restrictors which meet the requirements of 40 CFR 80.24;
6. The vehicle weight of the kit configuration can be no more than 500 pounds greater than the weight of the originally certified configuration; and
7. Each vehicle's accompanying documentation shall also include the make, model year, chassis year, engine year, engine family, subfamily, and tune-up specifications for the certified configuration applicable to the engine model year.

(d) Engine Switching Requirements. A motor vehicle with an exchanged or replaced engine shall be subject to the following requirements:

1. the vehicle configuration following the engine switch shall be a certified configuration;
2. the certified configuration shall be of the same emissions certification category, as established by the U.S. Environmental Protection Agency or the California Air Resources Board;
3. engine switching between vehicle California-certified and federally-certified vehicles is prohibited;
4. engine switching between vehicle classes is prohibited; and
5. for heavy-duty vehicles, the engine switched into a heavy duty truck shall be of a certified configuration of the same model year or newer as the year of the engine originally installed in the vehicle.

(13) Reinspections Prior to October 1, 2008. (Reserved)

60.02: continued

(14) Reinspections.

(a) The inspector shall inspect every vehicle presented for reinspection in accordance with the emissions inspection requirements of 310 CMR 60.02, Department-approved inspection procedures, and workstation software prompts.

(b) If a vehicle failed the on-board diagnostics test during the most recent initial inspection and does not meet readiness criteria as prescribed by 310 CMR 60.02(12)(b)4. at the reinspection, the vehicle shall be turned away consistent with Department-approved inspection procedures. A vehicle not meeting readiness criteria as prescribed by 310 CMR 60.02(12)(b)4. upon reinspection is not considered to have received an emissions reinspection.

(c) If the vehicle passes reinspection, the vehicle shall receive an emissions inspection certificate indicating compliance with emissions inspection requirements.

(d) Unless a vehicle that has failed an emissions inspection passes a reinspection within 60 days, obtains a waiver, or obtains an economic hardship failure repair extension, the vehicle shall not be operated on a public road and the registration of any such Massachusetts-registered motor vehicle shall be suspended in accordance with 540 CMR 4.00: *Annual Safety and Combined Safety and Emissions Inspection of All Motor Vehicles, Trailers, Semi-trailers and Converter Dollies.*

(15) Challenge Inspections.

(a) A motorist may challenge the results of an emissions inspection or reinspection. To challenge the results of an emissions inspection or reinspection, a motorist shall notify the Registry, in a form and manner as specified by the Registry, within two days (excluding Sundays, Commonwealth and federal holidays) of the inspection being challenged, and shall submit his or her vehicle for another emissions inspection or other facility as at an inspection station or other facility as designated by the Registry or the Department.

(b) If the vehicle fails a challenge inspection or reinspection, the motorist shall pay the inspection station or other facility for the cost of the inspection. If the vehicle passes the challenge inspection, the inspector shall issue the appropriate inspection certificate and report but shall not charge any inspection fee to the motorist.

(16) Waivers Prior to October 1, 2008. (Reserved)(17) Waivers.

(a) A motorist may apply for a waiver of emission inspection standards if the following conditions are met:

1. the vehicle failed a reinspection; and
2. emissions-related repairs appropriate for the diagnostic trouble code(s) that caused the malfunction indicator light to be commanded on by the OBD system were performed on the vehicle by a registered repair technician.

(b) The motorist shall present the vehicle to a location designated by the Registry or the Department along with the following documentation when applying for a waiver:

1. receipts for all emissions-related repairs completed by a registered repair technician since the vehicle's most recent initial inspection indicating the problem(s) diagnosed and the problem(s) to which the repairs are applicable; and
2. any other documents required by the Department.

(c) An emissions waiver certificate shall be granted if all of the following requirements are met:

1. all safety inspection requirements are met;
2. the vehicle is registered with the Registry as a private passenger motor vehicle or auto home pursuant to 540 CMR 2.05: *Vehicle Registrations Requirements*;
3. the emission control system is present and there is no evidence of tampering;
4. the malfunction indicator light is not commanded on by the OBD system for any diagnostic trouble code(s) for misfire, catalytic converter efficiency, particulate filter efficiency, or for equipment related to energy storage in a hybrid vehicle;
5. the malfunction indicator light is functioning properly;
6. repairs were performed that were appropriate for the diagnostic trouble code(s) that caused the malfunction indicator light to be commanded on by the OBD system;
7. the motorist has used all relevant manufacturer warranty coverage including recalls to repair the vehicle;

60.02: continued

8. repair expenditures exceed the following limits:
 - a. \$750 for vehicles five model years old or newer;
 - b. \$650 for vehicles over five but not exceeding ten model years old; and
 - c. \$550 for vehicles over ten model years old.

Beginning January 1, 2010, the expenditure limits in 310 CMR 60.02(17)(c) shall be subject to automatic annual adjustment. On January 1, 2010, the expenditure limit in 310 CMR 60.02(17)(c)8.a. shall be adjusted by the percentage, if any, by which the Consumer Price Index ("CPI") for the preceding calendar year differs from the CPI of 1989 and the adjusted expenditure limit shall be rounded to the nearest \$5.00.² The expenditure limit in 310 CMR 60.02(17)(c)8.b. shall then be adjusted by subtracting \$100 from the adjusted expenditure limit in 310 CMR 60.02(17)(c)8.a. The expenditure limit in 310 CMR 60.02(17)(c)8.c. shall then be adjusted by subtracting \$200 from the adjusted expenditure limit in 310 CMR 60.02(17)(c)8.a. The Department will publish these adjusted expenditure limits on the web site for the Enhanced Emissions and Safety Test Program.

(d) Costs associated with the following repairs are not eligible for consideration toward the waiver cost limit:

1. tampering-related repairs to the emissions control system except where it can be verified that the part in question or one similar to it is no longer available for sale;
2. repairs to an emissions control system which has been dismantled or rendered inoperable, except where it can be verified that the part in question or one similar to it is no longer available for sale;
3. repairs to a vehicle to correct an engine switch that does not meet the requirements of 310 CMR 60.02(12)(d);
4. repairs to an OBD system to correct its failure to communicate with emission inspection equipment;
5. repairs to an OBD system to return the malfunction indicator light to proper operation;
6. repairs to an OBD system to meet minimum test criteria for readiness, except that if it was necessary to replace the vehicle's powertrain control module to meet minimum test criteria for readiness and the vehicle failed upon reinspection because the malfunction indicator light was commanded by the OBD system to be illuminated, then ½ of the cost for such replacement may be combined with the repairs appropriate for the diagnostic trouble code(s) that caused the malfunction indicator light to be commanded on by the OBD system to meet the applicable waiver cost limit;
7. repairs under any warranty;
8. repairs that are subject to a manufacturer's recall;
9. repairs unrelated to emissions performance or inappropriate for the diagnostic trouble code(s) that caused the malfunction indicator light to be commanded on by the OBD system;
10. repairs performed prior to the most recent initial inspection failure; and
11. repairs not performed by a registered repair technician, except where the Department has determined that specialty repairs not typically performed by a registered repair technician are necessary.

(e) An emissions waiver certificate is valid until the vehicle's next emissions inspection.

(f) An emissions waiver certificate is not transferable upon the sale of the vehicle or transfer of the vehicle's registration.

(g) Diesel vehicles with a GVWR greater than 10,000 pounds are not eligible for a waiver from opacity standards.

²

The CPI for any calendar year is the average of the CPI for all-urban consumers published by the Department of Labor, as of the close of the 12 month period ending August 31st of each calendar year, as prescribed by 40 C.F.R. § 51.360(a)(7)(i). The revision of the CPI that is most consistent with the CPI for calendar year 1989 shall be used, as prescribed by 40 C.F.R. § 51.360(a)(7)(ii).

60.02: continued

- (18) Diagnostic Waivers Prior to October 1, 2008. (Reserved)
- (19) Economic Hardship Failure Repair Extensions.
- (a) A motorist may apply for an economic hardship failure repair extension if the following conditions are met:
1. the vehicle failed its most recent reinspection;
 2. the vehicle does not qualify for a waiver pursuant to 310 CMR 60.02(17);
 3. the economic hardship failure repair extension is not for any emissions inspection or reinspection required by 310 CMR 60.02(5)(c) associated with initial registration in Massachusetts or by 310 CMR 60.02(5)(d) associated with a transfer of ownership;
 4. documentation of the malfunction(s) causing the economic hardship failure(s) and an estimate of related repairs is provided by a registered repair technician;
 5. each diagnostic trouble code recorded during the most recent reinspection qualifies as an economic hardship failure;
 6. the motorist has used all relevant warranty coverage including recalls to repair the vehicle.
- (b) The motorist shall present the vehicle to a location designated by the Registry or the Department along with the following documentation when applying for an economic hardship repair extension:
1. an estimate provided by a registered repair technician of the cost of repairs related to the emissions failure;
 2. the vehicle's current registration; and
 3. any other documents required by the Registry or the Department.
- (c) An economic hardship failure repair extension shall be granted after an OBD emissions inspection failure if all of the following requirements are met:
1. the cost of a single component repair or replacement to correct a diagnostic trouble code for the component is more than 1.5 times the repair expenditure limit applicable for the model year of the vehicle specified in 310 CMR 60.02(17)(c)8.a., b., or c., including any adjustment for CPI;
 2. the vehicle does not qualify for a waiver pursuant to 310 CMR 60.02(17);
 3. the economic hardship failure repair extension is not for any emissions inspection or reinspection required by 310 CMR 60.02(5)(c) associated with initial registration in Massachusetts or by 310 CMR 60.02(5)(d) associated with a transfer of ownership;
 4. the Department or its designee agrees with the findings of the registered repair technician regarding the cause of the economic hardship failure, that the repair estimate is related to repairs appropriate for the economic hardship failure, and that the repair estimate provided by the registered repair technician is reasonable;
 5. each diagnostic trouble code recorded during the most recent reinspection qualifies as an economic hardship failure;
 6. the motorist has used all relevant warranty coverage including recalls to repair the vehicle;
 7. all safety inspection requirements are met;
 8. the vehicle is registered with the Registry as a private passenger motor vehicle or auto home pursuant to 540 CMR 2.05;
 9. the emission control system is present and there is no evidence of tampering; and
 10. the repair estimate is related to repairs appropriate for the economic hardship failure.
- (d) An economic hardship repair extension is valid until the vehicle's next emissions inspection.
- (e) A vehicle granted an economic hardship failure repair extension may not be issued a waiver or an economic hardship failure repair extension in *lieu* of passing its next emissions inspection or reinspection.
- (20) Inspector Training and Certification.
- (a) No person shall perform an emissions inspection unless such persons are certified by the Department or its designee and licensed by the Registry.
- (b) To become an inspector a person shall receive Department-approved training, be certified by the Department, and licensed by the Registry to perform inspections.
- (c) To meet the certification requirement, a person shall:
1. pass the Department-approved exam;

60.02: continued

2. demonstrate to the satisfaction of the Department or its designee, the ability to conduct a proper inspection, and perform proper quality control and workstation maintenance procedures; and
 3. not have a pattern of noncompliance with respect to performing motor vehicle inspections.
- (d) Certification. The Department shall certify a person who meets the requirements at 310 CMR 60.02(20)(c).
- (e) The Department may require inspectors to obtain additional training and pass additional exams prior to renewing their certifications if the Department determines that such training and examinations are appropriate to accommodate changes in the test equipment, changes in test procedures, or other changes in the motor vehicle inspection and maintenance program. The Department shall make any such determination in writing. An emissions inspector certificate shall renew automatically upon renewal of the emissions inspector license unless the Department makes such determination prior to the inspector's license renewal.
- (21) Repair Technician Registration Prior to October 1, 2008. (Reserved)
- (22) Repair Technician Registration.
- (a) To become a registered repair technician for nondiesel vehicles, an applicant shall complete any Department-required repair technician training, and meet at least one of the following requirements:
1. Hold a currently valid L1 certification from the Institute for Automotive Service Excellence (ASE);
 2. have equivalent certification from a motor vehicle or engine manufacturer, as determined by the Department or its designee (registered repair technicians qualifying under this provision would be registered repair technicians only for the motor vehicle or engine manufacturer's vehicles to which the equivalent certification applies), and be employed by a dealership for that manufacturer or by a repair facility recognized or authorized by the engine manufacturer; or
 3. have equivalent certification from another certification organization, as determined by the Department or its designee.
- (b) To become a registered repair technician specializing in the repair of diesel vehicles, an applicant shall complete the Department-approved repair technician training module and meet at least one of the following requirements:
1. Hold a currently valid L2 certification from the Institute for Automotive Service Excellence (ASE); or
 2. Hold currently valid L1 and A9 certifications from the Institute for Automotive Service Excellence (ASE); or
 3. have equivalent certification from a motor vehicle or engine manufacturer, as determined by the Department or its designee (registered repair technicians qualifying under this provision would be registered repair technicians only for the motor vehicle or engine manufacturer's vehicles to which the equivalent certification applies), and be employed by a dealership for that manufacturer or by a repair facility recognized or authorized by the engine manufacturer; or
 4. have equivalent certification from another certification organization, as determined by the Department or its designee.
- (c) The Department may remove a registered repair technician's registration if:
1. any requirement for qualification as a registered repairer is not met or maintained;
 2. the registered repair technician provides false documentation to the Department or its designee, the Registry, or a motorist, of repairs performed on a vehicle;
 3. the registered repair technician provides false documentation to the Department or its designee, the Registry, or the motorist, of the cost of repairs performed on a vehicle;
- or

60.02: continued

4. the Department, the Registry, or any state or federal agency or court of competent jurisdiction determines that the registered repairer has performed or been a party to fraudulent or deceptive business practices, including, but not limited to: charging motorists for repairs not performed; or, recommending or performing repairs unrelated to the cause of an emissions inspection failure and representing those repairs as related to the cause of an emissions inspection failure, or has violated any laws, rules, regulations, or other requirements or orders related to the protection of the environment.
- (d) Any automotive repair facility listed by the Department as employing a registered repair technician may be removed from the Department's list of such automotive repair facilities if:
1. the listed automotive repair facility no longer employs a registered repair technician;
 2. the listed automotive repair facility provides false documentation to the Department or its designee, the Registry, or a motorist of repairs performed on a vehicle;
 3. the listed automotive repair facility provides false documentation to the Department or its designee, the Registry, or the motorist of the cost of repairs performed on a vehicle;
- or
4. the Department, the Registry, or any state or federal agency or court of competent jurisdiction determines that any owner, operator, or employee of the listed automotive repair facility, while in the exercise of his or her responsibilities or duties related to the automotive repair facility, has performed or been a party to fraudulent or deceptive business practices, including, but not limited to, charging motorists for repairs not performed, recommending or performing repairs unrelated to the cause of an emissions inspection failure and representing those repairs as related to the cause of an emissions inspection failure, or has violated any laws, rules, regulations, or other requirements or orders related to the protection of the environment.

(23) Prohibition Against Tampering. All persons are prohibited from tampering with any vehicle emissions control device or system. No person or entity shall take any action or fail to take any action that causes a motor vehicle to no longer comply with federal or state law, with standards for the motor vehicle emissions inspection, or with requirements for motor vehicle registration. 310 CMR 60.02(23) shall not be construed as preventing the temporary alteration of equipment for the purpose of motor vehicle repair or quality assurance by the Department, Registry, or their designees.

(24) Enforcement.

- (a) No motorist may operate any vehicle without a valid inspection certificate.
- (b) No motorist may operate any motor vehicle in violation of 310 CMR 60.02.
- (c) Registration Suspension. A motor vehicle which does not comply with the applicable emissions inspection requirements shall be subject to registration suspension pursuant to 540 CMR 4.00: *Annual Safety and Combined Safety and Emissions Inspection of All Motor Vehicles, Trailers, Semi-trailers and Converter Dollies* until the vehicle passes the applicable emissions inspection or obtains a waiver.
- (d) No person shall give false information to an inspection station, an inspector, the Registry, or the Department or its designee concerning any repairs or associated expenditures to be considered for determining eligibility for a waiver or economic hardship repair extension waiver.
- (e) Inspection Certificates.
 1. No person shall issue an inspection certificate indicating compliance with 310 CMR 60.02 for a motor vehicle that has not been inspected or reinspected in accordance with, or is not in compliance with, the standards for the applicable motor vehicle emissions inspection pursuant to 310 CMR 60.02.
 2. An inspector shall issue an inspection certificate indicating compliance only for a motor vehicle that he or she has inspected and determined to comply with the applicable standards for motor vehicle emissions inspections pursuant to 310 CMR 60.02.
 3. An inspector shall issue a certificate indicating failure of the emissions inspection to any motor vehicle that he or she has inspected and determined does not comply with the applicable standards for motor vehicle emissions inspection pursuant to 310 CMR 60.02.
 4. No person or entity may alter, falsify, or counterfeit an inspection certificate, waiver certificate, or diagnostic waiver certificate.

60.02: continued

5. No person shall affix an inspection certificate, waiver certificate, or diagnostic waiver certificate to a motor vehicle other than the motor vehicle for which the certificate was issued.

(f) Penalty Provisions.

1. The Department may impose a penalty against an inspection station for any violation of 310 CMR 60.02 at that inspection station. The Department may impose a penalty against any person for any violation of 310 CMR 60.02.

2. Any person who violates any provision of M.G.L. c. 111, § 142M or 310 CMR 60.02 shall be subject to a civil or administrative penalty or fine or imprisonment pursuant to M.G.L. c. 111, § 142M and M.G.L. c. 21A, § 16.

3. Each day or portion thereof on which a violation occurs or continues shall be deemed a separate violation.

4. Whenever the Department seeks to assess a civil administrative penalty pursuant to M.G.L. c. 21A, § 16, M.G.L. c. 111, § 142M and 310 CMR 60.02, the person who would be assessed the penalty shall have the right to an adjudicatory hearing. Any request for an adjudicatory hearing thereon shall be made in accordance with M.G.L. c. 21A, § 16, and 310 CMR 5.00: *Administrative Penalty*.

(PAGES 2317 THROUGH 2324 ARE RESERVED FOR FUTURE USE.)

60.03: U Conformity to the State Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act

(1) Purpose. The purpose of 310 CMR 60.00 is to implement §176(c) of the Clean Air Act, as amended and the related requirements of 23 U.S.C. 109(j), with respect to the conformity of transportation plans, programs and projects which are developed, funded or approved by the U.S. Department of Transportation, and by metropolitan planning organizations or other recipients of funds under 23 U.S.C. or the Federal Transit Act (49 U.S.C. 1601 *et seq.*). 310 CMR 60.00 sets forth policy, criteria and procedures for demonstrating and assuring conformity of such activities to the Massachusetts State Implementation Plan developed pursuant to § 110 and Part D of the Clean Air Act.

(2) Definitions. Terms but not defined in 310 CMR 60.03 shall have the meaning given to them by the CAA, titles 23 and 49 U.S.C., Environmental Protection Agency regulations or U.S. Department of Transportation regulations, in that order of priority.

CAA means the Clean Air Act, as amended (42 U.S.C 7401 *et seq.* as amended by PL 101-549, November 15, 1990).

Cause or contribute to a new violation for a project means:

- (a) To cause or contribute to a new violation of a standard in the area affected by a project or over a region which would otherwise not be in violation of the standard during the future period in question, if the project were not implemented, or
- (b) To contribute to a new violation in a manner that would increase the frequency or severity of a new violation of a standard in such area.

CMAQ means the congestion mitigation and air quality improvement program established under the Intermodal Surface Transportation and Efficiency Act of 1991.

Consultation means that one party confers with another identified party, provides all appropriate information to that party needed for meaningful input, and, prior to taking any action, considers the views of that party and responds to those views in a timely, substantive written manner prior to any final decision on such action. Such views and written response shall be made part of the record of any decision or action.

Control strategy SIP revision is the revision to the SIP which contains specific strategies for controlling the emissions of and reducing ambient levels of pollutants in order to satisfy CAA requirements for demonstrations of reasonable further progress and attainment (CAA §§ 182(b)(1), 182(c)(2)(A), 182(c)(2)(B), 187(a)(7), 189(a)(1)(B), 189(b)(1)(A) and 192(a)&(b) for nitrogen dioxide (NO₂)).

Control strategy period with respect to carbon monoxide (CO), particulate matter less than ten microns in diameter (PM₁₀), nitrogen dioxide and/or ozone precursors (volatile organic compounds and oxides of nitrogen), means that period of time after EPA approves control strategy SIP containing strategies for controlling CO, and/or ozone, as appropriate. This period ends when a request under § 107(d) of the CAA for redesignation to an attainment area is submitted to and approved by EPA.

Department means the Department of Environmental Protection.

Design concept means the type of facility identified by a project, *e.g.*, freeway, expressway, arterial highway, grade-separated highway, reserved right-of-way rail transit, mixed-traffic rail transit, exclusive busway, *etc.*

Design scope means the design aspects which will affect a proposed facility's impact on regional emissions, usually as they relate to vehicle or person carrying capacity and control, *e.g.*, number of lanes or tracks to be constructed or added, length of project, signalization, access control including approximate number and location of interchanges, preferential treatment for high-occupancy vehicles, *etc.*

DOT means the United States Department of Transportation.

60.03: continued

EOTC means the Massachusetts Executive Office of Transportation and Construction.

EPA means the United States Environmental Protection Agency.

FHWA means the Federal Highway Administration of DOT.

FHWA/FTA project is any highway or transit project which is proposed to receive funding assistance and approval through the Federal-Aid Highway program or the Federal mass transit program, or requires Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) approval for some aspect of the project, such as connection to an interstate highway or deviation from applicable design standards on the interstate system.

FTA means the Federal Transit Administration of DOT.

Forecast period with respect to a transportation plan is the period covered by the transportation plan pursuant to 23 CFR part 450.

Highway project is an undertaking to implement or modify a highway facility or highway-related program and consists of all required phases necessary for implementation. For analytical purposes, it shall be defined sufficiently to:

- (a) connect logical termini and be of sufficient length to address environmental matters on a broad scope;
- (b) have independent utility or significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
- (c) not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Horizon year is a year for which the transportation plan describes the envisioned transportation system pursuant to 310 CMR 60.03(7).

Hot-spot analysis is an estimation of likely future localized CO and PM₁₀ pollutant concentrations and a comparison of those concentrations to the national ambient air quality standards. Pollutant concentrations to be estimated should be based on the total emissions burden which may result from the implementation of a single, specific project, summed together with future background concentrations (which can be estimated using the ratio of future to current traffic multiplied by the ratio of future to current emission factors and then applying the ratio to the background value) expected in the area. The total concentration shall be estimated and analyzed at appropriate receptor locations in the area substantially affected by the project. Hot-spot analysis assesses impacts on a scale smaller than the entire nonattainment or maintenance area, including, for example, congested roadway intersections and highways or transit terminals, and uses an air quality dispersion model to determine the effects of emissions on air quality.

Increase the frequency or severity means to cause a location or region to exceed a standard more often or to cause a violation at a greater concentration than previously existed and/or would otherwise exist during the future period in question, if the project were not implemented.

Interim Period with respect to a pollutant or pollutant precursor means that period of time lasting until the earlier of the following:

- (a) submission to EPA of the relevant control strategy SIP revisions which have been endorsed by the Governor and has been subject to a public hearing, or
- (b) the date that the Clean Air Act requires relevant control strategy SIP to be submitted to EPA, provided EPA has notified the Commonwealth, MPO, and DOT of the Commonwealth's failure to submit any such plans. The precise end of the interim period is defined in 310 CMR 60.03(24).

ISTEA means the Intermodal Surface Transportation Efficiency Act of 1991.

60.03: continued

Maintenance area means any geographic region previously designated nonattainment pursuant to the CAA Amendments of 1990 and subsequently redesignated to attainment subject to the requirement to develop a maintenance plan under §175A of the CAA, as amended.

Maintenance period with respect to a pollutant or pollutant precursor means that period of time beginning when EPA approves a request under § 107(d) of the CAA for redesignation to an attainment area, and lasting for 20 years, unless the SIP specifies that the maintenance period shall last for more than 20 years.

MEPA means the Massachusetts Environmental Policy Act (M.G.L. c. 30, § 61 through 62H, and regulations at 301 CMR 11.00: *MEPA Regulations*).

Metropolitan planning organization (MPO) is that organization designated as being responsible, together with the Commonwealth, for conducting the continuing, cooperative, and comprehensive planning process under 23 U.S.C. 134 and 49 U.S.C. 1607. It is the forum for cooperative transportation decision-making. For the purposes of 310 CMR 60.03, Regional Planning Agencies (RPA) in the Commonwealth of Massachusetts which have not been formally designated as MPOs under 23 U.S.C. 134 and 49 U.S.C. 1607 shall be subject to the same requirements as MPOs.

Milestone means an emissions level and the date on which it is required to be achieved under § 182(g)(1) and § 189(c) of the CAA.

Motor vehicle emissions budget is that portion of the total allowable emissions defined in a SIP revision (or in a SIP revision which was endorsed by the Governor or his or her designee, subject to a public hearing) and submitted to EPA but not yet approved by EPA for a certain date for the purpose of meeting reasonable further progress milestones or attainment or maintenance demonstrations, for any criteria pollutant or its precursors, allocated by the SIP to highway and transit vehicles. The SIP for an ozone nonattainment area shall include a NO_x motor vehicle emissions budget if NO_x reductions are being substituted for reductions in volatile organic compounds in milestone years required for reasonable further progress.

National ambient air quality standards (NAAQS) are those standards established pursuant to section 109 of the Clean Air Act and include standards for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone, particulate matter (PM-10), and sulfur dioxide (SO₂).

NEPA means the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 *et seq.*).

NEPA process completion with respect to FHWA or FTA, means the point at which there is a specific action to make a determination that a project is categorically excluded, to make a Finding of No Significant Impact, or to issue a record of decision on a Final Environmental Impact Statement under NEPA.

Nonattainment area means any geographic region which has been designated as nonattainment under § 107 of the CAA for any pollutant for which a national ambient air quality standard exists.

Not classified area means any carbon monoxide nonattainment area which EPA has not classified as either moderate or serious.

Project means a highway project or transit project.

Recipient of funds designated under title 23 U.S.C. or the Federal Transit Act means any agency at any level of Commonwealth, county, city, or regional government that routinely receives title 23 U.S.C. or Federal Transit Act funds to construct FHWA/FTA projects, operate FHWA/FTA projects or equipment, purchase equipment, or undertake other services or operations via contracts or agreements. This definition does not include private landowners or developers, or contractors or entities that are only paid for services or products created by their own employees.

60.03: continued

Regionally significant project means a transportation project (other than an exempt project) which serves regional transportation needs (such as access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, *etc.*, or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel. Regionally significant projects include, but are not limited to, (a) any project that adds a lane (other than a turning lane in the vicinity of an intersection) to a minor arterial or greater classification highway; and (b) any project for the construction of a new facility that is a minor arterial or greater classification highway.

SIP is the portion (or portions) of the implementation plan, or most recent revision thereof, which has been approved under § 110, or promulgated under § 110(c), or promulgated under § 301(d) and which implements the relevant requirements of the CAA.

Standard means a national ambient air quality standard.

Transit is mass transportation by bus, rail, or other conveyance which provides general or special service to the public on a regular and continuing basis. It does not include school buses or charter or sightseeing services.

Transit project is an undertaking to implement or modify a transit facility or transit-related program; purchase transit vehicles or equipment; or provide financial assistance for transit operations. It does not include actions that are solely within the jurisdiction of local transit agencies, such as changes in routes, schedules, or fares. It may consist of several phases. For analytical purposes, it shall be defined inclusively enough to: (a) connect logical termini and be of sufficient length to address environmental matters on a broad scope; (b) have independent utility or independent significance, *i.e.*, be a reasonable expenditure even if no additional transportation improvements in the area are made; and (c) not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Transitional period with respect to a pollutant or pollutant precursor means that period of time which begins after submission to EPA of the relevant control strategy SIP which has been endorsed by the Governor (or his or her designee) and has been subject to a public hearing. The transitional period lasts until EPA takes final approval action on the control strategy SIP submission.

Transportation control measure (TCM) is any measure that is specifically identified and committed to in the SIP or a SIP revision submitted to EPA that is either one of the types listed in §108 of the CAA or any other measure with the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Notwithstanding the above, vehicle technology-based, fuel-based, and maintenance-based measures which control the emissions from vehicles under fixed traffic conditions are not TCMs.

Transportation improvement program (TIP) means a staged, multiyear, intermodal program of transportation projects covering a metropolitan planning area which is consistent with the metropolitan transportation plan, and developed pursuant to 23 CFR part 450.

Transportation plan means the official intermodal metropolitan transportation plan that is developed through the metropolitan planning process for the metropolitan planning area, developed pursuant to 23 CFR part 450.

Transportation project is a highway project or a transit project.

(3) Applicability.

(a) Action applicability.

1. Except as provided for in 310 CMR 60.03(3)(c) or 310 CMR 60.03(30), conformity determinations are required for:

60.03: continued

- a. The adoption, acceptance, approval, funding or support of transportation plans by an MPO or DOT;
 - b. The adoption, acceptance, approval, funding or support of TIPs by an MPO or DOT; and
 - c. The approval, funding, or implementation of FHWA/FTA projects.
2. Conformity determinations are not required for projects which are not FHWA/FTA projects. However, 310 CMR 60.03(25) applies for regionally significant non FHWA/FTA projects.
- (b) Geographic Applicability.
1. The provisions of this subpart shall apply in all nonattainment and maintenance areas for transportation-related criteria pollutants.
 2. The provisions of this subpart apply with respect to emissions of the following criteria pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂) and particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM₁₀).
 3. The provisions of this subpart apply with respect to emissions of the following precursor pollutants:
 - a. volatile organic compounds (VOC) and nitrogen oxides (NO_x) in ozone areas (unless the EPA Administrator determines under §182 of the CAA that additional reductions would not contribute to attainment);
 - b. NO_x in NO₂ areas; and
 - c. VOC, NO_x and PM₁₀ in PM₁₀ areas if:
 - i. During the interim period, The EPA Regional Administrator or the director of the state air agency has made a finding that transportation-related precursor emissions within the nonattainment area are a significant contributor to the PM₁₀ nonattainment problem and has so notified the MPOs and DOT; or
 - ii. During the transitional, control strategy and maintenance periods, the applicable implementation plan (or implementation plan submission) established a budget for such emissions as part of the reasonable further progress, attainment or maintenance strategy.
- (c) Limitations.
1. Projects subject to 310 CMR 60.00 for which the NEPA process and a conformity determination have been completed by FHWA or FTA may proceed toward implementation without further conformity determinations if one of the following major steps has occurred within the most recent three year period: NEPA process completion; start of final design; acquisition of a significant portion of the right-of-way; or approval of the plans, specifications and estimates. All phases of such projects which were considered in the conformity determination are also included, if those phases were for the purpose of funding, final design, right-of-way acquisition, construction, or any combination of these phases.
 2. A new conformity determination for a project will be required if there is a significant change in project design concept and scope, if a supplemental environmental document for air quality purposes is initiated, or if no major steps to advance the project have occurred within the most recent three year period.
- (4) Priority. When assisting, funding or approving any action with air quality-related consequences, FHWA and FTA shall give priority to the implementation of the transportation-related portions of the SIP. This priority shall be consistent with statutory requirements for allocation of funds among States or other jurisdictions.
- (5) Frequency of conformity determinations.
- (a) Conformity determinations and conformity redeterminations for transportation plans, TIPs and FHWA/FTA projects must be made according to the requirements of 310 CMR 60.05 and the SIP.
 - (b) Transportation plans.
 1. Each new transportation plan shall be found to conform before the transportation plan is approved by the MPO or accepted by DOT.

60.03: continued

2. All transportation plan revisions shall be found to conform before the transportation plan revisions are approved by the MPO or accepted by DOT, unless the revision merely adds or deletes exempt projects listed in 310 CMR 60.03(30). The conformity determination shall be based on the transportation plan and the revision taken as a whole.
 3. Conformity of existing transportation plans shall be redetermined within 18 months of the following, or the existing conformity determination will lapse:
 - a. November 24, 1993; (May 24, 1995)
 - b. EPA approval of a SIP revision which:
 - i. Establishes or revises a transportation-related emissions budget (as required by CAA sections 175A(a), 182(b)(1), 182(c)(2)(A), 182(c)(2)(B), 187(a)(7), 189(a)(1)(B) and 189(b)(1)(A).
 - ii. Adds, deletes, or changes TCMs.
 - c. EPA promulgation of a SIP which establishes or revises a transportation-related emissions budget, or adds, deletes or changes TCMs.
 4. Conformity determinations shall be made no less frequently than every three years and shall lapse within three years of a determination.
- (c) Transportation improvement programs.
1. A new TIP shall be found to conform before the TIP is approved by the MPO or accepted by DOT.
 2. TIP amendment requires a new conformity determination for the entire TIP before the amendment is approved by the MPO or accepted by DOT, unless the amendment merely adds or deletes exempt projects listed in 310 CMR 60.03(30).
 3. After an MPO adopts a new or revised transportation plan, conformity shall be redetermined by the MPO and DOT within six months from the date of adoption of the plan, unless the new or revised plan merely adds or deletes exempt projects listed in 310 CMR 60.03(30). Otherwise, the existing conformity determination for the TIP will lapse.
 4. Conformity determinations shall be made no less frequently than every three years and shall lapse within three years of a determination.
- (d) Projects. FHWA/FTA projects shall be found to conform before they are adopted, accepted, approved, or funded. Conformity shall be redetermined for any FHWA/FTA project if none of the following major steps has occurred within the past three years: NEPA process completion; start of final design; acquisition of a significant portion of the right-of-way; or approval of the plans, specifications and estimates.
- (6) Consultation.
- (a) Agency Responsibilities.
1. Executive Office of Transportation and Construction (EOTC)
 - a. coordinates overall consultation process for conformity findings of transportation plans and TIPs;
 - b. provides guidance and assistance to MPOs in determining conformity of transportation plans, TIPs and projects, as appropriate;
 - c. reviews MPO transportation plans, TIPs and project air quality conformity determinations for acceptability and content and coordinates submittal to the Department, EPA and DOT;
 - d. performs project-level conformity determinations during the environmental review process under NEPA and MEPA;
 - e. provides the Department with traffic-related parameters for calculating mobile source emissions of the SIP;
 - f. serves as the lead agency, in consultation with other MPO members, in SIP planning and implementation for transportation initiatives pursuant to section 174(a) of the Clean Air Act.
 2. Metropolitan Planning Organizations (MPOs)
 - a. develops transportation plans and TIPs;
 - b. performs regional emissions analysis of transportation plans and TIPs;
 - c. makes conformity findings on transportation plans and TIPs;
 - d. develops public consultation procedures in accordance with 23 CFR Part 450;

60.03: continued

3. Department of Environmental Protection (DEP)
 - a. serves as lead agency in overall SIP development, coordination and implementation;
 - b. coordinates overall consultation process for the SIP;
 - c. coordinates with EPA on SIP-related issues;
 - d. provides EOTC and the MPOs with mobile source inputs for air quality modeling of transportation plans, TIPs and projects;
 - e. conducts conformity reviews of transportation plans, TIPs and projects and issues findings of concurrence or non-concurrence.
 4. Environmental Protection Agency (EPA)
 - a. provides input and guidance, as needed, on analysis procedures for air quality estimates, SIP preparation, conformity analyses and interpretation of EPA rules and guidance;
 - b. consults with the U.S. DOT on review of conformity determinations.
 4. U.S. Department of Transportation (DOT)
 - a. provides input and guidance, as needed, on the transportation planning process and issues that arise during the conformity process;
 - b. makes final conformity findings;
 - c. sends copies of conformity determinations to EPA for input.
- (b) The MPO shall make conformity determinations according to 310 CMR 60.03(6) and with the SIP and in accordance with the public involvement procedures established by the MPO in compliance with 23 CFR part 450. This criterion applies during all periods.
- (c) State and Federal Agency Consultation.
1. Prior to such time that conformity analyses on transportation plans, TIPs and projects are performed, or at the request of an involved agency, EOTC shall convene a consultation meeting(s) with representatives from the MPOs, the Department, EPA and DOT. Prior to a consultation meeting(s), EOTC shall circulate a meeting agenda to the involved agencies. The specific purposes of the state and federal agency consultation meeting are to:
 - a. select CO and PM₁₀ hotspot modeling procedures;
 - b. select regional emissions analysis models including consulting on model development and assessing project design factors for modeling;
 - c. identify analysis methods to estimate vehicle miles travelled (VMT) and emissions from non-regionally significant projects as required by 310 CMR 60.03(26)(b).
 - d. select inputs to the most recent EPA-approved emissions factor model;
 - e. identify regionally significant projects to be included in the regional emissions analysis including non-federally funded projects;
 - f. identify projects which have changed in design and scope from the transportation plan or TIP;
 - g. identify exempt projects;
 - h. identify exempt projects and categories of exempt projects which should be treated as non-exempt because they may have adverse air quality impacts and determining appropriate air quality analysis methodologies for analyzing such projects;
 - i. identify transportation plan and TIP revisions which add or delete exempt projects;
 - j. identify the latest planning assumptions and determining consistency with SIP assumptions;
 - k. determine if the transportation plan and TIP are fiscally constrained; and
 - l. develop factors to reconcile Highway Performance Monitoring System (HPMS) VMT estimates with network-based model VMT estimates pursuant to 310 CMR 60.03(25)(b)2.
 2. EOTC shall document the outcome(s) of the consultation meeting(s) and shall circulate said documentation to the MPOs, the Department, EPA and DOT.

60.03: continued

(d) State Agency Consultation.

1. Prior to such time that conformity analyses on transportation plans, TIPs and projects are performed, or at the request of an involved agency, EOTC shall convene a consultation meeting(s) with representatives from the MPOs and the Department. EOTC shall circulate a meeting agenda to involved agencies. The specific purpose of the state agency consultation meeting are to:
 - a. identify which events trigger conformity in addition to events listed in 310 CMR 60.03(6);
 - b. consult on emissions analyses for transportation activities which cross the borders of MPO or nonattainment areas; and
 - c. consult on conformity determinations outside MPO and nonattainment or maintenance areas.
2. EOTC shall document the outcome(s) of the consultation meeting(s) and shall circulate said documentation to the MPOs and the Department.

(e) CMAQ Consultation.

1. Prior to the time that the MPOs perform required conformity analyses on transportation plans, TIPs and projects, EOTC shall convene a consultation meeting(s) with representatives from the MPOs and the Department for the purpose of:
 - a. determining and establishing criteria and procedures for projects to be selected under the CMAQ program. Criteria to select projects shall include, but shall not be limited to, whether or not the project is a TCM in the SIP or listed as TCM under § 108(f) of the CAA, quantity of potential emissions reductions, timing of air quality benefits, impact on multiple pollutants, potential to reduce VMT, potential to alleviate congestion, the intermodal aspects of the projects, cost effectiveness, regional applicability, public awareness, promotion of technology, educational value, innovation and potential to reduce emissions from heavy duty vehicles; and
 - b. determining air quality analysis procedures for CMAQ projects.
2. Prior to performing the required conformity analyses on transportation plans, TIPs and projects, the MPOs shall:
 - a. develop a list of potential projects to be funded under the CMAQ program;
 - b. convene a consultation meeting which includes representatives from the MPO and the Department for the purpose of selecting CMAQ projects using the criteria developed pursuant to 310 CMR 60.03(6)(d)1.a.

(f) Transportation Control Measures.

1. Prior to making conformity determinations for a transportation plan, TIP or project, the MPOs and EOTC shall submit a list and status report of SIP TCMs, including TCMs contained in the SIP prior to passage of the Clean Air Act Amendments of 1990, to the Department for review and approval.
2. In the event that a SIP TCM has not been implemented or is behind the schedule required by the SIP, the MPO and/or EOTC shall submit to the Department, in writing:
 - a. the reasons why the SIP TCM has not been implemented or has been delayed;
 - b. the steps being taken to get the SIP TCM on schedule;
 - c. the funding source to be used to fund and implement the SIP TCM; and
 - d. an assessment of whether the SIP TCM may need to be replaced with substitute SIP TCM and SIP revision in order to create the expected emissions reductions.

(g) Concurrence.

1. After a final conformity determination has been made by an MPO, EOTC and the MPOs shall submit MPO-endorsed transportation plans, TIPs or projects within 30 days of endorsement to the Department for concurrence with the conformity determination.
2. The Department shall review the conformity determinations of transportation plans, TIPs or projects and shall issue a finding of concurrence or non-concurrence with the conformity determination, in writing, within 30 days. If the Department has not issued a finding of concurrence or non-concurrence within 30 days, the transportation plan, TIP or project shall be presumed to conform to the SIP by the Department.

60.03: continued

3. If the Department issues a finding of non-concurrence with the conformity determination, EOTC and the MPO shall have 30 days to resolve any issues which resulted in the finding of non-concurrence. If the issues which resulted in the finding of non-concurrence are not resolved to the Department's satisfaction, the state air agency shall issue a finding, in writing, of non-conformance with the SIP to EPA and DOT for further action.
- (h) Public consultation procedures. Prior to making conformity determinations on transportation plans, TIPs and projects, EOTC and MPOs shall comply with the public review processes required under 23 CFR Part 450 planning regulations and provide an opportunity for public review and comment. All public comments regarding plans for regionally significant projects not receiving FHWA or FTA funding or approval which were not reflected in the emissions analysis shall be specifically addressed in writing.
- (i) Circulation of documents.
 1. Draft Transportation Plans, TIPs and projects shall be circulated to the Department, EPA, FHWA and FTA and shall be available for public review by each MPO at each Regional Planning Agency.
 2. Transportation Plans, TIPs and projects which have received a final conformity determination by an MPO and have been approved by DOT shall be circulated to the Department, EPA, FHWA and FTA and shall be available for public review by each MPO at each Regional Planning Agency.
- (7) Content of Transportation Plans.
 - (a) Transportation plans adopted after January 1, 1995 shall specifically describe the transportation system envisioned for certain horizon years.
 1. The agency or organization developing the transportation plan may choose any years to be horizon years, subject to the following restrictions:
 - a. Horizon years shall be no more than ten years apart.
 - b. The first horizon year shall be no more than ten years from the base year used to validate the transportation demand planning model.
 - c. If the attainment year is in the time span of the transportation plan, the attainment year shall be a horizon year.
 - d. The last horizon year shall be the last year of the transportation plan's forecast period.
 2. For these horizon years:
 - a. The transportation plan shall quantify and document the demographic and employment factors influencing expected transportation demand, including land use forecasts, in accordance with the SIP and consultation procedures in 310 CMR 60.03(6);
 - b. The highway and transit system shall be described in terms of the regionally significant additions or modifications to the existing transportation network which the transportation plan envisions to be operational in the horizon years. Additions and modifications to the highway network shall be sufficiently identified to indicate intersections with existing regionally significant facilities, and to determine their effects on route options between transportation analysis zones. Each added or modified highway segment shall also be sufficiently identified in terms of its design concept and design scope to allow modeling of travel times under various traffic volumes, consistent with the modeling methods for area-wide transportation analysis in use by the MPO. Transit facilities, equipment, and services envisioned for the future shall be identified in terms of design concept, design scope, and operating policies sufficient to allow modeling of their transit ridership. The description of additions and modifications to the transportation network shall also be sufficiently specific to show that there is a reasonable relationship between expected land use and the envisioned transportation system; and
 - c. Other future transportation policies, requirements, services, and activities, including intermodal activities, shall be described.
 - (b) Savings The requirements of 310 CMR 60.03 supplement other requirements of applicable law or regulation governing the format or content of transportation plans.

60.03: continued

(8) Relationship of Transportation Plan and TIP Conformity with the NEPA and MEPA Processes. The degree of specificity required in the transportation plan and the specific travel network assumed for air quality modeling do not preclude the consideration of alternatives in the NEPA process, the MEPA process or other project development studies. Should the NEPA process or MEPA process result in a project with design concept and scope significantly different from that in the transportation plan or TIP, the project shall meet the criteria in 310 CMR 60.03(11) through (23) for projects not from a TIP before NEPA process or MEPA completion.

(9) Fiscal Constraints for Transportation Plans and TIP. Transportation plans and TIPs shall be fiscally constrained consistent with DOT's metropolitan planning regulations at 23 CFR part 450.322(b)(11) and 450.324(e) as in effect on the date of adoption of this rule in order to be found in conformity. The determinations that a transportation plan or TIP is fiscally constrained shall be subject to the consultation procedures in 310 CMR 60.03(6).

(10) Criteria and Procedures for Determining Conformity of Transportation Plans, Programs and Projects: General

(a) In order to be found to conform, each transportation plan, program and FHWA/FTA project shall satisfy the applicable criteria and procedures in 310 CMR 60.03(11) through (23) as listed in 310 CMR 60.03(10)(b)Table 1 and shall comply with all applicable conformity requirements of the SIP and of court orders for the area which pertain specifically to the conformity determination requirements. The criteria for making conformity determinations differ based on the action under review (transportation plans, TIPs and FHWA/FTA projects), the time period which the determination is made and the relevant pollutant.

(b) The following table indicates the criteria and procedures in 310 CMR 60.03(11) through (23) which shall apply for each action in each time period.

Table 1. - Conformity Criteria

ALL PERIODS	
Transportation Plan	<ul style="list-style-type: none"> • latest planning assumptions 310 CMR 60.03(11) • latest emissions model 310 CMR 60.03(12) • conformity in accordance with consultation procedures 310 CMR 60.03(6) • timely implementation of TCMs 310 CMR 60.03(13)(b)
TIP	<ul style="list-style-type: none"> • latest planning assumptions 310 CMR 60.03(11) • latest emissions model 310 CMR 60.03(12) • conformity in accordance with consultation procedures 310 CMR 60.03(6) • timely implementation of TCMs 310 CMR 60.03(13)(c)
Project (from a conforming plan and TIP)	<ul style="list-style-type: none"> • latest planning assumptions 310 CMR 60.03(11) • latest emissions model 310 CMR 60.03(12) • conformity in accordance with consultation procedures 310 CMR 60.03(6) • currently conforming plan/TIP 310 CMR 60.03(14) • project from conforming plan/TIP 310 CMR 60.03(15) • no causing/contributing to/increasing severity of CO or PM₁₀ violations in nonattainment and maintenance areas 310 CMR 60.03(16)
Project (not from a conforming plan and TIP)	<ul style="list-style-type: none"> • latest planning assumptions 310 CMR 60.03(11) • latest emissions model 310 CMR 60.03(12) • conformity in accordance with consultation 310 CMR 60.03(6) • timely implementation of TCMs 310 CMR 60.03(13)(d) • currently conforming plan/TIP 310 CMR 60.03(14) • no causing/contributing to/increasing severity of CO or PM₁₀ violations in nonattainment and maintenance areas 310 CMR 60.03(16) • FHWA/FTA projects shall comply with PM₁₀ control measures in the SIP 310 CMR 60.03(33)

60.03: continued

Table 1. - Conformity Criteria (continued)

INTERIM PERIOD (period between 12/27/93 and SIP submittal or SIP deadline)	
Transportation Plan	<ul style="list-style-type: none"> • contribute to reductions in ozone and CO nonattainment areas 310 CMR 60.03(21) • contribute to reductions in PM₁₀ and NO₂ nonattainment areas 310 CMR 60.03(34)
TIP	<ul style="list-style-type: none"> • contribute to reductions in ozone and CO nonattainment areas 310 CMR 60.03(22) • contribute to reductions in PM₁₀ and NO₂ nonattainment areas 310 CMR 60.03(35)
Project (from a conforming plan and TIP)	<ul style="list-style-type: none"> • FHWA/FTA project must eliminate/reduce severity and number of CO violations in CO nonattainment areas 310 CMR 60.03(20)
Project (not from a conforming plan and TIP)	<ul style="list-style-type: none"> • FHWA/FTA project must eliminate/reduce severity and number of CO violations in CO nonattainment areas 310 CMR 60.03(20) • contribute to reductions in ozone and CO nonattainment areas 310 CMR 60.03(23) • contribute to reductions in PM₁₀ and NO₂ nonattainment areas 310 CMR 60.03(35)
TRANSITIONAL PERIOD (period between SIP submittal and EPA approval of SIP)	
Transportation Plan	<ul style="list-style-type: none"> • consistent with motor vehicle emissions budget 310 CMR 60.03(17) • contribute to reductions in ozone and CO nonattainment areas 310 CMR 60.03(21) • contribute to reductions in PM₁₀ and NO₂ nonattainment areas 310 CMR 60.03(34)
TIP	<ul style="list-style-type: none"> • consistent with motor vehicle emissions budget 310 CMR 60.03(18) • contribute to reductions in ozone and CO nonattainment areas 310 CMR 60.03(22) • contribute to reductions in PM₁₀ and NO₂ nonattainment areas 310 CMR 60.03(35)
Project (from a conforming plan and TIP)	<ul style="list-style-type: none"> • FHWA/FTA project must eliminate/reduce severity and number of CO violations in CO nonattainment areas 310 CMR 60.03(20)
Project (not from a conforming plan and TIP)	<ul style="list-style-type: none"> • consistent with motor vehicle emissions budget 310 CMR 60.03(19) • FHWA/FTA project must eliminate/reduce severity and number of CO violations in CO nonattainment areas 310 CMR 60.03(20) • contribute to reductions in ozone and CO nonattainment areas 310 CMR 60.03(23) • contribute to reductions in PM₁₀ and NO₂ nonattainment areas 310 CMR 60.03(35)
CONTROL STRATEGY AND MAINTENANCE PERIOD (period after EPA approval of SIP)	
Transportation Plan	<ul style="list-style-type: none"> • consistent with motor vehicle emissions budget 310 CMR 60.03(17)
TIP	<ul style="list-style-type: none"> • consistent with motor vehicle emissions budget 310 CMR 60.03(18)
Project (from a conforming plan and TIP)	<ul style="list-style-type: none"> • no additional criteria
Project (not from a conforming plan and TIP)	<ul style="list-style-type: none"> • consistent with motor vehicle emissions budget 310 CMR 60.03(19)

60.03: continued

(11) Latest Planning Assumptions.

- (a) During all periods, conformity determinations, with respect to all other applicable criteria in 310 CMR 60.03(12) through (23), shall be based upon the most recent planning assumptions in force at the time of the conformity determination. The conformity determination shall satisfy the requirements of 310 CMR 60.03(11)(b) through (f).
- (b) Assumptions including but not limited to VMT per capita or per household, trip generation per household, vehicle occupancy, household size, vehicle fleet mix, vehicle ownership, and the geographic distribution of population growth shall be derived from the estimates of current and future population, employment, travel, and congestion most recently developed by the MPO or other agency authorized to make such estimates and approved by the MPO. The conformity determination shall also be based on the latest assumptions about current and future background concentrations. Any revisions to these estimates used as part of the conformity determination, including projected shifts in geographic location or level of population, employment, travel, and congestion shall be approved by the MPO or other agency authorized to make such estimates for the area after consultation with the Department.
- (c) The conformity determination for each transportation plan and TIP shall discuss how transit operating policies (including fares and service levels) and assumed transit ridership have changed since the previous conformity determination.
- (d) The conformity determination shall include reasonable assumptions about transit service and increases in transit fares and road and bridge tolls over time.
- (e) The conformity determination shall use the latest existing information regarding the effectiveness of the TCMs which have already been implemented.
- (f) Key assumptions shall be specified and included in the draft documents and supporting materials used for the interagency and public consultation required by 310 CMR 60.03(6).

(12) Latest Emissions Model.

- (a) During all periods, conformity determinations shall be based on the latest emission estimation model available. This requirement is satisfied if the most current version of the motor vehicle emissions model specified by EPA and used in the preparation or revision of the SIP is used for the conformity analysis and the consultation requirements in 310 CMR 60.03(6) are met.
- (b) EPA shall consult with DOT to establish a grace period following the specification of any new model.
 - 1. The grace period shall be no less than three months and no more than 24 months after notice of availability is published in the *Federal Register*.
 - 2. The length of the grace period shall depend on the degree of change in the model and the scope of re-planning likely to be necessary by MPOs in order to assure conformity. If the grace period will be longer than three months, EPA shall announce the appropriate grace period in the *Federal Register*.
- (c) Conformity analyses for which the emissions analysis was begun before the *Federal Register* notice of availability of the latest emission model or during the period which allows the use of the previous emissions model as defined in the *Federal Register* and known as the "grace period" may continue to use the previous version of the model for transportation plans and TIPs. The previous model may also be used for projects if the analysis was begun during the grace period or before the *Federal Register* notice of availability, provided no more than three years have passed since the draft environmental document was issued.

(13) Timely Implementation of TCMs.

- (a) During all periods, the transportation plan and TIP shall provide for the timely implementation of TCMs in the SIP and in SIP revisions submitted to EPA. An FHWA/FTA project which is not from a conforming plan and TIP shall provide for the timely implementation of TCMs in the SIP and in SIP revisions submitted to EPA.
- (b) For transportation plans, this criterion is satisfied if the following two conditions are met:

60.03: continued

1. The transportation plan, in describing the envisioned future transportation system, provides for the timely completion or implementation of all TCMs in the SIP and in SIP revisions submitted to EPA including, but not limited to those which are eligible for funding under title 23 U.S.C. or the Federal Transit Act, and is consistent with schedules included in the SIP and in SIP revisions submitted to EPA.
 2. Nothing in the transportation plan interferes with the implementation of any TCM in the SIP and in SIP revisions submitted to EPA.
- (c) For TIPs, this criterion is satisfied if the following conditions are met:
1. An examination of the specific steps and funding source(s) needed to fully implement each TCM indicates that TCMs, including but not limited to those which are eligible for funding under title 23 U.S.C. or the Federal Transit Act are on or ahead of the schedule established in the SIP in SIP revisions submitted to EPA, or, if such TCMs are behind the schedule established in the SIP or in SIP revisions submitted to EPA, the MPO and DOT have determined that past obstacles to implementation of the TCMs have been identified and have been or are being overcome, and that all State and local agencies with influence over approvals or funding for TCMs are giving maximum priority to approval or funding of TCMs over other projects within their control, including projects in locations outside a nonattainment or maintenance area. Maximum priority to approval or funding of the TCMs shall include demonstrations with respect to funding acceleration, commitment of staff or other agency resources, diligent efforts to seek approvals and similar actions.
 2. If TCMs in the SIP and in SIP revisions submitted to EPA have previously been programmed for Federal funding but the funds have not been obligated and the TCMs are behind the schedule in the SIP and in SIP revisions submitted to EPA, then the TIP cannot be found to conform if the funds intended for those TCMs are reallocated to projects in the TIP other than TCMs, or if there are no other TCMs in the TIP, if the funds are reallocated to projects in the TIP other than projects which are eligible for Federal funding under ISTEA's Congestion Mitigation and Air Quality Improvement Program.
 3. Nothing in the TIP may interfere with the implementation of any TCM in the SIP and in SIP revisions submitted to EPA.
- (d) For FHWA/FTA projects which are not from a conforming transportation plan and TIP, this criterion is satisfied if the project does not interfere with the implementation of any TCM in the SIP and in SIP revisions submitted to EPA.

(14) Project Approval: Currently Conforming Transportation Plan and TIP. During all periods, there shall be a currently conforming transportation plan and currently conforming TIP at the time of project approval. This requirement is satisfied if the current transportation plan and TIP have been found to conform to the SIP by the MPO and DOT according to the procedures and criteria of 310 CMR 60.03 and the Department has concurred with the conformity determination. Only one conforming transportation plan or TIP may exist in an area at any time; conformity determinations of a previous transportation plan or TIP expire once the current plan or TIP is found to conform by DOT. The conformity determination on a transportation plan or TIP shall also lapse if conformity is not determined according to the frequency requirements of 310 CMR 60.03(5).

(15) Projects from a Transportation Plan and TIP.

- (a) During all periods, transportation projects shall come from a conforming transportation plan and TIP. If this criterion is not satisfied, the project shall satisfy all criteria for a project not from a conforming transportation plan and TIP referenced in 310 CMR 60.03(10)Table 1. A project is considered to be from a conforming transportation plan if it meets the requirements of 310 CMR 60.03(15)(b) and from a conforming TIP if it meets the requirements of 310 CMR 60.03(15)(c).
- (b) A project is considered to be from a conforming transportation plan if one of the following conditions applies:

60.03: continued

1. For projects which are required to be identified in the transportation plan in order to satisfy 310 CMR 60.03(7), the project is specifically included in the conforming transportation plan and the project's design concept and scope have not changed significantly from those which were described in the transportation plan, or in a manner which would significantly impact use of the facility; or
 2. For projects which are not required to be specifically identified in the transportation plan, the project is identified in the conforming transportation plan, or is consistent with the policies and purpose of the transportation plan and will not interfere with other projects specifically included in the transportation plan.
- (c) A project is considered to be from a conforming TIP if the following conditions are met:
1. The project is included in the conforming TIP and the design concept and scope of the project were adequate at the time of the TIP conformity determination to determine its contribution to the TIP's regional emissions and have not changed significantly from those which were described in the TIP, or in a manner which would significantly impact use of the facility; and
 2. If the TIP describes a project design concept and scope which includes project-level emissions mitigation or control measures, enforceable written commitments to implement such measures shall be obtained from the project sponsor and/or operator as required by 310 CMR 60.03(29)(a) in order for the project to be considered to come from a conforming program. Any change in these mitigation or control measures that would significantly reduce their effectiveness constitutes a change in the design concept and scope of the project.
- (16) Localized CO and PM₁₀ Violations (Hot Spots).
- (a) During all periods FHWA/FTA projects shall not cause or contribute to any new localized CO or PM₁₀ violations or increase the frequency or severity of any existing CO or PM₁₀ violations in CO or PM₁₀ nonattainment and maintenance areas. This criterion is satisfied if it is demonstrated that no new local violations will be created and the severity or number of existing violations will not be increased as a result of the project.
 - (b) The demonstration shall be performed according to the requirements of 310 CMR 60.03(6)(c)1.a. and (27).
 - (c) For projects which are not of the type identified by 310 CMR 60.03(27)(a) or (d), this criterion may be satisfied if consideration of local factors clearly demonstrates that no local violations presently exist and no new local violations will be created as a result of the project. Otherwise, in CO nonattainment and maintenance areas, a quantitative demonstration shall be performed according to the requirements of 310 CMR 60.03(27)(b).
- (17) Motor Vehicle Emissions Budget (Transportation Plan).
- (a) In order to be found in conformity, the transportation plan shall be found consistent with the motor vehicle emissions budget(s) in the SIP or SIP package submitted to EPA through a quantitative demonstration. This criterion applies during the transitional period and the control strategy and maintenance periods, except as provided in 310 CMR 60.03(31). This criterion may be satisfied if the requirements in 310 CMR 60.03(17)(b) and (c) are met:
 - (b) A regional emissions analysis shall be performed as follows:
 1. The regional analysis shall estimate emissions of the following pollutants and pollutant precursors for which the SIP or SIP package submitted to EPA establishes an emissions budget:
 - a. VOC as an ozone precursor;
 - b. NO_x as an ozone precursor, unless the EPA Administrator determines that additional reductions of NO_x would not contribute to attainment;
 - c. CO;
 - d. PM₁₀ (and its precursors VOC and/or NO_x, if the SIP or SIP package submitted to EPA identifies transportation-related precursor emissions within the nonattainment area as a significant contributor to the PM₁₀ nonattainment problem or establishes a budget for such emissions); or
 - e. NO_x (in NO₂ nonattainment or maintenance areas).

60.03: continued

2. The regional emissions analysis shall estimate emissions from the entire transportation system, including all regionally significant projects contained in the transportation plan and all other regionally significant highway and transit projects expected in the nonattainment or maintenance area in the timeframe of the transportation plan;
 3. The emissions analysis methodology shall meet the requirements of 310 CMR 60.03(26);
 4. For areas with a transportation plan that meets the content requirements of 310 CMR 60.03(7)(a), the emissions analysis shall be performed for each horizon year. Emissions in milestone years which are between the horizon years may be determined by interpolation; and
 5. For areas with a transportation plan that does not meet the content requirements of 310 CMR 60.03(7)(a), the emissions analysis shall be performed for any years in the time span of the transportation plan provided they are not more than ten years apart and provided the analysis is performed for the last year of the plan's forecast period. If the attainment year is in the time span of the transportation plan, the emissions analysis shall also be performed for the attainment year. Emissions in milestone years which are between these analysis years may be determined by interpolation.
- (c) The regional emissions analysis shall demonstrate that for each of the applicable pollutants or pollutant precursors in 310 CMR 60.03(17)(b)1. the emissions are less than or equal to the motor vehicle emissions budget as established in the SIP or SIP package submitted to EPA as follows:
1. If the SIP or SIP package submitted to EPA establishes emissions budgets for milestone years, emissions in each milestone year are less than or equal to the motor vehicle emissions budget established for that year;
 2. For nonattainment areas, emissions in the attainment year are less than or equal to the motor vehicle emissions budget established in the SIP or SIP package submitted to EPA for that year;
 3. For nonattainment areas, emissions in each analysis or horizon year after the attainment year are less than or equal to the motor vehicle emissions budget established by the SIP or SIP submission for the attainment year. If emissions budgets are established for years after the attainment year, emissions in each analysis year or horizon year shall be less than or equal to the motor vehicle emissions budget for that year, if any, or the motor vehicle emissions budget for the most recent budget year prior to the analysis year or horizon year; and
 4. For maintenance areas, emissions in each analysis or horizon year are less than or equal to the motor vehicle emissions budget established by the maintenance plan for that year, if any, or the emissions budget for the most recent budget year prior to the analysis or horizon year.
- (18) Motor Vehicle Emissions Budget (TIP).
- (a) In order to be found in conformity, the TIP shall be found consistent with the motor vehicle emissions budget(s) in the SIP or SIP package submitted to EPA through a quantitative demonstration. This criterion applies during the transitional period and the control strategy and maintenance periods. This criterion may be satisfied if the requirements in 310 CMR 60.03(18)(b) and (c) are met:
 - (b) For areas with a conforming transportation plan that fully meets the content requirements of 310 CMR 60.03(7)(a), this criterion may be satisfied without additional regional analysis if:
 1. Each program year of the TIP is consistent with the Federal funding which may be reasonably expected for that year, and required State/local matching funds and funds for State/local funding-only projects are consistent with the revenue sources expected over the same period; and
 2. The TIP is consistent with the conforming transportation plan such that the regional emissions analysis already performed for the plan applies to the TIP also. This requires a demonstration that:
 - a. The TIP contains all projects which shall be started in the TIP's timeframe in order to achieve the highway and transit system envisioned by the transportation plan in each of its horizon years;

60.03: continued

- b. All TIP projects which are regionally significant are part of the specific highway or transit system envisioned in the transportation plan's horizon years; and
 - c. The design concept and scope of each regionally significant project in the TIP is not significantly different from that described in the transportation plan.
3. If the requirements in 310 CMR 60.03(18)(b)1. and 2. are not met, then:
 - a. The TIP may be modified to meet those requirements; or
 - b. The transportation plan shall be revised so that the requirements in 310 CMR 60.03(18)(b)1. and 2. are met. Once the revised plan has been found to conform, this criterion is met for the TIP with no additional analysis required except a demonstration that the TIP meets the requirements of 310 CMR 60.03(18)(b)1. and 2.
- (c) For areas with a transportation plan that does not meet the content requirements of 310 CMR 60.03(7)(a), a regional emissions analysis shall meet all of the following requirements:
1. The regional emissions analysis shall estimate emissions from the entire transportation system, including all projects contained in the proposed TIP, the transportation plan, and all other regionally significant highway and transit projects expected in the nonattainment or maintenance area in the timeframe of the transportation plan;
 2. The analysis methodology shall meet the requirements of 310 CMR 60.03(26)(c); and
 3. The regional analysis shall satisfy the requirements of 310 CMR 60.03(17)(b)1., 5., and (c).
- (19) Motor Vehicle Emissions Budget (Project not from a Plan and TIP).
- (a) In order to be found in conformity, a project which is not from a conforming transportation plan and a conforming TIP shall be found consistent with the motor vehicle emissions budget(s) in the SIP or SIP package submitted to EPA through a quantitative demonstration. This criterion applies during the transitional period and the control strategy and maintenance periods. It is satisfied if emissions from the implementation of the project, when considered with the emissions from the projects in the conforming transportation plan and TIP and all other regionally significant projects expected in the area, do not exceed the motor vehicle emissions budget(s) in the SIP or SIP package submitted to EPA.
 - (b) For areas with a conforming transportation plan that meets the content requirements of 310 CMR 60.03(7)(a):
 1. This criterion may be satisfied without additional regional analysis if the project is included in the conforming transportation plan, even if it is not specifically included in the latest conforming TIP. This requires a demonstration that:
 - a. Allocating funds to the project will not delay the implementation of projects in the transportation plan or TIP which are necessary to achieve the highway and transit system envisioned by the transportation plan in each of its horizon years;
 - b. The project is not regionally significant or is part of the specific highway or transit system envisioned in the transportation plan's horizon years; and
 - c. The design concept and scope of the project is not significantly different from that described in the transportation plan.
 2. If the requirements in 310 CMR 60.03(19)(b)1. are not met, a regional emissions analysis shall be performed as follows:
 - a. The analysis methodology shall meet the requirements of 310 CMR 60.03(26);
 - b. The analysis shall estimate emissions from the transportation system, including the proposed project and all other regionally significant projects expected in the nonattainment or maintenance area in the timeframe of the transportation plan. The analysis shall include emissions from all previously approved projects which were not from a transportation plan and TIP; and
 - c. The emissions analysis shall meet the requirements of 310 CMR 60.03(17)(b)1., 4., and (c).

60.03: continued

(c) For areas with a transportation plan that does not meet the content requirements of 310 CMR 60.03(7)(a), a regional emissions analysis shall be performed for the project together with the conforming TIP and all other regionally significant projects expected in the nonattainment or maintenance area. This criterion may be satisfied if:

1. The analysis methodology meets the requirements of 310 CMR 60.03(26)(c);
2. The analysis estimates emissions from the transportation system, including the proposed project, and all other regionally significant projects expected in the nonattainment or maintenance area in the timeframe of the transportation plan; and
3. The regional analysis satisfies the requirements of 310 CMR 60.03(17)(b)1., 5., and (c).

(20) Localized CO Violations (Hot Spots) in the Interim and Transitional Periods.

(a) Each FHWA/FTA project shall eliminate or reduce the severity and number of localized CO violations in the area substantially affected by the project in CO nonattainment areas. This criterion applies during the interim and transitional periods only. This criterion is satisfied with respect to existing localized CO violations if it is demonstrated that existing localized CO violations will be eliminated or reduced in severity and number as a result of the project.

(b) The demonstration shall be performed according to the requirements of 310 CMR 60.03(6)(c)1.a. and (27).

(c) For projects which are not of the type identified by 310 CMR 60.03(27)(a), this criterion may be satisfied if consideration of local factors clearly demonstrates that existing CO violations will be eliminated or reduced in severity and number. Otherwise, a quantitative demonstration shall be performed according to the requirements of 310 CMR 60.03(27)(b).

(d) The requirements of 310 CMR 60.03(20) shall lapse upon EPA approval of the control strategy SIP revision.

(21) Reductions in Ozone and CO Areas in the Interim and Transitional Periods (Transportation Plan).

(a) A transportation plan shall contribute to emissions reductions in ozone and CO nonattainment areas. This criterion applies during the interim and transitional periods only. It applies to the net effect on emissions of all projects contained in a new or revised transportation plan. This criterion may be satisfied if a regional emissions analysis is performed as described in 310 CMR 60.03(21)(b) through (f).

(b) The analysis years for which emissions are to be estimated shall be no more than ten years apart. The first analysis year shall be no later than the first SIP milestone year (1995 for CO nonattainment areas and 1996 for ozone nonattainment areas). The second analysis year shall be either the attainment year for the area (1996 for moderate CO nonattainment areas and 1999 for serious ozone nonattainment areas), or if the attainment year is the same as the first analysis year or earlier, the second analysis year shall be at least five years beyond the first analysis year. The last year of the transportation plan's forecast period shall also be an analysis year.

(c) The "Baseline" scenario for each of the analysis years is defined to be the future transportation system that would result from current programs, composed of the following (except that projects listed in 310 CMR 60.03(30) and (31) need not be explicitly considered):

1. All in-place regionally significant highway and transit facilities, services and activities;
2. All ongoing travel demand management or transportation system management activities; and

60.03: continued

3. Completion of all regionally significant projects, regardless of funding source, which are currently under construction or are undergoing right-of-way acquisition (except for hardship acquisition and protective buying); come from the first three years of the previously conforming transportation plan and/or TIP; or have completed the NEPA process. (For the first conformity determination on the transportation plan after November 24, 1993, a project may not be included in the "Baseline" scenario if one of the following major steps has not occurred within the past three years: NEPA process completion; start of final design; acquisition of a significant portion of the right-of-way; or approval of the plans, specifications and estimates. Such a project shall be included in the "Action" scenario, as described in 310 CMR 60.03(21)(d).)
- (d) The "Action" scenario for each of the analysis years shall be defined as the transportation system that will result in that year from the implementation of the proposed transportation plan, TIPs adopted under it, and other expected regionally significant projects in the nonattainment area. It will include the following (except that projects listed in 310 CMR 60.03(30) and (31) need not be explicitly considered):
1. All facilities, services, and activities in the "Baseline" scenario;
 2. Completion of all TCMs and regionally significant projects (including facilities, services, and activities) specifically identified in the proposed transportation plan which will be operational or in effect in the analysis year, except that regulatory TCMs may not be assumed to begin at a future time unless the regulation is already adopted by the enforcing jurisdiction or the TCM is identified in the SIP;
 3. All travel demand management programs and transportation system management activities known to the MPO, but not included in the SIP or utilizing any Federal funding or approval, which have been fully adopted and/or funded by the enforcing jurisdiction or sponsoring agency since the last conformity determination on the transportation plan;
 4. The incremental effects of any travel demand management programs and transportation system management activities known to the MPO, but not included in the SIP or utilizing any Federal funding or approval, which were adopted and/or funded prior to the date of the last conformity determination on the transportation plan, but which have been modified since then to be more stringent or effective;
 5. Completion of all expected regionally significant highway and transit projects which are not from a conforming transportation plan and TIP; and
 6. Completion of all expected regionally significant non-FHWA/FTA highway and transit projects that have clear funding sources and commitments leading toward their implementation and completion by the analysis year.
- (e) Estimate the emissions predicted to result in each analysis year from travel on the transportation systems defined by the "Baseline" and "Action" scenarios and determine the difference in regional VOC and NO_x emissions (unless the Administrator determines that additional reductions of NO_x would not contribute to attainment) between the two scenarios for ozone nonattainment areas and the difference in CO emissions between the two scenarios for CO nonattainment areas. The analysis shall be performed for each of the analysis years according to the requirements of 310 CMR 60.03(26). Emissions in milestone years which are between the analysis years may be determined by interpolation.
- (f) This criterion is met if the regional VOC and NO_x emissions (for ozone nonattainment areas) and CO emissions (for CO nonattainment areas) predicted in the "Action" scenario are less than the emissions predicted from the "Baseline" scenario in each analysis year, and if this can reasonably be expected to be true in the periods between the first milestone year and the analysis years. The regional analysis shall show that the "Action" scenario contributes to a reduction in emissions from the 1990 emissions by any nonzero amount.
- (g) The requirements of 310 CMR 60.03(21) shall lapse upon EPA approval of the control strategy SIP revision.
- (22) Reductions in Ozone and CO Areas in the Interim and Transitional Periods (TIP).
- (a) A TIP shall contribute to emissions reductions in ozone and CO nonattainment areas. This criterion applies during the interim and transitional periods only. It applies to the net effect on emissions of all projects contained in a new or revised TIP. This criterion may be satisfied if a regional emissions analysis is performed as described in 310 CMR 60.03(22)(b) through (f).

60.03: continued

(b) Determine the analysis years for which emissions are to be estimated. The first analysis year shall be no later than the first milestone year (1995 in CO nonattainment areas and 1996 in ozone nonattainment areas). The analysis years shall be no more than ten years apart. The second analysis year shall be either the attainment year for the area (1996 for moderate CO nonattainment areas and 1999 for serious ozone nonattainment areas), or if the attainment year is the same as the first analysis year or earlier, the second analysis year shall be at least five years beyond the first analysis year. The last year of the transportation plan's forecast period shall also be an analysis year.

(c) The "Baseline" scenario is defined as the future transportation system that would result from current programs, composed of the following (except that projects listed in 310 CMR 60.03(30) and (31) need not be explicitly considered):

1. All in-place regionally significant highway and transit facilities, services and activities;
2. All ongoing travel demand management or transportation system management activities; and
3. Completion of all regionally significant projects, regardless of funding source, which are currently under construction or are undergoing right-of-way acquisition (except for hardship acquisition and protective buying); come from the first three years of the previously conforming TIP; or have completed the NEPA process. (For the first conformity determination on the TIP after November 24, 1993, a project may not be included in the "Baseline" scenario if one of the following major steps has not occurred within the past three years: NEPA process completion; start of final design; acquisition of a significant portion of the right-of-way; or approval of the plans, specifications and estimates. Such a project shall be included in the "Action" scenario, as described in 310 CMR 60.03(22)(d).)

(d) Define the "Action" scenario as the future transportation system that will result from the implementation of the proposed TIP and other expected regionally significant projects in the nonattainment area in the timeframe of the transportation plan. It will include the following (except that projects listed in 310 CMR 60.03(30) and (31) need not be explicitly considered):

1. All facilities, services, and activities in the "Baseline" scenario;
2. Completion of all TCMs and regionally significant projects (including facilities, services, and activities) included in the proposed TIP, except that regulatory TCMs may not be assumed to begin at a future time unless the regulation is already adopted by the enforcing jurisdiction or the TCM is contained in the SIP;
3. All travel demand management programs and transportation system management activities known to the MPO, but not included in the SIP or utilizing any Federal funding or approval, which have been fully adopted and/or funded by the enforcing jurisdiction or sponsoring agency since the last conformity determination on the TIP;
4. The incremental effects of any travel demand management programs and transportation system management activities known to the MPO, but not included in the SIP or utilizing any Federal funding or approval, which were adopted and/or funded prior to the date of the last conformity determination on the TIP, but which have been modified since then to be more stringent or effective;
5. Completion of all expected regionally significant highway and transit projects which are not from a conforming transportation plan and TIP; and
6. Completion of all expected regionally significant non-FHWA/FTA highway and transit projects that have clear funding sources and commitments leading toward their implementation and completion by the analysis year.

(e) Estimate the emissions predicted to result in each analysis year from travel on the transportation systems defined by the "Baseline" and "Action" scenarios, and determine the difference in regional VOC and NO_x emissions (unless the Administrator determines that additional reductions of NO_x would not contribute to attainment) between the two scenarios for ozone nonattainment areas and the difference in CO emissions between the two scenarios for CO nonattainment areas. The analysis shall be performed for each of the analysis years according to the requirements of 310 CMR 60.03(26). Emissions in milestone years which are between analysis years may be determined by interpolation.

60.03: continued

(f) This criterion is met if the regional VOC and NO_x emissions in ozone nonattainment areas and CO emissions in CO nonattainment areas predicted in the "Action" scenario are less than the emissions predicted from the "Baseline" scenario in each analysis year, and if this can reasonably be expected to be true in the period between the analysis years. The regional analysis shall show that the "Action" scenario contributes to a reduction in emissions from the 1990 emissions by any nonzero amount.

(g) The requirements of 310 CMR 60.03(22) shall lapse upon EPA approval of the control strategy SIP revision.

(23) Reductions for Ozone and CO Areas in the Interim and Transitional Periods (Project not from a Plan and TIP).

(a) A Transportation project which is not from a conforming transportation plan and TIP shall contribute to emissions reductions in ozone and CO nonattainment areas. This criterion applies during the interim and transitional periods only. This criterion is satisfied if a regional emissions analysis is performed which meets the requirements of 310 CMR 60.03(21) and which includes the transportation plan and project in the "Action" scenario. If the project which is not from a conforming transportation plan and TIP is a modification of a project currently in the plan or TIP, the "Baseline" scenario shall include the project with its original design concept and scope, and the "Action" scenario shall include the project with its new design concept and scope.

(b) The requirements of 310 CMR 60.03(23)(b) shall lapse upon EPA approval of the control strategy SIP revision.

(24) Transition from the Interim Period and Transitional Periods to the Control Strategy Period.

(a) Areas which submit a control strategy SIP revision after November 24, 1993.

1. The transportation plan and TIP shall be demonstrated to conform according to transitional period criteria and procedures by one year from the date the Clean Air Act requires submission of such control strategy SIP revision. Otherwise, the conformity status of the transportation plan and TIP will lapse, and no new project-level conformity determinations may be made.

a. The conformity of new transportation plans and TIPs may be demonstrated according to interim period criteria and procedures for 90 days following submission of the control strategy SIP revision, provided the conformity of such transportation plans and TIPs is redetermined according to transitional period criteria and procedures as required in 310 CMR 60.03(24)(a)1.

b. Beginning 90 days after submission of the control strategy SIP revision, new transportation plans and TIPs shall demonstrate conformity according to transitional period criteria and procedures.

2. If EPA disapproves the submitted control strategy SIP revision and so notifies the Commonwealth, MPO, and DOT, which initiates the sanction process under Clean Air Act §§ 179 or 110(m), the conformity status of the transportation plan and TIP shall lapse 120 days after EPA's disapproval, and no new project-level conformity determinations may be made. No new transportation plan, TIP, or project may be found to conform until another control strategy SIP revision is submitted and conformity is demonstrated according to transitional period criteria and procedures.

3. Notwithstanding 310 CMR 60.03(24)(a)2., if EPA disapproves the submitted control strategy SIP revision but determines that the control strategy contained in the revision would have been considered approvable with respect to requirements for emission reductions if all committed measures had been submitted in enforceable form as required by Clean Air Act § 110(a)(2)(A), the provisions of 310 CMR 60.03(24)(a)1. shall apply for 12 months following the date of disapproval. The conformity status of the transportation plan and TIP shall lapse 12 months following the date of disapproval unless another control strategy SIP revision is submitted to EPA and found to be complete.

(b) Areas which have not submitted a control strategy SIP revision.

1. For areas whose Clean Air Act deadline for submission of the control strategy SIP revision is after November 25, 1993 and EPA has notified the Commonwealth, MPO, and DOT of a failure to submit a control strategy SIP revision, which initiates the sanction process under Clean Air Act sections 179 or 110(m):

60.03: continued

- a. No new transportation plans or TIPs may be found to conform beginning 120 days after the Clean Air Act deadline; and
 - b. The conformity status of the transportation plan and TIP shall lapse one year after the Clean Air Act deadline, and no new project-level conformity determinations may be made.
2. For areas whose Clean Air Act deadline for submission of the control strategy SIP was before November 24, 1993 and EPA has made a finding of failure to submit a control strategy implementation plan revision, which initiates the sanction process under Clean Air Act §§ 179 or 110(m), the following applies unless the failure has been remedied and acknowledged by a letter from the EPA Regional Administrator:
 - a. No new transportation plans or TIPs may be found to conform beginning March 24, 1994; and
 - b. The conformity status of the transportation plan and TIP shall lapse November 25, 1994, and no new project-level conformity determinations may be made.
- (c) Areas Which Have not Submitted a Complete Control Strategy SIP Revision.
1. For areas where EPA notifies the Commonwealth, MPO, and DOT after November 24, 1993 that the control strategy SIP revision submitted by the State is incomplete, which initiates the sanction process under Clean Air Act sections 179 or 110(m), the following applies unless the failure has been remedied and acknowledged by a letter from the EPA Regional Administrator:
 - a. No new transportation plans or TIPs may be found to conform beginning 120 days after EPA's incompleteness finding; and
 - b. The conformity status of the transportation plan and TIP shall lapse one year after the Clean Air Act deadline, and no new project-level conformity determinations may be made.
 - c. Notwithstanding 310 CMR 60.03(24)(c)1.a. and b., if EPA notes in its incompleteness finding that the submittal would have been considered complete with respect to requirements for emission reductions if all committed measures had been submitted in enforceable form as required by Clean Air Act §110(a)(2)(A), the provisions of 310 CMR 60.03(24)(a)1. shall apply for a period of 12 months following the date of the incompleteness determination. The conformity status of the transportation plan and TIP shall lapse 12 months following the date of the incompleteness determination unless another control strategy SIP revision is submitted to EPA and found to be complete.
 2. For areas where EPA has determined before November 24, 1993 that the control strategy SIP revision is incomplete, which initiates the sanction process under Clean Air Act sections 179 or 110(m), the following apply unless the failure has been remedied and acknowledged by a letter from the EPA Regional Administrator:
 - a. No new transportation plans or TIPs may be found to conform beginning March 24, 1994; and
 - b. The conformity status of the transportation plan and TIP shall lapse November 24, 1994, and no new project-level conformity determinations may be made.
 - c. Notwithstanding 310 CMR 60.03(24)(c)2.i. and ii., if EPA notes in its incompleteness finding that the submittal would have been considered complete with respect to requirements for emission reductions if all committed measures had been submitted in enforceable form as required by Clean Air Act § 110(a)(2)(A), the provisions of 310 CMR 60.03(24)(d)1. shall apply for a period of 12 months following the date of the incompleteness determination. The conformity status of the transportation plan and TIP shall lapse 12 months following the date of the incompleteness determination unless another control strategy SIP revision is submitted to EPA and found to be complete.
- (d) Areas which submitted a control strategy SIP before November 24, 1993.
1. The transportation plan and TIP shall be demonstrated to conform according to transitional period criteria and procedures by November 24, 1994. Otherwise, their conformity status will lapse, and no new project-level conformity determinations may be made.

60.03: continued

- a. The conformity of new transportation plans and TIPs may be demonstrated according to interim period criteria and procedures until February 22, 1994, provided the conformity of such transportation plans and TIPs is redetermined according to transitional period criteria and procedures as required in 310 CMR 60.03(24)(d)1.
 - b. Beginning February 22, 1994, new transportation plans and TIPs shall demonstrate conformity according to transitional period criteria and procedures.
2. If EPA has disapproved the most recent control strategy SIP submission, the conformity status of the transportation plan and TIP shall lapse March 24, 1994, and no new project-level conformity determinations may be made. No new transportation plans, TIPs, or projects may be found to conform until another control strategy SIP revision is submitted and conformity is demonstrated according to transitional period criteria and procedures.
 3. Notwithstanding 310 CMR 60.03(24)(d)2., if EPA has disapproved the submitted control strategy SIP revision but determines that the control strategy contained in the revision would have been considered approvable with respect to requirements for emission reductions if all committed measures had been submitted in enforceable form as required by Clean Air Act § 110(a)(2)(A), the provisions of 310 CMR 60.03(24)(d)1. shall apply for 12 months following November 24, 1993. The conformity status of the transportation plan and TIP shall lapse 12 months following November 24, 1993 unless another control strategy SIP revision is submitted to EPA and found to be complete.
- (e) Projects. If the currently conforming transportation plan and TIP have not been demonstrated to conform according to transitional period criteria and procedures, the requirements of 310 CMR 60.03(24)(e)1. and 2. shall be met.
1. Before a FHWA/FTA project which is regionally significant and increases single-occupant vehicle capacity (a new general purpose highway on a new location or adding general purpose lanes) may be found to conform, the Department shall be consulted in accordance with 310 CMR 60.03(6) on how the emissions which the existing transportation plan and TIP's conformity determination estimates for the "Action" scenario (as required by 310 CMR 60.03(21) through (23) and 310 CMR 60.03(34) through (36) compare to the motor vehicle emissions budget in the SIP submission or the projected motor vehicle emissions budget in the SIP under development.
 2. In the event of unresolved issues on project-level conformity determinations, the Department shall make a project-level finding of non-concurrence with the SIP in writing to EPA and DOT for further action.
- (f) Redetermination of Conformity of the Existing Transportation Plan and TIP According to the Transitional Period Criteria and Procedures.
1. The redetermination of the conformity of the existing transportation plan and TIP according to transitional period criteria and procedures (as required by 310 CMR 60.03(24)(a)1. and (d)1.) does not require new emissions analysis and does not have to satisfy the requirements of 310 CMR 60.03(11) and (12) if:
 - a. The control strategy SIP revision submitted to EPA uses the MPO's modeling of the existing transportation plan and TIP for its projections of motor vehicle emissions; and
 - b. The control strategy SIP does not include any transportation projects which are not included in the transportation plan and TIP.
 2. A redetermination of conformity as described in 310 CMR 60.03(f)1. is not considered a conformity determination for the purposes of 310 CMR 60.03(5)(c)4. or (d)4. regarding the maximum intervals between conformity determinations. Conformity shall be determined according to all the applicable criteria and procedures of 310 CMR 60.00 within three years of the last determination which did not rely on 310 CMR 60.03(24)(f)1.
- (g) Ozone nonattainment areas.
1. The requirements of 310 CMR 60.03(24)(b)1. apply if a serious or above ozone nonattainment area has not submitted the SIP revision required to be submitted to EPA by November 15, 1994 under §§ 182(c)(2)(A) and 182(c)(2)(B) of the Clean Air Act is not submitted, even if the area has submitted the SIP revision which CAA § 182(b)(1) requires to be submitted to EPA November 15, 1993.

60.03: continued

2. The requirements of 310 CMR 60.03(24)(b)1. apply if a moderate ozone nonattainment area which is using photochemical dispersion modeling to demonstrate the "specific annual reductions as necessary to attain" required by the CAA § 182(b)(1), and which has permission from EPA to delay submission of such demonstration until November 15, 1994, does not submit such demonstrations by that date. The requirements of 310 CMR 60.03(24)(b)1. apply in this case even if the area has submitted the 15% emission reduction demonstration required by the CAA § 182(b)(1).

3. The requirements of 310 CMR 60.03(24)(a) apply when the SIP revisions required by CAA §§ 182(c)(2)(A) and 182(c)(2)(B) are submitted.

(h) Maintenance plans. If a control strategy SIP revision is not submitted to EPA but a maintenance plan required by Clean Air Act § 175A is submitted to EPA, the requirements of 310 CMR 60.03(24)(a) or (d) apply, with the maintenance plan submission treated as a "control strategy SIP revision" for the purposes of those requirements.

(25) Requirements for Adoption or Approval of Projects by Recipients of Funds Designated under Title 23 U.S.C. or the Federal Transit Act. No recipient of federal funds designated under Title 23 U.S.C. or the Federal Transit Act shall adopt or approve a regionally significant highway or transit project, regardless of funding source, unless there is a currently conforming transportation plan and TIP consistent with the requirements of 310 CMR 60.03(14) and the requirements of 310 CMR 60.03(25)(a) through (e) are met (Adopt or approve, for the purposes of 310 CMR 60.03(25), shall mean the point after which the review of project alternatives has been completed and the project has been defined by the final NEPA document or by the final MEPA environmental document and after which the final project alternative for final design and construction have been determined):

(a) The project comes from a conforming transportation plan and TIP consistent with the requirements of 310 CMR 60.03(15);

(b) The project is included in the regional emissions analysis supporting the currently conforming TIP's conformity determination, even if the project is not strictly "included" in the TIP for the purposes of MPO project selection or endorsement, and the project's design concept and scope have not changed significantly from those which were included in the regional emissions analysis, or in a manner which would significantly impact use of the facility;

(c) During the control strategy or maintenance period, the project is consistent with the motor vehicle emissions budget(s) in the SIP consistent with the requirements of 310 CMR 60.03(19);

(d) During the interim period, the project contributes to emissions reductions or does not increase emissions consistent with the requirements of 310 CMR 60.03(23) (in ozone and CO nonattainment areas) or 310 CMR 60.03(36) in PM₁₀ and NO₂ nonattainment areas); or

(e) During the transitional period, the project satisfies the requirements of both 310 CMR 60.03(25)(c) and (d).

(26) Procedures for Determining Regional Transportation-Related Emissions.

(a) General requirements.

1. The regional emissions analysis for the transportation plan, TIP, or project not from a conforming plan and TIP shall include all regionally significant projects expected in the nonattainment or maintenance area, including FHWA/FTA projects proposed in the transportation plan and TIP and all other regionally significant projects which are disclosed to the MPO as required by 310 CMR 60.03(6). Projects which are not regionally significant are not required to be explicitly modeled using the network-based transportation demand model, but VMT and emissions from such projects shall be estimated by the MPO in accordance with reasonable professional practice. The effects of TCMs and similar projects that are not regionally significant may also be estimated in accordance with reasonable professional practice.

60.03: continued

2. The emissions analysis shall not include for emissions reduction credit any TCMs which have been delayed beyond the scheduled date(s) until such time as implementation has been assured. If the TCM has been partially implemented and it can be demonstrated that it is providing quantifiable emission reduction benefits, the emissions analysis may include that emissions reduction credit.

3. Emissions reduction credit from projects, programs, or activities which require a regulation in order to be implemented shall not be included in the emissions analysis unless the regulation is already adopted by the enforcing jurisdiction. Adopted regulations are required for demand management strategies for reducing emissions which are not specifically identified in the SIP, and for control programs which are external to the transportation system itself, such as tailpipe or evaporative emission standards, limits on gasoline volatility, inspection and maintenance programs, and oxygenated or reformulated gasoline or diesel fuel. A regulatory program may also be considered to be adopted if an opt-in to a Federally enforced program has been approved by EPA, if EPA has promulgated the program (if the control program is a Federal responsibility, such as tailpipe standards), or if the Clean Air Act requires the program without need for individual State action and without any discretionary authority for EPA to set its stringency, delay its effective date, or not implement the program.

4. Notwithstanding 310 CMR 60.03(26)(a)3., during the transitional period, control measures or programs which are committed to in a SIP as described in 310 CMR 60.03(17) through (19), but which has not received final EPA action in the form of a finding of incompleteness, approval, or disapproval may be assumed for emission reduction credit for the purpose of demonstrating that the requirements of 310 CMR 60.03(17) through (19) are satisfied.

5. A regional emissions analysis for the purpose of satisfying the requirements of 310 CMR 60.03(21) through (23) may account for the programs in 310 CMR 60.03(26)(a)4., but the same assumptions about these programs shall be used for both the "Baseline" and "Action" scenarios.

(b) Serious, Severe and extreme ozone nonattainment areas and serious carbon monoxide areas after January 1, 1995, estimates of regional transportation-related emissions used to support conformity determinations shall be made according to procedures which meet the requirements in 310 CMR 60.03(26)(b)1. through 5.

1. A network-based transportation demand model or models relating travel demand and transportation system performance to land-use patterns, population demographics, employment, transportation infrastructure, and transportation policies shall be used to estimate travel within the metropolitan planning area of the nonattainment area. Such a model shall possess the following attributes:

- a. The modeling methods and the functional relationships used in the model(s) shall in all respects be in accordance with acceptable professional practice, and reasonable for purposes of emission estimation;
- b. The network-based model(s) shall be validated against ground counts for a base year that is not more than ten years prior to the date of the conformity determination. Land use, population, and other inputs shall be based on the best available information and appropriate to the validation base year;
- c. For peak-hour or peak-period traffic assignments, a capacity sensitive assignment methodology shall be used;
- d. Zone-to-zone travel times used to distribute trips between origin and destination pairs shall be in reasonable agreement with the travel times which result from the process of assignment of trips to network links. Where use of transit currently is anticipated to be a significant factor in satisfying transportation demand, these times should also be used for modeling mode splits;
- e. Free-flow speeds on network links shall be based on empirical observations;
- f. Peak and off-peak travel demand and travel times shall be provided;
- g. Trip distribution and mode choice shall be sensitive to pricing, where pricing is a significant factor, if the network model is capable of such determinations and the necessary information is available;

60.03: continued

- h. The model(s) shall utilize and document a logical correspondence between the assumed scenario of land development and use and the future transportation system for which emissions are being estimated. Reliance on a formal land-use model is not specifically required but is encouraged;
 - i. A dependence of trip generation on the accessibility of destinations via the transportation network (including pricing) is specifically required as soon as possible as the use of such a network model becomes feasible and practicable. Such a model would assess the impact of proposed transportation infrastructure changes on land use pattern, and incorporate feedback from that assessment in calculating trip generation rates, trip distribution and mode splits, and vehicle miles of travel.
 - j. A dependence of regional economic and population growth on the accessibility of destinations via the transportation system is strongly encouraged but not specifically required, unless the network model is capable of such determinations and the necessary information is available; and
 - k. Consideration of emissions increases from construction-related congestion is not specifically required.
2. Highway Performance Monitoring System (HPMS) estimates of vehicle miles traveled shall be considered the primary measure of vehicle miles traveled within the portion of the nonattainment or maintenance area and for the functional classes of roadways included in HPMS, for urban areas which are sampled on a separate urban area basis. A factor (or factors) shall be developed to reconcile and calibrate the network-based model estimates of vehicle miles traveled in the base year of its validation to the HPMS estimates for the same period, and these factors shall be applied to model estimates of future vehicle miles traveled. In this factoring process, consideration will be given to differences in the facility coverage of the HPMS and the modeled network description. Departure from these procedures is permitted with the concurrence of DOT and EPA.
 3. Reasonable methods shall be used to estimate nonattainment area vehicle travel on off-network roadways within the urban transportation planning area, and on roadways outside the urban transportation planning area.
 4. Reasonable methods in accordance with good practice shall be used to estimate VMT and emissions from exempt projects not included in the network-based model in accordance with 310 CMR 60.03(6)(c)1.g.
 5. Reasonable methods in accordance with good practice shall be used to estimate VMT and emissions from federal actions reported to EOTC and the MPO in accordance with 310 CMR 60.04, "Criteria for Determining Conformity of General Federal Actions".
 6. Reasonable methods in accordance with good practice shall be used to estimate traffic speeds and delays in a manner that is sensitive to the estimated volume of travel on each roadway segment represented in the network model.
 7. Ambient temperatures shall be consistent with those used to establish the motor vehicle emissions budget in the SIP. Factors other than temperatures, for example the fraction of travel in a hot stabilized engine mode, may be modified after interagency consultation according to 310 CMR 60.03(6) if the newer estimates incorporate additional or more geographically specific information or represent a logically estimated trend in such factors beyond the period considered in the SIP.
- (c) Areas Which are not Serious, Severe, or Extreme Ozone Nonattainment Areas or Serious Carbon Monoxide Areas, or Before January 1, 1995.
1. Procedures which satisfy some or all of the requirements of 310 CMR 60.03(26)(a) shall be used in all areas not subject to 310 CMR 60.03(26)(a) in which those procedures have been the previous practice of the MPO.
 2. Regional emissions may be estimated by methods which do not explicitly or comprehensively account for the influence of land use and transportation infrastructure on vehicle miles traveled and traffic speeds and congestion. Such methods must account for VMT growth by extrapolating historical VMT or projecting future VMT by considering growth in population and historical growth trends for vehicle miles travelled per person. These methods must also consider future economic activity, transit alternatives, and transportation system policies.

60.03: continued

(d) Projects Not From a Conforming Plan and TIP in Isolated Nonattainment and Maintenance Areas. 310 CMR 60.03(26)(d) applies to any nonattainment or maintenance area or any portion thereof which does not have a metropolitan transportation plan or TIP and whose projects are not part of the emissions analysis of any MPO's metropolitan transportation plan or TIP (because the nonattainment or maintenance area or portion thereof does not contain a metropolitan planning area or portion of a metropolitan planning area and is not part of a Metropolitan Statistical Area or Consolidated Metropolitan Statistical Area which is or contains a nonattainment or maintenance area).

1. Conformity demonstrations for projects in these areas may satisfy the requirements of 310 CMR 60.03(19), (23) and (36) with one regional emissions analysis which includes all the regionally significant projects in the nonattainment or maintenance area (or portion thereof).

2. The requirements of 310 CMR 60.03(19) shall be satisfied according to the procedures in 310 CMR 60.03(19)(c), with references to the "transportation plan" taken to mean the statewide transportation plan.

3. The requirements of 310 CMR 60.03(23) and (36) which reference "transportation plan" or "TIP" shall be taken to mean those projects in the statewide transportation plan or statewide TIP which are in the nonattainment or maintenance area (or portion thereof).

4. The requirement of 310 CMR 60.03(25)(b) shall be satisfied if:

a. The project is included in the regional emissions analysis which includes all regionally significant highway and transportation projects in the nonattainment or maintenance area (or portion thereof) and supports the most recent conformity determination made according to the requirements of 310 CMR 60.03(19) or (23) or (36) (as modified by 310 CMR 60.03(26)(d)2. and 3.), as appropriate for the time period and pollutant; and

b. The project's design concept and scope have not changed significantly from those which were included in the regional emissions analysis, or in a manner which would significantly impact use of the facility.

(e) PM₁₀ From Construction-Related Fugitive Dust.

1. For areas in which the SIP does not identify construction-related fugitive PM₁₀ as a contributor to the nonattainment problem, the fugitive PM₁₀ emissions associated with highway and transit project construction are not required to be considered in the regional emissions analysis.

2. In PM₁₀ nonattainment and maintenance areas with SIPs which identify construction-related fugitive PM₁₀ emissions as a contributor to the nonattainment problem, the regional PM₁₀ emissions analysis shall consider construction-related fugitive PM₁₀ and shall account for the level of construction activity, the fugitive PM₁₀ control measures in the SIP and the dust-producing capacity of the proposed activities.

(27) Procedures for Determining Localized CO Concentrations (Hot-Spot Analysis).

(a) In the following cases, CO hot-spot analyses shall be based on the applicable air quality models, data bases, and other requirements specified in 40 CFR part 51 Appendix W ("Guideline on Air Quality Models (Revised)" (1988), supplement A (1987) and supplement B (1993), EPA publication no. 450/2-78-027R), unless, after the interagency consultation process described in 310 CMR 60.03(6) and with the approval of the EPA Regional Administrator, these models, data bases, and other requirements are determined to be inappropriate:

1. For projects in or affecting locations, areas, or categories of sites which are identified in the SIP as sites of current violation or possible current violation;

2. For those intersections at Level-of-Service D, E, or F, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes related to a new project in the vicinity;

3. For any project involving or affecting any of the intersections which the SIP identifies as the top three intersections in the nonattainment or maintenance area based on the highest traffic volumes;

4. For any project involving or affecting any of the intersections which the SIP identifies as the top three intersections in the nonattainment or maintenance area based on the worst Level-of-Service; and

60.03: continued

5. Where use of the "Guideline" models is practicable and reasonable given the potential for violations.
- (b) In cases other than those described in 310 CMR 60.03(27)(a), other quantitative methods may be used if they represent reasonable and common professional practice.
- (c) CO hot-spot analyses shall include the entire project, and may be performed only after the major design features which will significantly impact CO concentrations have been identified. The background concentration can be estimated using the ratio of future to current traffic multiplied by the ratio of future to current emission factors and then applying the ratio to the background value.
- (d) PM₁₀ hot-spot analysis must be performed for projects which are located at sites at which violations have been verified by monitoring, and at sites which have essentially identical vehicle and roadway emission and dispersion characteristics (including sites near one at which a violation has been monitored). The projects which require PM₁₀ hot-spot analysis shall be determined through the interagency consultation process required in 310 CMR 60.03(6). In PM₁₀ nonattainment and maintenance areas, new or expanded bus and rail terminals and transfer points which increase the number of diesel vehicles congregating at a single location require hot-spot analysis. DOT may choose to make a categorical conformity determination on bus and rail terminals or transfer points based on appropriate modeling of various terminal sizes, configurations and activity levels. The requirements of 310 CMR 60.03(27)(d) for quantitative hot-spot analysis will not take effect until EPA releases modeling guidance on this subject and announces that these requirements are in effect in the *Federal Register*.
- (e) Hot-spot analysis assumptions shall be consistent with those in the regional emissions analysis for those inputs which are required for both analyses.
- (f) CO and PM₁₀ mitigation or control measures shall be assumed in the hot-spot analysis only where there are written commitments from the project sponsor and/or operator to the implementation of such measures, as required by 310 CMR 60.03(29)(a).
- (g) CO and PM₁₀ hot-spot analyses are not required to consider construction-related activities which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established "Guideline" methods. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site.
- (28) Using the Motor Vehicle Emissions Budget in the SIP.
- (a) In interpreting a SIP motor vehicle emissions budget(s), the MPO and DOT may not infer additions to the budget(s) that are not explicitly intended by the SIP or SIP submission. Unless the SIP explicitly quantifies the amount by which motor vehicle emissions could be higher while still allowing a demonstration of compliance with the milestone, attainment or maintenance requirement and explicitly states an intent that some or all of this additional amount should be available to the MPO and DOT in the emission budget for conformity purposes, the MPO may not interpret the budget to be higher than the SIP's estimate of future emissions. This applies in particular to the SIP which demonstrate that after implementation of control measures in the SIP:
1. Emissions from all sources will be less than the total emissions that would be consistent with a required demonstration of an emissions reduction milestone;
 2. Emissions from all sources will result in achieving attainment prior to the attainment deadline and/or ambient concentrations in the attainment deadline year will be lower than needed to demonstrate attainment; or
 3. Emissions will be lower than needed to provide for continued maintenance.
- (b) A conformity demonstration shall not trade emissions among budgets which the SIP allocates for different pollutants or precursors, or among budgets allocated to motor vehicles and other sources, without a SIP revision or a SIP which establishes mechanisms for such trades.
- (c) If the SIP estimates future emissions by geographic subarea of the nonattainment area, the MPO and DOT are not required to consider this to establish subarea budgets, unless the SIP explicitly indicates an intent to create such subarea budgets for the purposes of conformity.
- (d) If a nonattainment area includes more than one MPO, the SIP may establish motor vehicle emissions budgets for each MPO, or else the MPOs shall collectively make a conformity determination for the entire nonattainment area.

60.03: continued

(29) Enforceability of Design Concept and Scope and Project-Level Mitigation and Control Measures.

(a) Prior to determining that a transportation project is in conformity, the MPO, other recipient of funds designated under title 23 U.S.C. or the Federal Transit Act, FHWA, or FTA shall obtain from the project sponsor and/or operator written commitments to implement in the construction of the project and operation of the resulting facility or service any project-level mitigation or control measures which are identified as conditions for NEPA process completion with respect to local CO or PM₁₀ impacts. Before making conformity determinations written commitments shall also be obtained for project-level mitigation or control measures which are conditions for making conformity determinations for a transportation plan or TIP and included in the project design concept and scope which is used in the regional emissions analysis required by 310 CMR 60.03(17) through (19) and (21) through (23) or used in the project-level hot-spot analysis required by 310 CMR 60.03(16) and (20).

(b) Project sponsors voluntarily committing to mitigation measures to facilitate positive conformity determinations shall comply with the obligations of such commitments.

(c) During the control strategy and maintenance periods, if the MPO or project sponsor believes the mitigation or control measure is no longer necessary for conformity, the project sponsor or operator may be relieved of its obligation to implement the mitigation or control measure if it can demonstrate that the requirements of 310 CMR 60.03(16), (17), and (18) are satisfied without the mitigation or control measure, and so notifies the agencies involved in the interagency consultation process required under 310 CMR 60.03(6). The MPO and DOT shall confirm that the transportation plan and TIP still satisfy the requirements of 310 CMR 60.03(17) and (18) and that the project still satisfies the requirements of 310 CMR 60.03(16), and therefore that the conformity determinations for the transportation plan, TIP, and project are still valid.

(30) Exempt Projects. Notwithstanding the other requirements of 310 CMR 60.03, highway and transit projects of the types listed in Table 2 are exempt from the requirement that a conformity determination be made. Such projects may proceed toward implementation even in the absence of a conforming transportation plan and TIP. A particular action of the type listed in Table 2 is not exempt if the MPO in consultation with other agencies (*see* 310 CMR 60.03(6)(c)1.(viii), the EPA, the Department and the FHWA (in the case of a highway project) or the FTA (in the case of a transit project) concur that it has potentially adverse emissions impacts for any reason. States and MPOs shall ensure that exempt projects do not interfere with TCM implementation.

Table 2. - Exempt Projects

SAFETY
Railroad/highway crossing
Hazard elimination program
Safer non-federal-aid system roads
Shoulder improvements
Increasing sight distance
Safety improvement program
Traffic control devices and operating assistance other than signalization projects
Railroad/highway crossing warning devices
Guardrails, median barriers and crash cushions
Pavement resurfacing and/or rehabilitation
Pavement marking demonstration
Emergency relief (23 U.S.C. 125)
Fencing

60.03: continued

Table 2. - Exempt Projects (continued)

Skid treatments
Safety roadside rest areas
Adding medians
Truck climbing lanes outside the urbanized area
Lighting improvements
Widening narrow pavements or reconstructing bridges (no additional travel lanes)
Emergency Truck pullovers
MASS TRANSIT
Operating assistance to transit agencies
Purchase of support vehicles
Rehabilitation of transit vehicles ³
Purchase of office, shop and operating equipment for existing facilities
Purchase of operating equipment for vehicles (e.g. radios, fareboxes, lifts, etc.)
Construction or renovation of power, signal and communications systems
Construction of small passenger shelters and information kiosks
Reconstruction or renovation of transit buildings and structures (e.g., rail or bus buildings, storage and maintenance facilities, stations terminals, and ancillary structures)
Rehabilitation or reconstruction of track structures, track and trackbed in existing rights-of-way
Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet ¹
Construction of new bus or rail storage/maintenance facilities categorically excluded in 23 CFR 771
AIR QUALITY
Continuation of ridesharing and vanpooling promotion activities at current levels
Bicycle and pedestrian facilities
OTHER
Specific activities which do not involve or lead directly to construction, such as: planning and technical studies grants for training and research programs planning activities conducted pursuant to titles 23 and 49 U.S.C. federal-aid systems revisions
Engineering to assess social, economic and environmental effects of the proposed action or alternatives to that action
Noise attenuation
Advance land acquisitions (23 CFR 712 or 23 CFR 771)
Acquisition of scenic easements
Plantings, landscaping, etc.
Sign removal
Directional and informational signs

³PM₁₀ nonattainment or maintenance areas, such projects are exempt only if they are in compliance with control measures in the SIP.

60.03: continued

Table 2. - Exempt Projects (continued)

Transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures or facilities)
Repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects involving substantial functional, locational or capacity changes

(31) Projects Exempt From Regional Emissions Analyses. Notwithstanding the other requirements of 310 CMR 60.03(31), highway and transit projects of the types listed in Table 3 are exempt from regional emissions analysis requirements. The local effects of these projects with respect to CO or PM₁₀ concentrations shall be considered to determine if a hot-spot analysis is required prior to making a project-level conformity determination. These projects may then proceed to the project development process even in the absence of a conforming transportation plan and TIP. A particular action of the type listed in Table 3 is not exempt from regional emissions analysis if the MPO in consultation with other agencies (*see* 310 CMR 60.03(31)(6)(c)1.h., the EPA, the Department and the FHWA (in the case of a highway project) or the FTA (in the case of a transit project) concur that it has potential regional impacts for any reason.

Table 3. - Projects Exempt From Regional Emissions Analyses

Intersection channelization projects
Intersection signalization projects at individual intersections
Interchange reconfiguration projects
Changes in vertical and horizontal alignment
Truck size and weight inspection stations
Bus terminals and transfer points

(32) Criteria and Procedures for PM₁₀ and NO₂ Nonattainment Areas. The requirements of 310 CMR 60.03(33) through (36) shall be applicable only at such time that the Commonwealth of Massachusetts is redesignated by EPA from a PM₁₀ or NO₂ attainment area to a PM₁₀ or NO₂ nonattainment area.

(33) Compliance With PM₁₀ Control Measures. The FHWA/FTA project shall comply with PM₁₀ control measures in the SIP. This criterion applies during all periods. It is satisfied if control measures (for the purpose of limiting PM₁₀ emissions from the construction activities and/or normal use and operation associated with the project) contained in the SIP are included in the final plans, specifications, and estimates for the project.

(34) Reductions in PM₁₀ and NO₂ Areas in the Interim and Transitional Periods (Transportation Plan).

(a) A transportation plan shall contribute to emission reductions or shall not increase emissions in PM₁₀ and NO₂ nonattainment areas. This criterion applies only during the interim and transitional periods. It applies to the net effect on emissions of all projects contained in a new or revised transportation plan. This criterion may be satisfied if the requirements of either 310 CMR 60.03(34)(b) or (c) are met.

60.03: continued

(b) Demonstrate that implementation of the plan and all other regionally significant projects expected in the nonattainment area will contribute to reductions in emissions of PM₁₀ in a PM₁₀ nonattainment area (and of each transportation-related precursor of PM₁₀ in PM₁₀ nonattainment areas if the EPA Regional Administrator or the director of the State air agency has made a finding that such precursor emissions from within the nonattainment area are a significant contributor to the PM₁₀ nonattainment problem and has so notified the MPO and DOT) and of NO_x in an NO₂ nonattainment area, by performing a regional emissions analysis as follows:

1. Determine the analysis years for which emissions are to be estimated. Analysis years shall be no more than ten years apart. The first analysis year shall be no later than 1996 (for NO₂ areas) or four years and six months following the date of designation (for PM₁₀ areas). The second analysis year shall be either the attainment year for the area, or if the attainment year is the same as the first analysis year or earlier, the second analysis year shall be at least five years beyond the first analysis year. The last year of the transportation plan's forecast period shall also be an analysis year.
2. Define for each of the analysis years the "Baseline" scenario, as defined in 310 CMR 60.03(21)(c), and the "Action" scenario, as defined in 310 CMR 60.03(21)(d).
3. Estimate the emissions predicted to result in each analysis year from travel on the transportation systems defined by the "Baseline" and "Action" scenarios and determine the difference between the two scenarios in regional PM₁₀ emissions in a PM₁₀ nonattainment area (and transportation-related precursors of PM₁₀ in PM₁₀ nonattainment areas if the EPA Regional Administrator or the director of the State air agency has made a finding that such precursor emissions from within the nonattainment area are a significant contributor to the PM₁₀ nonattainment problem and has so notified the MPO and DOT) and in NO_x emissions in an NO₂ nonattainment area. The analysis must be performed for each of the analysis years according to the requirements of 310 CMR 60.03(26). The analysis must address the periods between the analysis years and the periods between 1990, the first milestone year (if any), and the first of the analysis years. Emissions in milestone years which are between the analysis years may be determined by interpolation.
4. Demonstrate that the regional PM₁₀ emissions and PM₁₀ precursor emissions, where applicable, (for PM₁₀ nonattainment areas) and NO_x emissions (for NO₂ nonattainment areas) predicted in the 'Action' scenario are less than the emissions predicted from the 'Baseline' scenario in each analysis year, and that this can reasonably be expected to be true in the periods between the first milestone year (if any) and the analysis years.

(c) Demonstrate that when the projects in the transportation plan and all other regionally significant projects expected in the nonattainment area are implemented, the transportation system's total highway and transit emissions of PM₁₀ in a PM₁₀ nonattainment area (and transportation-related precursors of PM₁₀ in PM₁₀ nonattainment areas if the EPA Regional Administrator or the director of the Air Division of the Department has made a finding that such precursor emissions from within the nonattainment area are a significant contributor to the PM₁₀ nonattainment problem and has so notified the MPO and DOT) and of NO_x in an NO₂ nonattainment area will not be greater than baseline levels, by performing a regional emissions analysis as follows:

1. Determine the baseline regional emissions of PM₁₀ and PM₁₀ precursors, where applicable (for PM₁₀ nonattainment areas) and NO_x (for NO₂ nonattainment areas) from highway and transit sources. Baseline emissions are those estimated to have occurred during calendar year 1990, unless the SIP revision required by § 51.396 of the federal conformity rule defines the baseline emissions for a PM₁₀ area to be those occurring in a different calendar year for which a baseline emissions inventory was developed for the purpose of developing a control strategy implementation plan.

60.03: continued

2. Estimate the emissions of the applicable pollutant(s) from the entire transportation system, including projects in the transportation plan and TIP and all other regionally significant projects in the nonattainment area, according to the requirements of 310 CMR 60.03(26). Emissions shall be estimated for analysis years which are no more than ten years apart. The first analysis year shall be no later than 1996 (for NO₂ areas) or four years and six months following the date of designation (for PM₁₀ areas). The second analysis year shall be either the attainment year for the area, or if the attainment year is the same as the first analysis year or earlier, the second analysis year shall be at least five years beyond the first analysis year. The last year of the transportation plan's forecast period shall also be an analysis year.
 3. Demonstrate that for each analysis year the emissions estimated in 310 CMR 60.03(34)(c)2. are no greater than baseline emissions of PM₁₀ and PM₁₀ precursors, where applicable (for PM₁₀ nonattainment areas) or NO_x (for NO₂ nonattainment areas) from highway and transit sources.
- (35) Reductions in PM₁₀ and NO₂ areas in the interim and transitional periods (TIP).
- (a) A TIP shall contribute to emission reductions or shall not increase emissions in PM₁₀ and NO₂ nonattainment areas. This criterion applies only during the interim and transitional periods. It applies to the net effect on emissions of all projects contained in a new or revised TIP. This criterion may be satisfied if the requirements of either 310 CMR 60.03(35)(b) or (c) are met.
 - (b) Demonstrate that implementation of the plan and TIP and all other regionally significant projects expected in the nonattainment area will contribute to reductions in emissions of PM₁₀ in a PM₁₀ nonattainment area (and transportation-related precursors of PM₁₀ in PM₁₀ nonattainment areas if the EPA Regional Administrator or the director of the State air agency has made a finding that such precursor emissions from within the nonattainment area are a significant contributor to the PM₁₀ nonattainment problem and has so notified the MPO and DOT) and of NO_x in an NO₂ nonattainment area, by performing a regional emissions analysis as follows:
 1. Determine the analysis years for which emissions are to be estimated, according to the requirements of 310 CMR 60.03(34)(b)1.
 2. Define for each of the analysis years the "Baseline" scenario, as defined in 310 CMR 60.03(22)(c), and the "Action" scenario, as defined in 310 CMR 60.03(22)(d).
 3. Estimate the emissions predicted to result in each analysis year from travel on the transportation systems defined by the "Baseline" and "Action" scenarios as required by 310 CMR 60.03(34)(b)3., and make the demonstration required by 310 CMR 60.03(34)(b)4.
 - (c) Demonstrate that when the projects in the transportation plan and TIP and all other regionally significant projects expected in the area are implemented, the transportation system's total highway and transit emissions of PM₁₀ in a PM₁₀ nonattainment area (and transportation-related precursors of PM₁₀ in PM₁₀ nonattainment areas if the EPA Regional Administrator or the director of the State air agency has made a finding that such precursor emissions from within the nonattainment area are a significant contributor to the PM₁₀ nonattainment problem and has so notified the MPO and DOT) and of NO_x in an NO₂ nonattainment area will not be greater than baseline levels, by performing a regional emissions analysis as required by 310 CMR 60.03(34)(c)1. through 3.

60.03: continued

(36) Reductions in PM₁₀ and NO₂ areas in the interim and transitional periods (project not from a plan and TIP). A transportation project which is not from a conforming transportation plan and TIP shall contribute to emission reductions or shall not increase emissions in PM₁₀ and NO₂ nonattainment areas. This criterion applies during the interim and transitional periods only. This criterion is met if a regional emissions analysis is performed which meets the requirements of 310 CMR 60.03(34) and which includes the transportation plan and project in the 'Action' scenario. If the project which is not from a conforming transportation plan and TIP is a modification of a project currently in the transportation plan or TIP, and 310 CMR 60.03(34)(b) is used to demonstrate satisfaction of this criterion, the 'Baseline' scenario shall include the project with its original design concept and scope, and the 'Action' scenario must include the project with its new design concept and scope.

60.04: MB City of Cambridge Vehicle Trip Reduction Program

(1) Purpose. 310 CMR 60.04 authorizes the City of Cambridge to implement a vehicle trip reduction program to achieve a combination of reductions in vehicle trips, vehicle miles travelled and vehicle emissions so as to allow for the addition of commercial parking spaces and the added vehicle trips they generate with no net negative impact on air quality. 310 CMR 60.04 authorizes the City of Cambridge to implement the vehicle trip reduction program as a replacement and substitution to the Cambridge Parking Freeze.

(2) Definitions.

Automobile Efficiency Rate means the figure calculated by dividing the number of employees who report to a worksite within the City of Cambridge between 6:00 A.M. and 10:00 A.M. inclusive (Monday through Friday to achieve a five consecutive weekday average) by the number of vehicles used by those employees to reach the worksite during those hours. Bicycles, public transit vehicles, and approved Clean-Fuel vehicles shall be excluded from the vehicles counted. Motorcycles and light trucks shall be included in the vehicles counted.

Cambridge Parking Freeze means the regulation for a commercial parking freeze in the City of Cambridge at 40 CFR section 52.1128 and 52.1135, as modified by *South Terminal Corp. v. EPA*, 502 F.2d 646, 671-672 (1st Cir. 1974) and the 1978 and 1983 Transportation Elements of the SIP, which limited commercial parking spaces in the City to a total of 13,452 spaces.

Caravan means Caravan for Commuters Inc., a private, non-profit commuter services company which develops and markets commuter transportation services.

Carpool means a vehicle carrying two to seven passengers.

City means the City of Cambridge, Massachusetts.

Clean fuel means any fuel or power source used in a vehicle that complies with the applicable standards for clean fueled vehicles contained in §§ 241-245 of the Clean Air Act, 42 U.S.C. §§ 7581-7595.

Clean fueled vehicle means a vehicle in a class or category of vehicles which has been certified to meet the applicable clean-fuel vehicle standards as defined by and pursuant to the federal Clean Air Act Amendments of 1990.

Commercial parking space means a parking space available for use by the general public at any time for a fee and shall not include:

- (a) parking spaces which are owned or operated by a commercial entity whose primary business is other than the operation of parking facilities, for the exclusive use of its lessees, employees, patrons, customers, clients, patients, guests or residents and not available for use by the general public;
- (b) parking spaces restricted for the use of the residents of a specific residential building or group of buildings;
- (c) spaces located on public streets; or

60.04: continued

(d) spaces located at a park-and-ride facility operated in conjunction with the Massachusetts Bay Transportation Authority.

Department means the Department of Environmental Protection.

EPA means the United States Environmental Protection Agency.

Flex Time means a wide range of flexible scheduling procedures that allows employees to set their own start times at their place of employment with the purpose of avoiding peak commute periods.

Four-day Workweek means a provision which allows employees to work the number of hours normally worked in a five-day period in a four-day period.

Monitoring and Demonstration Plan means the monitoring and demonstration plan developed by the City and approved by DEP on July 17, 1996 for use by the City in connection with 310 CMR 60.04 and as it may be amended by the City in consultation with DEP.

MBTA means the Massachusetts Bay Transportation Authority.

Oversight Committee means a panel jointly appointed by the Department and the City.

Preferential Parking means parking spaces reserved for motor vehicles such as carpools, vanpools, ULEVs and ZEVs which produce lower emissions than a single occupant vehicle. Preferential parking may be provided in more convenient locations to destinations as an incentive to utilize lower emitting modes of travel.

SIP is the portion (or portions) of the state implementation plan, or most recent revision thereof, approved under § 110 of the Clean Air Act, or promulgated under § 110(c), or promulgated under § 301(d) and which implements the relevant requirements of the Clean Air Act.

Telecommuting means working at home or at a satellite facility which substantially reduces the VMT which would occur by working at the primary employment location.

ULEV means an ultra low emitting vehicle as defined at 310 CMR 7.40.

Vanpool means a vehicle carrying eight or more passengers.

VMT means vehicle miles travelled.

Vehicle trip reduction programs are programs designed to reduce VMT or vehicle trips by influencing travel behavior and demand or by reducing air emissions from mobile sources by utilizing clean fuels.

ZEV means a zero emitting passenger car or light duty truck which produces zero emissions under any and all possible operations.

(3) Applicability. 310 CMR 60.04 is applicable within the geographic boundaries of the City of Cambridge.

(4) Terms of the Vehicle Trip Reduction Program.

(a) The City shall implement a vehicle trip reduction program that offsets VMT associated with the issuance of new commercial parking space permits in Cambridge in excess of the number allowed by the Cambridge Parking Freeze (13,452 spaces), to maintain a level of air emissions less than or equal to those estimated to occur absent replacement and substitution of the Cambridge Parking Freeze.

(b) As of the date of approval by EPA of 310 CMR 60.04 as an amendment to the Massachusetts SIP, the City may issue new parking permits for commercial parking spaces in excess of the number allowed by the Cambridge Parking Freeze provided:

60.04: continued

1. the City is implementing vehicle trip reduction measures to offset the air emissions associated with such new commercial parking spaces in excess of the number allowed by the Cambridge Parking Freeze; and
 2. either a report has been submitted by the City and has been approved by the Department pursuant to 310 CMR 60.04(12) or else the City has submitted a certification that fewer than 13,452 commercial parking spaces exist in the City.
- (c) Prior to EPA approval of 310 CMR 60.04 as an amendment to the Massachusetts SIP, the City shall not issue more than 81 new commercial parking space permits unless the permits are issued to replace other commercial parking spaces that have been permanently taken out of service as commercial parking spaces after July 17, 1996.
- (d) Prior to issuing parking permits for commercial parking spaces pursuant to 310 CMR 60.04(4)(c), the City shall notify the Department and EPA.
- (5) Vehicle Trip Reduction Program.
- (a) The City's vehicle trip reduction program may include, but shall not be limited to, the measures described in 310 CMR 60.04.
- (b) Municipal Employee Trip Reduction Measure.
1. The City may implement a municipal employee trip reduction measure applicable to municipal departments and employees in the City. The measure may include some or all of the following requirements:
 - a. the provision of incentives, assistance and information on alternative modes of travel to the single occupant vehicle to all municipal employers and employees;
 - b. preferential parking for carpools, vanpools, ULEVS, and ZEVs;
 - c. the provision of an employee shuttle service;
 - d. financial subsidies and incentives for use of public transit;
 - e. alternative work schedules including the provision of flex-time, telecommuting and/or four day workweek to employees; and
 - f. restrictions on or reduction of employee parking spaces.
 2. If the City chooses this option, it shall monitor the effectiveness of the municipal vehicle trip reduction measure by tracking some or all of the following:
 - a. improvements to the automobile efficiency rate for municipal employees;
 - b. the number of transit pass sales sold through payroll deduction;
 - c. ridership levels of employee shuttle services;
 - d. the number of preferential parking spaces for employees;
 - e. the number of users of Caravan for Commuters, Inc. ridematching services; and
 - f. the number of bicycles, ULEVS, ZEV fleet vehicles used or operated by municipal employees.
- (c) Increase of the Municipal Parking Rates.
1. The City may permanently increase parking fees for daily parking at City-owned, off-street parking facilities.
 2. If the City chooses this option, it shall monitor and track the extent and amount of rate increases for each municipal parking facility.
- (d) Bicycle and Pedestrian Mobility Measure.
1. The City may design, fund, and implement programs to improve bicycle and pedestrian mobility. The bicycle and pedestrian mobility measure may include some or all of the following components:
 - a. the designation of a city bicycle and/or pedestrian coordinator;
 - b. the development of a master plan and improvements to the street network for bicycle and pedestrian access;
 - c. installation of bicycle racks and storage facilities;
 - d. the provision of bicycles for use by City police, Traffic and Parking Department personnel and other municipal employees; and
 - e. the addition of exclusive bicycle lanes on major streets.
 2. If the City chooses this option, it shall monitor the effectiveness of the bicycle and pedestrian mobility measure by tracking some or all of the following:
 - a. the amount of linear feet of exclusive bicycle lanes;
 - b. the number of bicycle parking facilities;
 - c. the number of City-owned bicycles available for use by municipal employees; and
 - d. the maintenance of infrastructure improvements.

60.04: continued

- (e) **Transportation Demand Management for Expansions and New Development.**
1. The City may develop and implement an ongoing transportation demand management measure which may be applicable to new and expanded municipal facilities of 25,000 square feet or more and to those private development projects of 75,000 square feet or more that are subject to special permits. The transportation demand management measure may require some or all of the following:
 - a. designating a transportation management coordinator responsible for distributing information and coordinating traffic management programs within the new development;
 - b. discouraging or restricting use of parking spaces by single-occupant vehicles;
 - c. funding local or area-wide shuttle services to public transit stations and/or shopping centers;
 - d. encouragement of flextime for employees of all tenants;
 - e. promotion of the use of public transportation by providing transit information and participation in the MBTA commuter pass program;
 - f. operation of a computer-based ridesharing information bank or coordination of ridesharing promotional programs with any existing commuter mobility program;
 - g. preferential parking;
 - h. establishing reduced parking fees or providing subsidies for carpool and vanpool parking;
 - i. encouragement of local employment opportunities by tenants of the new development; and
 - j. providing safe, convenient, sheltered bicycle storage facilities and/or shower facilities for bicycle commuters.
 2. If the City chooses this option, it shall monitor the effectiveness of the transportation demand management measure by tracking some or all of the following for each such new or expanded municipal development:
 - a. the number of users of Caravan for Commuters, Inc. services;
 - b. the number of transit pass sales through payroll deduction;
 - c. the number of riders on employee shuttles; and
 - d. the number of carpool/vanpool/ULEV/ZEV parking spaces and bicycle facilities.
 3. If the City chooses this option, it shall monitor the effectiveness of the transportation demand management measure by tracking the following for each such new or expanded private development:

transportation demand management requirements under a special permit from the Planning Board which may include but need not be limited to some or all of the following.

 - a. the number of users of Caravan for Commuters, Inc. services;
 - b. the number of transit pass sales through payroll deduction;
 - c. the number of riders on employee shuttles; and
 - d. the number of carpool/vanpool/ULEV/ZEV parking spaces and bicycle facilities.
- (6) **Feasibility Studies.** Within three years of December 26, 1997, the City shall complete the following studies:
- (a) **Promotion of Clean Fuels and Low/Zero Emission Vehicles.**
 1. The City shall complete a study and recommend ways to promote and provide incentives for the use of clean fuels and low/zero emission vehicles within the City. Such incentives may include, at a minimum, special permits or preferential parking for residents and others with ULEVs or ZEVS, and conversion of vehicle fleets to clean fuels.
 2. The City may implement the outcome of the study.
 3. If the City chooses this option, it shall monitor the effectiveness of implementing clean fuel and low/zero emission vehicle strategies by tracking the following:
 - a. number of ULEV, ZEV fleet vehicles within City;
 - b. number of refueling stations for alternative fuel vehicles;
 - c. number of City-regulated preferential parking spaces for ULEV/ZEV.
 - (b) **Taxi Cab Improvements.**
 1. The City shall complete a study and make recommendations on methods to make taxi cabs more accessible for use by multiple passengers with different destinations.

60.04: continued

2. The City may study the role of taxi cabs in a para-transit system for the City.
3. The City may study incentives for conversion of taxi fleets to clean fuels and/or zero emission vehicles.
4. The City may implement the outcome of the study.
5. If the City chooses this option, it shall monitor the effectiveness of implementing taxi cab improvements by tracking the following:
 - a. the extent taxi cabs play in the paratransit system;
 - b. ridership levels;
 - c. the number of vouchers issued;
 - d. the number of fleet/vehicle conversions.

(c) Zoning.

1. The City of Cambridge shall complete a study and recommend revisions to the Cambridge Zoning Ordinance to promote reductions of VMT and traffic congestion and to increase commuting alternatives to the single-occupant vehicle. The City shall consider: densities to achieve the goal of reduced VMT; eliminating the exclusion of parking in the calculation of gross floor area; reducing the minimum and maximum parking requirements; including special provisions for carpools and vanpools; and encouraging mixed-use developments.

(7) Travel Demand Management. The City shall work and coordinate with the Commonwealth and the Department to explore additional ways to manage travel demand and demand for parking in the City and ways in which it can facilitate the transfer of parking space permits and/or parking spaces in the City.

(8) City Enforcement Programs.

- (a) The City shall inspect periodically non-residential parking facilities to ensure that they are operating pursuant to and in compliance with appropriate permits and approvals and that non-commercial spaces are being used solely for non-commercial purposes and are not available as commercial parking spaces. The City shall take enforcement action against violators. The City shall forward copies of all inspection reports to the Department.
- (b) The City may focus on enforcement of statutory and regulatory prohibitions against idling by buses, trucks, taxis and automobiles in accordance with the requirements set forth in 310 CMR 7.11(1)(b), Air Pollution Control Regulations, U Transportation Media.

(9) Coordination Activities.Improved Coordination with the MBTA.

- (a) The City may work with the MBTA to improve the accessibility of public transit and to explore the development of a local para-transit system in the City.
- (b) The City may identify barriers to use of the MBTA by residents and commuters.
- (c) The City may conduct public forums throughout the city to assess transit needs and to inform residents and commuters of transit options.
- (d) If the City chooses this option, it shall monitor the effectiveness of improved coordination with the MBTA by documenting the following:
 1. City efforts to improve routing of buses to reduce number of connections and changes
 2. the number of bicycle parking facilities at or near subway and bus transit nodes
 3. the number of locations and volume of distribution of MBTA routes and schedule information
 4. improved multi-modal linkages between MBTA stations and bike and pedestrian facilities

(10) Monitoring and Demonstration Plan.

- (a) The City shall implement the Monitoring and Demonstration Plan.
- (b) The City shall continuously monitor the number of commercial parking spaces within the City and the effectiveness of the vehicle trip reduction program implemented in the City in achieving a combination of reductions in VMT, vehicle trips and vehicle air emissions to confirm that the requirement of 310 CMR 60.04(4)(a) is being met.

60.04: continued

(c) If the number of commercial parking spaces in the City exceeds 13,452 spaces and the Monitoring and Demonstration Plan does not demonstrate that the requirements of 310 CMR 60.04(4)(a) have been met, the City shall be prohibited from issuing any commercial parking space permits.

(11) Recordkeeping and Reporting.

(a) Beginning one year after EPA approves 310 CMR 60.04 as a SIP amendment and as a replacement of 40 C.F.R. §§ 52.1128, 52.1135 and every year for three years, and every other year thereafter, the City shall complete a report on the vehicle trip reduction programs and strategies in place in the City. This report shall include the status and progress of the programs and studies required by 310 CMR 60.04. Said report shall include:

1. a description of each vehicle trip reduction measure and its implementation status;
2. an inventory of commercial parking spaces permitted by the City pursuant to 310 CMR 60.04;
3. a compilation of supporting data collected pursuant to 310 CMR 60.04(10) or other supporting data, if available; and
4. a certification by the City that the vehicle trip reduction measures are being implemented in a manner consistent with the assumptions in the Report to determine emissions associated with new parking permits for commercial parking spaces pursuant to 310 CMR 60.04(4)(a) in excess of the number allowed by the Cambridge Parking Freeze.

(b) The City shall submit copies of the status report to the Department, EPA Region I and the chairman of the Boston Metropolitan Planning Organization.

(c) The City shall maintain records that document the assumptions used in the Report to determine emissions reductions from the City's Vehicle Trip Reduction Program and to demonstrate compliance with 310 CMR 60.04(4)(a).

(12) Monitoring and Demonstration Report Review.

(a) For those years in which a report is required to demonstrate that the City is offsetting air emissions associated with that number of commercial parking spaces permitted in the City in excess of 13,452, the City shall submit the Monitoring and Demonstration Report to the Department. Within 45 days of receipt of the Report, the Department shall either:

1. render a determination of its adequacy or inadequacy; or
2. submit the report to the Oversight Committee for review and comment.

(b) The Oversight Committee is authorized to review the effectiveness of the vehicle trip reduction program at offsetting air emissions and VMT associated with new commercial parking spaces permitted in excess of the number allowed by the Cambridge Parking Freeze, recommend ways to improve the effectiveness of the program and advise the Department whether the City has met its obligations under 310 CMR 60.04(4)(a). The Oversight Committee shall submit its advice to the Department within 60 days of receipt of a Monitoring and Demonstration Report.

(c) If the Oversight Committee, based on its review of the Monitoring and Demonstration Report, advises the Department that the City has met its obligations under 310 CMR 60.04(4)(a), the Report shall be approved by the Department within 30 days unless the Department finds, based on additional information, that 310 CMR 60.04(4)(a) has not been met.

(d) If the Oversight Committee, based on its review of the Monitoring and Demonstration Report, advises the Department that the City has failed to meet its obligations, the Department shall hold a public hearing within 45 days of receipt of the Oversight Committee's advice. Within 60 days after the public hearing, the Department will issue a finding of adequacy or inadequacy, depending on the results of the review and public comment.

(e) If the Report is found inadequate pursuant to 310 CMR 60.04(12), and notwithstanding a request for an adjudicatory hearing, the City shall resolve the inadequacies to the satisfaction of the Department prior to issuing any new commercial parking space permits for spaces in excess of 13,452. If the City and the Department are unable to resolve their differences within 60 days, the City may request an adjudicatory hearing on the Department's determination pursuant to M.G.L c. 21A and c. 30A.

60.04: continued

(f) The City has the option to submit a Monitoring and Demonstration Report to the Department in years when such a report is not otherwise required. The City shall submit a Monitoring and Demonstration Report to the Department and the Oversight Committee at such time when there are 13,377 commercial parking spaces permitted in the City in order to identify how the air emissions associated with new commercial parking spaces in excess of 13,452 will be offset.

(13) Enforcement. The Department may enforce 310 CMR 60.04 under applicable law.

(14) Responsibilities Under the Clean Air Act.

(a) Programs included in the Massachusetts SIP or regulations thereunder may not be included in the Cambridge Vehicle Trip Reduction Program for the purposes of 310 CMR 60.04 except to the extent the City's implementation of or contribution to such program or regulation achieves results in excess of the goals established by the SIP for such program or regulation.

(b) The failure of the City of Cambridge to comply with the requirements of 310 CMR 60.04 may be the cause for the Department to make a finding of non-conformity under section 176(c) of the Clean Air Act, 42 U.S.C. 7506(c) and the state and federal Transportation Conformity regulations, 310 CMR 60.03 and 40 CFR Part 51, Subpart T, respectively.

60.05: Global Warming Solutions Act Requirements for Transportation

(1) Purpose Scope and Authority. 310 CMR 60.05 is promulgated pursuant to M.G.L. c. 21N, § 3(d) and is also promulgated pursuant to M.G.L. c. 21A, §§ 2, 8 and 16, and M.G.L. c. 111, §§ 2C and 142A through 142M, to prevent and abate conditions of air pollution from the greenhouse gas emissions from the mobile sources specified in 310 CMR 60.05. The purpose of 310 CMR 60.05 is to assist the Commonwealth in achieving the GHG emissions reduction goals adopted pursuant to M.G.L. c. 21N, § (3)(b) and to establish an annually declining aggregate GHG emissions limit pursuant to M.G.L. c. 21N, § 3(d), by:

(a) Requiring MassDOT to demonstrate its aggregate MassDOT GHG emissions reduction limits as established in 310 CMR 60.05(6) are achieved;

(b) Requiring the MPOs to evaluate and report the aggregate transportation GHG emissions impacts of Regional Transportation Plans (RTPs), and Transportation Improvement Programs (TIPs);

(c) Requiring the MPOs, in consultation with MassDOT, to develop and utilize procedures to prioritize and select projects in RTPs and TIPs based on factors that include aggregate transportation GHG emissions impacts; and

(d) Requiring MassDOT to evaluate and report the aggregate transportation GHG emissions impacts of State Transportation Improvement Programs (STIPs) and state-funded projects that are not included in STIPs.

(2) Definitions.

Aggregate Transportation GHG Emissions means total GHG emissions estimated by MassDOT, in collaboration with the Department, from the multimodal surface transportation system and its facilities including the highway and transit networks.

Aggregate MassDOT GHG Emissions means total GHG emissions estimated by MassDOT as occurring from the combustion of fuels in mobile equipment owned by MassDOT and the MBTA and of heating fuels at MassDOT and MBTA facilities.

Appropriate Planning Assumptions means the data, models, and expectations about future year conditions that serve as inputs to forecasting models used for estimating future year GHG emissions. This shall include best assumptions about future land use, transportation system condition and operations, and travel costs.

Build Condition means transportation facilities and projects that have a reasonable expectation of being open and operating by the end of applicable milestone and horizon years (*e.g.*, 2020, 2030, 2035, and 2040, as appropriate).

60.05: continued

Consultation means one party confers with another identified party, provides all appropriate information to that party needed for meaningful input, and, prior to taking any action, considers the views of that party and responds to those views in a timely, substantive written manner prior to any final decision on such action. Such views and written response shall be made part of the record of any decision or action.

Department means the Massachusetts Department of Environmental Protection.

EOEEA means the Massachusetts Executive Office of Energy and Environmental Affairs.

Greenhouse Gas (GHG) Emissions means, for the purposes of 310 CMR 60.05, carbon dioxide (CO₂).

Horizon Year means a year for which the transportation plan describes the envisioned transportation system.

MassDOT means the Massachusetts Department of Transportation.

Metropolitan Planning Organizations (MPOs) means the Massachusetts organizations designated as being responsible, together with the Commonwealth, for conducting the continuing, cooperative, and comprehensive planning process under 23 U.S.C. 134 and 49 U.S.C. §§ 5301 through 5340. It is the forum for cooperative transportation decision-making. For the purposes of 310 CMR 60.05, Regional Planning Agencies (RPA) in the Commonwealth of Massachusetts which have not been formally designated as MPOs under 23 U.S.C. 134 and 49 U.S.C. §§ 5301 through 5340 shall be subject to the same requirements as MPOs under 310 CMR 60.05.

No-build Condition means existing transportation facilities plus those projects that are under construction, have been advertised, or have been included in the first year of the RTPs, TIPs or STIPs.

Regional Planning Agencies (RPA) means one of the 13 Massachusetts commissions, councils, or councils of government authorized to be formed under M.G.L. c. 40B.

Regional Transit Authority (RTA) means one of the 16 Massachusetts regional transit authorities including the Massachusetts Bay Transportation Authority (MBTA).

Regional Transportation Plan (RTP) means the official intermodal metropolitan transportation plan that is developed through the metropolitan planning process for the metropolitan planning area, developed pursuant to 23 CFR Part 450.

Statewide Transportation Improvement Program (STIP) means the compilation of the 13 regional TIPs prepared annually by MassDOT and includes a listing of priority transportation projects (highway and transit) listed by funding category and fiscal year.

Transportation GHG Emissions Impact means an increase or decrease of GHG emissions from the combustion of fuels in vehicles traveling on roadways in Massachusetts.

Transportation Improvement Program (TIP) means a staged, multiyear, intermodal program of transportation projects covering a metropolitan planning area which is consistent with the regional transportation plan, and developed pursuant to 23 CFR Part 450.

(3) Applicability.

(a) General. The provisions of 310 CMR 60.05 shall apply to MassDOT, MPOs, RTAs, the Department and EOEEA.

(4) Effective Dates.

(a) MassDOT and the MPOs shall apply the requirements of 310 CMR 60.05(5) to RTPs, TIPs, and STIPs effective October 1, 2015, with the start of federal fiscal year 2016. In keeping with this effective date, the GHG emission analysis shall be included in the RTPs, TIPs, and STIPs that are due on September 30, 2015, and in each subsequent version of these documents.

60.05: continued

(b) 310 CMR 60.05(6) and (7) shall apply to MassDOT beginning in calendar year 2018.

(5) General Requirements for Transportation Planning and Investment.

(a) The MPOs shall:

1. Evaluate and report the aggregate transportation GHG emissions impacts of RTPs and TIPs.
2. In consultation with MassDOT, develop and utilize procedures to prioritize and select projects in RTPs and TIPs based on factors that include aggregate transportation GHG emissions impacts.
3. Quantify net transportation GHG emissions impacts resulting from the projects in RTPs and TIPs and certify in a statement included with RTPs and TIPs pursuant to 23 CFR Part 450 that the MPO has made efforts to minimize aggregate transportation GHG emissions impacts.
4. Determine in consultation with the RPA that the appropriate planning assumptions used for transportation GHG emissions modeling are consistent with local land use policies, or that local authorities have made documented and credible commitments to establishing such consistency.

(b) MassDOT shall evaluate and report the transportation GHG emissions impacts of STIPs and state-funded projects that are not included in STIPs.

(c) Prior to adoption and approval of RTPs and TIPs by MPOs and STIPs by MassDOT, MassDOT shall:

1. Determine that the MPOs have adopted and implemented procedures to prioritize and select projects in the RTPs and TIPs based on factors that include aggregate transportation GHG emissions impacts.
2. Calculate the net GHG transportation emission reductions achieved through implementation of the projects and programs included in RTPs, TIPs, STIPs, and state-funded projects that are not included in STIPs.
3. Determine in consultation with the RPAs that the appropriate planning assumptions used for transportation GHG emissions modeling are consistent with existing local land use policies, or that local authorities have made documented and credible commitments to establishing such consistency.

(d) MassDOT shall certify that the requirements of 310 CMR 60.05(5)(a) through (c) have been met in a statement included with the endorsed RTPs, TIPs, and STIPs pursuant to 23 CFR Part 450.

(6) Requirements for Aggregate MassDOT GHG Emissions.

(a) MassDOT shall:

1. Quantify aggregate MassDOT GHG emissions annually to demonstrate whether the aggregate emissions limits in Table 310 CMR 60.05(6) have been achieved.
2. Report to the Department, by March 1, 2019, March 1, 2020 and March 1, 2021, aggregate MassDOT GHG emissions for the prior calendar year, in an electronic format specified by the Department.
3. The March 1st report shall address any exceedance of the limits in 310 CMR 60.05(6): *Table*, in consultation with the Department, through supplemental measures proposed in the March 1st report, including an estimate of the emission reductions expected from each supplemental measure and the implementation status and schedule of each supplemental measure listed in a March 1st report, until the supplemental measure is complete.

310 CMR 60.05(6): Table

Maximum Annual Aggregate MassDOT GHG Emissions	
Calendar Year	Maximum Allowable Aggregate MassDOT GHG Emissions (million metric tons of CO ₂)
2018	0.303
2019	0.298
2020	0.293

60.05: continued

(b) Supplemental measures taken by MassDOT may include, but are not limited to, the following:

1. Decrease vehicle miles travelled within the MBTA and MassDOT fleet;
2. Promote Transportation Demand Management;
3. Increase plug-in and plug-in hybrid electric vehicle use within the MBTA and MassDOT fleet;
4. Promote plug-in and plug-in hybrid electric vehicle use by motorists;
5. Increase energy efficiency of MBTA and MassDOT facilities; and
6. Increase the use of renewable energy at MBTA and MassDOT facilities.

(7) General Requirements for Determining Aggregate Transportation GHG Emissions in the Transportation Planning Process.

(a) MassDOT shall:

1. Quantify aggregate transportation GHG emissions annually to demonstrate whether the aggregate emissions targets in 310 CMR 60.05(7): *Table* have been achieved.
2. Report to the Department, by July 1, 2019, July 1, 2020 and July 1, 2021, aggregate transportation GHG emissions for the prior calendar year, in an electronic format specified by the Department.

310 CMR 60.05(7): Table

Maximum Annual Aggregate Transportation GHG Emissions	
Calendar Year	Maximum Allowable Aggregate Transportation GHG Emissions (million metric tons of CO ₂)
2018	24.582
2019	24.122
2020	23.682

(8) Interagency Consultation.

(a) Agency Responsibilities.

1. MassDOT.

- a. Coordinates overall consultation process for evaluation of aggregate transportation GHG emissions impacts of RTPs, TIPs, and STIPs;
- b. Provides guidance and assistance to MPOs in assessing aggregate transportation GHG emissions impacts of RTPs, TIPs, and STIPs and projects included in the plans, as appropriate, including guidance on modeling and aggregate transportation GHG emissions impact calculation methods and prioritizing and selecting projects based on factors that include transportation GHG emissions impacts;
- c. Reviews MPO RTPs and TIPs, and aggregate transportation GHG emission analysis for acceptability and content and coordinates submittal to the Department within 30 days of endorsement for the Department's review; and
- d. At the request of the Department, models and projects aggregate transportation GHG emissions using appropriate planning assumptions for the horizon years modeled.

2. Metropolitan Planning Organizations (MPOs).

- a. Develop RTPs and TIPs;
- b. Ensure that RPAs are using appropriate planning assumptions;
- c. Perform regional aggregate transportation GHG emissions impact analysis of RTPs and TIPs;
- d. Calculate aggregate transportation GHG emissions impacts for RTPs and TIPs; and
- e. Develop public consultation procedures for aggregate transportation GHG emissions impact reporting and related GWSA requirement consistent with current and approved regional public participation plans.

3. RTAs.

- a. Conduct comprehensive service reviews (CSRs);
- b. Identify service enhancements to increase passenger ridership;

60.05: continued

- c. Identify vehicle technology and operational improvements that can reduce aggregate transportation GHG emissions; and
 - d. Work within the MPO process to prioritize and fund GHG reduction projects and investments.
4. Department of Environmental Protection.
 - a. Provides MassDOT and the MPOs with mobile source inputs for emissions analysis of RTPs, TIPs, STIPs, and projects included in these plans;
 - b. Reviews of RTPs, TIPs, STIPs, and projects; and
 - c. Provides comments to MassDOT and MPO's on aggregate transportation GHG emissions reduction projects and projections, including supplemental projects.
 5. Executive Office of Energy and Environmental Affairs (EOEEA).
 - a. Provides MassDOT with user access to software tracking tools and training, and support as needed for MassDOT users; and
 - b. Provides comments to the Department and MassDOT on progress, including deficiencies and areas of concern regarding aggregate transportation GHG emission reductions.
- (b) Agency Consultation.
1. Prior to such time that aggregate transportation GHG emission impact analysis of RTPs, TIPs, STIPs and projects included in these plans is performed, or at the request of an involved agency, MassDOT shall convene a consultation meeting(s) or conduct similar electronic correspondence with representatives from the MPOs, RTAs, RPAs, EOEEA, and the Department. Prior to convening any consultation meeting(s), MassDOT shall circulate a meeting agenda to the involved agencies. The specific purposes of the state agency consultation meeting(s) and/or correspondence are to:
 - a. Determine appropriate emissions analysis models and/or other analysis techniques, including consulting on model development and assessing project design factors for modeling;
 - b. Select inputs to the most recent EPA-approved or similar emissions factor model;
 - c. Identify and confirm regionally significant projects to be included in the regional and/or statewide emissions analysis;
 - d. Identify projects which have changed in design and scope from the RTP or TIP;
 - e. Identify exempt projects;
 - f. Identify exempt projects and categories of exempt projects which should be treated as nonexempt because they may have adverse air quality impacts and determine appropriate air quality analysis methodologies for analyzing such projects;
 - g. Identify RTP, TIP, and STIP revisions which add or delete exempt projects; and
 - h. Identify appropriate planning assumptions relevant to aggregate transportation GHG emission estimation procedures and calculations.
 2. MassDOT shall document the outcome(s) of the consultation meeting(s) and shall circulate said documentation to the MPOs, RTAs, EOEEA, and the Department.
- (c) Public Consultation Procedures. Prior to making final endorsements on the RTPs, TIPs, STIPs, and projects included in these plans, MassDOT and the MPOs shall include the aggregate transportation GHG emission impact assessment in RTPs, TIPs, and STIPs and provide an opportunity for public review and comment on the RTPs, TIPs, and STIPs.
- (9) Enforcement. The Department shall enforce the requirements of 310 CMR 60.05 in accordance with the applicable federal and Massachusetts law including, but not limited to, M.G.L. c. 21A, § 16; c. 111, § 2C; c. 111, §§ 142A through 142M; c. 21N, § 7(d), and 310 CMR 5.00: *Administrative Penalty*.

60.06: CO₂ Emission Limits for State Fleet Passenger Vehicles

(1) Purpose, Scope and Authority. The purpose of 310 CMR 60.06 is to assist the Commonwealth in achieving the greenhouse gas emissions reduction goals adopted pursuant to M.G.L. c. 21N, § (3)(b) by reducing carbon dioxide (CO₂) emissions from certain vehicles owned or leased by Commonwealth of Massachusetts Executive Offices through the imposition of declining annual aggregate emission limits. 310 CMR 60.06 is promulgated pursuant to M.G.L. c. 21N, § 3(d) and is also promulgated pursuant to M.G.L. c. 21A, §§ 2, 8 and 16, and M.G.L. c. 111, §§ 2C and 142A through 142M, to prevent and abate conditions of air pollution from the CO₂ emissions from the mobile sources specified in 310 CMR 60.06. The CO₂ emissions limits set forth in 310 CMR 60.06(6) are applicable for the years 2021 through 2025 and thereafter beginning January 1, 2021.

60.06: continued

(2) Definitions. The terms used in 310 CMR 60.06 are defined in 310 CMR 60.06 and in 310 CMR 60.00. Where a term is defined in 310 CMR 60.06 and in other sections of 310 CMR 60.00, the definition in 310 CMR 60.06 shall apply.

Department means the Massachusetts Department of Environmental Protection.

Emergency Vehicle means any publicly owned or leased vehicle operated by a sworn officer in performance of their duties, any authorized emergency vehicle used for fighting fires, any publicly owned or leased authorized emergency vehicle used by an emergency medical technician or paramedic, or used for towing or servicing other vehicles, or repairing damaged lighting or electrical equipment, or any ambulance used by a private entity under contract with a public agency.

Executive Office means the Executive Office of Administration and Finance (A&F), the Executive Office of Education (EOE), the Executive Office of Energy and Environmental Affairs (EEA), the Executive Office of Health and Human Services (EOHHS), the Executive Office of Housing and Economic Development (EOHED), the Executive Office of Labor and Workforce Development (EOLWD), the Executive Office of Public Safety and Security (EOPSS), and the Massachusetts Department of Transportation (MassDOT), including the agencies, boards, bureaus, commissions, committees, councils, departments, divisions, groups, guards, homes, laboratories, libraries, offices, police, programs, systems, trusts, universities and other entities within each Executive Office, and entities whose governing members or board include(s) the Secretary of an Executive Office pursuant to appointment by the Governor, or to the requirements of a Massachusetts General or Session Law.

Passenger Vehicle means any motor vehicle with a gross vehicle weight rating of less than 10,000 pounds designed primarily for transportation of persons and having a design capacity of 12 persons or less and that has an Environmental Protection Agency fuel economy sticker pursuant to 40 CFR Part 600 Fuel Economy and Greenhouse Gas Exhaust Emissions of Motor Vehicles. Passenger vehicle does not include transit vehicles or vehicles primarily designed to transport property or with special features enabling off-road operation and use, including but not limited to, pickup trucks, cargo vans, emergency vehicles, test vehicles, non-road vehicles.

Test Vehicle means an experimental or prototype motor vehicle which appears to have very low emission characteristics or a used motor vehicle within which an experimental motor vehicle pollution control device is installed, and which has also received a test vehicle or fleet permit from the California Air Resources Board pursuant to Manufacturers Advisory Correspondence No. 83-01.

Transit Vehicle means any vehicle used to transport paying customers.

(3) Applicability. 310 CMR 60.06 is applicable to Executive Offices, except that an Executive Office is not subject to annual CO₂ emission limits unless it owns or leases 30 or more passenger vehicles, as determined by the Department in its sole discretion.

(4) General Requirements.

(a) For calendar year 2018 and for every calendar year thereafter, each Executive Office shall meet its passenger vehicle CO₂ emission limit specified in 310 CMR 60.06(6).

(b) By November 1, 2017, each Executive Office shall provide the Department with the information specified in 310 CMR 60.06(8) for the time period from January 1, 2016 through December 31, 2016 for each of its vehicles that is not a passenger vehicle.

(c) By March 1, 2018, each Executive Office shall provide the Department with the information specified in 310 CMR 60.06(8) for the time period from January 1, 2017 through December 31, 2017 for each of its vehicles that is not a passenger vehicle.

(d) By March 1, 2019 and by March 1st of each year thereafter, each Executive Office shall submit a report to the Department for the previous calendar year on its passenger vehicles as specified in 310 CMR 60.06(7).

(e) The Department may specify the format and process by which any submission required pursuant to 310 CMR 60.06 shall occur, including electronic submission requirements.

60.06: continued

(5) Calculation of CO₂ Emissions. Each Executive Office shall calculate the CO₂ emissions for passenger vehicles by using the applicable equation:

(a) for gasoline fueled vehicles:

metric tons CO₂ emitted/year = gallons of gasoline used * 19.8416 pounds of CO₂/gallon of gasoline/2000 pounds/short ton / 1.10231 short tons/metric ton

(b) for diesel fueled vehicles:

metric tons CO₂ emitted/year = gallons of diesel used * 22.38 pounds of CO₂/gallon of diesel/2000 pounds/short ton / 1.10231 short tons/metric ton

(c) for natural gas fueled vehicles:

metric tons CO₂ emitted/year = thousand cubic feet of natural gas used * 121.25 pounds of CO₂/thousand cubic feet of natural gas/2000 pounds/short ton / 1.10231 short tons/metric ton

(6) Annual CO₂ Emission Limits.

(a) Individual Executive Office Limits. For each calendar year specified in 310 CMR 60.06(6): *Tables 1* through *5*, each Executive Office shall ensure the annual CO₂ emissions from passenger vehicles, as calculated pursuant to 310 CMR 60.06(5), shall not exceed the following:

Table 1 - Maximum Annual CO ₂ Emissions - Executive Office of Education (EOE)	
Calendar Year	Maximum Allowable CO ₂ Emissions (metric tons)
2018	589
2019	564
2020	539
2021	509
2022	490
2023	461
2024	437
2025, and each calendar year thereafter	401

Table 2 - Maximum Annual CO ₂ Emissions - Executive Office of Energy and Environmental Affairs (EEA)	
Calendar Year	Maximum Allowable CO ₂ Emissions (metric tons)
2018	568
2019	558
2020	548
2021	545
2022	539
2023	537
2024	471
2025, and each calendar year thereafter	445

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

60.06: continued

Table 3 - Maximum Annual CO ₂ Emissions - Executive Office of Health and Human Services (EOHHS)	
Calendar Year	Maximum Allowable CO ₂ Emissions (metric tons)
2018	1,443
2019	1,435
2020	1,427
2021	1,407
2022	1,403
2023	1,399
2024	1,259
2025, and each calendar year thereafter	1,081

Table 4 - Maximum Annual CO ₂ Emissions - Executive Office of Public Safety and Security (EOPSS)	
Calendar Year	Maximum Allowable CO ₂ Emissions (metric tons)
2018	1,795
2019	1,657
2020	1,518
2021	1,499
2022	1,486
2023	1,479
2024	1,334
2025, and each calendar year thereafter	1,319

Table 5 - Maximum Annual CO ₂ Emissions - Massachusetts Department of Transportation (MassDOT)	
Calendar Year	Maximum Allowable CO ₂ Emissions (metric tons)
2018	3,853
2019	3,827
2020	3,800
2021	3,739
2022	3,682
2023	3,092
2024	2,646
2025, and each calendar year thereafter	2,421

(b) Aggregate Limit. For each calendar year specified in 310 CMR 60.06(6): *Table 6*, the annual CO₂ emissions from passenger vehicles owned or leased by all Executive Offices named in 310 CMR 60.06(6): *Tables 1* through *5* shall not exceed the following:

60.06: continued

Table 6 - Annual Aggregate CO ₂ Emissions from passenger vehicles owned or leased by Executive Offices named in 310 CMR 60.06(6): <i>Tables 1 through 5</i>	
Calendar Year	Maximum Allowable CO ₂ Emissions (metric tons)
2018	8,249
2019	8,040
2020	7,832
2021	7,699
2022	7,600
2023	6,968
2024	6,147
2025, and each calendar year thereafter	5,668

(c) CO₂ Set-aside and Petition Process for Modifying CO₂ Emission Limit.

1. The Department has set-aside the quantities of CO₂ in 310 CMR 60.06(6)(c): *Table 7* each calendar year for Executive Offices that petition to modify their limits in 310 CMR 60.06(6)(a) based on one of the reasons in 310 CMR 60.06(6)(c)3.

Table 7 - Set-aside of CO ₂ and Summary of Maximum Annual Aggregate CO ₂ Emissions Limit		
Calendar Year	Set-aside of CO ₂ (metric tons)	Maximum Annual Aggregate CO ₂ Emissions Limit (metric tons)
2018	31,734	39,983
2019	31,734	39,775
2020	31,734	39,566
2021	31,734	39,433
2022	31,734	39,334
2023	31,734	38,702
2024	31,734	37,882
2025, and each calendar year thereafter	31,734	37,402

2. Upon written petition from an Executive Office, the Department may modify the CO₂ emission limits and allocate additional CO₂ in excess of the limits in 310 CMR 60.06(6)(a) provided that the set-aside amount of CO₂ in each calendar year in 310 CMR 60.06(6): *Table 7* is not exceeded.

3. The basis for the petition shall be one or more of the following:

- a. The Executive Office did not provide the Department with complete information about the inventory of its passenger vehicles prior to August 11, 2017;
- b. The Executive Office believes that the Department made a mathematical error in its calculation of the CO₂ emission limit(s);
- c. The Executive Office is required to increase its passenger vehicle fleet due to unforeseen circumstances or new legislative or regulatory requirements; and/or
- d. The Executive Office increases its passenger vehicle fleet to 30 or more passenger vehicles thereby becoming subject to the CO₂ emission limits in 310 CMR 60.06(6)(a) and (b).

60.06: continued

4. Requirements for the Petition.
 - a. The Executive Office shall submit the petition to the Department no later than 60 days after the end of the calendar year in which the Executive Office seeks to have additional CO₂ allocated.
 - b. If the basis for the petition is 310 CMR 60.06(6)(c)3.a., the Executive Office shall provide all the information in 310 CMR 60.06(7)(b).
 - c. If the basis for the petition is 310 CMR 60.06(6)(c)3.b., the Executive Office shall provide a detailed explanation of the alleged mathematical error and any supporting documentation.
 - d. If the basis for the petition is 310 CMR 60.06(6)(c)3.c., the Executive Office shall describe the event leading to the need to expand the passenger vehicle fleet for the Executive Office and also provide all the information in 310 CMR 60.06(7)(b).
 - e. The petition shall be signed and certified in accordance with the requirements at 310 CMR 60.06(7)(b)8.
5. In its sole discretion, the Department will approve or deny the petition in writing within 60 days of receipt of the petition. During the 60 day review period, the Department may request additional information from the Executive Office. Depending on when the Department receives the information, and the volume of the information, the Department may extend the 60 day review period.
 - a. If the Department approves the petition, calculates a modified or new limit, and/or allocates additional CO₂, the modified CO₂ emission limit(s) in the approval letter shall be enforceable in *lieu* of the CO₂ emission limit in 310 CMR 60.06(6)(a).
 - b. If the petition is approved, the Department will calculate the metric tons of CO₂ emissions remaining in the set-aside for the applicable calendar year and publish that figure on its website.
- (d) Petition Process for Executive Offices with less than 30 Passenger Vehicles.
 1. If an Executive Office decreases its passenger vehicle fleet to less than 30 passenger vehicles for one or more years, it may petition the Department to be excluded from CO₂ emission limits on its passenger vehicles.
 2. Requirements for the petition.
 - a. The Executive Office shall submit the petition to the Department no later than 60 days after the end of the calendar year in which the Executive Office seeks to be excluded from the CO₂ emission limits.
 - b. The Executive Office shall provide all the information in 310 CMR 60.06(7)(b).
 - c. The petition shall be signed and certified in accordance with the requirements at 310 CMR 60.06(7)(b)8.
 3. In its sole discretion, the Department will approve or deny the petition in writing within 60 days of receipt of the petition. During the 60 day review period, the Department may request additional information from the Executive Office. Depending on when the Department receives the information, and the volume of the information, the Department may extend the 60 day review period.
 - a. If the Department approves the petition, the Executive Office shall not have a CO₂ emission limit(s) unless and until the Executive Office increases its passenger vehicle fleet to 30 or more passenger vehicles.
 - b. If the petition is approved, the Department will calculate the metric tons of CO₂ emissions remaining in the set-aside for the applicable calendar year and publish that figure on its website.
- (7) Annual Passenger Vehicle Reporting Requirements.
 - (a) By March 1, 2019 and by March 1st of each year thereafter, each Executive Office shall submit a report to the Department for the previous calendar year.
 - (b) The annual report shall be submitted electronically in a format specified by the Department, and shall include all of the following information as well as any additional information specified in the form provided by the Department for reporting:
 1. The Executive Office name, physical address, and mailing address;
 2. The location of records and documents;
 3. The name and contact information including e-mail address and telephone number of the Climate Change Coordinator or authorized Executive Office official submitting the report, and the person primarily responsible for preparing the report;

60.06: continued

4. The calendar year for which the information is submitted;
5. For each passenger vehicle owned or leased:
 - a. vehicle identification number (VIN);
 - b. vehicle make;
 - c. vehicle model;
 - d. vehicle model year; and
 - e. entity within the Executive Office that owns or leases the vehicle;
6. The total gallons of gasoline and diesel, cubic feet of hydrogen and natural gas and megawatt hours of electricity used by the passenger vehicles owned or leased by the Executive Office;
7. Metric tons of CO₂ emissions from passenger vehicles, by fuel, as calculated using the equations specified in 310 CMR 60.06(5); and
8. The signature of the Climate Change Coordinator or authorized Executive Office official, and the following certification statement: "I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

(8) Non-passenger Vehicle Reporting Requirements.

- (a) By the deadlines in 310 CMR 60.06(4)(b) and (c), each Executive Office shall also submit reports to the Department with information about non-passenger vehicles owned or leased by that Executive Office.
- (b) The reports shall be submitted electronically in a format specified by the Department, and shall include all of the following information as well as any additional information specified in the form provided by the Department for reporting:
 1. The Executive Office name, physical address, and mailing address;
 2. The location of records and documents;
 3. The name and contact information including e-mail address and telephone number of the Climate Change Coordinator or authorized Executive Office official submitting the report, and the person primarily responsible for preparing the report;
 4. The calendar year for which the information is submitted;
 5. For each vehicle owned or leased that is not a passenger vehicle, and that has an odometer:
 - a. vehicle identification number (VIN);
 - b. vehicle make;
 - c. vehicle model;
 - d. vehicle model year;
 - e. gross vehicle weight rating (GVWR);
 - f. entity within the Executive Office that owns or leases the vehicle;
 - g. VMT;
 - h. primary type of fuel used;
 - i. gallons of gasoline or diesel, or cubic feet of hydrogen or natural gas or megawatt hours of electricity used as primary fuel;
 - j. secondary type of fuel used, if applicable;
 - k. gallons of gasoline or diesel, or cubic feet of hydrogen or natural gas or megawatt hours of electricity used as secondary fuel;
 - l. a description of what the vehicle is used for (for example, snow plow, street sweeper, bus, emergency response, off-road use); and
 6. The signature of the Climate Change Coordinator or authorized Executive Office official, and the following certification statement: "I certify that I have personally examined the report and am familiar with the information contained in that report and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

60.06: continued

(9) Monitoring and Recordkeeping Requirements.

(a) Each Executive Office shall collect, record and maintain information sufficient to demonstrate compliance with 310 CMR 60.06.

(b) Each Executive Office shall retain for five years documentation sufficient to demonstrate compliance with 310 CMR 60.06 and shall provide such documentation to the Department upon request. The documentation shall be submitted in the format and within the time limit requested by the Department.

(10) Compliance Verification. The Department may verify compliance with 310 CMR 60.06 by conducting inspections, requesting information and records and requiring the collection of information; provided that 310 CMR 60.06(10) does not limit the authority of the Department as otherwise provided by law or in an authorization, determination, modification, permit, or other approval, or by the terms of any order or other enforcement document.

(a) Access to Information. Where necessary to ascertain compliance with 310 CMR 60.06, including actual or potential CO₂ emissions, the Department may request of an Executive Office information or records. The Executive Office shall, within a reasonable time, furnish the requested information or records and shall permit Department personnel or authorized representatives to have access to and to take images of such records.

(b) Requirement to Collect Information. When the Department has reason to believe that an Executive Office has exceeded its CO₂ emissions limit or violated any other condition in 310 CMR 60.06, the Department may require the Executive Office to submit the necessary information or records to determine compliance. In doing so, the Department may require an Executive Office to:

1. Perform audits on CO₂ emissions records using standard procedures and methods;
2. Quantify CO₂ emissions in accordance with the procedures and methods as the Department may prescribe;
3. Make periodic reports to the Department, as necessary, to assure continuous compliance with 310 CMR 60.06; and
4. Maintain other records and provide any other information as the Department might reasonably require.

(11) Enforcement. The Department shall enforce the requirements of 310 CMR 60.06 in accordance with applicable federal and Massachusetts law, including but not limited to M.G.L. c. 21A, § 16; 310 CMR 5.00: *Administrative Penalty*; M.G.L. c. 111, §§ 2C, 142A through 142M; and c. 21N § 7(d).

REGULATORY AUTHORITY

310 CMR 60.00: M.G.L. c. 111, §§ 2C and 142A through M; M.G.L. c. 21N; M.G.L. c. 21A, §§ 2, 8 and 16.

(PAGES 2375 THROUGH 2400 ARE RESERVED FOR FUTURE USE.)

310 CMR 70.00: ENVIRONMENTAL RESULTS PROGRAM CERTIFICATION

Section

- 70.01: Purpose and Authority
- 70.02: Definitions
- 70.03: Compliance Certification Requirements
- 70.04: Violations

70.01: Purpose and Authority

(1) The purpose of 310 CMR 70.00 is to provide for the protection of public health, safety, welfare and the environment by requiring Environmental Results Program (ERP) facilities or units to submit a performance based compliance certification to the Department.

(2) 310 CMR 70.00 is promulgated pursuant to the authority of M.G.L. c. 21, §§ 26 through 53 (the Massachusetts Clean Waters Act), M.G.L. c. 21A, §§ 2, 13 and 16, M.G.L. c. 21C (the Hazardous Waste Management Act), M.G.L. c. 21H, §§ 6A through 6N (the Mercury Management Act), M.G.L. c. 21O, § 4 (The Operation and Removal of Underground Storage Tanks), M.G.L. c. 111, §§ 142A through 142M (the Massachusetts Clean Air Act) and M.G.L. c. 111 § 150A (the Solid Waste Management Act).

70.02: Definitions

The definitions found in 310 CMR 70.02 are for use only in the compliance certification requirements contained in 310 CMR 70.00 and are not intended to replace the definitions of those terms in the underlying standards.

Certification means the certification form as prescribed by the Department pursuant to 310 CMR 70.03(2), which includes the certification statement requirements pursuant to 310 CMR 70.03(2).

Department means the Massachusetts Department of Environmental Protection.

Environmental Results Program (ERP) Facility or Unit means one of the following:

- (a) a dry cleaner subject to 310 CMR 7.26(10) through (16);
- (b) a photo processor subject to 310 CMR 71.00: *Industrial Wastewater Regulations for Photo Processors*;
- (c) a printer as defined in 310 CMR 7.26(22): Printer;
- (d) a boiler subject to 310 CMR 7.26(30) through (37);
- (e) an engine or combustion turbine subject to 310 CMR 7.26(40) through (44);
- (f) a dental facility subject to 310 CMR 73.00: *Amalgam Wastewater and Recycling Regulations for Dental Facilities*;
- (g) an industrial wastewater holding tank subject to 314 CMR 18.00: *Industrial Wastewater Holding Tank and Container Construction, Operation, and Record Keeping Requirements*.
- (h) a scrap recycling facility, vehicle recycler or vehicle manufacturer subject to 310 CMR 74.00: *Removal and Recycling of Mercury-added Components in Vehicles*;
- (i) a manufacturer of a mercury-added product subject to 310 CMR 75.00: *Collection and Recycling, Labeling, and Sales Ban of Mercury-added Products*;
- (j) a manufacturer of mercury-added lamps subject to 310 CMR 75.00: *Collection and Recycling, Labeling, and Sales Ban of Mercury-added Products*; or
- (k) an underground storage tank system subject to 310 CMR 80.00: *Underground Storage Tank (UST) Operator Training*.

ERP Sector means all ERP facilities or units of one type, with the exception of printers where the certification requirements for very small printers differ from those of other printers as defined in 310 CMR 7.26(22): *Definitions*.

Operator means the person responsible for the over-all operation of an ERP facility or unit.

70.02: continued

Owner means any person who has legal or equitable ownership, alone or with others, of an ERP facility or unit, including, but not limited to, any agent, executor, administrator, trustee, lessee, or guardian of the estate for the holder of legal title.

Person means any individual, partnership, corporation, syndicate, company, firm, association, authority, department, bureau, trust or group including, but not limited to, a city, town, county, the Commonwealth and its agencies, and the federal government.

Responsible Official is one of the following:

- (a) For a corporation: a president, secretary, treasurer, or a vice-president of the corporation in charge of a principal business function who has been duly authorized pursuant to a corporate vote, or a representative of the corporation who has been duly authorized pursuant to a corporate vote provided the representative is responsible for the overall operation of the facility or unit;
- (b) For a partnership: a general partner with the authority to bind the partnership or the proprietor, respectively;
- (c) For a sole proprietorship; the sole proprietor;
- (d) For a municipality, state, federal, or other public agency including any legislatively created authority, board, commission, district, *etc.*: either a principal executive officer or ranking elected official who is empowered to enter into contracts on behalf of the municipality or public agency.

Standards means those requirements listed in the certification form referred to in 310 CMR 70.03(2), including but not limited to 310 CMR 7.00: *Air Pollution Control*, 30.00: *Hazardous Waste*, 71.00: *Industrial Wastewater Regulations for Photo Processors*, 72.00: *Industrial Wastewater Standard for Dry Cleaners*, 73.00: *Amalgam Wastewater and Recycling Regulations for Dental Facilities*, 74.00: *Removal and Recycling of Mercury-added Components in Vehicles*, 75.00: *Collection, Recycling, Labeling, and Sales Ban of Mercury-added Products*, 314 CMR 3.00: *Surface Water Discharge Permit Program*, 5.00: *Ground Water Discharge Permit Program*, or 12.00: *Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Dischargers*, requirements contained in NESHAP's (40 CFR Part 61 Subparts, and Part 63) or NSPS's (40 CFR Part 60 Subparts) that have been delegated to Massachusetts, and the terms and conditions of any permits issued pursuant to any of those regulations.

70.03: Compliance Certification Requirements

(1) Schedule for Submission of Compliance Certification.

- (a) The owner or operator of each ERP facility or unit shall submit a certification in accordance with 310 CMR 70.03(2) and thereafter shall submit, as applicable, a periodic compliance certification in accordance with the schedule set forth herein for the specific type of ERP facility or unit.
- (b) The owner or operator of each ERP facility or unit, except underground storage tank systems subject to 310 CMR 80.00: *Underground Storage Tank (UST) Operator Training*, shall submit a compliance certification in accordance with 310 CMR 70.03(1) and (2) within 60 days of:
 - 1. the commencement of operation of a new ERP facility or unit; except for boiler(s) subject to 310 CMR 7.26(30): *U Boilers - Applicability* that must submit a certification in accordance with the schedule in 310 CMR 7.26(32): *Certification*;
 - 2. the recommencement of operation of an ERP facility or unit for which no certification was submitted during the year prior to recommencement; except for boiler(s) subject to 310 CMR 7.26(30): *U Boilers - Applicability* that must submit a certification in accordance with the schedule in 310 CMR 7.02(3)(m): *Reactivating an Inactive Emission Unit*; or
 - 3. acquiring an ERP facility or unit unless exempted from this requirement pursuant to 314 CMR 18.10(3).

70.03: continued

- (c) If a periodic compliance certification is required, then the owner or operator of the ERP facility or unit shall submit the compliance certification by the end of each certification period unless a statement of non-applicability is submitted to the Department on a form prescribed by the Department.
- (d) Notwithstanding 310 CMR 70.03(1)(a) and (b), a photo processor holding a permit from the Massachusetts Water Resources Authority pursuant to 360 CMR 10.000: *Sewer Use* is deemed to hold the equivalent of an ERP certification and is not required to file a one-time compliance certification pursuant to 310 CMR 70.00 and 71.00: *Industrial Wastewater Regulations for Photo Processors*, but such a photo processor is required to pay an annual compliance fee to the Department pursuant to 310 CMR 4.00: *Timely Action Schedule and Fee Provisions*.
- (e) A photo processor located in the service area of the Massachusetts Water Resources Authority and which hauls or ships photo processing waste off-site is required to file one-time compliance certification pursuant to 310 CMR 70.00 and 71.00: *Industrial Wastewater Regulations for Photo Processors*.
- (f) Owners or operators of the following types of ERP facilities or units shall submit a periodic compliance certification to the Department by September 15th of each year except as provided in 310 CMR 70.03(h):
1. dry cleaners subject to 310 CMR 7.26(10) through (16); and
 2. printers, with the exception of very small printers, subject to 310 CMR 7.26(20) through (29).
- (g) The owner or operator of the following types of ERP facilities or units shall submit a periodic or one-time compliance certification in accordance with the following schedules:
1. The owner or operator of a facility with boilers subject to 310 CMR 7.26(30): *U Boilers - Applicability* shall submit a one-time certification in accordance with the schedule set forth in 310 CMR 7.26(32): *Certification*.
 2. The owner or operator of an industrial wastewater holding tank shall submit to the Department a one-time certification in accordance with the schedule and conditions set forth in 314 CMR 18.10: *Certification*.
 3. The owner or operator of a photo processor subject to 310 CMR 71.00: *Industrial Wastewater Regulations for Photo Processors* shall submit a one-time certification in accordance with 310 CMR 70.03(1)(b).
 4. The owner or operator of a very small printer as defined in 310 CMR 7.26(22) shall submit a one-time certification in accordance with 310 CMR 70.03(1)(b).
 5. The owner or operator of a dental facility subject to 310 CMR 73.00: *Amalgam Wastewater and Recycling Regulations for Dental Facilities* shall submit a certification in accordance with the schedule and conditions referenced in 310 CMR 73.07: *Compliance Certification Requirements for Dental Facilities*.
 6. An owner or operator of an engine or combustion turbine subject to 310 CMR 7.26(40) through (44) shall submit a certification in accordance with the schedule and conditions set forth in 310 CMR 7.26: *Industry Performance Standards*.
 7. Scrap recycling facilities, vehicle recyclers and vehicle manufacturers subject to 310 CMR 74.00: *Removal and Recycling of Mercury-added Components in Vehicles* shall submit certification forms in compliance with the applicable schedules and conditions referenced in 310 CMR 74.09: *Submittal of Compliance Certifications and Reports to the Department*.
 8. Manufacturers of mercury-added products and lamps subject to 310 CMR 75.00: *Collection, Recycling, Labeling, and Sales Ban of Mercury-added Products*, shall submit certification forms in compliance with the applicable schedules and conditions referenced in 310 CMR 75.04: *Plans for Collecting and Recycling Mercury-added Products*.

70.03: continued

9. An Owner or Operator of an underground storage tank system subject to 310 CMR 80.00: *Underground Storage Tank (UST) Operator Training* shall submit a certification in accordance with the schedule and conditions set forth in 310 CMR 80.34: *Requirements for Compliance Certification*.

(h) The Department may determine a schedule, less frequently than the schedule in 310 CMR 70.03(1)(f), for submission of periodic compliance certifications, based on the following criteria:

1. the size, composition and activities of the ERP sector;
2. the quantity and types of (toxic) materials used and potential wastes, emissions and discharges of the ERP sector;
3. the degree of compliance with established regulatory requirements by the ERP sector;
4. the degree of control over the environmental and public health aspects of activities by the ERP sector; and
5. any other relevant information regarding the environmental consequences of the periodic compliance certifications and return to compliance response rates and results within the ERP sector.

The Department will notify the public and affected businesses by publishing a notice in the *Massachusetts Environmental Policy Act Monitor* and may also notify an ERP sector through industry trade associations, the Department's website and other appropriate cost effective methods of changes in the ERP sector's certification schedule.

(2) Certification Statement. The Responsible Official for each ERP facility or unit shall submit a compliance certification. Each compliance certification shall be on a form prescribed by the Department and shall address compliance with standards to which the ERP facility or unit is subject. The certification form may include specialized forms for specific categories of ERP facilities or units, and any owner/operator required to submit a certification pursuant to 310 CMR 70.03 shall submit all applicable forms. The compliance certification shall:

- (a) state whether the ERP facility or unit is in compliance with the applicable standards as listed on the certification form;
- (b) identify any violations that occurred and the date of such violations within the certification period prior to the due date of the certification statement including, but not limited to, any notifications required pursuant to M.G.L. c. 21E, § 7 and 310 CMR 40.0300: *Notification of Releases and Threats of Release of Oil and Hazardous Materials; Identification and Listing of Oil and Hazardous Materials* (releases and threats of release of oil and/or hazardous material), and any reporting of violations required pursuant to 310 CMR 7.02(6): *Aggregated Emissions* (air pollution control equipment failures), 314 CMR 12.03(8) (emergency bypasses to sewer treatment works), 310 CMR 30.520: *Basis for Tier Classification* (hazardous waste contingency plans) and the terms and conditions of any permits issued by the Department; and
- (c) state what the owner/operator will do to return to compliance and the date by which compliance will be achieved; and
- (d) include the following statement: "I, [name of responsible official], attest under the pains and penalties of perjury:
 1. that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification statement;
 2. that, based on my inquiry of those individuals responsible for obtaining the information, the information contained in this submittal is to the best of my knowledge, true, accurate, and complete;
 3. that systems to maintain compliance are in place at the facility or unit and will be maintained even if processes or operating procedures are changed; and
 4. that I am fully authorized to make this attestation on behalf of this facility or unit. I am aware that there are significant penalties, including, but not limited to possible fines and imprisonment, for submitting false, inaccurate, or incomplete information."
- (e) provide any other information pertaining to the facility which the Department requires.

70.04: Violations

- (1) It shall be a violation of 310 CMR 70.00 for any person to:
 - (a) fail to submit a timely certification pursuant to 310 CMR 70.03;
 - (b) make any false, inaccurate, incomplete, or misleading statements in any certification required pursuant to 310 CMR 70.03;
 - (c) make any false, inaccurate, incomplete or misleading statements in any record, report, plan, file, log, or register which that person is required to keep pursuant to the applicable standards;
 - (d) hold themselves out as a responsible official in violation of the requirements contained in 310 CMR 70.03;
 - (e) fail to comply with the applicable standards; or
 - (f) violate any other provision of 310 CMR 70.00.

- (2) The Department reserves the right to exercise the full extent of its legal authority, pursuant to M.G.L. c. 21, §§ 26 through 53 (Massachusetts Clean Waters Act), M.G.L. c. 21A, §§ 2, 8, 13 and 16, M.G.L. c. 21C (Hazardous Waste Management Act), M.G.L. c. 21H, §§ 6A through 6N (the Mercury Management Act), M.G.L. c. 21H, § 8, M.G.L. c. 21O, § 4 (The Operation and Removal of Underground Storage Tanks), M.G.L. c. 111, §§ 142A through 142M (Massachusetts Clean Air Act), and M.G.L. c. 111, § 150A (Solid Waste Management Act), in order to obtain full compliance with all requirements applicable to ERP facilities and units, including but not limited to, criminal prosecution, fines, civil and administrative penalties, and orders.

REGULATORY AUTHORITY

310 CMR 70.00: M.G.L. c. 21, §§ 26 through 53; c. 21A, §§ 2, 13 and 16; c. 21C, c. 21H, §§ 6A through 6N (the Mercury Management Act), c. 21O § 4, and c. 111, §§ 142A through 142M and 150A.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 71.00: INDUSTRIAL WASTEWATER REGULATIONS FOR PHOTO PROCESSORS AND PRINTERS

Section

- 71.01: Purpose and Authority
- 71.02: Definitions
- 71.03: Applicability
- 71.04: Performance Standard for Photo Processors and Printers with Equivalent POTW Permits
- 71.05: Performance Standard for Photo Processors and Printers Without Equivalent POTW Permits That Discharge or Ship Industrial Wastewater to a POTW
- 71.06: Supplemental Requirements for Photo Processors and Printers
- 71.07: Compliance Certification for Photo Processors and Printers

71.01: Purpose and Authority

(1) The purpose of 310 CMR 71.00 is to provide for the protection of public health, safety, welfare and the environment by establishing performance standards for photo processors and printers and requiring a performance-based facility-wide compliance certification in accordance with 310 CMR 70.00: *Environmental Results Program Certification*.

(2) 310 CMR 71.00 is promulgated pursuant to the authority of M.G.L. c. 21, §§ 26 through 53 and M.G.L. c. 21C.

71.02: Definitions

Cartridge Unit means any variety of hollow canisters containing steel wool or fiberglass fibers impregnated with iron filings which are used for silver recovery. These units use metallic replacement to recover silver. They are sometimes called "chemical recovery cartridges", "metallic recovery cartridges" or "canisters".

Class A Recycling Permit means a permit issued pursuant to 310 CMR 30.221: *General Provisions*.

Container means any portable device in which an industrial wastewater is stored, transported, treated, disposed of, or otherwise handled.

Equivalent POTW Permit means a permit issued by a Publicly Owned Treatment Works (POTW) containing an effluent limit of no more than 2 mg/l for total silver (*i.e.*, two parts per million).

Industrial Wastewater means wastewater resulting from any process of industry, trade or business, regardless of volume or pollutant content. Wastewater which contains only sewage, non-contact cooling water, compressor or air conditioner condensate, including wastewaters from restaurants and school/industry cafeterias is not considered industrial wastewater.

Photo Processor means a facility, as defined in 310 CMR 71.00, that performs the chemical process by which photographic film is treated after photographic exposure to produce a negative or positive image (*e.g.*, processing color prints or slides, or black and white prints or slides). Photo processor does not include a facility that only conducts digital processing of color prints or slides, or black and white prints, or slides.

Photo Processing means the chemical process by which photographic film is treated after photographic exposure to produce a negative or positive image (*e.g.*, color or black and white film, prints, or slides). Photo processing does not include a the digital processing of color or black and white prints, or slides.

Printer means the owner or operator of a facility subject to 310 CMR 7.26(20) through (29) pursuant to 310 CMR 7.26(21): *Applicability*.

71.02: continued

Publicly Owned Treatment Works or POTW means any device or system used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature which is owned by a public entity. A POTW includes any sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Silver Recovery Unit or System, or Silver Recovery Unit or Unit means equipment or a process that removes silver from solutions such as fixers, bleach fixers, washless stabilizers, and low flow washes.

Small Scale Precipitation Unit means an enclosed pre-assembled unit which uses chemicals to cause the silver to settle to the bottom of the container. The water is then separated from the silver on the bottom and is discharged. The resultant sludge is sent off-site for refining.

Tank means a stationary device used to store or contain an accumulation of industrial wastewater and which is constructed of non-earthen materials (*e.g.*, concrete, steel or plastic) which provide structural support.

71.03: Applicability

(1) Unless exempt pursuant to 310 CMR 71.03(2), the following photo processors are subject to 310 CMR 71.00:

- (a) photo processors that perform photo processing in a commercial space; or
- (b) photo processors that use automated photo processing equipment.

(2) The following photo processors are exempt from 310 CMR 71.00:

- (a) photo processors that discharge or generate industrial wastewater from photo processing and industrial wastewater from other industrial processes;
- (b) photo processors that process motion picture film;
- (c) photo processing performed in a dental or other medical offices;
- (d) photo processors described in 310 CMR 71.07(1) that are not required to submit a compliance certification. Such exemption shall expire at the earlier of an election by an otherwise exempted photo processor to certify in accordance with 310 CMR 71.00, or at the expiration of any permit, described in 310 CMR 71.07(1), held by that otherwise exempted photo processor.
- (e) photo processing performed in a residence; and
- (f) photo processors using only hand tray processing.

(3) 310 CMR 71.00 applies to printers subject to 310 CMR 7.26(20) through (29).

71.04: Performance Standard for Photo Processors and Printers with Equivalent POTW Permits

Each photo processor with an equivalent POTW permit shall comply with that equivalent POTW permit and the applicable requirements of 310 CMR 71.05(2) through (4) and 71.06.

71.05: Performance Standard for Photo Processors and Printers Without Equivalent POTW Permits That Discharge or Ship Industrial Wastewater to a POTW

Except as set forth in 310 CMR 71.05(6), each photo processor and each printer without an equivalent POTW permit that discharges or ships industrial wastewater to a POTW shall comply with the applicable requirements of 310 CMR 71.06 and the following:

(1) Discharge Limit. Each photo processor and each printer shall not discharge or ship industrial wastewater to a POTW unless the wastewater from photo processing contains no more than 2 mg/l (*i.e.*, two parts per million) of silver, measured in accordance with 310 CMR 71.05(3). In addition, by one year from May 1, 1998 no printer shall discharge or ship to a POTW wastewater containing dischromate (chromic acid) resulting from film processor cleaning operations.

71.05: continued

- (2) Operation and Maintenance. Each photo processor and each printer shall maintain a silver recovery unit in accordance with the manufacturer's or vendor's instructions to meet the 2 mg/l silver limit or limit set forth in the equivalent POTW permit, whichever is stricter.
- (3) Sampling and Analysis. Each photo processor and each printer shall sample its wastewater and shall analyze the sample for silver content.
- (a) Frequency. Sampling and analysis shall occur as frequently as necessary to demonstrate that the discharge complies with 310 CMR 71.05(1) and 71.06(2), and at least monthly, unless the Department approves a different frequency, or unless a different frequency is set in accordance with a process reviewed and approved by the Department.
- (b) Methodology. The sample shall be representative of wastewater composition during the selected day, and shall be taken after the photo finishing process (*i.e.*, after combination with other wastestreams from photo processing) but prior to dilution with other wastewater. The sample shall be analyzed by a state-certified laboratory, a photographic equipment manufacturer, or a photochemical manufacturer provided that the lab uses methods prescribed in *Standard Methods for the Examination of Water and Wastewater*, issued by the American Health Association, American Waterworks Association, and the Water Pollution Federation, 1992 edition.
- (4) Recordkeeping and Reporting. Each photo processor shall keep the following records in 310 CMR 71.05(4)(a) through (f) and each printer shall keep the following records in 310 CMR 71.05(4)(a) through (f) on-site for at least three years.
- (a) sampling dates and results conducted in accordance with 310 CMR 71.05(3);
- (b) for silver recovery systems with cartridge units, date(s) of silver recovery cartridge installation and replacement;
- (c) for silver recovery systems without cartridge units, date(s) that the silver recovery unit is cleaned or serviced;
- (d) total amount of wastewater discharged in the past 12 months; and
- (e) total amount of wastewater passing through the silver recovery system in the past 12 months; and
- (f) MSDSs or other records demonstrating that film processor cleaners do not contain any chromium compounds.
- (5) Compliance with Board of Certified Operators of Wastewater Treatment Facilities Requirements. Each photo processor and each printer using a silver recovery system shall comply with 257 CMR 2.00: *Certification of Operators of Wastewater Treatment Facilities*, if applicable.
- (6) Printers with DEP Sewer Connection Permits. Each printer without an equivalent POTW permit that has a sewer connection permit issued by the Department pursuant to 314 CMR 7.00: *Sewer System Extension and Connection Permit Program* shall comply with either 310 CMR 71.05(1) through (4) or with the terms and conditions of that permit.

71.06: Supplemental Requirements for Photo Processors and Printers

- (1) Photo processors and printers shall not discharge industrial wastewater to the ground without a groundwater permit pursuant to 314 CMR 5.00: *Ground Water Discharge Permit Program*, and shall not discharge industrial wastewater to surface water without a permit pursuant to 314 CMR 3.00: *Surface Water Discharge Permit Program*. Discharge of industrial wastewater to a septic or on site disposal system is prohibited.
- (2) Photo processors and printers subject to 310 CMR 71.00 that use silver recovery systems with cartridges or non-cartridges shall comply with the general and specific prohibitions listed in 310 CMR 71.06(2)(a) and (b):
- (a) General Prohibitions. No person shall discharge or cause to be discharged to a POTW any substances, materials or wastewaters that can harm the sewers, wastewater treatment process, or equipment; have an adverse impact on the receiving waters or can otherwise endanger life, limb, public property or constitute a nuisance. In addition, no person shall discharge hazardous waste or allow the discharge of hazardous waste through any sewer connection.

71.06: continued

In determining the acceptability of these wastewaters, consideration shall be given to such factors as the quantities of such wastewaters in relation to flows and velocities in the sewers, materials or construction of sewers, nature of the wastewater treatment process, capacity of the wastewater treatment process, degree of treatability of such wastewaters in the wastewater treatment plant, and other pertinent factors. Pollutants introduced into POTWs by a non-domestic source shall not pass through the POTW or interfere with the operation or performance of the works. These general prohibitions and the specific prohibitions listed in 310 CMR 71.06(2)(b) apply to all non-domestic sources introducing pollutants into a POTW whether or not the source is subject to other pretreatment standards or any other Federal, State or local pretreatment requirements.

(b) Specific Prohibitions. In addition, the following pollutants shall not be introduced into a POTW:

1. Pollutants which create a fire or explosion hazard in the POTW;
2. Pollutants which cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.5 or more than 10.0, unless the works is specifically designed to accommodate such discharges;
3. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;
4. Any pollutant, including oxygen demanding pollutants discharged in a flow rate and/or pollutant concentration which will cause interference with the POTW;
5. Heat in amounts which will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40°C (104°F) unless the Division, upon request of the POTW, approves alternate temperature limits.

(3) Photo processors and printers generating hazardous waste shall comply with all applicable requirements in 310 CMR 30.000: *Hazardous Waste* including requirements for using holding tanks for hazardous waste. These holding tank requirements include:

- (a) maintain tanks and containers holding hazardous waste to be recycled on site in accordance with 310 CMR 30.205(19): *Storage and Accumulation in Tanks and Containers*;
- (b) maintain tanks and containers holding hazardous waste to be shipped off site in accordance with 310 CMR 30.340: *Large Quantity Generators*, 30.351: *Small Quantity Generators*, or 30.353: *Very Small Quantity Generators*, as applicable;
- (c) maintain records in accordance with 310 CMR 30.310: *The Manifest*, 30.331: *Recordkeeping*, and 30.353(9), as applicable, in order to demonstrate that all hazardous waste is shipped off-site to a facility authorized to receive it pursuant to 310 CMR 30.305: *Destination of Hazardous Waste or Regulated Recyclable Material Sent Off-site* or 30.353(8).

(4) Photo processors and printers using silver recovery systems which are not directly piped to the photo processing wastestream shall:

- (a) comply with any existing Class A recycling permit for the unit;
- (b) maintain tanks and containers holding hazardous industrial wastewater in accordance with 310 CMR 30.205(19): *Storage and Accumulation in Tanks and Containers*;
- (c) record amount of industrial wastewater passing through their silver recovery unit and keep the records on-site for at least three years; and
- (d) manage any hazardous waste byproducts either as a regulated recyclable material in accordance with 310 CMR 30.200: *Provisions for Recyclable Materials and for Waste Oil* or as a hazardous waste in accordance with 310 CMR 30.000 *Hazardous Waste*.

(5) Photo processors and printers using tanks or containers to store non-hazardous industrial wastewater shall:

- (a) use tanks which
 1. have a containment structure with 110% capacity of the total volume of all above-ground tanks;
 2. have a bell and light alarm in a conspicuous location if they are remotely/ automatically filled tanks. The alarm must activate when the level of wastewater reaches 75% capacity of the tank and the alarm signal must be transmitted to a staffed location. Manually filled tanks must be provided with visual or sight glass type of level measurement;

71.06: continued

3. are located to provide year round access for emptying;
 4. have odor control as necessary;
 5. are made of, or lined with, materials which will not react with, and otherwise be compatible with, the industrial wastewater to be stored; and
 6. are located in a secured storage area which is free of cracks and gaps that is sufficiently impervious to contain leaks and spills, and,
 7. have a label indicating contents are non-hazardous.
- (b) use containers which
1. satisfy requirements set by the Department of Transportation for transportation of waste off-site,
 2. have a label indicating contents are non-hazardous, and,
 3. are located in a secured storage area which is free of cracks and gaps that is sufficiently impervious to contain leaks and spills.
- (c) maintain records sufficient to demonstrate that all industrial wastewater is shipped off-site to the POTW, including, but not limited to, transporter name and address, dates of shipment, amount shipped, and destination. These records shall be kept on-site for at least three years.
- (d) implement the following operating procedures and work practices:
1. spill control measures when filling, emptying or transporting containers
 2. report to the local Board of Health within 24 hours any occurrence of spills released to the environment.

71.07: Compliance Certification for Photo Processors and Printers

(1) Beginning on September 15, 2006, and thereafter as prescribed in accordance with 310 CMR 70.03(1): *Schedule for Submission of Compliance Certification*, photo processors shall submit to the Department, a compliance certification on a form supplied by the Department in accordance with 310 CMR 70.00: *Environmental Results Program Certification*, except that photo processors discharging to a POTW holding any sewer connection permit issued pursuant to 314 CMR 7.00: *Sewer System Extension and Connection Permit Program* or holding a permit issued by the Massachusetts Water Resources Authority pursuant to 360 CMR 10.000: *Sewer Use* that do not haul or ship photo processing waste off-site are not required to submit a certification.

(2) Beginning on September 15, 2006, and as prescribed in accordance with 310 CMR 70.03(1): *Schedule for Submission of Compliance Certification*, thereafter, printers shall submit to the Department a compliance certification in accordance with 310 CMR 70.00: *Environmental Results Program Certification*.

REGULATORY AUTHORITY

310 CMR 71.00: M.G.L. c. 21, § 26 through 53; c. 21C.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 72.00: INDUSTRIAL WASTEWATER STANDARD FOR DRY CLEANERS

Section

72.01: Purpose and Authority

72.02: Definitions

72.03: Applicability

72.04: Performance Standard for Dry Cleaners

72.05 : Compliance Certification for Dry Cleaners

72.01: Purpose and Authority

(1) The purpose of 310 CMR 72.00 is to provide for the protection of public health, safety, welfare and the environment by establishing industrial wastewater performance standards for dry cleaners and requiring a performance-based facility-wide compliance certification in accordance with 310 CMR 70.00.

(2) 310 CMR 72.00 is promulgated pursuant to the authority of M.G.L. c. 21, § 26 through 53, M.G.L. c. 21C and M.G.L. c. 111, §§ 142A through 142J.

72.02: Definitions

POTW Permit means a permit issued by a Publicly Owned Treatment Works (POTW).

Industrial Wastewater means wastewater resulting from any process of industry, trade or business, regardless of volume or pollutant content. Wastewater which contains only sanitary waste, and/or non-contact cooling water, compressor or air conditioner condensate is not considered industrial wastewater for purposes of determining applicability of the regulations at 310 CMR 72.00.

Publicly Owned Treatment Works or POTW means any device or system used in the treatment (including recycling and reclamation) of sewage or industrial wastewater which is owned by a public entity. A POTW includes any sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Separator water means the wastewater phase produced by a water separator, such as a refrigerated condenser, carbon adsorber, still or muck cooker, used for the recovery of perchloroethylene vapors from dry cleaning equipment at a dry cleaning facility subject to 310 CMR 7.26. The following terms shall have the same meaning as set forth in 310 CMR 7.26(11): "water separator", "refrigerated condenser", "carbon adsorber", "still", and "muck cooker".

72.03: Applicability

(1) 310 CMR 72.00 applies to dry cleaners that are subject to 310 CMR 7.26.

(2) 310 CMR 72.00 does not apply to dry cleaners that are also industrial laundries described by SIC codes 7213 and 7218.

72.04: Performance Standard for Dry Cleaners

(1) No dry cleaner shall discharge industrial wastewater to the ground, septic system, or other on-site disposal system without a groundwater discharge permit pursuant to 314 CMR 5.00, or to surface water without a permit pursuant to 314 CMR 3.00.

(2) Each dry cleaner with a POTW permit shall comply with the terms and conditions of that permit.

(3) Each dry cleaner shall comply with the general and specific prohibitions listed below:

(a) General Prohibitions. No person shall discharge or cause to be discharged to a POTW any substances, materials or wastewaters that can harm the sewers, wastewater treatment process, or equipment; have an adverse impact on the receiving waters or can otherwise endanger life, limb, public property or constitute a nuisance.

72.04: continued

In determining the acceptability of these wastewaters, consideration shall be given to such factors as the quantities of such wastewaters in relation to flows and velocities in the sewers, materials or construction of sewers, nature of the wastewater treatment process, capacity of the wastewater treatment process, degree of treatability of such wastewaters in the wastewater treatment plant, and other pertinent factors. Pollutants introduced into POTWs by a non domestic source shall not pass through the POTW or interfere with the operation or performance of the works. These general prohibitions and the specific prohibitions listed in the 310 CMR 72.04(3)(b) apply to all non-domestic sources introducing pollutants into a POTW whether or not the source is subject to other pretreatment standards or any other Federal, State or local pretreatment requirements.

(b) Specific Prohibitions. In addition, the following pollutants shall not be introduced into a POTW:

1. Pollutants which create a fire or explosion hazard in the POTW;
 2. Pollutants which cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.5 or more than 9.5, unless the works is specifically designed to accommodate such discharges;
 3. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;
 4. Any pollutant, including oxygen demanding pollutants discharged in a flow rate and/or pollutant concentration which will cause interference with the POTW;
 5. Heat in amounts which will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40°C (104°F) unless the Division, upon request of the POTW, approves alternate temperature limits.
 6. Wastewater containing perchloroethylene, except that separator water may be discharged.
- (4) Each dry cleaner that treats industrial wastewater shall comply with 314 CMR 12.03(3) and 12.04(2).
- (5) Dry cleaners using tanks or containers to store industrial wastewater shall:
- (a) use tanks which:
 1. have a containment structure with 110% capacity of the total volume of all above-ground tanks;
 2. have a bell and light alarm in a conspicuous location if they are remotely/ automatically filled tanks. The alarm must activate when the level of wastewater reaches 75% capacity of the tank and the alarm signal must be transmitted to a staffed location. Manually filled tanks must be provided with visual or sight glass type of level measurement;
 3. are located to provide year round access for emptying;
 4. have odor control as necessary;
 5. are made of, or lined with, materials which will not react with, and otherwise be compatible with the, industrial wastewater to be stored; and,
 6. are located in a secured storage area which is free of cracks and gaps that is sufficiently impervious to contain leaks and spills.
 - (b) use containers which:
 1. satisfy requirements set by the Department of Transportation for transportation of waste off-site, and
 2. are located in a secured storage area which is free of cracks and gaps that is sufficiently impervious to contain leaks and spills.
 - (c) maintain records sufficient to demonstrate that all industrial wastewater is shipped off-site to the POTW, including, but not limited to, transporter name and address, dates of shipment, amount shipped, and destination. These records shall be kept on-site for at least three years.
 - (d) implement the following operating procedures and work practices:
 1. spill control measures when filling, emptying or transporting containers
 2. report to the local Board of Health within 24 hours any occurrence of spills released to the environment

72.04: continued

(6) Wastewater containing perchloroethylene shall not be evaporated, except that separator water may be evaporated.

72.05: Compliance Certification for Dry Cleaners

Beginning on September 15, 1998, and annually thereafter, dry cleaners shall submit to the Department a compliance certification in accordance with 310 CMR 70.00. Effective June 27, 2003, all dry cleaners required to certify pursuant to 310 CMR 72.00 shall submit to the Department an initial certification and thereafter file an annual compliance certification by September 15th of each year.

REGULATORY AUTHORITY

310 CMR 72.00: M.G.L. c. 21, § 26 through 53; c. 21C; c. 111, §§ 142A through 142J.

310 CMR 73.00: AMALGAM WASTEWATER AND RECYCLING REGULATIONS FOR DENTAL FACILITIES

Section

- 73.01: Purpose
- 73.02: Definitions
- 73.03: Applicability
- 73.04: Amalgam Separator Requirements
- 73.05: Operational Standards
- 73.06: Recordkeeping
- 73.07: Compliance Certification Requirements for Dental Facilities

73.01: Purpose

The purpose of 310 CMR 73.00 is to protect public health, safety, welfare and the environment. 310 CMR 73.00 establishes wastewater treatment, operational standards, and amalgam recycling requirements to reduce the amount of mercury discharged from dental facilities, and require a performance-based compliance certification from the owners of dental practices in compliance with 310 CMR 70.00: *Environmental Results Program Certification*.

73.02: Definitions

Amalgam. An alloy containing mercury and other metals used to restore the dentition.

Amalgam Separator. An item of dental equipment designed to remove amalgam particles from the wastewater passing through the vacuum system, or any vacuum line filters and screens and/or chair-side traps of a Dental Facility prior to its discharge.

Amalgam Waste. Any waste containing mercury amalgam or otherwise associated with preparation or use of amalgam including, but not limited to, amalgam collected by chair-side traps, screens, filters, vacuum system filters, amalgam separators or other devices; waste elemental mercury; and waste amalgam capsules.

Approved Amalgam Separator. An amalgam separator that has been demonstrated by the manufacturer to achieve a 98% or greater amalgam removal efficiency. Such removal efficiency shall be determined on the basis of test data generated by a professional laboratory that is qualified to perform the following analytical methods:

- (a) ISO protocol 11143, using average test results under empty and simulated full conditions; or
- (b) an equivalent method that meets Department-approved quality assurance and quality control criteria.

Separators installed under the Department's voluntary Dental Amalgam/Mercury Recycling Certification program, described at 310 CMR 73.03(2)(a) and (b), that have been demonstrated to achieve 95% or greater removal efficiency may be used as long as the separator is properly maintained and continues to achieve a 95% or greater removal efficiency. However, any replacement for such amalgam separators must achieve a 98% or greater amalgam removal efficiency.

Dental Facility or Facility. Any institution, clinic, office or location where dentistry is practiced, as defined in M.G.L. c. 112, § 50.

Department. The Massachusetts Department of Environmental Protection.

ISO. The International Organization for Standardization.

Operational Standards. Specified business, operational, maintenance and other procedures listed at 310 CMR 73.05 that limit the amount of mercury released to the environment through wastewater and solid waste.

73.02: continued

Owner of a Dental Facility. Any person who owns, leases, maintains, or operates a Dental Facility in any office or other room or rooms where dentistry is practiced, as defined in M.G.L. c. 112, § 50, or who directly or indirectly is manager, proprietor, or conductor of the same.

Publicly Owned Treatment Works (POTW). Any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a public entity. A POTW includes any sewers, pipes, or other conveyances only if it conveys wastewater to a POTW providing treatment.

Reclaimed. Processing to recover a usable product or regeneration, but does not include burning (e.g., for energy recovery) or use constituting disposal.

73.03: Applicability

- (1) 310 CMR 73.00 is applicable to every Dental Facility, except any of the following:
 - (a) A Dental Facility that does not generate or discharge wastewater from amalgam-related processes;
 - (b) A Dental Facility that does not place amalgam and does not remove amalgam, except in limited emergency or unplanned, unanticipated circumstances; and
 - (c) A Dental Facility that certifies to a POTW on an annual or biennial basis pursuant to the receiving POTW's regulations, and 40 CFR 441: *Dental Office Point Source Category*.
- (2) Each Dental Facility that is subject to 310 CMR 73.00 must comply in accordance with the following schedule:
 - (a) A Dental Facility certified by an owner of a Facility under the Department's voluntary Dental Amalgam/Mercury Recycling Certification program that it installed an approved amalgam separator by February 28, 2005, and maintains compliance with all other requirements of that program, is subject to 310 CMR 73.00 effective February 1, 2010.
 - (b) A Dental Facility certified by an owner of a Facility under the Department's voluntary Dental Amalgam/Mercury Recycling Certification program that it installed an approved amalgam separator between March 1, 2005 - January 31, 2006, and maintains compliance with all other requirements of that program, is subject to 310 CMR 73.00 effective February 1, 2007.
 - (c) A Dental Facility in operation as of April 24, 2006 and that did not participate in the Department's voluntary Dental Amalgam/Mercury Recycling Certification program shall comply with all requirements of 310 CMR 73.00 no later than June 23, 2006.
 - (d) A new or expanded Dental Facility shall install an approved amalgam separator before commencing operation and shall comply with all other requirements of 310 CMR 73.00 in accordance with 310 CMR 70.03(4).
 1. A new Dental Facility is one that commences operations after April 24, 2006.
 2. An expanded Dental Facility is one whose maximum amalgam wastewater flow rate exceeds the capacity of the existing certified amalgam separator due to facility expansion.
- (3) Compliance with 310 CMR 73.00 does not release the owner of a Dental Facility from the need to comply with other applicable state, federal and local requirements.
- (4) Certification Form. Each compliance certification required pursuant to 310 CMR 70.03 shall be on a form prescribed by the Department and shall address compliance with the standards established by 310 CMR 70.00 and 73.00. The certification form may also address compliance with other applicable standards promulgated by the Department.

73.04: Amalgam Separator Requirements

- (1) Each Dental Facility subject to 310 CMR 73.00 shall:
 - (a) install an approved amalgam separator(s) which meets the requirements of 310 CMR 73.04;
 - (b) ensure that all wastewater that contains amalgam waste from the Dental Facility including, but not limited to, wastewater from chairs and cuspidors, passes through an approved amalgam separator before being discharged;

73.04: continued

- (c) ensure that the installed amalgam separator(s) is properly sized to accommodate maximum amalgam wastewater flow rates at the facility;
- (d) ensure that any amalgam separator is installed, operated and maintained according to the instructions of the manufacturer of the unit;
- (e) for each new or expanded Dental Facility that opens after April 24, 2006, ensure that the amalgam separator is installed prior to commencing operations; and
- (f) provide to the Department upon request test data generated by the professional laboratory that documents the amalgam separator's removal efficiency.

73.05: Operational Standards

- (1) Each Dental Facility subject to 310 CMR 73.00 shall:
 - (a) ensure that no amalgam waste is disposed of with solid waste or medical waste;
 - (b) safely store all amalgam waste generated at the Dental Facility in containers that are sealed and structurally sound;
 - (c) use only biodegradable disinfectants and cleaning agents that are non-corrosive (pH range between 6.5 - 8.0) and non-oxidizing (no bleach) in the facility's vacuum lines and all other drains connected to its amalgam separator. The disinfectants and cleaning agents shall also be compatible with the unit(s) in use, and shall be used only in accordance with the unit manufacturer's instructions;
 - (d) ensure amalgam separator system clean-outs are conducted in accordance with the manufacturer's recommended frequency. The frequency may depend upon the volume of wastewater discharged, and may be as often as daily, weekly, or monthly;
 - (e) transfer all amalgam waste to a permitted hazardous waste recycling facility, licensed hazardous waste facility, a facility that consolidates shipments of amalgam waste before being shipped off-site for reclamation, or, if shipped out of state, a facility that is authorized to reclaim mercury from amalgam waste. Shipments of amalgam waste to facilities described in 310 CMR 73.05(1)(d) shall be transported by either a common carrier or a licensed hazardous waste transporter, and accompanied by information identifying the shipment as amalgam waste containing mercury; and
 - (f) retain documentation, such as a certificate of recycling, a hazardous waste manifest, bill of lading or contractual agreement, showing that the amalgam waste has been recycled by being reclaimed and the name and address of the facility at which the amalgam waste is ultimately recycled.

73.06: Recordkeeping

- (1) Each Dental Facility shall keep records on-site that demonstrate compliance with manufacturers' recommended maintenance and servicing of installed amalgam separators, that the amalgam waste has been recycled pursuant to 310 CMR 73.05(1)(e), and the supporting information upon which the Dental Facility relied to file the certification required by 310 CMR 73.07.
- (2) Records referenced in 310 CMR 73.06(1) shall be retained for five years.

73.07: Compliance Certification Requirements for Dental Facilities

- (1) Certification Form. Within 60 days of a Dental Facility becoming subject to the requirements of 310 CMR 73.00, pursuant to the schedule described at 310 CMR 73.03(2), an owner of a Dental Facility shall submit to the Department a compliance certification. The certification shall address compliance with all applicable standards on a form prescribed by the Department that shall include at least the following information:
 - (a) The type of amalgam separator installed, including manufacturer and model.
 - (b) Date upon which the amalgam separator became operational, and for a new or expanded Dental Facility, the date the facility became operational.
 - (c) Identification of the requirements of 310 CMR 73.04 for amalgam separators and certification as to whether or not the system meets all such requirements.
 - (d) Certification of compliance with the operational standards of 310 CMR 73.05.
 - (e) Certification that documentation and records are being maintained as stipulated in 310 CMR 73.06.

73.07: continued

(f) Certification that at least one staff member is familiar with procedures to follow in order to ensure compliance with the amalgam separator requirements and operational standards described at 310 CMR 73.04 and 73.05, and that all other staff that handle amalgam waste are informed of these procedures.

(g) Certification that Dental Facility that owns or operates industrial wastewater holding tanks is in compliance with 314 CMR 18.00: *Industrial Wastewater Holding Tank and Container Construction, Operation, and Recordkeeping Requirements*.

(h) Any other information pertaining to the Dental Facility which the Department requires.

(2) Within 60 days of a new owner taking ownership of a Dental Facility subject to the requirements of 310 CMR 73.00, the new owner shall notify MassDEP of the change in ownership on a form specified by the Department.

(3) Beginning in calendar year 2016, each owner of a Dental Facility subject to 310 CMR 73.07 shall recertify every two years in every even numbered year, after the initial certification, that the dental practice continues to be in compliance with all requirements listed in 310 CMR 73.04 through 73.07. All such recertifications shall be submitted by March 31st of the year in which the recertification is due.

REGULATORY AUTHORITY

310 CMR 73.00: M.G.L. c. 21, §§ 26 through 53; M.G.L. c. 21C, §§ 4 and 6; M.G.L. c. 111, § 150A; and M.G.L. c. 21A, §§ 2 and 8.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 74.00: REMOVAL AND RECYCLING OF MERCURY-ADDED COMPONENTS IN VEHICLES

Section

- 74.01: Purpose and Authority
- 74.02: Definitions
- 74.03: Applicability
- 74.04: Requirements for the Removal of Mercury-added Components Before Crushing
- 74.05: Prohibition on the Sale of Mercury-added Switches in Vehicles
- 74.06: Plans for Proper Removal, Recovery, and Recycling of Mercury-added Switches from End-of-life Vehicles
- 74.07: Measuring Recycling of Mercury-added Vehicle Switches
- 74.08: Recordkeeping
- 74.09: Submittal of Compliance Certifications and Reports to the Department

74.01: Purpose and Authority

The purpose of 310 CMR 74.00 is to protect public health, safety, welfare and the environment by implementing the Mercury Management Act (St. 2006, c. 190). 310 CMR 74.00 prohibit the sale of mercury-added vehicle switches, establishes requirements for the removal of mercury-added vehicle switches and other components that contain mercury before a vehicle is crushed or shredded and requires a performance-based compliance certification in compliance with 310 CMR 70.00.

310 CMR 74.00 is promulgated pursuant to the authority of M.G.L. c. 21C, §§ 4 and 6, and M.G.L. c. 21H, §§ 6C and 6N.

74.02: Definitions

The definitions found in 310 CMR 74.02 apply and are limited to 310 CMR 74.00.

Automobile Dealer or Vehicle Dealer means any person who, in the ordinary course of his business, is engaged in the business of selling motor vehicles to consumers or other end users pursuant to a franchise agreement and who is required to obtain a Class 1 or Class 2 license pursuant to the provisions of M.G.L. c. 140, §§ 58 and 59.

Automobile Manufacturer or Vehicle Manufacturer means any person, firm, association, partnership, corporation, governmental entity, organization, combination or joint venture which is last in the production or assembly process of a new vehicle that uses mercury-added components, or in the case of an imported vehicle, the importer or domestic distributor of the vehicle; however, if a company from whom an importer or domestic distributor purchases the merchandise has a U.S. presence or assets, that company shall be considered to be the manufacturer and the distributor as defined in M.G.L. c. 93B shall not be considered to be the manufacturer.

Department means the Massachusetts Department of Environmental Protection.

End-of-life Vehicle means any vehicle, which is sold, given, or otherwise conveyed to a vehicle recycler or scrap recycling facility for the purpose of dismantling, recycling or disposal.

Mercury-added Component means a component that contains mercury, including but not limited to a mercury-added vehicle switch, mercury high intensity discharge (HID) headlamp, or fluorescent lamps.

Mercury-added Vehicle Switch means a mercury-added component installed in a motor vehicle that opens or closes an electrical circuit or gas valve, including, but not limited to, those used in light switches and antilock braking systems.

Motor Vehicle (See "Vehicle").

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

74.02: continued

Person means any natural or corporate person, whether public or private, including corporations, societies, associations and partnerships and bodies politic and corporate, public agencies, authorities, departments, offices and political subdivisions of the Commonwealth of Massachusetts.

Scrap Recycling Facility means a facility, location, device or unit, including, but not limited to, scrap recyclers and vehicle shredders, where machinery and equipment are used for processing and manufacturing scrap metal into prepared grades and whose principal product is scrap iron, scrap steel or nonferrous metallic scrap for sale for remelting purposes.

Vehicle or Motor Vehicle means a vehicle propelled by an internal combustion engine or an electric motor, such as an automobile, van, truck, motorized construction equipment, motorized recreational vehicle, motorcycle or forklift.

Vehicle in Commerce means any vehicle offered for sale by a vehicle dealer, or duly registered in Massachusetts or in the United States to be operated on public roads and highways.

Vehicle Recycler means any individual or entity engaged in the business of acquiring, dismantling, crushing (including partial crushing) or destroying six or more vehicles in a calendar year for the primary purpose of reselling their parts. For the purposes of 310 CMR 74.00, an individual or entity owning or operating a mobile or stationary crushing unit is considered a vehicle recycler.

74.03: Applicability

(1) 310 CMR 74.00 is applicable to automobile dealers, automobile manufacturers, scrap recycling facilities that accept end-of-life vehicles, and vehicle recyclers.

(2) Compliance with 310 CMR 74.00 does not release an automobile dealer, automobile manufacturer, scrap recycling facility, or vehicle recycler from the need to comply with other applicable state, federal and local requirements.

(3) Certification Form. Each certification required by 310 CMR 70.03 shall be on a form prescribed by the Department and shall address compliance with the standards established by 310 CMR 70.00 and 74.00. The certification form may also address compliance with other applicable standards promulgated by the Department.

74.04: Requirements for the Removal of Mercury-added Components Before Crushing

(1) No person shall crush, cause to be crushed or otherwise arrange for an end-of-life vehicle to be crushed without first having removed any mercury-added components, including but not limited to, mercury-added vehicle switches.

(2) 310 CMR 74.04(1) shall not apply to:

- (a) mercury-added components made inaccessible due to significant damage to the vehicle in the area surrounding the component's location, or
- (b) mercury-added lamps used to backlight the vehicle's dashboard and other electronic devices (due to the inaccessibility of these lamps and the resulting potential for mercury to be released to the environment if a lamp is broken while it is being removed).

(3) A vehicle recycler shall, before delivering or selling vehicle bodies to scrap recycling facilities, certify in writing to the scrap recycling facility, in a form approved by the department, that all mercury-added vehicle switches have been removed from the vehicle bodies in the shipment.

(a) Such certification shall be provided on a bill of lading, on stickers affixed to the vehicle bodies, or in another manner approved by the Department.

(b) Certifications provided on a bill of lading shall contain:

- 1. A statement that: "I certify that mercury-added switches have been removed from the vehicles in this shipment in compliance with 310 CMR 74.04."; and

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

74.04: continued

2. The signature of the corporate official making the certification (which may be pre-printed or signed for each bill of lading) and the typed or printed name of such corporate official and his or her title.
- (c) Certification provided on stickers affixed to the vehicle bodies shall contain:
1. A statement that: "Mercury-added switches have been removed from this vehicle in compliance with 310 CMR 74.04."; and
 2. The signature of the corporate official making the certification (which may be pre-printed or signed in "permanent" ink) and the typed or printed name of such corporate official and his or her title.
- (d) Written certification may be provided in another manner, if a proposal is submitted to the Department and approved prior to use.
- (4) A scrap recycling facility may agree to accept an end-of-life vehicle containing mercury-added components that has not been flattened, crushed or baled provided that the scrap recycling facility removes the mercury added components.
- (5) Any person removing a mercury-added component from a vehicle shall manage the component in accordance with the provisions of 310 CMR 30.000, either as a hazardous waste or a universal waste, except for mercury-added components that are not switches (e.g. high intensity discharge (HID) lamps) and that are still in commerce.

74.05: Prohibition on the Sale of Mercury-added Switches in Vehicles

- (1) No person shall sell, offer to sell or distribute a vehicle manufactured on or after January 1, 2007, containing mercury-added vehicle switches;
- (2) No person shall sell or offer to sell or distribute a mercury-added vehicle switch for new installation in a vehicle;
- (3) If a mercury-added switch in a vehicle in commerce requires replacement, it shall be replaced with a non-mercury alternative, if such an alternative is commercially available. If the mercury-added vehicle switch requiring replacement is a component of an anti-lock braking system or an airbag, replacement with a non-mercury alternative shall not be required. The commercial availability of a non-mercury vehicle switch for a particular vehicle may be determined by consulting information published (electronically on internet web pages and on paper) by the Department, vehicle manufacturers and/or their trade associations, and the automotive industry trade press.

74.06: Plans for Proper Removal, Recovery, and Recycling of Mercury-added Switches from End-of-life Vehicles

- (1) No later than April 30, 2008, every vehicle manufacturer shall, individually or as a group, or through a trade association, develop, file with the department, and commence implementing the plan required by M.G.L. c. 21H, § 6C(f) and (g) for the removal, recycling, transportation, storage, and containment of mercury-added switches from end-of-life vehicles in accordance with the regulations at 310 CMR 30.000 as either a hazardous waste or universal waste. Such plans shall, to the extent practicable, use the existing end-of-life vehicle recycling infrastructure, and shall:
 - (a) include a method for collecting and transporting switches after they are removed from vehicles;
 - (b) identify or establish and use facilities where switches may be received and accepted;
 - (c) ensure that the mercury from all recovered switches is recycled in accordance with 310 CMR 30.000;
 - (d) provide information, training, technical assistance to vehicle recyclers, scrap recyclers and all other persons involved in removing mercury-added vehicle switches from motor vehicles;
 - (e) include a program which is designed to achieve a mercury-added vehicle switch capture rate of at least 90%, based on the capture rate described in 310 CMR 74.07;

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

74.06: continued

- (f) describe the financing system through which the total cost of removal, collection, record keeping and recovery of mercury-added vehicle switches shall be borne by the vehicle manufacturer. Such financing system shall include, but not be limited to, a payment of \$ 3 for every mercury-added vehicle switch removed by a vehicle recycler or scrap recycling facility; and
 - (g) describe any reasons for not using the existing end-of-life vehicle recycling infrastructure.
- (2) The plan described in 310 CMR 74.06(1) shall not be required from:
- (a) a vehicle manufacturer that is participating in a plan being implemented in accordance with the requirements of M.G.L. c. 21 H, § 6C(n), where such plan is demonstrated to achieve a capture rate that complies with the requirements of 310 CMR 74.07. In the event that a plan fails to achieve the specified capture rate in any year, as determined by the Department, the vehicle manufacturer shall submit to the Department within 30 days of such determination a plan that meets the requirements of 310 CMR 74.06(1); or
 - (b) a vehicle manufacturer that never installed mercury-added vehicle switches in its vehicles. To qualify for this exemption, such manufacturer shall submit a one-time certification of non-applicability in compliance with the requirements of 310 CMR 74.09(1)(c) to the Department by April 30, 2008.
- (3) Nothing in 310 CMR 74.06 shall prohibit a vehicle manufacturer from substituting a new plan in accordance with, and subject to, the requirements of 310 CMR 74.06(4).
- (4) If a vehicle manufacturer's plan under 310 CMR 74.06(1) has been in effect for at least one year, the manufacturer may submit an alternate plan to the Department for approval. The alternate plan shall meet the following criteria:
- (a) The alternate plan has been in effect for at least one year in another state and can be implemented statewide;
 - (b) The alternate plan has achieved at least a 90% capture rate in that state; and
 - (c) The alternate plan, to the extent practicable, uses the existing end-of-life vehicle recycling infrastructure in Massachusetts.
- (5) When considering whether to approve an alternate plan pursuant to 310 CMR 74.06(4), the Department shall take into consideration the environmental impact in Massachusetts and the economic impact on Massachusetts businesses. To do so, the Department shall seek public comment on any plan submitted pursuant to 310 CMR 74.06(4).
- (a) The Department shall publish a legal notice in Massachusetts newspapers of general circulation which includes a summary of the plan and contact information on how and where to submit comments;
 - (b) The Department shall notify Massachusetts vehicle recyclers and scrap recycling facilities in writing of the plan and public comment opportunity;
 - (c) The public comment period shall be no less than 21 calendar days.
- (6) Approval of the alternate plan pursuant to 310 CMR 74.06(4) by the Department shall release the vehicle manufacturer from the obligations of its original plan, pursuant to 310 CMR 74.06(1), starting on the effective date of the alternate plan. Upon receipt of approval of an alternate plan, the vehicle manufacturer must notify all vehicle recyclers and scrap recycling facilities of the approval, the plan's provisions and its effective date.
- (7) An alternate plan may include an agreement between automobile manufacturers and automobile dealers to remove switches before the vehicle reaches its end-of-life.

74.07: Measuring Recycling of Mercury-added Vehicle Switches

- (1) The success of any plan designed to remove, collect, and recover mercury-added switches from end-of-life vehicles that is implemented in compliance with M.G.L. c. 21H, § 6C shall be measured by a capture rate that compares the actual number of mercury vehicle switches recovered and transported to authorized recycling facilities in each calendar year to the total number of mercury-added vehicle switches estimated to be available for removal from end-of-life vehicles in Massachusetts in that calendar year.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

74.07: continued

(2) The vehicle manufacturer shall calculate the capture rate for each calendar year in which a plan established pursuant to 310 CMR 74.06 is implemented, and shall report that rate to the Department in compliance with the requirements of 310 CMR 74.09(1)(b).

(3) Determining Compliance with the 2007 Target Capture Rate for Alternative Plans Submitted Pursuant to M.G.L. c. 21H, § 6C(n):

(a) For calendar year 2007, the target capture rate shall be 50% of 92,500 mercury-added vehicle switches estimated to be available for collection (or 46,250 switches).

(b) Plans that achieve the target capture rate of 50% by December 31, 2007, as determined by the Department, shall be deemed to be in compliance. Plans that do not achieve this target capture rate by December 31, 2007 shall be deemed to be not in compliance, and their proponents shall comply with the provisions of 310 CMR 74.06 as applicable.

(4) Determining Compliance with the Target Capture Rate for all Plans in 2008 and Subsequent Years.

(a) For calendar years 2008 through 2017, the target capture rate shall be 90% of the mercury switches estimated to be available for recovery in each calendar year, as described in 310 CMR 74.07(4)(b): Table 1.

(b) Programs that achieve a capture rate of 90% by December 31st of each calendar year, as determined by the Department, shall be deemed to be in compliance. Programs that do not achieve the 90% capture rate by December 31st of each calendar year shall be deemed to be not in compliance, and their proponents shall comply with the provisions of 310 CMR 74.06 as applicable.

Table 1: Estimate of Number of Mercury-added Vehicle Switches Available for Capture in Massachusetts by Year

Year	Estimate of the Number of switches Available	Number of switches needed to meet 90% capture rate
2008	74,000	66,600
2009	71,000	63,900
2010	67,000	60,300
2011	63,000	56,700
2012	59,000	53,100
2013	54,000	48,600
2014	50,000	45,000
2015	45,000	40,500
2016	41,000	36,900
2017	36,000	32,400

74.08: Recordkeeping

Parties subject to 310 CMR 74.00 shall keep records on-site for five years that demonstrate compliance with 310 CMR 74.00, and the supporting information that the facility relied upon to file the certification(s) required by 310 CMR 74.00, and may be required to submit said records upon request of the Department.

74.09: Submittal of Compliance Certifications and Reports to the Department

(1) The following certifications shall be submitted to the Department pursuant to 310 CMR 70.03(1)(8)9.:

(a) Scrap recycling facilities and vehicle recyclers subject to 310 CMR 74.00 shall submit to the Department a compliance certification by March 1st of each year. The certification shall be on a form prescribed by the Department, and shall address compliance with the requirements of 310 CMR 74.00 during the previous calendar year (ending December 31st). The certification shall contain the following information, at a minimum:

1. Certification that all mercury-added components required to be removed pursuant to 310 CMR 74.00 were removed from vehicles during the calendar year covered and will continue to be removed during the coming year;

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

74.09: continued

2. Certification that removed mercury-added components have been managed in accordance with the requirements of 310 CMR 74.00;

3. The number of mercury switches removed and shipped off-site for recycling.

(b) (for vehicle recyclers) Certification that the vehicle recycler has provided the certification required by 310 CMR 74.04(3) to the scrap recycling facility(ies) to which it shipped vehicle bodies during the period covered by the certification.

(2) No later than March 1, 2008, and March 1st of each subsequent year, each automobile manufacturer shall certify to the Department, in writing on a form prescribed by the Department, that it is implementing the collection and recycling plan in accordance with 310 CMR 74.06. Such certification shall meet the requirements of 310 CMR 70.03, and shall include but not be limited to the following:

(a) the number of mercury-added vehicle switches collected and recycled during the previous calendar year;

(b) the actual capture rate achieved during the calendar year covered by the certification, pursuant to 310 CMR 74.07(2); and

(c) where and how the switches were stored, recycled or otherwise disposed of.

(3) By April 30, 2008, any vehicle manufacturer that never installed mercury-added vehicle switches shall submit a non applicability certification to the Department, pursuant to 310 CMR 74.06(2)(b), on a form prescribed by the Department.

REGULATORY AUTHORITY

310 CMR 74.00: M.G.L. c. 21C, §§ 4 and 6 and c. 21H, §§ 6C and 6N.

310 CMR 75.00: COLLECTION, RECYCLING, LABELING AND SALES BAN OF MERCURY-ADDED PRODUCTS

Section

- 75.01: Purpose
- 75.02: Definitions
- 75.03: Applicability
- 75.04: Plans for Collecting and Recycling Mercury-added Products
- 75.05: Mercury-added Lamps
- 75.06: Ban on Sales and Distribution of Mercury-added Products
- 75.07: Exemptions from the Sales and Distribution Ban
- 75.08: Labeling of Mercury-added Products and Notification to Purchasers

75.01: Purpose

(1) The purpose of 310 CMR 75.00 is to protect public health, safety, welfare and the environment by implementing the Mercury Management Act (St. 2006, c. 190). 310 CMR 75.00 prohibits the sale or distribution of mercury-added products in Massachusetts unless the manufacturer of the product creates, files with the Department, and implements a convenient and accessible collection plan for mercury-added products at the end-of-life, including a system for the direct return of the mercury-added product to the manufacturer or a collection and recycling plan, in accordance with M.G.L. c. 21C and 310 CMR 30.000: *Hazardous Waste*, using new or existing collection systems. 310 CMR 75.00 establishes performance standards and other requirements for collection and recycling plans, and requires a performance-based compliance certification in accordance with 310 CMR 70.00: *Environmental Results Program Certification*. In addition, 310 CMR 75.00 allows manufacturers of mercury-added lamps to satisfy the collection plan requirements *via* payment of an annual registration fee to the Department to be deposited into a Commonwealth expendable trust. 310 CMR 75.00 also applies to bans on the sale or distribution of mercury-added products and the process for obtaining an exemption to such bans. They also apply to the labeling of mercury-added products.

75.02: Definitions

The definitions found in 310 CMR 75.02 apply to, and are limited to, 310 CMR 75.00.

Department means the Department of Environmental Protection.

Distributor means any person who imports, consigns, or offers for sale, sells, barter or otherwise supplies mercury-added products in the commonwealth.

IMERC means the Interstate Mercury Education and Reduction Clearinghouse, a regional, multi-state clearinghouse established to coordinate the administration of state laws on mercury-added products.

Irremovable means not intended by the manufacturer to be replaceable by the product user or consumer (*e.g.*, an irremovable component is one for which the manufacturer does not sell replacement component).

Manufacturer means any person, firm, association, partnership, corporation, governmental entity, organization, combination or joint venture which produces a product containing mercury or an importer or domestic distributor of a product containing mercury produced in a foreign country. In the case of a mercury-added multi-component product where the only mercury is contained in a mercury-added component manufactured by a different manufacturer which is intended to be readily removable and replaceable by the consumer or user, the manufacturer is the manufacturer who produced the mercury-added component. If the product or component is produced in a foreign country, the manufacturer is the importer or domestic distributor. However, if a company from whom an importer purchases the merchandise has a United States presence or assets, that company shall be considered to be the manufacturer. 310 CMR 75.02: Manufacturer shall not apply to a “distributor” of motor vehicles as defined in M.G.L. c. 93B, § 1.

75.02: continued

Massachusetts *Environmental Monitor* means a twice monthly publication of the Executive Office of Energy and Environmental Affairs that provides information on projects under review by the Massachusetts Environmental Policy Act (MEPA) office, recent MEPA decisions of the Secretary of Environmental Affairs, and public notices from environmental agencies.

Mercury-added Component means a component that contains mercury.

Mercury-added Formulated Product means a chemical product to which mercury has been added, intentionally or unintentionally, including, but not limited to, laboratory chemicals, cleaning products, cosmetics, pharmaceuticals and coating materials that are sold as consistent mixtures of chemicals.

Mercury-added Lamp means an electric lamp to which the manufacturer intentionally introduces mercury for the operation of the lamp, including, but not limited to, fluorescents, compact fluorescents, black lights, high intensity discharge lamps, ultraviolet lamps and neon lamps.

Mercury-added Product means a product to which the manufacturer intentionally introduces mercury, including, but not limited to, electric lamps, thermostats, automotive devices, electric switches, medical or scientific instruments, electric relays or other electrical devices, but not including products made with coal ash or other products that are incorporated into equipment used to manufacture semiconductor devices, elemental mercury in pre-capsulated form that is sold, distributed or provided to a dental practitioner for use in compliance with the department's regulations concerning amalgam wastewater and recycling for dental facilities, or mercury-added formulated products. 310 CMR 75.02: Mercury-added Product includes mercury-added components that are incorporated into larger products.

Mercury Relay means a mercury-added product that opens or closes electrical contacts to affect the operation of other devices in the same or another electrical circuit.

Mercury Switch means a mercury-added product that opens or closes an electrical circuit or gas valve.

Mercury-added Thermostat means a product or device that uses a mercury switch to sense and control room temperature through communication with heating, ventilation or air conditioning equipment, including thermostats used to sense and control room temperature in residential, commercial, industrial and other buildings, but shall not include a thermostat used to sense and control temperature as part of a manufacturing process.

Person means any natural or corporate person, whether public or private, including corporations, societies, associations and partnerships and bodies politic and corporate, public agencies, authorities, departments, offices and political subdivisions of the Commonwealth.

Qualified Mercury-added Lamp Recycler means a person who engages in the manual or mechanical separation of spent household mercury-added lamps to recover components and mercury contained therein, and meets the requirements of the Commonwealth of Massachusetts for handling, transporting and disposal of mercury-added lamps.

75.03: Applicability

- (1) 310 CMR 75.00 applies to any person who manufactures, sells, offers for sale or distributes mercury-added products in Massachusetts.
- (2) The following products are exempt from the requirements of 310 CMR 75.04:
 - (a) motor vehicles and mercury-added components in motor vehicles;
 - (b) refurbished medical equipment;
 - (c) mercury-added button cell batteries;
 - (d) products where the only mercury contained in the product is in one or more removable mercury-added button cell batteries;

75.03: continued

- (e) products where the only mercury contained in the product is contained in one or more mercury-added lamps;
- (f) mercury-added formulated products intended to be totally consumed in use, such as reagents, cosmetics, cleaning products, pharmaceuticals and other laboratory chemicals;
- (g) Products made with coal ash;
- (h) Products that are incorporated into equipment used to manufacture semi-conductor devices;
- (i) elemental mercury in pre-capsulated form that is sold, distributed or provided to a dental practitioner for use in compliance with the department's regulations concerning amalgam wastewater and recycling for dental facilities; or
- (j) mercury-added thermostats subject to the requirements of 310 CMR 77.00: *Collection and Recycling of Mercury-added Thermostats*.

(3) After December 28, 2007, once a mercury-added product is no longer sold, offered for sale, or distributed in Massachusetts, the product's manufacturer will no longer be subject to the requirements of 310 CMR 75.04.

(4) Compliance with 310 CMR 75.00 does not release manufacturers, distributors, wholesalers, or retailers from the need to comply with other applicable state, federal and local requirements.

(5) The Department shall deem a manufacturer of mercury-added lamps to have satisfied the requirements of 310 CMR 75.04 if such manufacturer who sells mercury-added lamps in the Commonwealth individually pays, until June 30, 2024, an annual registration fee in accordance with the requirements of 310 CMR 4.03(2): *Table 4.03* and with the requirements of 310 CMR 75.05. Manufacturers shall make such payments to the Department to be deposited into an expendable trust fund established in accordance with M.G.L. c. 6A, § 6. If a manufacturer fails to comply with these provisions, such manufacturer shall comply with the full terms and conditions of 310 CMR 75.04.

75.04: Plans for Collecting and Recycling Mercury-added Products

(1) No later than March 3, 2008, every manufacturer of a mercury-added product subject to 310 CMR 75.00 whose products are sold, offered for sale, or distributed in Massachusetts shall develop and file with the Department a plan for collection, storage (including containment of mercury-added products and/or components), transportation, and recycling of end-of-life mercury-added products in accordance with 310 CMR 30.000. Such plans shall provide methods of collection and recycling that are convenient and accessible to product purchasers and users.

(2) No person shall sell, offer for sale or distribute a mercury-added product to which 310 CMR 75.00 applies after March 3, 2008, unless its manufacturer files with the Department a plan as specified in 310 CMR 75.04 for collecting its mercury-added product(s) at the end of the product's useful life and recycling its mercury content, and commences implementation of such plan.

(3) Every manufacturer of mercury-added products sold or distributed in Massachusetts shall be financially responsible for developing and implementing a plan that meets the requirements of 310 CMR 75.04.

(4) Where a mercury-added component is part of another product, the collection system shall provide for collection of the mercury-added component or collection of both the mercury-added component and the product containing it.

(5) Plans for collection and recycling of mercury-added products may be submitted by a trade association or industry group on behalf of a specific group of manufacturers.

(6) Plans for collection and recycling of mercury-added products shall include, at a minimum, the following information:

- (a) Applicant's name, telephone number, North American Industry Classification System, and web address. If a trade association is submitting a plan on behalf of a group of manufacturers, include trade association name, telephone number and web address, and list of participating manufacturers' names with respective contact information.

75.04: continued

- (b) Applicant's address, including the mailing address.
- (c) The address, telephone number, and e-mail address of a contact person for the applicant.
- (d) A description of how to advise purchasers of the mercury-added product(s) about the collection and recycling program, including the purpose of the collection and recycling program, and how they may participate. The description must identify the parties who will be responsible for implementing the purchaser education plan, and the date on which it will commence implementation. Such description shall also include, but shall not be limited to, notification to all persons who sell, distribute, or offer the mercury-added product(s) for sale in Massachusetts that the product(s) cannot be sold unless they are covered by the manufacturer's collection and recycling plan. Such notification shall be repeated on a specified basis that shall be no less frequent than annually.
- (e) Location of all mercury-added components in each product covered by the Plan, and directions for removing them to aid collection (if appropriate).
- (f) If applicable, documentation regarding the intention of the applicant to phase-out use of mercury in the product or the sale of the mercury-added product in Massachusetts, and the schedule for the phase-out.
- (g) Identification of currently available collection and recycling methods for the mercury-added product(s) and information about the extent to which the mercury-added product(s) is currently collected and recycled at the end of its useful life.
- (h) Description of the system that will be employed for collection, storage, transportation, and recycling of the mercury-added product(s), including provision for managing collected mercury-added products in accordance with 310 CMR 30.000: Hazardous Waste. Such system shall be convenient and accessible for the product user. It may employ:
 - 1. the direct return of an end-of-life product or component to the manufacturer, or its agents;
 - 2. a drop off program where a receiving facility is no farther than a 30 minute driving distance for any Massachusetts generator of the end-of-life mercury-added product; or
 - 3. another system that is as convenient to the product user as the original product purchase.
- (i) Schedule for implementing the plan, including the date on which collection will commence. Collection shall commence no later than 45 days after submittal of the plan to the Department.
- (j) Documentation of the commitment of all necessary parties to perform as intended in the planned collection and recycling program.
- (k) Documentation demonstrating how the manufacturer will finance the proposed collection and recycling program. The cost of the program shall not be borne by state or local government. Financing may include the recovery of a product that has an economic value to processors, such as silver oxide batteries.
- (l) The targeted recycling rate for the collection and recycling of mercury-added product(s), or components covered in the Plan, a description of the performance measures to be used to demonstrate that the collection and recycling program is meeting the target recycling rate and the recordkeeping protocol that will be implemented to demonstrate compliance with the Plan.
 - 1. Such target recycling rate shall be expressed as a percentage, where the numerator is the number of mercury-added product(s) (or mercury-added components) expected to be collected in Massachusetts and recycled in each year of the Plan's operation, and the denominator is an estimate of the number of mercury-added products (or mercury-added components) expected to be available for collection in Massachusetts and recycling each year. The estimated number of products expected to be available for collection in any year shall be based on a rolling average life expectancy of the product (assuming normal use by the user) and sales data, and other indications of the number of products that are likely to be retired (or reach the end of their useful life) in each year.
 - 2. For plans submitted by an individual manufacturer, the target recycling rate shall be based on that manufacturer's Massachusetts sales data and average product life expectancy. For plans submitted by a trade association or industry group on behalf of a group of manufacturers, the target recycling rate shall be based on the group's Massachusetts sales data and average product life expectancy.

75.04: continued

3. The target recycling rate shall not be less than the rates established in 310 CMR 75.04(6)(1)3.: *Table 1*:

TABLE 1

Target Recycling Rates for Mercury-added Products Generated in Massachusetts	
Calendar Year	Target Recycling Rate
2008	30%
2009	40%
2010	50%
2011	75%
Each subsequent year	75%

4. The target recycling rate for mercury-added products first sold, offered for sale or distributed after March 3, 2008 shall be 75%, to be achieved by the end of the first full year of the product's sale or distribution in Massachusetts.

(m) Description of additional or alternative actions that will be implemented to improve the collection and recycling program and its operation in the event that the target recycling rate is not met; and

(n) Other special conditions or information related to the affected mercury-added product(s), such as special handling that will be required by product users to participate in the collection and recycling program.

(7) Submittal of Plans to the Department.

(a) Plans shall be filed with the Department in accordance with the schedule established in 310 CMR 75.04(1).

(b) Such plans shall be accompanied by the certification required by 310 CMR 75.04(9) and shall comply with the requirements of 310 CMR 70.03: *Compliance Certification Requirements*.

(8) Recordkeeping Requirements.

(a) Manufacturers subject to 310 CMR 75.00 shall keep records on-site that demonstrate compliance with 310 CMR 75.04, and the supporting information that the manufacturer relied upon to file the plan required by 310 CMR 75.04, and may be required to submit said records upon request of the Department.

(b) Records shall be maintained for at least five years.

(9) Annual Compliance Certification.

(a) Manufacturers subject to 310 CMR 75.04 shall submit a compliance certification annually to the Department. Such certification shall address compliance with the requirements of 310 CMR 75.04 on a form prescribed by the Department that shall include at least the following information:

1. The type and number of each mercury-added product collected in Massachusetts and recycled;
2. The estimated number of each mercury-added product expected to be available for collection in Massachusetts for recycling in the year covered by the certification, which shall be based on a rolling average life expectancy of the product (assuming normal use by the user);
3. The number of mercury-added products the manufacturer sold, offered for sale or distribution in Massachusetts in the year covered by the certification;
4. Calculation of the actual recycling rate;
5. Certification that documentation and records are being maintained as required by 310 CMR 75.04(8);
6. Certification that the plan will continue to be implemented (identifying any changes needed to address operating issues or to ensure that the target capture rate is met) during the coming year; and
7. The certification required by 310 CMR 70.03: *Compliance Certification Requirements*.

75.04: continued

(b) Compliance certifications shall be submitted to the Department by March 31st of each year. The first compliance certification shall cover the period from the commencement of plan implementation through the first full calendar year of implementation.

(c) Information included in a compliance certification may be submitted to the Department with a claim of confidentiality, including a claim that the information is confidential business information, pursuant to 310 CMR 3.00: *Access to and Confidentiality of Department Records and Files* and/or the state public records act. A completed confidentiality form available from the Department shall be submitted along with the compliance certification wherein the rationale for the confidentiality claim, based on the criteria set out at 310 CMR 3.23: *Criteria for Determining a Trade Secret*, is described. When confidentiality is requested, the Department will follow standard confidentiality procedures laid out in 310 CMR 3.00. Information included in a compliance certification claimed to be confidential, as well as any documents the Department creates using that information (such as fee invoices), will be separated from the Department's public files and held as confidential until a public records request is made to see that information, whereupon the Department will make a final confidentiality determination pursuant to 310 CMR 3.00

75.05: Mercury-added Lamps

(1) A manufacturer of mercury-added lamps shall satisfy the requirements of 310 CMR 75.04 if, such manufacturer who sells mercury-added lamps in the Commonwealth of Massachusetts individually pays, until June 30, 2024, an annual registration fee in accordance with the requirements of 310 CMR 4.03(2): *Table 4.03* and with the requirements of 310 CMR 75.05. Manufacturers shall make such payments to the Department to be deposited into an expendable trust fund established in accordance with M.G.L. c. 6A, § 6. Such fund shall be maintained for the purpose of Department and municipal administration, access, communication, enforcement, and education costs for proper mercury-added lamp recycling or disposal.

(2) Manufacturers of mercury added lamps that either fail to pay an annual registration fee in accordance with 310 CMR 4.03(2): *Table 4.03* and 310 CMR 75.05, or fail to submit and implement a collection and recycling plan and the annual compliance certifications pursuant to 310 CMR 75.04, shall not sell, offer to sell, or distribute mercury-added lamps in Massachusetts.

(3) Manufacturers of mercury-added lamps that do not submit a collection and recycling plan or the annual compliance certification pursuant to 310 CMR 75.04 shall comply with 310 CMR 75.05(3)(a) or (b).

(a) Manufacturers that sold, offered for sale or distributed mercury-added lamps in Massachusetts in the prior calendar year shall submit to the Department:

1. on or before 30 days after April 5, 2019 and on or before March 1st of every year thereafter, through 2024, an annual registration on a form prescribed by the Department. Such registration shall include the total number of mercury-added lamps sold by that manufacturer in Massachusetts in the previous calendar year, and the certification required by 310 CMR 75.05(8). This annual registration will also serve as a basis for an invoice for an annual registration fee based on mercury-added lamp sales in Massachusetts in the prior calendar year and established in accordance with 310 CMR 4.03(2): *Table 4.03*. Mercury-added lamp manufacturers choosing to calculate Massachusetts sales on the basis of population shall use the most recently published population estimates published by the United States Census Bureau; and
2. on or before the invoice payment due date of each year, the annual registration fee established in accordance with 310 CMR 4.03(2): *Table 4.03*.

(b) Manufacturers that did not sell, offer for sale, or distribute mercury-added lamps in Massachusetts in the prior calendar year shall submit a non-applicability notification to the Department on or before 30 days after April 5, 2019 and on or before March 1st of every year thereafter, through 2024.

1. Such notification shall be on a form prescribed by the Department and shall include the certification required by 310 CMR 75.05(8).
2. In calendar year 2019 such notification is only required from manufacturers that had submitted a mercury-added lamp compliance certification in 2014. Thereafter, through 2024, the non-applicability notification is only required from mercury-added lamp manufacturers that were required to submit an annual registration in the prior year.

75.05: continued

- (4) Each manufacturer of mercury-added lamps shall notify the Department when there has been a change in ownership. Such notification shall be submitted to the Department no later than 30 days following the change in ownership and shall include the date of the change in ownership.
- (5) Manufacturers of mercury-added lamps shall individually or collectively provide mercury-added lamp retailers with a printed copy of the following notice free of charge upon request. The notice shall be in 24-point type or larger and shall state the following: "Fluorescent bulbs save energy and reduce environmental pollution. Note: Fluorescent bulbs contain a small amount of mercury and must be properly recycled at the end of their use. Contact your municipality or www.lamprecycle.org for bulb recycling options."
- (6) Qualified mercury-added lamp recyclers shall:
- (a) Upon collection of mercury-added lamps from within Massachusetts, provide a mercury-lamp recycling certificate to each person delivering mercury-added lamps from within Massachusetts to the facility. The certificate shall be on a form prescribed by the Department.
 - (b) Submit to the Department an annual report containing information regarding the recycling of mercury-added lamps by persons in the Commonwealth of Massachusetts on a form prescribed by the Department, including but not limited to:
 1. The number of mercury-added lamp recycling certificates issued during the previous year;
 2. The number of intact mercury-added lamps collected from within Massachusetts during the previous year; and
 - a. The number disposed;
 - b. The number from which the facility separated and recovered the components and mercury contained therein;
 - c. The amount of mercury disposed; and
 - d. The amount of mercury made available for reuse.
 3. An estimate of the number of broken mercury-added lamps collected from within Massachusetts during the previous year and;
 4. The name and address of the facility where the mercury-added lamps were recycled.
- (7) Each person delivering mercury-added lamps from Massachusetts to a qualified mercury-added lamp recycler shall retain all mercury-lamp recycling certificates for a minimum of three years and provide access to such certificates upon request by the Department.
- (8) The annual registration required by 310 CMR 75.05(3)(a), the non-applicability notification described in 310 CMR 75.05(3)(b), and the annual report required by 310 CMR 75.05(6)(b) shall include the following certification: "I, [name of Responsible Official, as defined in 310 CMR 70.02: *Environmental Results Program Certification*], attest under the pains and penalties of perjury:
- (a) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification statement;
 - (b) that, based on my inquiry of those individuals responsible for obtaining the information, the information contained in this submittal is to the best of my knowledge, true, accurate, and complete; and
 - (c) that I am fully authorized to make this attestation on behalf of this facility or unit. I am aware that there are significant penalties, including, but not limited to possible fines and imprisonment, for submitting false, inaccurate, or incomplete information."

75.06: Ban on Sales and Distribution of Mercury-added Products

- (1) No person shall sell, offer to sell, or distribute in Massachusetts the following mercury-added products on or after May 1, 2008:
- (a) thermostats;
 - (b) barometers;
 - (c) flow meters;
 - (d) hydrometers;
 - (e) hygrometers or psychrometers;

75.06: continued

- (f) manometers;
- (g) pyrometers;
- (h) sphygmomanometers;
- (i) basal thermometers; or
- (j) esophageal dilators, bourgie tubes or gastrointestinal tubes.

(2) The ban on sale or distribution established in 310 CMR 75.06(1) shall not apply to thermometers if they are determined to be medically necessary by a licensed physician or are ordered by prescription.

(3) No person shall sell, offer to sell, or distribute in Massachusetts a mercury switch or mercury relay, individually or as a product component, on or after May 1, 2009. 310 CMR 75.06(3) shall not apply if:

- (a) The mercury switch or mercury relay is a component in a larger product in use before May 1, 2009 and the Department determines that there is no mercury-free alternative available for the component, and:
 - 1. the larger product is used in manufacturing (equipment or machinery at a fixed location that is used in making a product from raw materials, *e.g.*, a papermaking machine); or
 - 2. the switch or relay is integrated and not physically separate from other components of the larger product (*i.e.*, embedded in the larger product such that the larger product would have to be replaced to accommodate a non-mercury replacement switch or relay); or
- (b) A mercury switch or a mercury relay is integrated as a component of a larger product that has been refurbished for resale and which was originally manufactured before October 26, 2006.

75.07: Exemptions from the Sales and Distribution Ban

(1) The manufacturer, importer, or distributor of a mercury switch, relay, instrument or device subject to the sales prohibitions in 310 CMR 75.06 may apply to the Department for an exemption from the prohibition on sale or distribution.

(2) The Department may grant an exemption, with or without conditions, upon determining that the conditions described in 310 CMR 75.07(2)(a) through (d) all apply, or that the condition described in 310 CMR 75.07(2)(e) applies:

- (a) Use of the mercury-added product is beneficial to the environment, or protective of public health or public safety, based on consideration of:
 - 1. The amount of mercury expected to be placed in commerce annually if the exemption is granted;
 - 2. The likelihood that the mercury in the product will be released to the environment, or that users of the product will be exposed to the mercury;
 - 3. The steps that will be taken through product design and other methods to ensure that mercury is not released during use and disposal of the product; and
 - 4. The nature of the claimed benefit, and whether it differs in kind or degree from the environment, public health and public safety benefits afforded by available non-mercury alternatives.
- (b) There is no technically feasible non-mercury alternative available, based on consideration of:
 - 1. A description of past, current and planned efforts to identify or develop non-mercury alternatives;
 - 2. The individuals, companies and resources consulted during the search for non-mercury alternatives;
 - 3. A description of all potential non-mercury alternatives that have been identified and considered; and
 - 4. The specific basis (*e.g.*, electrical performance, size, power consumption, product life) for concluding that each potential alternative was not technically feasible for the intended use.

75.07: continued

- (c) There is no comparable non-mercury alternative available at a reasonable cost, based on consideration of:
 - 1. The purchase price differential between the mercury-added product and any available non-mercury alternatives; and
 - 2. Costs other than purchase price associated with the substitution of a non-mercury alternative, if applicable.
- (d) An effective system for the collection, transportation and processing of the mercury-added product at the end of life, pursuant to 310 CMR 75.04, has been implemented at the time that the exemption application is submitted.
- (e) The use of the product is a federal requirement, as evidenced by
 - 1. a statute or regulation;
 - 2. a contract specification; or
 - 3. another documented federal requirement.

(3) Contents of Applications for Exemption from Sales and Distribution Ban.

- (a) An application for an exemption based on the conditions in 310 CMR 75.07(2)(a) through (d) shall contain the following information, as applicable:
 - 1. Applicant's name, mailing address, telephone number, North American Industry Classification System, e-mail address, web address and relationship to the product manufacturer;
 - 2. The name, mailing address, telephone number, and e-mail address of a contact person for the applicant;
 - 3. Product manufacturer's name, mailing address, telephone number, North American Industry Classification System, e-mail address and web address (if different from applicant);
 - 4. The name, mailing address, telephone number, and e-mail address of a contact person for the product manufacturer;
 - 5. A description of the mercury-added product for which an exemption is requested, including the specific uses of the product and an explanation of the amount and purpose of the mercury in the product;
 - 6. An explanation of the environmental, public health or public safety benefits that the mercury-added product offers in comparison with available non-mercury alternatives;
 - 7. The amount of mercury expected to be placed in commerce annually if the exemption is granted;
 - 8. The likelihood that the mercury in the product will be released to the environment, or that users of the product will be exposed to the mercury;
 - 9. The steps that will be taken through product design and other methods to ensure that mercury is not released during use and disposal of the product;
 - 10. A description of past, current and planned efforts to identify or develop non-mercury alternatives;
 - 11. A list of the individuals, companies and resources consulted during the search for non-mercury alternatives;
 - 12. A description of all potential non-mercury alternatives that have been identified and considered;
 - 13. The specific basis (*e.g.*, electrical performance, size, power consumption, product life) for concluding that each potential alternative was not technically feasible for the intended use;
 - 14. The purchase price differential between the mercury-added product and any available non-mercury alternatives;
 - 15. Costs other than purchase price associated with the substitution of a non-mercury alternative, if applicable; and
 - 16. A short description of the collection and recycling system that has been implemented for end-of-life mercury-added products pursuant to the requirements of 310 CMR 75.04.

(4) Submission of Applications for Exemption from Sales and Distribution Ban.

- (a) Applications for exemptions from the sales and distribution ban shall be submitted to the Department or IMERC on a form prescribed by IMERC that shall include the information described in 310 CMR 75.07(3).

75.07: continued

(b) Such application shall be accompanied by a statement prescribed by 310 CMR 70.03(2)(d), to certify the accuracy of the information in the application.

(c) Manufacturers may request that the Department keep the information described in 310 CMR 75.07(3) confidential, in accordance with the requirements and procedures established in 310 CMR 3.00: *Access to and Confidentiality of Department Records and Files*.

(d) An exemption application filed with IMERC that complies with the requirements of 310 CMR 75.07(2) and (3) or requirements established by other IMERC states shall be deemed to have been submitted to the Department.

(5) The Applicant Applying Directly to the Department or IMERC Shall Publish a Legal Notice in a Massachusetts Newspaper of General Circulation and the Massachusetts Environmental Monitor.

(a) The legal notice shall include:

1. A summary of the application for exemption;
2. A statement that comments can be sent to the Mercury Program Manager at the Massachusetts Department of Environmental Protection up to 21 days after the date that the legal notice is published, and instructions for sending comments including the appropriate mailing address; and
3. Instructions for obtaining a complete copy of the application for exemption.

(b) Within five days following the publication of the legal notice, the applicant shall send a tear sheet of the legal notice to the Mercury Program Manager at the Massachusetts Department of Environmental Protection.

(6) Decisions on Applications for Exemption from Sales and Distribution Ban.

(a) The Department shall determine whether the application is complete based on the information required in 310 CMR 75.07, and may request additional information.

(b) The Department shall consult with the Massachusetts Department of Public Health in reviewing applications for exemptions that pertain to mercury-added products used in medical settings and other items that may affect public health.

(c) The Department shall consult with other states that regulate mercury-added products that are affected by the sales ban to ensure consistency in decisions among states to the extent practicable.

(d) Exemptions shall be valid for a period of time not to exceed three years from the date of approval. An exemption may be renewed at the discretion of the Department, based on an application that meets the requirements of 310 CMR 75.07, submitted no later than six months prior to the end of the previously approved exemption period.

(e) Exemptions that have been approved by IMERC states prior to August 21, 2009 shall be deemed to be approved by the Department for the duration that the exemption has been granted.

(7) An application for an exemption based on 310 CMR 75.07(2)(e) shall contain the following information:

(a) All information required in 310 CMR 75.07(3)(a)1. through 5.;

(b) A copy of the relevant federal statute, regulation, contract specification, or other federal requirement, and contact information for the federal agency (including a staff contact) that established the requirement; and

(c) A statement prescribed by 310 CMR 70.03(2)(d).

(d) An applicant requesting an exemption under 310 CMR 75.07(2)(e) is not required to publish a legal notice as per 310 CMR 75.07(5).

(e) If the Department determines that the product is not eligible for an exemption from the sales and distribution ban under 310 CMR 75.07(2)(e), the manufacturer shall either comply with the sales and distribution ban or apply for an exemption in accordance with 310 CMR 75.07(3).

75.08: Labeling of Mercury-added Products and Notification to Purchasers

(1) General Labeling Requirements. On or after May 1, 2008, no person shall sell, offer to sell, or distribute a mercury-added product in Massachusetts unless the manufacturer:

75.08: continued

- (a) Submits to the Department a labeling plan for such product that meets the requirements of 310 CMR 75.08(3) and (4) and implements the labeling plan in accordance with the requirements of 310 CMR 75.08(3) and (4); or
- (b) Labels such product in compliance with a labeling plan approved by another state that is a member of IMERC, pursuant to 310 CMR 75.08(5).

(2) The following mercury-added products are exempt from the requirements of 310 CMR 75.08:

- (a) Refurbished medical equipment;
- (b) Mercury-added products whose only mercury component is a removable mercury-added lamp;
- (c) Mercury-added products whose only mercury component is a button cell battery.

(3) Labeling Standards for Labeling Plans Submitted to the Department. Prior to sale or distribution of a mercury-added product, the manufacturer of the product shall affix or cause to be affixed a label that conforms to the following requirements:

(a) Label Content. Product labels, and package labels if required, shall clearly inform the prospective purchasers and product users, using words or symbols, that the product contains mercury and shall clearly specify that the mercury-added product be reused, recycled or properly disposed of as hazardous waste at the end of the product's useful life.

(b) Product Label Standards.

1. The label must be affixed to the product so that the label is clearly visible (*e.g.*, on an outer surface of the product) and legible. A label printed using ten-point font or larger is presumed to be legible.
2. Labels affixed to products must be printed, mounted, molded, engraved or otherwise affixed using materials that are sufficiently durable to remain legible under the conditions of the product's intended use for the useful life of the product.

(c) Product Label Location.

1. Labels shall be placed on mercury-added products so they can be seen by prospective purchasers and product users, and in conformance with the labeling plan described in 310 CMR 75.08(4).
2. Manufacturers of products that contain, as their only mercury-added component, one or more irremovable mercury-added lamps that are used for backlighting shall meet the requirements of 310 CMR 75.08(3)(b) and (c) by placing the label on the product or in its "care and use" manual (if such a manual is provided to purchasers).
3. Manufacturers of button cell batteries are not required to place a label on the product but shall place a label on the product packaging in accordance with 310 CMR 75.08(3)(d)3.
4. Mercury-added products that are components of larger products shall be labeled as required by 310 CMR 75.08(3)(a) and (b). In addition:
 - a. If the mercury-added component label is not clearly visible to prospective purchasers and product users, then the product shall be labeled. Such label shall identify the component in sufficient detail so that it can be readily located for removal and proper end-of-life management.
 - b. Supplemental information about the location of the mercury-added component and instructions on its removal and proper end-of-life management may be provided in the care and use manual, if the product has one.
 - c. Each new motor vehicle sold on or after May 1, 2008 shall contain a label listing the mercury-added product(s) that may be components in the vehicle. The label shall be affixed in a visible location on the doorpost of the driver's compartment (and not on the door itself) unless, in accordance with 310 CMR 75.08(5), a different location has been proposed by the manufacturer and accepted by another state that is a member of IMERC.

(d) Product Package Label.

1. In addition to the label on the product required by 310 CMR 75.08(3)(b) and (c), the packaging for a mercury-added product shall be labeled, except when the product label can easily be viewed through the packaging, in order to inform prospective purchasers and product users, prior to purchase, that the product contains mercury and will need to be managed properly at the end of its useful life.

75.08: continued

2. Packaging of mercury-added components offered for sale or distribution as replacement parts shall be labeled in accordance with 310 CMR 75.08(3)(a).
 3. Labels affixed to packaging of mercury-added products must be printed, mounted, molded, engraved or otherwise affixed using materials that are sufficiently durable to remain legible under the conditions of the packaging's intended use for the expected life of the packaging. A label printed using ten-point font or larger is presumed to be legible.
 4. If a manufacturer purchases a mercury-added product from another manufacturer and repackages the product, the manufacturer repackaging the product shall label the package in accordance with 310 CMR 75.08(3)(a).
- (e) Where labels on the product or product packaging are not clearly visible and legible to prospective purchasers and product users prior to purchase, (*e.g.*, in catalog sales transactions that occur over the internet, telephone or postal service), the manufacturer or retailer shall:
1. Clearly inform the purchaser that the product contains mercury and shall clearly specify that the mercury-added product be reused, recycled or properly disposed of as hazardous waste at the end of the product's useful life.
 2. Such notice shall be provided as part of the product's description either in the catalog or on the website used to place the online order.
- (4) Labeling Plans. Manufacturers of mercury-added products for which an IMERC state has not approved a labeling plan, or who are revising a labeling plan previously filed with the Department, shall submit a labeling plan to the Department that includes, at a minimum, the following information:
- (a) Applicant's name, mailing address, telephone number, North American Industry Classification System, e-mail address, and web address.
 - (b) The name, mailing address, telephone number, and e-mail address of a contact person for the applicant.
 - (c) A detailed description of:
 1. the products covered by the plan, label size, font size, label material, wording, location, and attachment method for each product and for the product packaging in accordance with 310 CMR 75.08(3);
 2. how prospective purchasers and product users shall be notified that the product contains mercury, and that the product must be reused, recycled or properly disposed of as hazardous waste at the end of the product's useful life in accordance with 310 CMR 75.08(3); and
 3. the certification required by 310 CMR 70.03: *Compliance Certification Requirements*.
- (5) Consistency with Other States. The manufacturer of a mercury-added product may satisfy the requirements of 310 CMR 75.08 by labeling all units of the product sold or distributed in Massachusetts and by effectively implementing in Massachusetts a labeling plan that has been approved by and implemented in another state that is a member of IMERC. In order for the Department to determine whether a product labeling plan approved by another state is being effectively implemented in Massachusetts, the manufacturer shall provide the following, upon the Department's request:
- (a) A copy of the label as it appears on products and product packaging sold in Massachusetts;
 - (b) A copy of the application or labeling plan approved by another state that is a member of IMERC; and
 - (c) A copy of the letter approving the use of the label in another state that is a member of IMERC.
- (6) Notification to Purchasers of Mercury-added Lamps.
- (a) In addition to the requirements of 310 CMR 75.08 for labeling mercury-added products, any person who sells mercury-added lamps, either directly or through a service contract, to the owner or manager of an industrial, commercial or office building, or to any person who replaces or removes from service outdoor lamps that contain mercury, or to an agent or contractor of such parties, shall clearly inform the purchaser in writing on the invoice or in a separate document that:

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

75.08: continued

1. the lamps contain mercury;
 2. mercury is a hazardous substance that is regulated by federal and state law; and
 3. end-of-life lamps must be managed in accordance with 310 CMR 76.05.
- (b) Recordkeeping Requirements.
1. A person subject to 310 CMR 75.08(6)(a) shall keep records on-site that demonstrate compliance with 310 CMR 75.08(6).
 2. Records shall be maintained for at least three years.
- (c) Retail establishments that incidentally sell mercury-added lamps (*i.e.*, fewer than 50 lamps per transaction) to the purchasers specified in 310 CMR 75.08(6)(a) are exempt from 310 CMR 75.08(6).

REGULATORY AUTHORITY

310 CMR 75.00: M.G.L. c. 21C, §§ 4 and 6, c. 21H, §§ 6D, 6E, 6F, 6J, 6K and 6N.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

310 CMR 76.00: DISPOSAL PROHIBITION OF MERCURY-ADDED PRODUCTS IN SOLID WASTE

Section

- 76.01: Purpose and Authority
- 76.02: Definitions
- 76.03: Applicability
- 76.04: Disposal Requirements
- 76.05: Management of End-of-Life Mercury-Added Products

76.01: Purpose and Authority

(1) The purpose of 310 CMR 76.00 is to protect public health, safety, welfare and the environment by implementing the Mercury Management Act (Chapter 190 of the Acts of 2006). These regulations prohibit the disposal of mercury-added products in any manner other than by recycling, disposing as hazardous waste in accordance with M.G.L. c. 21C and 310 CMR 30.000, or using an alternative method approved by the Department.

(2) 310 CMR 76.00 is promulgated pursuant to the authority of M.G.L. c. 21C, §§ 4 and 6, M.G.L. c. 21H, §§ 6I, 6L and 6N.

76.02: Definitions

The definitions found in 310 CMR 76.02 apply to, and are limited to, 310 CMR 76.00.

End of Life Mercury-added Product means any mercury-added product that is no longer being used for its intended purpose and meets the definition of solid waste or hazardous waste.

Hazardous Waste means Hazardous Waste, as defined in 310 CMR 30.010.

Mercury-added Component means a component that contains mercury.

Mercury-added Formulated Product means a chemical product to which mercury has been added, intentionally or unintentionally, including, but not limited to, laboratory chemicals, cleaning products, cosmetics, pharmaceuticals and coating materials that are sold as consistent mixtures of chemicals.

Mercury-added Product means a product to which the manufacturer intentionally introduces mercury, including, but not limited to, electric lamps, thermostats, automotive devices, electric switches, medical or scientific instruments, electric relays or other electrical devices, but not including products made with coal ash or other products that are incorporated into equipment used to manufacture semiconductor devices, elemental mercury in pre-capsulated form that is sold, distributed or provided to a dental practitioner for use in compliance with the department's regulations concerning amalgam wastewater and recycling for dental facilities, or mercury-added formulated products. This term includes mercury-added components that are incorporated into larger products.

Person means any natural or corporate person, whether public or private, including corporations, societies, associations and partnerships and bodies politic and corporate, public agencies, authorities, departments, offices and political subdivisions of the Commonwealth.

Reclaimed or Reclamation means processing to recover a usable product, but does not include burning (e.g., for energy recovery) or use constituting disposal.

Scrap Recycling Facility means a facility, location, device or unit where machinery and equipment are used for processing and manufacturing scrap metal into prepared grades and whose principal product is scrap iron, scrap steel or nonferrous metallic scrap for sale for remelting purposes.

Solid Waste means Solid Waste as defined in 310 CMR 16.02 and 310 CMR 19.006.

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

76.02: continued

Solid Waste Collector means any person who collects solid waste from residential, business, commercial, industrial or other establishments.

76.03: Applicability

(1) 310 CMR 76.00 applies, on or after May 1, 2008, to any person who generates (including the original consumer), collects or processes a mercury-added product for disposal and to any solid waste collector in Massachusetts.

(2) Compliance with 310 CMR 76.00 does not release any person from the need to comply with other applicable federal, state and local requirements.

76.04 Disposal Requirements

(1) No person, household, school, healthcare facility, state or municipal government or business (including solid waste landfills, municipal waste combustors, and solid waste handling facilities) shall knowingly dispose of a mercury-added product in any manner other than by recycling, disposing as hazardous waste or using an alternate method approved by the Department.

(2) Alternative methods of disposal for mercury-added products and mercury-added components.

(a) Alternative methods of disposal for categories or types of mercury-added products and mercury-added components.

1. The department in its sole discretion may approve alternative methods of disposal for categories or types of mercury-added products and components. Such approvals may be made in response to requests in writing that describe:

- a. why an alternative to mercury reclamation or disposal as hazardous waste is necessary;
- b. the alternative method proposed;
- c. the environmental impacts of the proposed method; and
- d. a description of the measures that will be implemented to minimize exposure of people and the environment to mercury.

2. In approving an alternative method of disposal, the department will consider the following:

- a. the ability to reclaim the mercury from the product or component in a cost efficient manner;
- b. the ability to safely contain and transport the product or component; and
- c. the existence of a manufacturer's plan for collecting the product or component, in accordance with 310 CMR 75.04, and reclaiming its mercury content or otherwise preventing the mercury from entering the waste stream.

3. List of Approved Alternative Methods of Disposal for Categories of Mercury-added Products and Mercury-added Components. Accidentally broken mercury lamps that are excluded from the hazardous waste regulations pursuant to 310 CMR 30.104(2)(g) [household waste exclusion] may be disposed of as solid waste.

(b) Alternative methods of disposal for individual mercury-added products and mercury-added components on a case-by-case basis.

1. The Department may also issue approvals of alternative methods for disposal of individual mercury-added products or mercury-added components on a case-by-case basis, in response to requests submitted in writing. Any such requests shall include at a minimum:

- a. why an alternative to mercury reclamation or disposal as hazardous waste is necessary;
- b. the alternative method proposed;
- c. an implementation schedule;
- d. the environmental impacts of the proposed method; and
- e. a description of the measures that will be implemented to minimize exposure of people and the environment to mercury.

2. The person requesting an alternative method for disposal of individual mercury-added products or mercury-added components shall publish a legal notice in a Massachusetts newspaper of general circulation and the Massachusetts Environmental Monitor. The legal notice shall include:

310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

76.04: continued

- a. A summary of the request;
- b. A statement that comments can be sent to the Mercury Program Manager at the Massachusetts Department of Environmental Protection up to 21 days after the date that the legal notice is published, and instructions for sending comments including the appropriate mailing address; and
- c. Instructions for obtaining a complete copy of the written request for an alternative method of disposal.

3. Within five days following the publication of the legal notice, the applicant shall send a tear sheet of the legal notice to the Mercury Program Manager at the Massachusetts Department of Environmental Protection.

(3) A solid waste collector shall refuse to collect the contents of a solid waste container that the solid waste collector knows or reasonably should know contains one or more mercury-added products unless such solid waste is collected for the purpose of being reused, reclaimed or properly disposed of as hazardous waste or otherwise managed to ensure that the mercury does not become mixed with other solid waste or wastewater.

(4) Mercury from mercury-added products shall not knowingly be discharged into water, wastewater treatment or wastewater disposal systems unless it is done in compliance with applicable federal, state and local requirements.

76.05: Management of End-of-Life Mercury-Added Products

(1) End of life mercury-added products that are hazardous waste pursuant to 310 CMR 30.000 shall be handled in accordance with 310 CMR 30.000.

(a) End of life mercury-added products that are universal wastes pursuant to 310 CMR 30.1000 may be handled in accordance with 310 CMR 30.1000.

(b) Mercury-added components that are removed from larger products and that are classified as universal waste may be handled in accordance with 310 CMR 30.1000.

(2) End of life mercury-added products that are not hazardous waste shall be managed in accordance with an alternative method approved by the Department pursuant to 310 CMR 76.04(2) or in accordance with the following requirements:

(a) separated from solid waste;

(b) handled and stored in a manner that minimizes breakage, prevents an unpermitted discharge of mercury to air, land, water or other natural resources of Massachusetts and results in no public nuisance;

(c) transported by either a licensed hazardous waste transporter or by common carrier with a bill of lading; and

(d) transferred to a permitted hazardous waste recycling facility, licensed hazardous waste facility, a facility that consolidates shipments of mercury-added products or mercury-added components before being shipped off-site for reclamation, or if shipped out of state, a facility that is authorized to reclaim mercury from mercury-added products.

(3) No person shall knowingly send a multi-component product that contains mercury to a scrap recycling facility or a facility for further processing or recycling without first removing and managing, or arranging for the removal and appropriate management, of the mercury-added product or products prior to crushing, unless such facility agrees, in writing, to be responsible for removing such product or products and recycling them or disposing of them as hazardous waste.

REGULATORY AUTHORITY

310 CMR 76.00: M.G.L. c.21C, §§ 4 and 6 and c.21H, §§ 6I and 6L.

310 CMR 77.00: COLLECTION AND RECYCLING OF MERCURY-ADDED THERMOSTATS

Section

- 77.01: Purpose
- 77.02: Definitions
- 77.03: Applicability
- 77.04: Collection of Mercury-added Thermostats
- 77.05: Management of Mercury-added Thermostats

77.01: Purpose

The purpose of 310 CMR 77.00 is to protect public health, safety, welfare and the environment by implementing M.G.L. c. 21H, § 6J½ and St. 2014, c. 196, § 5. 310 CMR 77.00 requires manufacturers that distributed, offered for final sale, or sold at final sale mercury-added thermostats, to establish a system to collect, transport, and properly manage out-of-service mercury-added thermostats, including recycling of such thermostats, in accordance with M.G.L. c. 21C and 310 CMR 30.000: *Hazardous Waste*. 310 CMR 77.00 establishes requirements for collection and proper management of mercury-added thermostats.

77.02: Definitions

The definitions found in 310 CMR 77.02 apply to, and are limited to, 310 CMR 77.00.

Collection Site means a location for the collection of out-of-service mercury-added thermostats which is either part of a manufacturer sponsored collection program established pursuant to 310 CMR 77.04 or a location where mercury-added thermostats are collected and managed in accordance with applicable federal and state laws governing hazardous waste and universal waste, including 310 CMR 30.000: *Hazardous Waste*.

Contractor means a person engaged in the business of installation, service or removal of heating, ventilation, and air conditioning components.

Department means the Massachusetts Department of Environmental Protection.

Local Governmental Authority means a household hazardous waste facility, a solid waste management agency, an environmental management agency, or a department of public health.

Manufacturer means an organization or entity that sells or sold a mercury-added thermostat under a brand or label it owns or is or was licensed to use a brand or label for a mercury-added thermostat produced by other suppliers.

Mercury-added Thermostat means a product or device that uses a mercury switch to sense and control room temperature through communication with heating ventilation, or air conditioning equipment, including thermostats used to sense and control room temperature in residential, commercial, industrial, or other buildings, but excluding thermostats used to sense and control temperature as part of a manufacturing process.

Person means an individual, trust, firm, joint stock company, corporation, including a government corporation, partnership, association, the federal government or any agency or subdivision thereof, a state, municipality, commission, political subdivision of a state or any interstate body.

Properly Manage Out-of-service Mercury-added Thermostats means to recycle or manage as a hazardous waste or universal waste in compliance with 310 CMR 30.000: *Hazardous Waste*.

Qualified Contractor means a person engaged in the business of installation, service, or removal of heating, ventilation, and air conditioning components who employs seven or more service technicians or installers or who is located in an area outside an urban area, as defined by the United States Bureau of Census.

77.02: continued

Solid Waste Facility means a site or works, and other appurtenances thereto, which is, has been, or will be used for the handling, storage, transfer, processing, treatment or disposal of solid waste, as defined in 310 CMR 19.006: *Definitions*, including all land, structures and improvements which are directly related to solid waste activities.

Thermostat Retailer means a person that sells thermostats of any kind directly to homeowners, other non-professionals, or contractors through any selling or distribution mechanism, including, but not limited to, sales using the internet or catalogs.

Thermostat Wholesaler means a person engaged in the distribution and wholesale sale of thermostats and other heating, ventilation, and air conditioning components to contractors who install heating, ventilation, and air conditioning components.

77.03: Applicability

- (1) 310 CMR 77.00 applies to:
 - (a) Manufacturers that distributed, offered for final sale, or sold at final sale any mercury-added thermostat within the Commonwealth of Massachusetts;
 - (b) Thermostat wholesalers;
 - (c) Thermostat retailers;
 - (d) Contractors;
 - (e) Qualified contractors;
 - (f) Solid waste haulers;
 - (g) Operators of solid waste facilities; and
 - (h) Any person who generates (including the original consumer), who generates, collects, processes, or manages a mercury-added thermostat for disposal in Massachusetts.
- (2) Compliance with 310 CMR 77.00 does not release manufacturers, wholesalers, retailers, contractors, qualified contractors, solid waste haulers, operators of solid waste facilities or other persons from the need to comply with other applicable state, federal and local requirements.

77.04: Collection of Mercury-added Thermostats

- (1) Manufacturers that distributed, offered for final sale, or sold at final sale, any mercury-added thermostat within the Commonwealth shall, individually or collectively:
 - (a) Establish a system to collect, transport, and properly manage out-of-service mercury-added thermostats, including recycling, from all collection sites established pursuant to 310 CMR 77.04. Mercury-added thermostat manufacturers shall not charge a fee or other charge for this service, except a one-time program administration fee not to exceed \$25 per collection container provided pursuant to 310 CMR 77.04(1)(b).
 - (b) Make collection containers available to thermostat wholesalers, thermostat retailers, qualified contractors, and local government authorities within the Commonwealth that request them. Such containers shall be accompanied by information on proper management of mercury-added thermostats as a hazardous waste or universal waste, in accordance with Department regulations at 310 CMR 30.000: *Hazardous Waste*.
 - (c) Submit an annual report to the Department by March 1st of every year of the program, on a form prescribed by the Department, that shall include at a minimum:
 1. The number of mercury-added thermostats collected by the manufacturer(s) in the previous calendar year;
 - a. The number disposed; and
 - b. The number from which the facility separated and recovered the components and mercury contained therein.
 2. The estimated total amount of mercury contained in the thermostat components collected and recycled by the manufacturer(s) in the previous calendar year;
 3. An evaluation of the effectiveness of the manufacturer(s)' collection program including, but not limited to, an estimate of how many out-of-service mercury-added thermometers have yet to be collected;

77.04: continued

4. An accounting of the administrative costs of administering the collection and recycling program; and
 5. A list of all locations where collection containers were provided by the manufacturer(s), including locations that received collection containers during the calendar year. The list shall contain information including, but not limited to:
 - a. Location address;
 - b. The date each location received its mercury-added thermostat collection container; and
 - c. The number of mercury-added thermostats collected from each location.
 6. A description of the education and outreach efforts conducted pursuant to 310 CMR 77.04(1)(d).
- (d) Conduct education and outreach to:
1. Promote the availability of collection containers to:
 - a. Thermostat wholesalers;
 - b. Thermostat retailers;
 - c. Qualified contractors; and
 - d. Units of local government in the Commonwealth.
 2. Promote the importance of proper mercury-added thermostat management, mercury-added thermostat collection opportunities, and the availability of the manufacturer sponsored collection program to:
 - a. Contractors;
 - b. Homeowners; and
 - c. Persons.
 3. Provide signage to participating collection sites that can be prominently displayed to promote the collection and recycling of out-of-service mercury-added thermostats.
 4. Provide written materials or templates of written materials for reproduction by thermostat wholesalers and thermostat retailers to provide to customers at the time of purchase or delivery of thermostats. These materials shall include, but not be limited to, the following information:
 - a. The importance of properly managing out-of-service mercury-added thermostats; and
 - b. Mercury-added thermostat collection opportunities.
- (2) Thermostat wholesalers shall:
- (a) Not offer for final sale, sell at final sale, or distribute any thermostat of a manufacturer that is not in compliance with 310 CMR 77.00.
 - (b) Not offer for final sale, sell at final sale, or distribute any thermostat unless that thermostat wholesaler acts as a collection site for mercury-added thermostats.
 1. To qualify as a collection site, the thermostat wholesaler shall either:
 - a. Collect and manage mercury-added thermostats in accordance with applicable federal and state laws governing hazardous waste and universal waste, including 310 CMR 30.000: *Hazardous Waste*; or
 - b. Participate as a collection site in a manufacturer sponsored collection program established pursuant to 310 CMR 77.04.
 2. All collection sites shall provide visible signage identifying the location as a mercury-added thermostat collection site.
- (3) Thermostat retailers shall:
- (a) Not offer for final sale, sell at final sale, or distribute any thermostat of a manufacturer that is not in compliance with 310 CMR 77.00.
 - (b) Provide visible signage identifying the location as a mercury-added thermostat collection site, if acting as a collection site.
 1. To qualify as a collection site, the thermostat retailer shall either:
 - a. Collect and manage mercury-added thermostats in accordance with applicable federal and state laws governing hazardous waste and universal waste, including 310 CMR 30.000: *Hazardous Waste*; or
 - b. Participate as a collection site in a manufacturer sponsored collection program established pursuant to 310 CMR 77.04.

77.04: continued

(4) Qualified contractors acting as collection sites shall provide visible signage identifying the location as a mercury-added thermostat collection site. To qualify as a collection site, qualified contractors shall either:

- (a) Collect and manage mercury-added thermostats in accordance with applicable federal and state laws governing hazardous waste and universal waste, including 310 CMR 30.000: *Hazardous Waste*; or
- (b) Participate as a collection site in a manufacturer sponsored collection program established pursuant to 310 CMR 77.04.

77.05: Management of Mercury-added Thermostats

(1) Except as otherwise provided in 310 CMR 77.05, all persons shall dispose of mercury-added thermostats by recycling or by disposing as hazardous waste or universal waste in compliance with 310 CMR 30.000: *Hazardous Waste*.

(2) Contractors who remove mercury-added thermostats from buildings shall deliver such thermostats to a collection site established by mercury-added thermostat manufacturers pursuant to 310 CMR 77.04.

(3) Persons who demolish buildings shall remove all mercury-added thermostats prior to building demolition and either:

- (a) Deliver such thermostats to collection sites established by mercury-added thermostat manufacturers pursuant to 310 CMR 77.04; or
- (b) Collect and manage mercury-added thermostats in accordance with applicable federal and state laws governing hazardous waste and universal waste, including 310 CMR 30.000: *Hazardous Waste*.

(4) Persons who remove mercury-added thermostats from a location that is participating in an energy efficiency or weatherization program supported or administered in whole or part by a department, agency, authority, or political subdivision of the Commonwealth or conducted as a result of any statutory requirement, including, but not limited to, demand-side management or least-cost procurement, shall deliver such thermostats to a collection site established by mercury-added thermostat manufacturers pursuant to 310 CMR 77.04.

(5) No municipal or private solid waste haulers or operators of solid waste disposal facilities shall knowingly dispose, or allow to be disposed, a mercury-added thermostat as solid waste, as defined in 310 CMR 19.006: *Definitions*, unless the mercury has been first removed by recycling or disposed as hazardous waste in accordance with 310 CMR 30.000: *Hazardous Waste*.

(6) Solid waste facility operators may knowingly accept or collect mercury-added thermostats for proper disposal, only if:

- (a) The device is segregated from solid waste and stored in an identified recycling container; and
 1. the facility participates in a mercury-added thermostat manufacturer's collection program as a collection site; or
 2. the facility has established a site to collect, manage, and dispose of mercury-added thermostats as hazardous waste or universal waste in accordance with all applicable federal and state laws and regulations, including 310 CMR 30.000: *Hazardous Waste*.
- (b) Solid waste facility operators will not be found in violation of 310 CMR 77.05, if they:
 1. Make a good faith and consistent effort, as determined by the Department, to comply with 310 CMR 77.05(6);
 2. Post, in a conspicuous location at the facility, a sign stating that mercury-added thermostats are not accepted at this facility; and
 3. Notify, in writing, any person authorized to deposit solid waste at that facility that mercury-added thermostats are not accepted at this facility.

REGULATORY AUTHORITY

310 CMR 77.00: M.G.L. c. 21C, §§ 4 and 6, c. 21H, § 6J½ and 6N; and St. 2014, c. 196, § 5.

310 CMR 80.00: UNDERGROUND STORAGE TANK (UST) SYSTEMS

Section

GENERAL PROVISIONS

- 80.01: Authority
- 80.02: Purpose
- 80.03: Definitions
- 80.04: Applicability
- 80.05: Rules of Construction
- 80.06: Computation of Time
- 80.07: Accurate and Timely Submittals to the Department and Recordkeeping
- 80.08: Accurate and Complete Recordkeeping
- 80.09: Accurate Monitoring
- 80.10: Duty to Provide Information
- 80.11: Submittals to the Department
- 80.12: Presumption of Irreparable Harm
- 80.13: Department Access to UST Facilities and Records

DESIGN, CONSTRUCTION AND INSTALLATION REQUIREMENTS

- 80.14: General Requirements
- 80.15: General Prohibitions
- 80.16: Installation Requirements
- 80.17: Specifications for Tanks
- 80.18: Specifications for Regulated Substance Piping
- 80.19: Leak Detection
- 80.20: Requirements for Turbine, Intermediate and Dispenser Sumps
- 80.21: Requirements for Spill Buckets and Overfill Prevention Equipment
- 80.22: Requirements for Corrosion Protection

GENERAL OPERATING REQUIREMENTS

- 80.23: Requirements for Registration and Reporting
- 80.24: General Requirements
- 80.25: Requirements for an UST System or an UST Component Emergency Response
- 80.26: Requirements for Leak Detection Systems
- 80.27: Requirements for Turbine, Intermediate and Dispenser Sumps
- 80.28: Requirements for Spill Buckets and Overfill Prevention Equipment
- 80.29: Requirements for Corrosion Protection
- 80.30: Requirements for Compatibility
- 80.31: Requirements for Inventory Monitoring
- 80.32: Requirements for Tank and Pipe/Line Tightness Testing
- 80.33: Requirements for Repairs and Replacements
- 80.34: Requirements for Compliance Certification
- 80.35: Requirements for Periodic Inspections
- 80.36: Requirements for Recordkeeping

OPERATOR TRAINING

- 80.37: Class A, B and C Operator Requirements and Certifications

LEAKAGE AND RELEASE: RESPONSE, REPORTING AND REMEDIATION

- 80.38: Response to a Release
- 80.39: Response to Leakage
- 80.40: Reportable Releases

CHANGE-IN-PRODUCT, OUT OF SERVICE SYSTEMS AND CLOSURE

- 80.41: Requirements for Change-in-product
- 80.42: Requirements for Taking an UST System Temporarily Out-of-service
- 80.43: Requirements for Removal and Permanent Closure In-place
- 80.44: Requirements for a Tank within a Tank
- 80.45: UST Systems Temporarily Out-of-service for over Five Years
- 80.46: Requirements for Previously Closed-in-place UST Systems
- 80.47: Standards for Cleaning and Closure

Section: continued

DELIVERY PROHIBITION

80.48: Delivery Prohibition

THIRD-PARTY INSPECTIONS

80.49: Third-party Inspections

ENFORCEMENT AND APPEALS

80.50: Enforcement and Appeals

FINANCIAL RESPONSIBILITY

80.51: Definitions

80.52: Requirements for Amount and Scope of Financial Responsibility

80.53: Allowable Mechanisms and Combinations of Mechanisms

80.54: Requirements for Financial Responsibility Mechanisms

80.55: Requirements for a Standby Trust

80.56: Substitution of Financial Assurance Mechanisms by Owner or Operator

80.57: Cancellation or Nonrenewal by a Provider of Financial Assurance

80.58: Requirements for Reporting by Owner or Operator

80.59: Requirements for Recordkeeping

80.60: Requirements for Drawing on Financial Assurance Mechanisms

80.61: Release from Financial Responsibility Requirements

80.62: Bankruptcy or Other Incapacity of Owner or Operator or Provider of Financial Assurance

80.63: Requirements for Replenishment of Local Government Guarantees, Letters of Credit, or Surety Bonds

REQUIREMENTS FOR AIRPORT HYDRANT FUEL DISTRIBUTION SYSTEMS

80.64: Requirements for Airport Hydrant Fuel Distribution Systems

GENERAL PROVISIONS

80.01: Authority

310 CMR 80.00 is promulgated by the Commissioner of the Department of Environmental Protection pursuant to the authority granted by M.G.L. c. 21O, § 5, M.G.L. c. 21C, M.G.L. c. 21E, § 6 and M.G.L. c. 21A, § 16.

80.02: Purpose

310 CMR 80.00 is intended to protect public health, safety and the environment by regulating the design, installation, testing, maintenance, operation, inspection and closure of underground storage tank (UST) systems and to prevent releases from UST systems.

80.03: Definitions

For the purposes of 310 CMR 80.00, the following terms shall have the following meanings:

Abandoned means an UST system that is not in operation for a continuous period of at least one year and is not temporarily out-of-service in accordance with 310 CMR 80.42 and is not in full compliance with the applicable requirements of 310 CMR 80.00.

Airport Hydrant Fuel Distribution System (also called airport hydrant system) means an UST system which supplies fuel to aircraft and operates under high pressure with large diameter piping that typically terminates into one or more hydrants (fill stands). The airport hydrant system begins where fuel enters one or more tanks from an external source such as a pipeline, barge, rail car, or other fuel carrier.

80.03: continued

Automatic Line Leak Detector means a mechanical or electronic device, but not a sump sensor, designed to detect regulated substance or pressure losses in a pressurized product line of a pressurized pumping system and that automatically restricts or shuts off flow in a pressurized piping system. All automatic line leak detectors shall be able to detect a leak of three gallons per hour at one pound per square inch line pressure within one hour with a 95% probability of detection and a 5% probability of false alarm. At UST facilities that are staffed 24 hours per day, seven days per week, 365 days per year, an automatic line leak detector may be a continuous alarm that alerts staff when there is regulated substance or pressure loss in a pressurized product line of a pressurized pumping system.

Business Day means a day of the week that the Department is open for business.

Cathodic Protection or Cathodic Protection System means a technique which inhibits the corrosion of a UST system either through sacrificial or galvanic anode or impressed current.

Cathodic Protection Tester means a person who is certified as follows:

- (a) Certified at least at level CP1 - Cathodic Protection Tester by NACE: The Corrosion Society; or
- (b) Certified as a Cathodic Protection Tester by the Steel Tank Institute (STI); or
- (c) Certified in the UST Cathodic Protection category by the International Code Council (ICC).

CERCLA means the Comprehensive Environmental Response Compensation and Liability Act of 1980, 42 U.S.C. § 9601 *et seq.*

Certified UST System Tightness Tester means a person certified by the manufacturer of the testing equipment to test UST systems using only the testing equipment on which they are certified.

Change-in-product means changing the type of product in a UST system from a regulated substance to another regulated substance or to a non-regulated substance. Changing from one grade of gasoline to a different grade of gasoline is not a change-in-product.

Commissioner means Commissioner of the Department of Environmental Protection.

Commonwealth means the Commonwealth of Massachusetts.

Compatible means that two or more substances maintain their respective physical and chemical properties upon contact with one another under conditions encountered within or around an underground storage tank system for the design life of that system.

Consumptive Use means storing fuel oil exclusively for area heating and/or the heating of domestic water on the premises where stored. Waste oil used for heating is not considered consumptive use.

Continuous Monitoring means the use of a device capable of automatic, uninterrupted and unattended surveillance.

Corrosion Expert means a person who is accredited or certified as being qualified by NACE International as a Cathodic Protection Specialist or Corrosion Specialist. The corrosion expert shall follow applicable NACE International criteria.

Corrosion Protection means the use of a technology, material, or method of construction to prevent any metallic component of a UST system from corroding (*e.g.*, cathodic protection or the use of fiberglass-reinforced plastic or other polymer resins when constructing tanks or piping).

Department means Massachusetts Department of Environmental Protection.

80.03: continued

Dispenser Sump means an impermeable, liquid-tight basin installed beneath a regulated substance dispenser to contain leakage of regulated substance from the dispenser connections and piping.

Double-walled means a container or pipe with two complete shells which provide primary and secondary containment. The container shall have a continuous interstitial space between the primary and secondary shell.

Emergency Spill or Overflow Containment UST System means a tank used solely to contain accidental spills of a regulated substance which are unanticipated and unpredictable.

Emergency Engine means any stationary internal combustion engine which operates as an emergency or standby mechanical or electrical power source. A load shaving unit, peaking power production unit or a standby engine in an energy assistance program is not an emergency or standby engine under Emergency Engine.

Empty or Emptied means when all regulated substance has been removed from a tank using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue, or 0.3% by weight of the total capacity of the tank, remains in the tank.

European Suction System means an underground suction piping system which is sloped back to the tank and is equipped with only one check valve that is installed immediately below the pump so that the contents of the piping will drain back into the tank if there is a breach in the piping and the suction is released.

Farm means an operation engaged in Agriculture or Farming as defined in M.G.L. c. 128, § 1A.

Field-constructed Tank means an underground tank primarily fabricated and/or constructed on-site.

Flow-through Process Tank means a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operations of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

Fuel Oil means any hydrocarbon oil as specified by the *American Society of Testing and Materials (ASTM) Standard D396 90, Specification for Fuel Oil*.

Hazardous Substances means regulated substances as defined in § 101(14) of CERCLA and 40 CFR Part 302. (Hazardous Substances does not include any substance regulated as a hazardous waste under Subtitle C of RCRA and 40 CFR Part 261).

Hydraulic Lift Tank means a tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices or equipment.

Intermediate Sump means an impermeable, liquid-tight basin, installed below grade to allow access to fittings and regulated substance piping or that is used to allow piping declines to tanks or to provide access at key points in the piping system. Intermediate Sumps shall be designed to contain leakage of regulated substance and fluids and prevent a release into the environment. Intermediate Sumps do not include sumps that have only a single-walled siphon bars with no connections within the sump or only contain a European suction system, or sumps that do not contain any regulated substance piping connections.

Interstitial Monitoring means the continuous surveillance of the space between the walls of a double-walled tank or double-walled piping.

Interstitial Space means the space between the primary and secondary barriers of a secondarily contained system (*e.g.*, the space between the two walls of a double-wall tank).

80.03: continued

Leakage means the escape of regulated substance from a UST system into a UST component not intended to store regulated substance including, but not limited to, interstitial spaces, a turbine sump, intermediate and dispenser sumps and containment areas.

Leak Detection means determining whether a release or leakage of a regulated substance has occurred from the UST system.

Lining or Lined means a liquid-tight non-corrodible material that is bonded firmly to the interior surface of a tank and that is compatible with any regulated substance stored in the tank.

Listed if referring to equipment or materials means a list published by a nationally recognized organization, including, but not limited to American Petroleum Institute (API), Steel Tank Institute (STI), Petroleum Engineering Institute (PEI), Underwriters Laboratories, Inc. and NACE: The Corrosion Society concerned with product evaluation, that maintains periodic inspection of production of listed equipment or materials and whose listing states either that equipment or materials meet appropriate standards or have been tested and found suitable for use in a specific manner.

Manufacturer's Specifications mean information provided or prescribed by the manufacturer of a UST system or UST component including, but not limited to, manuals, instructions, checklists, testing requirements and maintenance requirements.

Monitoring Device means an instrument that checks and keeps data and issues alerts and alarms.

NACE means NACE International, a globally recognized authority on corrosion control solutions.

Non-European Suction System means a piping system that conveys regulated substance under suction with a check valve in or at the top of the tank located so that the regulated substance stays in the line when the suction is released.

Operator means:

- (a) In the case of a UST system in use on November 8, 1984, or brought into use after that date, any person in control of, or having responsibility for, the daily operation of a UST system used for the storage, use, or dispensing of regulated substances; or
- (b) In the case of any UST system in use before November 8, 1984, but not in use at any time on or after that date, any person who owns the land on or in which such tank is or was located.

Owner means:

- (a) In the case of a UST system in use on November 8, 1984, or brought into use after that date, any person who owns a UST system used for the storage, use, or dispensing of regulated substances; or
- (b) In the case of any UST system in use before November 8, 1984, but not in use at any time on or after that date, any person who owned such tank immediately before the discontinuance of such use.

Person means any individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, the United States Government, state, municipality, commission, political subdivision of a state, interstate body, consortium, joint venture or commercial entity.

Pipe, Piping or Line means the hollow cylinder or the tubular conduit that is constructed of non-earthen materials.

Pressurized Piping System means a pressurized line system in which regulated substances are supplied to a point away from the tank by means of a pumping unit.

P.S.I. means pounds per square inch.

80.03: continued

Prior to Commencing Operation means before the UST system or UST component is used for its intended purpose after installation or repair, or after being temporarily out-of-service.

RCRA means the Solid Waste Disposal Act, 42 U.S.C. § 6901 *et seq.*, as revised by the Resource Conservation and Recovery Act, Pub. L. 94-580, 90 Stat. 2795 (1976).

Red Tag means a tag, device or mechanism affixed on the UST systems' fill pipes by the Department that clearly identifies a tank as ineligible for regulated substance delivery.

Regulated Substance means:

- (a) Any substance defined in § 101(14) of CERCLA. Regulated substance also includes waste oil, but does not include any other substance regulated as a hazardous waste under M.G.L. c. 21C; and
- (b) Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60°F and 14.7 p.s.i. absolute).

Regulated Substance Deliverer means any person who delivers or deposits regulated substance into a UST system. Regulated Substance Deliverer includes, but is not limited to, oil companies, jobbers, petroleum transportation companies, or other product delivery entities.

Regulated Substance Piping means piping that conveys regulated substance.

Release means any spilling, leaking, emitting, discharging, escaping, leaching, or disposing from a UST system or UST component into the ground water, surface water, surface soil or subsurface soil.

Repair means any modification to the UST system or a UST component that is not routine maintenance including, but not limited to, modifications to the UST system or a UST component that has failed to function properly or has caused a release or leakage, and that restores the UST system to proper operating condition.

Replace or Replacement means the removal of existing tank or piping or an existing UST component and installation of another tank, piping or UST component. If part of the piping is being replaced, "replace" or "replacement" means removal and installation of more than 50% of the piping connected to a single UST system.

Residential means buildings or dwellings used primarily for human habitation, but not industrial and commercial structures.

Routine Maintenance means the normal operational upkeep of an UST system or UST component.

Secondary Containment means a release prevention system for a tank and/or piping where the tank and/or piping have an inner and outer barrier with a space in-between these two barriers for monitoring. Lining a tank or piping shall not constitute secondary containment.

Septic Tank means a watertight receptacle to receive sewage from a building sewer which is designed and constructed to allow for the separation of scum and sludge and the partial digestion of organic matter before discharge of the liquid portion to a soil absorption system or other intermediate structure in the treatment sequence.

Shear, Crash or Impact Valve means a listed, rigidly-anchored valve incorporating a fusible link or other thermally actuated device designed to close automatically in the event of a severe impact or exposure to fire.

Siphon Line means regulated substance piping that connects two tanks and is used to draw regulated substance from one tank into the other to maintain equal levels of regulated substance in each tank.

80.03: continued

Spill Bucket means a containment device at the fill port used to catch, accumulate and prevent the release of regulated substance to the environment.

Statistical Inventory Reconciliation (SIR) means a process of evaluating the various sources of errors present in daily inventory records and capable of detecting a release or leakage from the UST system, including associated piping, of 0.20 gallons per hour with the probability of detection of 0.95 and probability of false alarm of 0.05 as determined by an independent testing laboratory using the U.S. Environmental Protection Agency's standardized test procedures at EPA 510-B-1-004, May 2019 or equivalent.

Storm Water or Wastewater Collection System means tank, piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water run-off resulting from precipitation, or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance.

Surface Impoundment means a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials) that is not an injection well.

Tank means an underground structure that contains regulated substance. Tank shall not include any of the following:

- (a) Any septic tank;
- (b) Any pipeline facility, including gathering lines, which is regulated under:
 - 1. the Natural Gas Pipeline Safety Act of 1968;
 - 2. the Hazardous Liquid Pipeline Safety Act of 1979;
- (c) Any surface impoundment, pit, pond, or lagoon;
- (d) Any storm water or waste water collection system;
- (e) Any flow through process tank;
- (f) Any liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or
- (g) Any storage tank situated in an underground area, including without limitation, a basement, cellar, or mineworking drift, shaft or tunnel, if the storage tank is situated upon or above the surface of the floor, and all sides of the tank are accessible and visible.

Temporarily Out-of-service means the temporary closure of a UST system for not more than five years that occurs when the UST system has been prepared for temporary closure and is maintained during such temporary closure in accordance with 310 CMR 80.42(4) and the Owner informs the Department of the temporary closure in accordance with 310 CMR 80.42(2).

Third-party Inspector means an individual certified to conduct third-party inspections in accordance with 310 CMR 80.49(4).

Third-party Inspection Report means the report prepared by the Third-party Inspector after completion of the third-party inspection in accordance with 310 CMR 80.49(2).

Turbine Sump means an impermeable, liquid-tight basin that contains a submersible pump installed below grade to allow access to piping, pumps, fittings and valves or to collect leakage of regulated substance to prevent its introduction into the environment.

UST Component means equipment serving the tank and piping (UST system) including, but not limited to, pumps, sumps, electrical devices, consoles, cathodic protection system, leak detection system, spill prevention equipment and overfill prevention equipment.

Underground Storage Tank (UST) Facility or Facility means the property on which one or more UST systems, associated UST components, and related above-ground structures are located.

80.03: continued

Underground Storage Tank (UST) System means any one or combination of tanks including, without limitation, underground pipes connected thereto, and any containment system that is or was used to contain regulated substance, or is temporarily out-of-service, and the volume of which, including the volume of underground pipes connected thereto, is 10% or more beneath the surface of the ground. Underground Storage Tank (UST) System shall not include any of the following tanks or any pipes connected to any of the following:

- (a) Any septic tank;
- (b) Any pipeline facility, including gathering lines, which is regulated under 49 U.S.C. c. 601; or
- (c) Any surface impoundment, pit, pond, or lagoon; or
- (d) Any storm water or waste-water collection system; or
- (e) Any flow through process tank; or
- (f) Any liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or
- (g) Any storage tank situated in an underground area including, without limitation, a basement, cellar, or mineworking drift, shaft or tunnel, if the storage tank is situated upon or above the surface of the floor, and all sides of the tank are accessible and visible.

UST Facility Compliance Date means the triennial date by which an Owner or Operator shall ensure that a third-party inspection is completed and the third-party inspection report is submitted to the Department, as further defined in 310 CMR 80.49.

Waste Oil means used or unused waste oil (or any mixture thereof) that is not otherwise hazardous pursuant to 310 CMR 30.120 through 30.136, except that used waste oil with a flash point greater than or equal to 100°F and less than 140°F (solely through use) remains subject to regulation as used waste oil under 310 CMR 30.000: *Hazardous Waste*.

80.04: Applicability

- (1) The requirements of 310 CMR 80.00 shall apply to:
 - (a) Owners and Operators of UST systems, except as provided in 310 CMR 80.04(5) through (13);
 - (b) If the UST system has a crash, shear or impact valve, the regulations apply to Owners and Operators of the UST system below the crash, shear or impact valve, except as provided in 310 CMR 80.04(5) through (13);
 - (c) Class A, B and C operators;
 - (d) Third-party inspectors; and
 - (e) Any person required by 310 CMR 80.00 to certify compliance with 310 CMR 80.00.
- (2) Whenever any provision in 310 CMR 80.00 requires an action to be taken by an Owner or Operator, either may take the action, but both are responsible for ensuring that the proper action is taken, and both the Owner and Operator are jointly and severally liable.
- (3) Schedule of UST System and UST Component Upgrade Requirements. Owners and Operators of the following UST systems shall comply with the Schedule of Upgrades in Table A:
 - (a) Pressurized piping installed before May 28, 1999;
 - (b) UST systems using a submersible pump that do not have a turbine sump;
 - (c) UST systems used to supply regulated substance to emergency engines installed before January 2, 2015; and
 - (d) Airport hydrant systems.

80.04: continued

Table A: Schedule of Upgrades

Type of UST System	Section(s)	Effective Date
Pressurized piping installed before May 28, 1999	Leak Detection Requirements for Automatic Line Leak Detectors at 310 CMR 80.19(4)(b)2.	January 2, 2016
UST systems using a submersible pump that do not have a turbine sump	Requirement for Sumps at 310 CMR 80.20 and 80.27	January 1, 2019 or tank top upgrade, whichever is earlier.
UST systems used to supply fuel to emergency engines installed before January 2, 2015	Leak detection requirements at 310 CMR 80.26(3), (4), (5) or (6).	No later than October 13, 2022
Airport hydrant systems	310 CMR 80.64	See 310 CMR 80.64 for effective dates

(4) **Financial Responsibility.** The financial responsibility requirements at 310 CMR 80.51 through 80.63 shall apply to all Owners and Operators of UST systems except:

- (a) As provided in 310 CMR 80.04(5) through (12); and
- (b) State and Federal government entities whose debts and liabilities are the debts and liabilities of a state or the United States government.

Owners and Operators shall have the burden of proof to demonstrate that they are not subject to 310 CMR 80.51 through 80.63.

(5) Owners and Operators of the following UST systems are exempt from all requirements of 310 CMR 80.00:

- (a) UST systems holding hazardous wastes listed or identified under Subtitle C of RCRA, M.G.L. c. 21C or 310 CMR 30.000: *Hazardous Waste*, except UST systems holding waste oil.
- (b) Equipment or machinery that contains regulated substances for operational purposes including, but not limited to, hydraulic lift tanks and electrical equipment tanks.
- (c) UST systems that contain a *de minimis* concentration of regulated substance which means a concentration of regulated substance not exceeding the GW1 groundwater reportable concentrations in the Massachusetts Oil and Hazardous Materials List at 310 CMR 40.1600: *Massachusetts Oil and Hazardous Material List*. If a regulated substance is not listed at 310 CMR 40.1600: *Massachusetts Oil and Hazardous Material List*, the Owner and Operator shall demonstrate *de minimis* by demonstrating that the regulated substance does not display characteristics of ignitability, corrosivity, flammability and/or toxicity in order to be subject to this exemption. The Owner and Operator shall keep records of said demonstration in accordance with 310 CMR 80.36 until the Owner and Operator no longer claim the exemption.
- (d) UST systems with a capacity of 110 gallons or less.
- (e) UST systems that are part of a storm water or wastewater treatment facility regulated under § 402 or 307(b) of the Federal Clean Water Act or the State Clean Water Act at M.G.L. c. 21, §§ 26 through 53 including, but not limited, to industrial wastewater holding tanks and oil water separators.

(6) Owners and Operators of the following UST systems shall be subject only to the requirements at 310 CMR 80.04(7):

- (a) UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954, 42 U.S.C. § 2011 *et al.*
- (b) UST systems that are part of an emergency generator system at a nuclear power generation facility licensed by the Nuclear Regulatory Commission and subject to Nuclear Regulatory Commission requirements regarding design and quality criteria including, but not limited to, 10 CFR Part § 50,
- (c) UST systems containing low level radioactive waste or its mixture with hazardous waste regulated by the Nuclear Regulatory Commission and the Department of Public Health.

80.04: continued

(d) UST systems that are part of a storm water or wastewater treatment system not regulated under the Federal Clean Water Act § 402 or § 307(b) or the State Clean Water Act at M.G.L. c. 21, §§ 26 through 53.

(7) Owners and Operators of UST systems at 310 CMR 80.04(6) shall comply with the following requirements:

- (a) Prevent releases due to corrosion or structural failure;
- (b) Be cathodically protected against corrosion in accordance with 310 CMR 80.22 and 80.29, be constructed of non-corrodible material, be steel clad with a non-corrodible material, or be designed in a manner to prevent the release or threatened release of any stored regulated substance; and
- (c) Be constructed or lined with material that is compatible with the stored regulated substance.

(8) Owners and Operators of UST systems with consumptive use tanks having a capacity of 1100 gallons or less shall be subject only to the following requirements:

- (a) Tank Specifications at 310 CMR 80.17(3), if installed on or after March 21, 2008; and
- (b) Response to a Release requirements at 310 CMR 80.38.

(9) Owners and Operators of UST systems with consumptive use tanks having a capacity of more than 1100 gallons installed on and after January 1, 1989 are subject only to the following requirements:

- (a) Installation Requirements at 310 CMR 80.16, except 310 CMR 80.16(8);
- (b) Tank Specifications at 310 CMR 80.17(1);
- (c) Specifications for Regulated Substance Piping at 310 CMR 80.18;
- (d) Leak Detection Requirements at 310 CMR 80.19(3)(a) and 80.26;
- (e) Sump Requirements at 310 CMR 80.20 and 80.27;
- (f) Spill Bucket and Overfill Prevention Requirements at 310 CMR 80.21 and 80.28;
- (g) Corrosion Protection Requirements, if applicable, at 310 CMR 80.22 and 80.29;
- (h) General Requirements at 310 CMR 80.24, except 310 CMR 80.24(4)
- (i) Emergency Response Requirements at 310 CMR 80.25;
- (j) Compatibility Requirements at 310 CMR 80.30;
- (k) Repair and Replacement Requirements at 310 CMR 80.33;
- (l) Leakage and Release: Response, Reporting and Remediation requirements at 310 CMR 80.38 through 80.40; and
- (m) Closure Requirements at 310 CMR 80.41 through 80.47.

(10) Owners and Operators of UST systems with consumptive use tanks having a capacity of more than 1100 gallons installed before January 1, 1989 are subject only to the following requirements:

- (a) Specifications for Regulated Substance Piping at 310 CMR 80.18(1);
- (b) Sump Requirements at 310 CMR 80.20 and 80.27;
- (c) Spill Bucket and Overfill Prevention Requirements at 310 CMR 80.21 and 80.28;
- (d) General Requirements at 310 CMR 80.24, except 310 CMR 80.24(4);
- (e) Emergency Response Requirements at 310 CMR 80.25;
- (f) Compatibility Requirements at 310 CMR 80.30;
- (g) Repair and Replacement Requirements at 310 CMR 80.33;
- (h) Leakage and Release: Response, Reporting and Remediation requirements at 310 CMR 80.38 through 80.40; and
- (i) Closure Requirements at 310 CMR 80.41 through 80.47.

(11) Owners and Operators of farm or residential tanks having a capacity of 1100 gallons or less used exclusively for the storage of motor fuel are subject to only the following requirements:

- (a) Tank Specifications at 310 CMR 80.17(1); and
- (b) Response to a Release requirements at 310 CMR 80.38.

(12) Owners and Operators of UST systems used solely for emergency spill or overflow containment of a regulated substance are subject to only the following requirements:

- (a) Tank standards at 310 CMR 80.17(1);
- (b) Registration requirements at 310 CMR 80.23(1);

80.04: continued

- (c) Response to a Release requirements at 310 CMR 80.38; and
- (d) Remove all regulated substance within 72 hours of the introduction of a regulated substance.
- (e) If the substance contained in the emergency spill or overflow containment UST system is determined to be hazardous waste, the substance shall be subject to 310 CMR 30.000: *Hazardous Waste*.

(13) Owners and Operators of UST systems used to supply regulated substance to emergency engines are subject to all requirements of 310 CMR 80.00, except the Inventory Monitoring requirements at 310 CMR 80.31.

80.05: Rules of Construction

- (1) No provision of 310 CMR 80.00 shall be construed to limit the Department's authority to take or arrange for, or to require any person to perform, any response action authorized by M.G.L. c. 21C or 21E which the Department deems necessary to protect public health, safety or the environment.
- (2) The provisions of 310 CMR 80.00 are severable, and if any provision herein or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions hereof or applications thereof which can be given effect without the invalid provision or application.
- (3) No provision of 310 CMR 80.00 shall be construed to relieve any person of the necessity of complying with all applicable federal, state or local laws.

80.06: Computation of Time

Unless otherwise specifically provided by law, 310 CMR 80.00, or any determination issued pursuant to 310 CMR 80.00, any time period prescribed or referred to in 310 CMR 80.00, or in any determination issued pursuant to 310 CMR 80.00, shall begin with the first day following the act which initiates the running of the time period, and shall include every calendar day, including the last day of the time period so computed. If the last day is a Saturday, Sunday, legal holiday, or any other day in which the offices of the Department are closed, the deadline shall run until the end of the next business day. If the time period prescribed or referred to is less than seven days, only days when the offices of the Department are open shall be included in the computation. If the time period is prescribed in hours, the computation is the exact number of hours from the start of the deadline without regard to whether the Department is open, unless the deadline requires delivery of information or documentation to the Department, in which case it is on the next business day after the running of the deadline if that deadline runs on a day when the Department is closed.

80.07: Accurate and Timely Submittals to the Department and Recordkeeping

- (1) No person shall make any false, inaccurate, incomplete or misleading statement in any application, record, report, plan, log or statement which that person submits, or is required to submit, to the Department pursuant to M.G.L. c. 21O, 310 CMR 80.00, or any permit, order, certification or approval issued by the Department.
- (2) Any application, record, report, plan or statement which any person is required to submit to the Department shall be submitted within the time period presented in M.G.L. c. 21O, 310 CMR 80.00, or any order issued by the Department, unless otherwise specified by the Department.
- (3) No person shall make any false, inaccurate, incomplete or misleading statement in any application, record, report, plan, log or statement which that person keeps, or is required to keep, by the Department pursuant to M.G.L. c. 21O, 310 CMR 80.00, or by any permit, order, certification or approval issued by the Department.

80.08: Accurate and Complete Recordkeeping

Any recordkeeping which any person is required to perform shall be promptly, fully, and accurately performed and shall otherwise be in compliance with 310 CMR 80.00, and any permit, order, certification or approval issued by the Department.

80.09: Accurate Monitoring

No person shall falsify, tamper with, or render inaccurate any monitoring device or method which any person maintains, or which is required to be maintained pursuant to M.G.L. c. 210 or 310 CMR 80.00. Any monitoring which any person is required to perform shall be promptly, fully and accurately performed and shall otherwise be in compliance with M.G.L. c. 210, 310 CMR 80.00, or any permit, order, certification or approval issued by the Department.

80.10: Duty to Provide Information

For any of the purpose set forth in M.G.L. c. 210 or 310 CMR 80.00, any Owner or Operator of a UST system shall upon reasonable request of the Department furnish information relating to UST systems and UST components, conduct monitoring or testing, and permit the Department to have access to, and to copy all records relating to, such UST systems and UST components within the time specified in the Department's request.

80.11: Submittals to the Department

(1) Any person signing a document or form, required by 310 CMR 80.00 to be signed by the Owner or Operator, shall be signed by:

- (a) If a sole proprietorship, the sole proprietor;
- (b) If a partnership, a general partner with the authority to bind the partnership;
- (c) If a trust, a trustee or any other natural person authorized:
 1. to enter into contracts regarding the trust property;
 2. to bind the trust; or
 3. to encumber or dispose of the trust property;
- (d) If a limited liability company, a person authorized pursuant to M.G.L. c. 156C, § 24 and the limited liability company's operating agreement to bind the company and all the members;
- (e) If a corporation or a nonprofit corporation, a president, secretary, treasurer, or a vice-president of the corporation in charge of a principal business function who has been duly authorized to bind the corporation pursuant to a corporate vote, or an employee of the corporation who has been duly authorized to bind the corporation pursuant to a corporate vote;
- (f) If a municipality or other public agency, a principal executive officer or ranking elected official who is empowered to enter into contracts on behalf of the municipality or public agency.

(2) Unless otherwise required by law or 310 CMR 80.00, any person signing a document pursuant to 310 CMR 80.00, or when providing any other information ordered or requested by the Department in writing pursuant to 310 CMR 80.00, shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

80.12: Presumption of Irreparable Harm

Pursuant to M.G.L. c. 210, § 8, any violation of any provision of M.G.L. c. 210 or 310 CMR 80.00 or of any order, permit, or approval adopted or issued thereunder shall be presumed to constitute irreparable harm to public health, safety and welfare, and to the environment. Such presumption may be rebutted by the introduction of competent evidence.

80.13: Department Access to UST Facilities and Records

(1) Reasonable Access.

- (a) For purposes of implementing M.G.L. c. 210 and 310 CMR 80.00, personnel and/or representatives of the Department may, upon presentation of credentials, enter property containing or suspected of containing UST systems in order to:
 1. Inspect or obtain samples from any UST system;

80.13: continued

2. Conduct monitoring or testing of the tanks, associated equipment, contents of the tank or surrounding soils, air, surface water or ground water; and
 3. Have access to, and copy all records, relating to such tanks.
- (b) Said inspections shall be conducted during normal business hours or at other reasonable times, with or without prior notice, except that personnel or authorized representatives of the Department may enter a UST facility, at any time, if emergency conditions require immediate entry or to protect public health, safety or the environment.
- (c) For announced inspections, the Department will notify the UST facility no less than 48 hours before the announced inspection.
- (2) Duty to Comply.
- (a) The Owner and Operator shall cooperate and assist Department personnel or authorized representative and in no way restrict, impede, or delay an inspection or any request for information by personnel or authorized representatives of the Department where such inspection or request is made pursuant to a reasonable request in accordance with 310 CMR 80.13(1), or in accordance with the conditions of any authorization, determination, modification, permit, or other approval, or pursuant to the terms of any order or other enforcement document, or as otherwise authorized by law.
- (b) For announced inspections, the Owner or Operator shall provide the necessary personnel in order to provide access to UST records, systems and facilities including, but not limited to, the following:
1. Regulated substance fill port/spill bucket;
 2. Automatic tank gauge port and console;
 3. Turbine and intermediate sumps;
 4. Underground piping/other access ports;
 5. Dispenser cabinet/dispenser sump;
 6. Audible and visual alarm equipment;
 7. Overfill prevention equipment; and
 8. Any other component of the UST System if the Department informs the Owner or Operator it needs access to the component at the time the inspection is announced, and excludes any UST system or UST component that would only be visible for inspection if they were excavated.
- (3) Warrants. If the Department is denied full and complete access to the UST facility or requested information, or if after reasonable efforts, the Department cannot locate the Owner or Operator, the Department may seek, from a court, judge, justice or magistrate, a warrant authorizing personnel or authorized representatives of the Department to conduct a reasonable search of the UST facility or property. 310 CMR 80.13 shall not preclude the Department from gaining access through other legal means, including, but not limited to, a court order or injunctive relief.

DESIGN, CONSTRUCTION AND INSTALLATION REQUIREMENTS

80.14: General Requirements

Owners and Operators shall comply with all general and specific design, construction and installation requirements in 310 CMR 80.14 through 80.22, as applicable.

80.15: General Prohibitions

- (1) All single-walled steel tanks in-service and temporarily out-of-service shall be permanently closed and removed from the ground or permanently closed in-place in compliance with 310 CMR 80.43 by August 7, 2017, except for the following tanks:
- (a) Consumptive use tanks; and
 - (b) Tanks that were relined prior to August 8, 2007 in accordance with API 1631, 1983 Edition and the Owner or Operator has the following:
 1. A permit and approval that was issued by the Head of the Fire Department for such relining; and
 2. A current, legally valid warranty for said relining.

80.16: Installation Requirements

(1) No UST system shall be installed except by a person who has been certified to install that type of UST system in writing by the UST system manufacturer. The installation shall include, but shall not be limited to, compliance with the manufacturer's specifications and all items on the manufacturer's checklist(s).

(a) The installer shall certify that the UST system was installed in accordance with the manufacturer's specifications and that the installer complied with all items on the manufacturer's installation checklist(s).

(b) The Owner or Operator shall maintain a copy of the certifications in 310 CMR 80.16(1) and 80.16(1)(a), manufacturer's specifications and completed checklist(s) in accordance with 310 CMR 80.36.

(c) The Owner shall submit the installer certification(s) from the manufacturer(s) and the installer's certification in 310 CMR 80.16(1)(a), in accordance with 310 CMR 80.23(1)(b).

(d) A new double-walled tank may be installed inside an existing tank, if the new double-walled tank meets the requirements of 310 CMR 80.17 and does not rely on the existing tank to provide structural integrity or as a tank wall and:

1. Prior to installing the new double-walled tank, the Owner or Operator shall have all the solid and liquid material removed from the existing UST system, in accordance with 310 CMR 80.47, have the existing UST system rendered inert and shall secure all openings. The Owner or Operator shall manage all solid and liquid material removed from the UST system in accordance with all applicable federal, state and local laws and regulations.

2. Conduct an assessment in accordance with 310 CMR 80.43(4) before the new double-walled tank is installed. If the assessment finds contamination requiring notification pursuant to 310 CMR 40.0000, *Massachusetts Contingency Plan*, the installation of the new tank shall not commence until the Owner or Operator has complied with the notification requirements contained in 310 CMR 40.0300: *Notification of Releases and Threats of Release of Oil and Hazardous Materials; Identification and Listing of Oil and Hazardous Materials*, as applicable, and any required response actions under 310 CMR 40.0000.

3. Notify the Department that a new double-walled tank is being installed inside an existing tank, in a format specified by the Department, within 30 days of the new tank being installed. A copy of the assessment in 310 CMR 80.43(4) shall be submitted with said form.

(2) The installation of all UST systems, including anchoring of the tank, shall be carried out in accordance with the manufacturer's specifications, listed engineering practices, and the provisions of 310 CMR 80.14 through 80.22. In lieu of the requirements at 310 CMR 80.16(9) through (16), Owners and Operators may use military construction criteria, such as Unified Facilities Criteria (UFC) 3-460-01, Petroleum Fuel Facilities, when designing, constructing, and installing UST systems with field-constructed tanks over 50,000 gallons capacity.

(3) Any damage to the exterior of a tank or its coating shall be repaired before the tank is covered.

(4) The Tank and Piping Shall Pass the following Tests Prior to Burial.

(a) The tank and the interstitial space shall be tested by air pressure not less than three pounds and not more than five pounds per square inch. If the interstitial space contains liquid, testing shall comply with the manufacturer's specifications.

(b) The piping shall be hydrostatically tested (or by air pressure) to 150% of the maximum anticipated pressure of the piping system, but not less than 50 pounds per square inch gauge of the highest point of the piping system.

(c) The Owner shall provide the test results to the professional engineer conducting the inspection in accordance with 310 CMR 80.16(6).

(5) After installation, backfilling and surfacing to grade, the tank and piping shall pass a tightness test in accordance with 310 CMR 80.32.

80.16: continued

(6) All UST systems shall be inspected by the person who prepares the drawings or as-built plans in accordance with 310 CMR 80.16(7), or their designated representative, prior to being backfilled, to ensure the UST system is installed in accordance with 310 CMR 80.14 through 80.22. If the person who prepares the drawing or as-built plans, or their designated representative, determines the UST system is not installed in accordance with 310 CMR 80.14 through 80.22, the UST system shall not be backfilled until the Owner or Operator of the UST system complies with all requirements at 310 CMR 80.14 through 80.22.

(7) The Owner or Operator shall maintain a scaled drawing or a set of as-built plans prepared by the installer who installed the UST system or a registered professional engineer until the UST system is removed or permanently closed in accordance with 310 CMR 80.43(2) or (3) and shall submit a copy of the as-built plans to the Department in accordance with 310 CMR 80.23(1). The scaled drawing or as-built plans shall include, but not be limited to:

(a) A locus plan or location map showing the location of the UST facility and the global positioning system (GPS) coordinates of the UST system(s). The plan or map shall include, but not be limited to, the location of any public well, private well, if readily ascertainable, and any body of surface water within 500 feet of the UST facility. All drinking water wells shall be clearly marked on the plan or map.

(b) A site plan of the UST facility including, but not limited to, the location of each UST system and all buildings.

(c) UST system details including, but not limited to, a list of UST components (including manufacturer and model number), schematics of the tanks, piping, and turbine, intermediate and dispenser sumps, elevations of each tank and related piping below the final surface grade and a materials list.

(d) A signed statement by the licensed professional engineer who signed and sealed the as-built plans that the UST system was installed in accordance with 310 CMR 80.00, the manufacturer's specifications and the manufacturer's checklist.

(8) The Owner shall submit a registration to the Department within 30 days of the initial introduction of regulated substance into an UST system on a form specified by the Department, in accordance with 310 CMR 80.23(1), except Owners of UST systems used solely for emergency spill or overflow containment shall submit a registration to the Department within 30 days of installation.

(9) If the manufacturer's specifications do not specify the type of backfill material, the Owner or Operator shall comply with one of the following:

(a) API Recommended Practice 1615, 6th Edition, April 2011, *Installation of Underground Petroleum Storage Systems*; or

(b) PEI Recommended Practice 100-17, 2017, *Recommended Practices for Installation of Underground Liquid Storage Systems*.

(10) At any fueling facilities where tanks are at an elevation which produces a gravity head on the dispensing unit, the tank outlet shall be equipped with a device, such as a solenoid valve, positioned adjacent to, and downstream from, the outlet of the tank that is installed and adjusted so that liquid cannot flow by gravity from the tank in case of piping or hose failure when the dispenser is not in use.

(11) Underground piping and underground vent lines shall be installed in a trench. If the manufacturer's specifications specify a different standard for installing piping and vent lines, the Owner and Operator may comply with the manufacturer's specification in lieu of 310 CMR 80.16(11). The Owner or Operator shall keep records of the standard in accordance with 310 CMR 80.36.

(12) A minimum six-inch-deep bed of well-compacted noncorrosive material such as clean washed sand or gravel shall be placed in a trench before the piping is installed, unless otherwise directed by the manufacturer's specifications. All trenches shall be wide and deep enough to permit at least six inches of noncorrosive backfill material surrounding all lines, unless otherwise directed by the manufacturer's specifications. The owner or Operator shall keep records of the Manufacturer's specification in accordance with 310 CMR 80.36.

80.16: continued

(13) All piping shall lead from the tops of tanks, and the tops of all tanks shall be below the level of the lowest horizontal pipe used in the connection therein, except where the design specifically prevents a possible siphoning condition.

(14) All pipes used for the conveyance of flammable liquid shall decline to tanks without traps or pockets, and shall be protected against damage. Intermediate sumps installed to allow piping to decline to tanks shall not be considered a trap or pocket provided the intermediate sump is monitored for leakage and is accessible for repairs and inspections. Piping drops from submerged pumps to allow piping decline to the tank shall not be considered a trap. Siphon lines shall be exempt from 310 CMR 80.16(14).

(15) A double elbow swing joint or flexible connector listed for underground applications shall be installed at all locations where piping changes direction from horizontal to vertical or from vertical to horizontal. If the manufacturer's specifications specify a different standard, the Owner and Operator may comply with the manufacturer's specification in *lieu* of 310 CMR 80.16(15). The Owner or Operator shall keep records of the standard in accordance with 310 CMR 80.36.

(16) Pressurized systems shall be designed or equipped so that no part of the system will be subjected to pressures above its allowable working pressure in accordance with the manufacturer's specifications.

(17) A permanent dewatering well for the purpose of dewatering the tank grave in order to conduct repairs of the UST system may be installed if the well is seated in the tank grave and the well seals are designed and constructed to prevent migration of fluids from the ground surface into the borehole.

(a) The following seals are all required and shall be designed and constructed as follows:

1. Annular Seals.

a. Annular seals shall be placed in the annular space between the well casing and the borehole wall and above the divider seal.

b. Annular seals shall consist of a low permeability material that will serve to inhibit the vertical movement of fluids within the annular space.

c. An annular seal shall be composed of one or a combination of the following sealants: neat cement, bentonite/cement slurries, or equivalent sealing agents.

2. Divider Seals.

a. Divider seals shall consist of a layer of bentonite slurry or pellets designed to prevent the annular seal materials from plugging up the screened area of the well.

b. Divider seals shall be placed above the material surrounding the well screen and below the annular seal.

3. Surface (Apron) Seal.

a. A surface seal around the top of the well is required even if the annular seal is carried to the surface.

b. A surface seal shall be concrete.

c. A surface seal shall be shaped so that surface water flows away from the well casing.

d. Based on site conditions, the surface seal shall extend, at a minimum, to the bottom of the tank pad, and in no event less than one foot below grade to prevent frost-heaving of the apron.

(b) Dewatering wells and seals shall be maintained so as to prevent storm water and/or regulated substances from entering the subsurface as long as the dewatering well is in place.

(18) The Owner or Operator shall keep a copy of the installer's certifications, manufacturer's specifications and completed checklist(s), records of all testing results and inspections conducted during the installation and the accurate drawing or as-built plans in accordance with 310 CMR 80.36.

80.17: Specifications for Tanks

- (1) Tanks, except consumptive use tanks having a capacity of 1100 gallons or less, that are installed on and after January 1, 1989 shall be one of the following:
 - (a) Listed double-walled cathodically protected metal tanks;
 - (b) Listed double-walled fiberglass reinforced plastic tanks;
 - (c) Listed double-walled composite tanks;
 - (d) Listed double-walled jacketed steel tanks; or
 - (e) Listed tanks that are no less protective of human health and the environment than 310 CMR 80.17(1)(a) through (d), if the following requirements are met:
 1. The Owner shall submit an application to the Department for approval demonstrating that the tank is equal to or more protective of human health and the environment than 310 CMR 80.17(1)(a) through (d). This demonstration shall include, but is not limited to, technical information that the tank is noncorrosive or corrosion resistant, and meets or exceeds the performance standards in 310 CMR 80.17(1)(a) through (d).
 2. The Department, at its sole discretion, shall determine whether the Owner has made the demonstration required in 310 CMR 80.17(1)(e)1.
 3. The Owner shall not install the tank unless and until it receives written approval from the Department.
 - (f) Listed "tank-within-a-tank" systems that are double-walled and do not rely on the existing tank to provide structural integrity or as a tank wall.
- (2) Tanks that are installed or that become subject to 310 CMR 80.00, on and after January 1, 1989 shall be equipped with a metallic or nonmetallic striker plate attached to the bottom of the tank at each opening. Such striker plate shall be at least 12" x 12" in area and at least ¼" thick.
- (3) Consumptive use tanks having a capacity of 1100 gallons or less that are installed on and after March 21, 2008 shall be one of the following:
 - (a) Listed double-walled fiberglass reinforced plastic using materials compatible with fuel oil and equipped with continuous interstitial monitoring.
 - (b) Listed double-walled metal tank with cathodic protection or bonded fiberglass coating and equipped with continuous interstitial monitoring.

80.18: Specifications for Regulated Substance Piping

- (1) UST systems that contain regulated substance piping shall be installed with one of, or a combination of, the following piping systems:
 - (a) Pressurized piping system;
 - (b) European suction system; or
 - (c) Non-European suction system.
- (2) In addition to complying with 310 CMR 80.18(1), regulated substance piping installed in UST systems between January 1, 1989 and January 2, 2015, shall meet the following requirements:
 - (a) Regulated substance piping shall be constructed of:
 1. A non-corrodible material; or
 2. Cathodically protected metal, including copper if the copper is adequately protected against physical damage and is secondarily contained.
 - (b) Regulated substance piping, except European suction systems and siphon lines between tanks, shall be installed with secondary containment which may include, but is not limited to, impervious liners if installed prior to January 2, 2015 or double-walled piping.
- (3) All regulated substance piping installed after January 2, 2015 shall be:
 - (a) double-walled, except European suction systems and siphon lines between tanks;
 - (b) product compatible; and
 - (c) constructed of:
 1. a non-corrodible material; or
 2. cathodically protected metal, including copper if the copper is adequately protected against physical damage and is secondarily contained.

80.19: Leak Detection

- (1) Owners and Operators shall equip UST systems with leak detection equipment.
- (2) The Owner or Operator shall install, calibrate, operate and maintain all leak detection equipment in accordance with 310 CMR 80.19 and 80.26, and the manufacturer's specifications.
- (3) Requirements for Tanks.
 - (a) Tanks (except tanks used to supply regulated substance to emergency engines) installed on or after January 1, 1989, and tanks used to supply regulated substance to emergency engines installed on or after January 2, 2015, shall be equipped with a system that continuously monitors interstitial space.
 1. The interstitial monitors shall be installed and operated in accordance with the manufacturers' specifications.
 2. The system shall comply with 310 CMR 80.26(3).
 3. The interstitial monitoring shall detect leakage through the inner wall of any tank.
 4. For UST systems using continuous vacuum, pressure, or hydrostatic methods (including brine systems) of interstitial monitoring, the method shall be capable of detecting a breach in the inner and outer walls of the tank.
 - (b) Tanks, except tanks used to supply regulated substance to emergency engines, installed before January 1, 1989, shall be equipped with at least one of the leak detection methods listed 310 CMR 80.19(3)(b)1. through 4. No later than October 13, 2022, tanks used to supply regulated substance to emergency engines that were installed before January 2, 2015, shall be equipped with at least one of the leak detection methods listed at 310 CMR 80.19(3)(b)1. through 4.
 1. A system that continuously monitors interstitial space.
 - a. The sensors shall be installed in accordance with the manufacturers' specifications.
 - b. The system shall comply with 310 CMR 80.26(3).
 - c. The interstitial monitoring shall detect leakage through the inner wall of any tank.
 2. An in-tank monitoring system that is used to test the tank at least once a month over the continuous period of time prescribed by the manufacturer's specifications to determine if there is a release or leakage. If the manufacturer's specifications do not prescribe a continuous period of time, the continuous period of time shall be six hours. The system shall be capable of detecting a release or leakage of 0.20 gallons per hour with the probability of detection of 0.95 and a probability of false alarm of 0.05 as determined by an independent testing laboratory using the U.S. Environmental Protection Agency Standard Test Procedures for Evaluating Leak Detection Methods (EPA-510-B-19-002, May 2019) or other equivalent test procedures and complies with 310 CMR 80.26(4).
 3. A continuous in-tank monitoring system installed and operated in accordance with the manufacturers' specifications that is capable of detecting a release or leakage of 0.20 gallons per hour with the probability of detection of 0.95 and a probability of false alarm of 0.05 as determined by an independent testing laboratory using the U.S. Environmental Protection Agency Standard Test Procedures for Evaluating Leak Detection Methods (EPA-510-B-19-002, May 2019) or other equivalent test procedures and complies with 310 CMR 80.26(5).
 4. An in-tank monitoring system installed, operated and maintained by a qualified person with inventory data analysis conducted by a trained statistical inventory reconciliation (SIR) vendor. The SIR testing or monitoring methods shall meet the following requirements:
 - a. Report a quantitative result with a calculated leak rate;
 - b. Be capable of detecting a release or leakage of 0.20 gallons per hour with the probability of detection of 0.95 and a probability of false alarm of 0.05 as determined by an independent testing laboratory using the U.S. Environmental Protection Agency Standard Test Procedures for Evaluating Leak Detection Methods (EPA/530/UST-90/006 510-B-19-002, May 2019) or other equivalent test procedures;
 - c. Use a threshold that does not exceed ½ the minimum detectible leak rate; and

80.19: continued

- d. Comply with U.S. Environmental Protection Agency Standard Test Procedures for Evaluating Leak Detection Methods (EPA 510-B-19-004, May 2019) or other equivalent test procedures and with 310 CMR 80.26(6).
- (c) Until October 13, 2022, tanks used to supply fuel to emergency engines installed before January 2, 2015 shall comply with at least one of the following leak detection methods:
1. Leak detection requirements at 310 CMR 80.19(3)(b)1., 2. 3. or 4.;
 2. If the tank has a capacity of 1000 gallons or less, weekly tank gauging in accordance with 310 CMR 80.26(7); or
 3. If the tank has a capacity of more than 1000 gallons, monthly tank gauging in accordance with 310 CMR 80.26(8), and conduct an annual tightness test in accordance with 310 CMR 80.32.
- (d) Owners and Operators of field-constructed tanks with a capacity greater than 50,000 gallons capacity may use one of the following methods of leak detection for each tank to satisfy the requirements of 310 CMR 80.19(1):
1. Conduct an annual bulk tank tightness test that can detect a release or leakage at 0.5 gallon per hour;
 2. Use an in-tank monitor to perform leak detection at least every 30 days that can detect a release or leakage of less than or equal to one gallon per hour. This method shall be combined with a bulk tank tightness test that can detect a release or leakage of 0.2 gallon per hour and be performed at least every three years; or
 3. Use an in-tank monitor to perform leak detection at least every 30 days that can detect a release or leakage of less than or equal to two gallons per hour. This method shall be combined with a bulk tank tightness test that can detect a release or leakage of 0.2 gallon per hour and be performed at least every two years.
 4. Perform inventory control (conducted in accordance with Department of Defense Directive 4140.25; ATA Airport Fuel Facility Operations and Maintenance Guidance Manual; or equivalent procedures) at least every 30 days that can detect a release or leakage equal to or less than 0.5% of flow-through; and perform a tank tightness test that can detect a release or leakage of 0.5 gallon per hour at least every two years.
 5. Maintain records of the testing conducted according to 310 CMR 80.19(3)(d) in accordance with 310 CMR 80.36.
- (4) Requirements for Piping.
- (a) UST systems installed on or after May 28, 1999 shall have the following requirements for regulated substance piping, except European suction systems and single-walled siphon lines between tanks:
1. All regulated substance piping shall have a system that continuously monitors interstitial space as follows:
 - a. Sensors shall be installed in the sump in accordance with the manufacturers' specification. If there is no manufacturer's specification, the sensors shall be placed at the lowest point in the sump.
 - b. The system shall comply with 310 CMR 80.26(3).
 - c. The system shall detect regulated substance in a sump that leaked through the inner wall in any portion of the piping that routinely contains regulated substance.
 2. In addition to complying with 310 CMR 80.19(4)(a)1., pressurized piping systems shall be equipped with an automatic line leak detector that accurately detects a release or leakage of three gallons per hour at ten p.s.i. in line pressure within one hour with the probability of detection of 0.95 and probability of false alarm of 0.05. At UST facilities that are staffed 24 hours per day, seven days per week, 365 days per year, an automatic line leak detector may also be a continuous alarm that alerts staff when there is regulated substance or pressure loss in a pressurized product line of a pressurized pumping system.
 3. European suction systems and siphon lines between tanks are not required to have leak detection.
- (b) UST Systems installed between January 1, 1989 and May 28, 1999 shall have the following requirements for regulated substance piping, except European suction systems and single-walled siphon lines between tanks:
1. Owners or Operators of all regulated substance piping shall implement one of the following methods of leak detection:

80.19: continued

- a. A system that continuously monitors interstitial space in accordance with 310 CMR 80.19(4)(a)1.; or
 - b. Quarterly visual inspections of secondary containment ports and conduct of an annual tightness test of the product piping line in accordance with 310 CMR 80.32; or
 - c. An in-tank monitoring system that is maintained by a qualified person with inventory data analysis conducted by a qualified statistical inventory reconciliation (SIR) vendor. The SIR testing or monitoring methods shall:
 - i. Report a quantitative result with a calculated leak rate;
 - ii. Be capable of detecting a release or leakage of 0.20 gallons per hour with the probability of detection of 0.95 and a probability of false alarm of 0.05 as determined by an independent testing laboratory using the U.S. Environmental Protection Agency Standard Test Procedures for Evaluating Leak Detection Methods (EPA 510-B-19-0002, May 2019) or other equivalent test procedures;
 - iii. Use a threshold that does not exceed $\frac{1}{2}$ the minimum detectible leak rate; and
 - iv. Comply with U.S. Environmental Protection Agency Standard Test Procedures for Evaluating Leak Detection Methods (EPA 510-B-19-004, May 2019) or other equivalent test procedures and with 310 CMR 80.26(6).
2. In addition to complying with 310 CMR 80.19(4)(b)1., pressurized piping systems shall be equipped with an automatic line leak detector that accurately detects a release or leakage of three gallons per hour at ten p.s.i. in line pressure within one hour with the probability of detection of 0.95 and probability of false alarm of 0.05. At UST facilities that are staffed 24 hours per day, seven days per week, 365 days per year, an automatic line leak detector may also be a continuous alarm that alerts staff when there is regulated substance or pressure loss in a pressurized product line of a pressurized pumping system.
3. European suction systems are not required to have leak detection.
- (c) UST Systems installed before January 1, 1989 shall have the following requirements for regulated substance piping, except European suction systems and single-walled siphon lines between tanks:
1. Owners or Operators of all regulated substance piping shall implement one of the following methods of leak detection:
 - a. A system that continuously monitors interstitial space in accordance with 310 CMR 80.19(4)(a)1.; or
 - b. Quarterly visual inspections of secondary containment ports and conduct an annual tightness test of the product piping line in accordance with 310 CMR 80.32; or
 - c. An in-tank monitoring system that is maintained by a qualified person with inventory data analysis conducted by a trained statistical inventory reconciliation (SIR) vendor. The SIR testing or monitoring methods shall:
 - i. Report a quantitative result with a calculated leak rate;
 - ii. Be capable of detecting a release or leakage of 0.20 gallons per hour with the probability of detection of 0.95 and a probability of false alarm of 0.05 as determined by an independent testing laboratory using the U.S. Environmental Protection Agency Standard Test Procedures for Evaluating Leak Detection Methods (EPA 510-B-19-002, May 2019) or other equivalent test procedures;
 - iii. Use a threshold that does not exceed $\frac{1}{2}$ the minimum detectible leak rate; and
 - iv. Comply with U.S. Environmental Protection Agency Standard Test Procedures for Evaluating Leak Detection Methods (EPA 510-B-19-004, May 2019) or other equivalent test procedures and with 310 CMR 80.26(6).
 - d. For single-walled pressurized piping systems and single-walled gravity piping systems, conduct an annual tightness test in accordance with 310 CMR 80.32; or
 - e. For Non-European suction systems that do not have secondary containment, conduct an annual tightness test in accordance with 310 CMR 80.32.

80.19: continued

2. In addition to complying with 310 CMR 80.19(4)(c)1., pressurized piping systems shall be equipped with an automatic line leak detector that accurately detects a release or leakage of three gallons per hour at ten p.s.i. in line pressure within one hour with the probability of detection of 0.95 and probability of false alarm of 0.05. At UST facilities that are staffed 24 hours per day, seven days per week, 365 days per year, an automatic line leak detector may also be a continuous alarm that alerts staff when there is regulated substance or pressure loss in a pressurized product line of a pressurized pumping system.
3. European suction systems are not required to have leak detection.

80.20: Requirements for Turbine, Intermediate and Dispenser Sumps

(1) Dispenser Sumps.

- (a) Regulated substance dispensers installed, repaired or replaced on or after October 1, 2021 shall be equipped with a dispenser sump that shall be continuously monitored for liquids utilizing a dispenser sump sensor(s). 310 CMR 80.20(1)(a) shall not apply in situations where only the product dispenser is repaired or replaced due to damage or malfunction, but shall apply to any replacement of both the product dispenser and dispenser components attaching the dispenser to the UST piping system at the dispenser.
- (b) Regulated substance dispensers installed, repaired or replaced on or after March 21, 2008 and before October 1, 2021 shall be equipped with a dispenser sump that shall be continuously monitored for liquids utilizing a dispenser sump sensor(s). 310 CMR 80.20(1)(b) shall not apply in situations where only the product dispenser is repaired or replaced due to damage or malfunction, but shall apply to any replacement of both the product dispenser and the piping used to connect the product dispenser to the tank.

(2) Tanks utilizing a submersible pump, when the pump was installed on or after March 21, 2008, shall be equipped with a turbine sump. All turbine sumps, including intermediate sumps, shall be continuously monitored for liquids utilizing a sump sensor(s).

(3) All turbine sumps, intermediate sumps and dispenser sumps installed on or after March 21, 2008, except sumps that only contain a single-walled siphon line with no connections within the sump or only contain a European suction system or sumps that do not contain any regulated substance piping connections, shall be continuously monitored for liquids utilizing a sump sensor(s).

(4) Tanks using a submersible pump that do not have a turbine sump, shall be upgraded with a turbine sump by January 1, 2019 or when the tank top is upgraded, whichever is earlier, or that tank shall be removed or permanently closed in-place in accordance with 310 CMR 80.43(2) or (3).

(5) Turbine, intermediate and dispenser sumps, except sumps listed at 310 CMR 80.27(8), shall pass an integrity test at installation to ensure the sump is liquid tight by using a vacuum or hydrostatic test in accordance with PEI RPI 1200-19. The owner or Operator shall keep records of this test in accordance with 310 CMR 80.36.

(6) Turbine sump manhole covers installed on and after the January 2, 2015 shall be designed and installed with a final grade that channels storm water away from the turbine sump cover and turbine sump manhole covers installed on and after October 1, 2021 shall also be installed so that the paved surface is crowned as to protect the sump and equipment within from damage due to traffic.

(7) Turbine, intermediate and dispenser sumps shall be constructed so that they are accessible for repairs and inspections.

80.21: Requirements for Spill Buckets and Overfill Prevention Equipment

- (1) All fill ports used to introduce regulated substance to a UST system shall be equipped with a spill bucket.

80.21: continued

(a) Spill buckets, including replacement spill buckets, installed on or after January 2, 2015 shall have a minimum capacity of five gallons, unless it is not physically possible to replace a three-gallon spill bucket with a five-gallon spill bucket. "Not physically possible" means that the area where the three-gallon spill bucket is installed cannot be made to accommodate a five-gallon spill bucket by any physical means including, but not limited to, digging or jack hammering.

1. If it is not physically possible to replace a three-gallon spill bucket with a five-gallon spill bucket, the Owner or Operator shall certify to the Department that it is not physically possible in a letter signed in accordance with 310 CMR 80.11.

2. If it is not physically possible to replace a three-gallon spill bucket with a five-gallon spill bucket, the Owner or Operator shall install a spill bucket no smaller than three gallons.

(b) Spill buckets installed before January 2, 2015 shall have a minimum capacity of three gallons.

(c) All spill buckets shall pass an integrity test at installation to ensure the spill bucket is liquid tight by using a vacuum or hydrostatic test in accordance with PEI RPI 1200-19. The Owner or Operator shall keep records of this test in accordance with 310 CMR 80.36.

(d) Spill bucket covers installed on and after October 1, 2021 shall be designed and installed with a final grade that channels storm water away from the spill bucket and the paved surface is crowned as to protect the spill bucket and fill port from damage due to traffic.

(2) UST systems shall have an overfill prevention device that is designed to allow a tank tightness test and installed in accordance with the manufacturer's specifications.

(a) On or after January 2, 2015, new or replacement ball float valves are prohibited from being used as the primary overfill prevention device. Owners and Operators may continue to use ball float valves as a secondary overfill prevention device, unless the ball float valve interferes with the operation of the primary overfill prevention device. Ball float valves installed prior to January 2, 2015 may be used as the primary overfill prevention device until the ball float valve is replaced.

(b) All UST systems shall be equipped with one of the following:

1. An automatic shut off device that shall automatically and completely shut off flow into the tank when the tank is no more than 95% full.

2. A device which shall sufficiently alert the operator and regulated substance deliverer when the tank is at a maximum of 90% full by triggering a high-level alarm.

a. All high level alarms installed on and after January 2, 2015 shall be visible and audible to the regulated substance deliverer.

b. All high-level alarms shall be clearly labeled as a tank overfill alarm.

3. A ball float valve which shall alert the regulated substance deliverer by restricting the flow into the tank 30 minutes prior to overfilling, in accordance with 310 CMR 80.21(2)(a).

80.22: Requirements for Corrosion Protection

(1) All UST systems shall be protected from corrosion.

(2) Metal components of a UST system and UST components, excluding manhole covers, that are subject to corrosion and are in contact with the ground shall have continuous cathodic protection.

Riser and fill pipes may be coated, taped or clad with noncorrosive materials, such as fiberglass to comply with 310 CMR 80.22(2).

(3) If a tank or regulated substance piping is manufactured with cathodic protection, it shall comply with a listed standard.

(4) A field constructed cathodic protection system shall be designed by a corrosion expert.

(a) The cathodic protection system design plans, applications, surveys, drawings, test data and results, shall be reviewed and approved by a corrosion expert and bear the full name, signature, address, certification number and seal of the corrosion expert.

80.22: continued

(b) The installation and repair of any cathodic protection system shall be completed under the direction of a corrosion expert. Cathodic protection systems shall be designed and installed in accordance with a listed standard and the manufacturer's specifications.

(c) For field-constructed cathodic protection systems installed on and after January 2, 2015, the Owner or Operator shall have as-built, scaled plans of the field-constructed cathodic protection system. Said plans shall be reviewed and approved by a corrosion expert and shall bear the full name, signature, address, certification number and seal of the corrosion expert and shall be retained in accordance with 310 CMR 80.36.

(5) Within six months of installation, a cathodic protection system shall be tested by a cathodic protection tester in accordance with the following standards to determine that the UST system or UST component is protected against corrosion.

(a) NACE Standard Test Method: NACE Standard TM0101-2012, *Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems*"; or

(b) NACE Standard Test Method: NACE Standard TM0497-2012, *Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems*".

(6) The cathodic protection system shall pass the applicable test(s) at 310 CMR 80.22(5). The Owner or Operator shall keep a record of the passed test(s) in accordance with 310 CMR 80.36. If the cathodic protection system does not pass the test, the Owner or Operator shall comply with 310 CMR 80.29(5).

GENERAL OPERATING REQUIREMENTS

80.23: Requirements for Registration and Reporting

(1) Owners shall sign and submit to the Department, in a format specified by the Department, a registration for UST systems and UST facilities within 30 days of receiving regulated substance into the UST system, except Owners of UST systems used solely for emergency spill or overflow containment shall submit a registration to the Department within 30 days of installation or for existing emergency spill or overflow tanks on or before October 1, 2022. The Owner shall retain a copy of the current registration in accordance with 310 CMR 80.36 until the UST system is removed or permanently closed in-place in accordance with 310 CMR 80.43(2) or (3).

(a) The registration shall include, but not be limited to, the following categories of information:

1. Identity of and contact information for the Owner, Operator and Contact Person(s) including, but not limited to, name, title, address, telephone numbers and email address;
2. Description of the UST system(s) including, but not limited to, the location, date of installation, size, uses of the UST system(s) and type of facility;
3. Description of UST components including, but not limited to, leak detection, corrosion prevention, spill bucket and overflow prevention;
4. Description of the financial responsibility mechanism(s) including, but not limited to, the type, amount, expiration date and issuer; and
5. Description of the UST records received from the previous Owner(s) and Operator(s).

(b) The Owner shall submit with the registration for the installation of a new or replacement UST system, the following, in a format specified by the Department:

1. A copy of the certification from the UST system installer that:
 - a. He or she was certified by the manufacturer of the UST system that was installed;
 - b. The UST system was installed in accordance with the manufacturer's specifications; and
 - c. The installer complied with all items on the manufacturer's installation checklist(s).
2. A copy of the as-built plans pursuant to 310 CMR 80.16(7).

(c) Owners, or Operators if authorized by the Owner, shall update the registration if any information on the registration changes, and submit it to the Department within 30 days of the change.

80.23: continued

- (2) Owners, or Operators if authorized by the Owner, shall submit to the Department, in a format specified by the Department, notifications of the following including, but not limited to:
 - (a) A change in the product in accordance with 310 CMR 80.41:
 1. Prior to the change, if the change is from a regulated substance to a non-regulated substance.
 2. Within 30 days of the change, if the change is from a regulated substance to another regulated substance, except as provided in 310 CMR 80.23(2)(a)3.
 3. At least 30 days prior to the change if the change is from a regulated substance to a regulated substance containing greater than 10% ethanol or greater than 20% biodiesel, in accordance with 310 CMR 80.30(3).
 - (b) Any UST system taken temporarily out-of-service, in accordance with 310 CMR 80.42, within 30 days of the change in status.
 - (c) Any temporarily out-of-service UST system brought back into service in accordance with 310 CMR 80.42, within 30 days after being brought back into service.
 - (d) Any UST system removed, within 30 days of removal, in accordance with 310 CMR 80.43(2).
 - (e) UST systems closed-in-place within 30 days of UST system being filled in accordance with 310 CMR 80.43(3)(c).
 - (f) UST systems closed because a new tank is installed inside an existing tank, in accordance with 310 CMR 80.44.
- (3) The Owner or Operator shall submit to the Department, in a format specified by the Department, information including, but not limited to:
 - (a) Third-party inspection reports in accordance with 310 CMR 80.49(2).
 - (b) Assessment reports in accordance with 310 CMR 80.41(4)(b) and 80.43(3) and (4).
 - (c) Source and cause of reportable releases in accordance with 310 CMR 80.40.
 - (d) Compliance Certification in accordance with 310 CMR 80.34.
- (4) Upon the sale of a UST system or UST facility, the Owner shall transfer installer certifications, as-built plans of UST systems, cathodic protection systems plans and specifications, and manufacturer's specifications, if they were required to be kept by the Owner, to the new Owner.
- (5) A UST facility Owner, on or before the sale or transfer of a UST facility, shall provide the Department with the following information, in a format specified by the Department:
 - (a) Facility identification number;
 - (b) New Owner entity name and address; and
 - (c) New Owner entity contact's name, phone number and email address.

80.24: General Requirements

- (1) Owners and Operators shall comply with all general and specific operating requirements in 310 CMR 80.23 through 80.36, as applicable.
- (2) The Owner or Operator shall activate and keep in working condition all electrical equipment, components and alarms for UST systems and UST components.
- (3) The Owner or Operator shall respond to every UST system alarm that may indicate the presence of leakage or a release, and document the response to each of those alarms in a report or log which shall include the date, the cause and any corrective action taken. The Owner or Operator shall keep records of such alarms in accordance with 310 CMR 80.36.
- (4) The Owner or Operator shall ensure that fill pipe covers of tanks are painted and maintained in accordance API Recommended Practice 1637, 4th Edition, 2020, *Using the API Color-Symbol System to Identify Equipment, Vehicles, and Transfer Points for Petroleum Fuels and Related Products at Dispensing and Storage Facilities and Distribution Terminals*, if applicable.

80.24: continued

(5) When all regulated substance is removed from a UST system, the Owner or Operator shall take the UST system temporarily out-of-service in accordance with 310 CMR 80.42 or remove or permanently close in-place the UST system in accordance with 310 CMR 80.43. When any regulated substance remains in a UST system, unless the concentration of regulated substance in the UST system meets the *de minimis* standard in 310 80.04(5)(c), the UST system shall comply with all applicable requirements of 310 CMR 80.00.

(6) After January 2, 2015, an Owner or Operator shall not line or reline any tank to extend the operating life of the UST system.

(a) Tanks that were internally lined on or before January 2, 2015 shall be internally inspected on or before 12 months after the October 1, 2021 and every five years thereafter, in accordance with a code of practice developed by a nationally recognized association to determine whether the tank is structurally sound and the lining still performing in accordance with the original design specifications.

(b) If the lining is determined to be no longer performing in accordance with original design specifications and cannot be repaired in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory or the tank is found to not be structurally sound, the tank shall be immediately taken temporarily out-of-service in accordance with 310 CMR 80.42 and removed or permanently closed in-place in accordance with 310 CMR 80.43 within 90 days of the determination.

80.25: Requirements for a UST System or UST Component Emergency Response

(1) The Owner or Operator shall post a sign at the UST facility indicating what steps to follow in the event of a UST system or UST component emergency including, but not limited to, the name and phone number of the person or persons to contact in the event of an emergency.

(a) The sign shall be written in large print so that employees can clearly see it from at least ten feet away, in languages that are commonly spoken at the UST facility and be prominently displayed at various locations.

(b) The emergency signage shall be updated when any information on the sign changes.

(2) The Owner or Operator shall develop, and update when necessary, a written procedure for how UST facility employees and contractors should respond in the event of a UST system or UST component emergency. The Owner or Operator shall keep the most recent copy of the written procedure in accordance with 310 CMR 80.36.

(a) The procedure shall include, but not be limited to, how to access the emergency shut-off for the tanks, how to locate the communication device and how to respond to alarms that indicate leakage or a release.

(b) The Owner or Operator shall inform all Class A, B and C operators where the procedure is located and train Class A, B and C operators on the emergency procedures.

80.26: Requirements for Leak Detection Systems

(1) The Owner or Operator shall equip UST systems with a leak detection system for tanks and piping in accordance with manufacturer's specifications and 310 CMR 80.19.

(2) The Owner or Operator shall operate and maintain leak detection systems at all times and in accordance with manufacturer's specifications and 310 CMR 80.26, as applicable. As applicable, the Owner or Operator shall inspect and test leak detection systems annually, as follows:

(a) For in-tank monitors and other controllers:

1. Test alarms;
2. Verify system configuration; and
3. Test battery backup.

(b) For probes and sensors:

1. Inspect for residual buildup and remove buildup as necessary;
2. Ensure floats move freely;
3. Ensure shaft is not damaged;

80.26: continued

4. Ensure cables are free of kinks or breaks; and
 5. Test alarm operability and communication with controller.
- (c) For automatic line leak detector: test operation to meet criteria in 310 CMR 80.19(4)(a)2., 310 CMR 80.80.19(4)(b)2., and 310 CMR 80.19(4)(c)2., by simulating a leak.
- (d) For vacuum pumps and pressure gauges: ensure proper communication with sensors and controller.
- (e) Repair and replace leak detection systems and components, as necessary.
- (f) Keep records of inspection results, repairs and replacements in accordance with 310 CMR 80.36.
- (3) Requirements for UST systems that continuously monitor interstitial space in a double-walled tank and/or double-walled piping as its primary leak detection system are as follows:
- (a) Sensors shall continuously monitor interstitial space and be maintained in good working order and shall be operated to perform their original design function in accordance with the manufacturer's specifications.
 - (b) Interstitial space shall be free of solid material, water and regulated substance. Water in 310 CMR 80.26(3)(b) does not include brine or condensation that occurs in a properly operating UST system.
 - (c) If a release or leakage is indicated by alarm or otherwise, the Owner or Operator shall immediately commence an investigation to determine whether there may be a release or leakage. The Owner or Operator shall conclude the investigation within 72 hours of the indication of release or leakage.
 - (d) If the Owner or Operator is unable to determine that there is not a release or leakage within 72 hours of the indication of release or leakage, he or she shall conduct a tightness test of the suspected tank or piping in accordance with 310 CMR 80.32 within 72 hours after the conclusion of the investigation.
 1. If the tank or piping fails a tightness test pursuant to 310 CMR 80.32, the Owner or Operator shall comply the requirements at with 310 CMR 80.32(3), as applicable.
 2. If the tank and the piping pass a tightness test pursuant to 310 CMR 80.32, the tank and the piping are considered tight, and the requirements for tightness testing are satisfied.
 3. If the investigation or the tightness test indicates leakage, the Owner or Operator shall comply with 310 CMR 80.39.
 - (e) The Owner or Operator shall keep records of all investigations and monthly liquid status reports in hard copy if electronically (but not electronically in the leak detection system), in accordance with 310 CMR 80.36.
- (4) Requirements for those UST systems that use an in-tank monitoring system as its primary leak detection system are as follows:
- (a) At least once each calendar month, the Owner or Operator shall conduct a test using the in-tank monitor over a continuous period of time as prescribed by the manufacturer's specifications, during which no regulated substance shall be delivered to or taken from the tank, in order to determine whether there is a release or leakage of regulated substance. If the manufacturer's specifications do not prescribe a continuous period of time, the continuous period of time shall be six hours. A loss of 0.20 gallons per hour or more over the testing period with the probability of detection of 0.95 and a probability of false alarm of 0.05 shall indicate a release or leakage.
 - (b) If at the end of the calendar month, the tank has not passed a test in accordance with 310 CMR 80.26(4)(a), the Owner or Operator shall conduct a tightness test of the suspected tank and piping in accordance with 310 CMR 80.32 within 72 hours of the end of the calendar month.
 1. If the tank or piping fails a tightness test pursuant to 310 CMR 80.32, the Owner or Operator shall comply with 310 CMR 80.32(3), as applicable.
 2. If the tank and the piping pass a tightness test pursuant to 310 CMR 80.32, the tank and the piping are considered tight, and the requirements for tightness testing are satisfied.
 - (c) The Owner or Operator shall keep records of all investigations and passing monthly tests in hard copy or electronically (but not electronically in the leak detection system), in accordance with 310 CMR 80.36.

80.26: continued

- (5) Requirements for those UST systems that use a continuous in-tank detection system as its primary leak detection system are as follows:
- (a) Throughout each calendar month, the Owner or Operator shall ensure that the continuous in-tank monitoring system is operating in accordance with the manufacturer's specifications.
 - (b) A loss of 0.20 gallons per hour with the probability of detection of 0.95 and a probability of false alarm of 0.05 shall indicate a release or leakage.
 - (c) If at the end of the calendar month, the continuous in-tank monitoring system indicates a release or leakage in accordance with 310 CMR 80.26(5)(b), the Owner or Operator shall conduct a tightness test of the suspected tank or piping pursuant to 310 CMR 80.32 within 72 hours of the end of the calendar month.
 - 1. If the tank or piping fails a tightness test pursuant to 310 CMR 80.32, the Owner or Operator shall comply with 310 CMR 80.32(3), as applicable.
 - 2. If the tank and the piping pass a tightness test pursuant to 310 CMR 80.32, the tank and the piping are considered tight, and the requirements for tightness testing are satisfied.
 - (d) If the continuous in-tank monitoring system does not produce sufficient data to obtain a conclusive result, the Owner or Operator shall within 24 hours of the end of the calendar month take the tank out of service to allow the continuous in-tank monitoring system the minimum sufficient quality test time in accordance with the manufacturer's specification.
 - (e) If after complying with 310 CMR 80.26(5)(d), the Owner or Operator is still unable to obtain a passing result, the Owner or Operator shall comply with 310 CMR 80.26(5)(c) within 96 hours of the end of the calendar month.
 - (f) The Owner or Operator shall keep records of all investigations and passing monthly tests in hard copy or electronically (but not electronically in the leak detection system), in accordance with 310 CMR 80.36.
- (6) Requirements for an in-tank monitoring system that uses statistical inventory reconciliation (SIR) as its primary leak detection system are as follows:
- (a) The Owner or Operator shall have an inventory analyses conducted by a qualified SIR vendor who analyzes inventory, delivery, and dispensing data collected over a calendar month to determine whether or not the UST system has a release or leakage.
 - (b) The Owner or Operator shall have equipment and procedures in place to assure that the data provided to the SIR vendor is accurate.
 - (c) If the SIR analysis is conclusive and identifies a release or leakage, the Owner or Operator shall conduct a tightness test of the suspected tank or piping pursuant to 310 CMR 80.32 within 72 hours of obtaining knowledge of the suspected release or leakage.
 - 1. If the tank or piping fails a tightness test pursuant to 310 CMR 80.32, the Owner or Operator shall comply with 310 CMR 80.32(3), as applicable.
 - 2. If the tank and the piping pass a tightness test pursuant to 310 CMR 80.32, the tank and the piping are considered tight, and the requirements for tightness testing are satisfied.
 - (d) If the SIR analysis is inconclusive, the Owner or Operator shall immediately, upon obtaining knowledge of the inconclusive result, commence an investigation to determine whether there is a release or leakage. the Owner or Operator shall conclude the investigation within 72 hours upon obtaining knowledge of the inconclusive result. If the Owner or Operator is unable to determine that there is not a release or leakage within 72 hours upon obtaining knowledge of the inconclusive result, he or she shall conduct a tightness test pursuant to 310 CMR 80.32 within 72 hours of the conclusion of the investigation.
 - 1. If the tank or piping fails a tightness test pursuant to 310 CMR 80.32, the Owner or Operator shall comply with 310 CMR 80.32(3), as applicable.
 - 2. If the tank and the piping pass a tightness test pursuant to 310 CMR 80.32, the tank and the piping are considered tight, and the requirements for tightness testing are satisfied.
 - (e) If the SIR analysis is conclusive and does not identify a release or leakage of regulated substance, the tank is considered tight.

80.26: continued

(f) The Owner or Operator shall keep records of all investigations and SIR analyses in accordance with 310 CMR 80.36.

(7) Until October 13, 2022, UST systems having a capacity of 1000 gallons or less, installed before January 2, 2015, that supply regulated substance to emergency engines may conduct weekly tank gauging as its primary leak detection system are as follows:

- (a) Manual tank gauging shall be conducted every seven days.
- (b) Manual tank gauging shall be conducted as follows:
 1. Tank liquid level measurements shall be taken and recorded, including date and time of measurements, at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank;
 2. Level measurements shall be based on an average of two consecutive stick readings at the beginning and the ending of the period;
 3. The equipment used shall be capable of measuring the level of regulated substance over the full range of the tank's height to the nearest 1/8 of an inch;
 4. A release or leakage shall be suspected if the variation between beginning and ending measurements exceeds the weekly or monthly standard in 310 CMR 80.26(7)(b)4.:

Table D:

Table D

Nominal Tank Capacity	Weekly Standard (One Test)	Monthly Standard (Average of Four Tests)
500 gallons or less	10 gallons	5 gallons
501 through 1,000 gallons	13 gallons	7 gallons

(c) In the event of a suspected release or leakage, the Owner or Operator shall comply with 310 CMR 80.31(1)(e),(f) and (g).

(d) The Owner or Operator shall keep records of the results of weekly tank gauging in accordance with 310 CMR 80.36.

(8) Until October 13, 2022, UST systems having a capacity of more than 1000 gallons, installed before January 2, 2015 that supply regulated substance to emergency engines may conduct monthly tank gauging as its primary leak detection system are as follows: (These UST systems shall also conduct an annual tightness test in accordance with 310 CMR 80.32).

- (a) Manual tank gauging shall be conducted every 30 days.
- (b) Manual tank gauging shall be performed as follows:
 1. Tank liquid level measurements shall be taken and recorded, including date and time of measurements, at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank;
 2. Level measurements shall be based on an average of two consecutive stick readings at the beginning and the ending of the period;
 3. The equipment used shall be capable of measuring the level of regulated substance over the full range of the tank's height to the nearest 1/8 of an inch;
 4. A release or leakage shall be suspected if the variation between beginning and ending measurements exceeds the monthly standard in 310 CMR 80.26(8)(b)4.:

Table E

Nominal Tank Capacity	Monthly Standard
More than 1000 gallons	7 gallons plus 2 gallons for every additional 1000 gallons capacity

(c) In the event of a suspected release or leakage, the Owner or Operator shall comply with 310 CMR 80.31(1)(e), (f) and (g).

(d) The Owner or Operator shall keep records of the results of weekly tank gauging in accordance with 310 CMR 80.36.

80.26: continued

(9) For piping installed before May 28, 1999, the Owner or Operator may conduct quarterly visual inspections of secondary containment ports and conduct an annual tightness test of the piping in accordance with 310 CMR 80.32. The Owner or Operator shall keep records of the visual inspections and the tightness tests in accordance with 310 CMR 80.36.

(10) Options for Owners and Operators of regulated substance piping installed before January 1, 1989:

(a) Non-European suction piping, if it does not have secondary containment and continuous monitoring of interstitial space, shall comply with 310 CMR 80.49(4)(c)1.c. or e. The Owner and Operator shall maintain records of the tightness testing in accordance with 310 CMR 80.36.

(b) Single-walled pressurized piping systems and single-walled gravity piping systems shall comply with 310 CMR 80.19(4)(c)1.b., c. or d. The Owner and Operator shall maintain records of the tightness testing in accordance with 310 CMR 80.36.

(11) If the Owner or Operator cannot demonstrate that its European suction piping is sloped back to the tank and that its one check valve is located directly under the dispenser to the satisfaction of the Department including, but not limited to, an accurate drawing, as-built plans or installation records, it shall comply with the standards for non-European piping at 310 CMR 80.19(4)(a)1. 310 CMR 80.19(4)(b)1.(c)1., as applicable.

(12) The Owner or Operator shall test those components of the leak detection system that are repaired or replaced, prior to returning the leak detection system to service, to determine that they are operational. The Owner or Operator shall keep records of such tests in accordance with 310 CMR 80.36.

(13) All leak detection records required in 310 CMR 80.26(1) through (12) shall be kept in accordance with 310 CMR 80.36.

80.27: Requirements for Turbine, Intermediate and Dispenser Sumps

(1) Owners and Operators shall operate and maintain turbine, intermediate and dispenser sumps in accordance with 310 CMR 80.27.

(2) Turbine, intermediate and dispenser sumps shall be clean and free of solid and liquid material at all times.

(a) If a sensor or visual observation indicates that there is liquid in the sump, the liquid shall be removed immediately.

(b) If the liquid is a regulated substance, the Owner or Operator shall investigate the source of the regulated substance, shall investigate the path of entry to the sump, and shall make any necessary repairs in accordance with 310 CMR 80.33.

(c) The solid and liquid material that collects in a sump shall be removed, managed and disposed of in accordance with applicable local, state and federal laws and regulations.

(3) All sump sensors shall be placed in accordance with the manufacturer's specifications, or, if no such specifications exist, the sensors shall be placed at the lowest possible location in the sump, where it can feasibly be installed.

(4) All manhole covers shall prevent water infiltration to the sump. All sump covers shall be free of cracks and holes.

(5) All tanks using a submersible pump that do not have a turbine sump shall be inspected every 30 days.

(a) The Owner or Operator shall visually inspect the area around the submersible pump as follows:

1. Visually inspect the submersible pump for release of regulated substance(s); and
2. Visually inspect the submersible pump and other components for signs of corrosion, breakage and wear.

80.27: continued

- (b) The Owner or Operator shall repair or replace components as necessary in accordance with 310 CMR 80.33; and
 - (c) The Owner or Operator shall keep records of this inspection and any repairs or replacements to demonstrate compliance with 310 CMR 80.27(5) in accordance with 310 CMR 80.36.
- (6) The Owner or Operator shall inspect turbine, intermediate and dispenser sumps, except sumps that only contain a single-walled siphon line with no connections within the sump or sumps that only contain a European suction system or sumps that do not contain any regulated substance piping connections, in accordance with the following and in accordance with 310 CMR 80.35(3) or (4), as applicable:
- (a) Single-walled and double-walled sumps without continuous monitoring sensors in the sump shall be inspected every 90 days.
 - (b) Single-walled and double-walled sumps with correctly installed and operating continuous monitoring sensors in the sump shall be inspected annually.
- (7) The Owner or Operator shall conduct an integrity test of turbine, intermediate and dispenser sumps, except sumps listed in 310 CMR 80.27(8), on or before January 2, 2017, on or before October 13, 2021, and once every three years thereafter as follows:
- (a) Sumps with properly operating and installed sensors that are not used for interstitial monitoring of piping may be tested hydrostatically to the level that will activate the sensors. The sump passes the integrity test if the sensors are activated when they come in contact with the liquid.
 - (b) Dispenser sumps with properly operating and installed sensors used for interstitial monitoring of piping and that shuts off the dispenser when activated may be tested hydrostatically to the level that will activate the sensor, if the UST facility is always staffed when the pumps are operational. The sump passes the integrity test if the sensors are activated when they come in contact with the liquid and shut off the dispenser.
 - (c) Turbine sumps with properly operating and installed sensors that are used for interstitial monitoring of piping and that shuts off the submersible pump when activated may be tested hydrostatically to the level that will activate the sensor. The sump passes the integrity test if the sensors are activated when they come in contact with the liquid and shut off the submersible pump.
 - (d) Sumps that do not meet the requirements of 310 CMR 80.27(7)(a), (b) or (c) or do not have a sensor shall be integrity tested by vacuum or hydrostatic testing in accordance with PEI RP1200-19.
- (8) The following sumps are not subject to the testing requirements in 310 CMR 80.27(7), 80.27(9) or 80.20(54):
- (a) Sumps that only contain a single-walled siphon line with no connections within the sump or sumps that do not contain any regulated substance piping connections;
 - (b) Sumps that only contain a European suction system; and
 - (c) Double-walled sumps, if the integrity of both walls is monitored every 90 days or annually, as applicable under 310 CMR 80.27(6), by checking vacuum, pressure or liquid interstitial integrity indicators.
 - 1. A sensor in a dry interstice does not meet the requirements of monitoring the integrity of both walls.
 - 2. In order to claim the exemption from testing, the Owner or Operator shall keep documentation showing that the sump is double-walled and that the integrity of both walls is monitored every 90 days or annually, as applicable under 310 CMR 80.27(6), in accordance with 310 CMR 80.36.
- (9) If the sump fails a test, the Owner or Operator shall investigate the failure and shall make any necessary repairs in accordance with 310 CMR 80.33.
- (a) The Owner or Operator shall keep records of the test and any repairs to demonstrate compliance with 310 CMR 80.27(7) and 310 CMR 80.33 including, but not limited to, the date of the test and the results, in accordance with 310 CMR 80.36.

8.27: continued

(b) Turbine, intermediate and dispenser sumps that are repaired, except sumps listed in 310 CMR 80.27(8), shall pass an integrity test in accordance with 310 CMR 80.27(7) prior to commencing operation. The Owner or Operator shall keep records of such tests in accordance with 310 CMR 80.36.

(c) Repairs which do not affect the integrity of a sump to retain liquid including, but not limited to, a sump lid and gasket, do not require an integrity test prior to commencing service.

80.28: Requirements for Spill Buckets and Overfill Prevention Equipment

(1) Owners and Operators shall at all times operate and maintain spill buckets and overfill prevention equipment in accordance with 310 CMR 80.21 and 80.28(2) and (3).

(2) Requirements for the proper operation and maintenance of spill buckets and covers are as follows:

(a) The Owner or Operator shall keep spill buckets clean and free of solid and liquid material.

(b) The Owner or Operator shall maintain the spill bucket and cover so that they are free of cracks and holes at all times.

(c) The Owner or Operator shall remove and manage any solid or liquid material that collects within a spill bucket in accordance with local, state and federal laws and regulations.

(d) The Owner or Operator shall maintain spill buckets in accordance with the manufacturer's specifications.

(e) The Owner or Operator shall inspect spill buckets no less frequently than once every 30 days in accordance with 310 CMR 80.35.

(f) The Owner or Operator shall test spill buckets in accordance with 310 CMR 80.28(2)(g) on or before January 2, 2017, on or before October 13, 2022 and once every three years thereafter.

1. Double-walled spill buckets, if the integrity of both walls is monitored every 30 days by checking vacuum, pressure or liquid interstitial integrity indicators are exempt from the testing requirement in 310 CMR 80.28(2)(f).

2. A sensor in a dry interstice does not meet the requirements of monitoring the integrity of both walls.

3. In order to claim the exemption from testing, the Owner or Operator shall keep documentation showing that the spill bucket is double-walled and that the integrity of both walls is monitored at least every 30 days, in accordance with 310 CMR 80.36.

(g) The Owner or Operator shall conduct an integrity test on spill buckets in accordance with the schedule at 310 CMR 80.28(2)(f) and after repairs, in accordance with the following requirements:

1. Spill buckets shall pass an integrity test to ensure the spill bucket is liquid tight by using vacuum or hydrostatic test in accordance with PEI RP1200-19.

2. If the spill bucket fails the test, the Owner or Operator shall repair or replace the spill bucket in accordance with 310 CMR 80.33. Prior to commencing operation, the repaired spill bucket shall be retested in accordance with 310 CMR 80.27(2)(g)1.

3. Repairs which do not affect the integrity of a spill bucket to retain liquid or disturb the seal between the spill bucket and the riser do not require an integrity test prior to commencing operation.

(h) The Owner or Operator shall repair or replace spill buckets as necessary in accordance with 310 CMR 80.33. Prior to commencing operation, the repaired spill bucket shall be retested in accordance with 310 CMR 80.27(2)(g)1.

(i) If a spill bucket is equipped with sensors, the sensors shall be placed in accordance with the manufacturer's specifications, or, if no such specifications exist, the sensors shall be placed at the lowest possible location in the spill bucket.

(j) The Owner or Operator shall keep the following spill bucket records in accordance with 310 CMR 80.36.

1. Records of spill bucket inspections to demonstrate compliance with 310 CMR 80.28(2)(e).

2. Records of spill bucket integrity tests to demonstrate compliance with 310 CMR 80.28(2)(f) and (g).

80.28: continued

(3) Requirements for proper operation and maintenance of overfill prevention equipment are as follows:

(a) The Owner or Operator shall inspect and test the overfill prevention equipment annually to ensure that it is operational and will activate at the correct level in accordance with 310 CMR 80.21(2)(b).

1. Inspection and testing shall be conducted in accordance with requirements in the manufacturer's specifications, if the manufacturer has developed requirements for inspection and testing; or

2. Inspection and testing shall be conducted in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory.

(b) The Owner or Operator shall repair or replace components as necessary in accordance with 310 CMR 80.33. Prior to commencing operation, the overflow prevention equipment shall be tested to ensure that it will activate at the correct level in accordance with 310 CMR 80.21(2)(b).

(c) The Owner or Operator shall keep records of the following in accordance with 310 CMR 80.36:

1. Records of inspection and testing, in accordance with the manufacturer's specifications including, but not limited to, a copy of the manufacturer's specifications to demonstrate compliance with 310 CMR 80.28(3)(a)1.; or

2. Records of inspection and testing including, but not limited to the code of practice developed by a nationally recognized association or independent testing laboratory to demonstrate compliance with 310 CMR 80.28(3)(a)2.

(4) The Owner or Operator shall ensure that the volume available in the tank is greater than the volume of regulated substance to be transferred to the tank before the regulated substance transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling.

80.29: Requirements for Corrosion Protection

(1) Owners and Operators shall operate and maintain corrosion protection in accordance with 310 CMR 80.22 and 80.29.

(2) Sacrificial or galvanic anode cathodic protection systems shall be tested by a cathodic protection tester at the following recurring frequency and in accordance with the NACE standards at 310 CMR 80.29(3):

(a) If test results indicate a negative voltage of at least -0.90 volts or if the system passes the 100-mV cathodic polarization test as indicated in the NACE Standards at 310 CMR 80.29(3)(a) or (b), the system shall be tested at three-year intervals thereafter.

(b) If test results indicate a negative voltage of between -0.85 and -0.90 the system shall be tested annually thereafter.

(c) If test results indicate a negative voltage of less than -0.85 or if the system fails the 100-mV cathodic polarization test as indicated in the NACE Standard at 310 CMR 80.29(3)(a) or (b), the system shall be deemed inadequate and the Owner and Operator shall comply with 310 CMR 80.29(5).

(3) Sacrificial or galvanic anode cathodic protection systems shall be tested by a cathodic protection tester at the recurring frequency in 310 CMR 80.29(2) and in accordance with the following standards:

(a) NACE Standard Test Method: NACE Standard TM0101-2012, *Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Tank Systems*; or

(b) NACE Standard Test Method: NACE Standard TM0497-2012, *Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems*.

(4) Impressed current cathodic protection systems shall be tested every 12 months by a cathodic protection tester to determine whether the UST system is protected against corrosion.

80.29: continued

- (a) In addition to the annual testing, impressed current systems shall be inspected every 60 days by the Owner or Operator in accordance with the manufacturer's specifications or the NACE publications listed at 310 CMR 80.29(3)(a) or (b) to ensure the equipment is operating as designed.
- (b) Acceptable system operating voltage and amperage ranges as determined by the corrosion expert shall be affixed to each rectifier.
 - 1. System voltage and amperage readings shall be recorded every 60 days.
 - 2. If the system voltage and amperage readings are outside the range determined to be acceptable by the cathodic protection tester, it is considered a failed test and the Owner or Operator shall comply with 310 CMR 80.29(5).
- (c) Systems installed without voltage and/or amperage meters shall be retrofitted with meters upon the first annual test of the system after January 2, 2015.

(5) The Owner or Operator shall determine the cause of the failed cathodic protection test by retaining a corrosion expert within ten business days of obtaining knowledge of the failed test. If within ten business days of the failed test, the cathodic protection tester can make repairs, re-test and the result is a passing test, the Owner or Operator is not required to retain a corrosion expert.

- (a) If necessary, the Owner or Operator shall repair or replace the cathodic protection system within 120 days of the date of the failed test.
- (b) The Owner or Operator shall document the results of the corrosion expert's determination including, but not limited to, the date of the investigation and the results.
- (c) If repairs to the cathodic protection system are not completed within 120 days of the date of the failed test, the Owner or Operator shall either take the UST system temporarily out-of-service in accordance 310 CMR 80.42, or remove or permanently close in-place the UST system in accordance with 310 CMR 80.43.

(6) All cathodic protection systems shall be tested by a cathodic protection tester for proper operation within 60 days following a repair to the cathodic protection system or an excavation at the UST system.

(7) The Owner or Operator shall keep the following records in accordance with 310 CMR 80.36:

- (a) Documentation of corrosion experts determination in 310 CMR 80.29(5)(b);
- (b) Records of testing of cathodic protection system(s); and
- (c) Repairs of the cathodic protection system.

80.30: Requirements for Compatibility

(1) The Owner and Operator shall not introduce, or allow to be introduced, any regulated substance into a UST system that is not compatible with the UST system.

(2) The Owner or Operator shall ensure that all UST systems are compatible with the environment in which they are installed including, but not limited to, soil and groundwater.

(3) The Owner or Operator storing regulated substance containing greater than 10% ethanol or greater than 20% biofuel shall demonstrate compatibility of the tank, piping, sumps, pumping equipment, leak detection equipment, spill buckets and overfill prevention equipment with the regulated substance by complying with one of the following options:

- (a) Certification or listing of UST system and UST components listed in 310 CMR 80.30(3) by a nationally recognized, independent testing laboratory for use with the regulated substance stored; or
- (b) Manufacturer's approval, in writing, indicating an affirmative statement of compatibility, specifying the range of biofuel blends are compatible with the UST system and UST components.

(4) The Owner or Operator shall keep records of regulated substance compatibility as required by 310 CMR 80.30(3) and in accordance with 310 CMR 80.36.

80.31: Requirements for Inventory Monitoring(1) Daily Inventory Monitoring.

- (a) The Owner or Operator of a tank that is not single-walled and does not have continuous monitoring in accordance with 310 CMR 80.19(3)(b)3. shall conduct inventory monitoring for abnormal regulated substance loss.
- (b) The Owner or Operator of UST systems with tanks having a capacity of 111 to 1000 gallons may use manual tank gauging in accordance with 310 CMR 80.31(2) in order to satisfy the requirements of 310 CMR 80.31(1)(a).
- (c) Inventory monitoring for abnormal regulated substance loss shall be performed as follows:
1. Take daily measurements and reconcile inventory data daily and monthly;
 2. Measure the liquid in the tank using:
 - a. A gauge stick or tape with water sensitive paste which shall be capable of measuring liquid in the tank to the nearest $\frac{1}{8}$ of an inch; or
 - b. An automatic tank gauging device of equivalent or better measuring accuracy.
 3. At the close of each calendar month, determine, for that month and for each tank or combination of tanks, the number of days in which any amount of regulated substance was dispensed and the number of days in which a loss of regulated substance was recorded.
 4. Record all daily measurements and monthly reconciliation information.
- (d) An abnormal regulated substance loss from any tank or combination of tanks shall mean a loss not explainable by any spillage, temperature variations or other causes in excess of 1% of the volume plus 130 gallons of regulated substance dispensed over a period of a calendar month.
- (e) In the event of abnormal regulated substance loss, the Owner or Operator shall take the following steps within the 72 hours following the discovery of the abnormal regulated substance loss:
1. Check the inventory input and output records for mathematical error; and
 2. Check the inventory for an error in measurement.
- (f) If the abnormal regulated substance loss cannot be reconciled in accordance with 310 CMR 80.31(1)(e)1. or 2., the UST system shall be tested for tightness within 72 hours of the completion of 310 CMR 80.31(1)(e) in accordance with 310 CMR 80.32.
- (g) If the tank fails a tightness test pursuant to 310 CMR 80.32, the Owner or Operator shall comply with 310 CMR 80.32(3).
- (h) If the tank passes a tightness test pursuant to 310 CMR 80.32, the tank is considered tight, and the requirements for tightness testing in 310 CMR 80.32 are satisfied.

(2) Manual Tank Gauging for Small Tanks.

- (a) Owners and Operators may use weekly manual tank gauging on tanks that have a capacity of 1000 gallons or less, in accordance with 310 CMR 80.31(2)(b) and (c), to satisfy the inventory monitoring requirements in 310 CMR 80.31(1)(a).
- (b) Manual tank gauging shall be conducted every seven days as follows:
1. Tank liquid level measurements shall be taken and recorded, including date and time of measurements, at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank;
 2. Level measurements shall be based on an average of two consecutive stick readings at the beginning and the ending of the period;
 3. The equipment used shall be capable of measuring the level of regulated substance over the full range of the tank's height to the nearest $\frac{1}{8}$ of an inch;

80.31: continued

4. A release or leakage shall be suspected if the variation between beginning and ending measurements exceeds the weekly or monthly standard in 310 CMR 80.31(2)(b)4.:
Table F: **Table F**

Nominal Tank Capacity	Weekly Standard (One Test)	Monthly Standard (Average of Four Tests)
500 gallons or less	10 gallons	5 gallons
501 through 1,000 gallons	13 gallons	7 gallons

(c) In the event of a suspected release or leakage, the Owner and Operator shall comply with 310 CMR 80.31(1)(e) and (f).

(3) Abnormal Water Gain.

- (a) Owners and Operators that are subject to the requirements of 310 CMR 80.31 shall also take daily measurements to determine if there is abnormal water gain in the tank.
- (b) The measurement shall be taken using a method in 310 CMR 80.31(1)(c).
- (c) All measurements shall be recorded.
- (d) An abnormal gain of water inside the tank shall be a gain in the water level of more than one inch in a 24 hour period.
- (e) The Owner or Operator shall have the water removed from the tank and managed in accordance with applicable local, state and federal laws and regulations.
- (f) The Owner or Operator shall have the tank checked for water in accordance with 310 CMR 80.31(3)(b) through (d) within 24 hours of the removal of the water, during which time no regulated substance shall be added to the tank.
- (g) In the event of any abnormal water gain, the Owner or Operator shall:
 - 1. Within 72 hours of obtaining knowledge of the abnormal water gain, investigate the cause of the abnormal water gain and make repairs or replacements as necessary.
 - 2. If the Owner or Operator cannot determine the cause of the abnormal water gain, the UST system shall be tested for tightness in accordance with 310 CMR 80.32.
 - a. If the tank fails a tightness test pursuant to 310 CMR 80.32, the Owner or Operator shall comply with 310 CMR 80.32(3) as applicable.
 - b. If the tank passes a tightness test pursuant to 310 CMR 80.32, the tank is considered tight, and the requirements for tightness testing in 310 CMR 80.32 are satisfied.

(4) Records. The Owner or Operator shall maintain all records of inventory monitoring including, but not limited to, sales receipts, weekly and monthly measurements, and records of monitoring for abnormal water gain found at 310 CMR 80.31(3), in accordance with 310 CMR 80.36.

(5) Waste Oil Tanks. Waste oil tanks that are subject to 310 CMR 80.31 and are connected to oil burning equipment shall be exempt from 310 CMR 80.31 during periods when oil burning equipment is in use.

80.32: Requirements for Tank and Pipe/Line Tightness Testing

(1) Tank and piping/line tightness testing shall be capable of detecting a release or leakage of 0.1 gallon per hour, accounting for the effects of thermal expansion or contraction of regulated substance, vapor pockets, tank deformation, evaporation, condensation, and the location of the water table. The probability of detection shall be no less than 95% and the probability of a false alarm shall be no more than 5%.

(2) Owners or Operators of all UST systems shall meet the following tightness test and reporting requirements:

- (a) A tank or pipe/line tightness test shall be performed by a certified UST system tightness tester using the appropriate test for the particular tank or piping/line.

80.32: continued

- (b) When a tightness test is performed, the Owner or Operator shall compile a report or log that shall include, but not be limited to, the following:
1. Date the test was performed;
 2. Facility name and address;
 3. Facility Owner name and address;
 4. Identification of the tank or piping/line that was tested;
 5. Reason for the test including, but not limited to, the date when the Owner and Operator first discovered the need for the test;
 6. Type of tightness test equipment used for the test;
 7. Name of the certified UST system tightness tester, his/her certificate number and expiration date, and the name of any persons assisting in the test;
 8. Data sheets with test readings recorded;
 9. Calculations pertaining to the test method and test results;
 10. Location of monitoring or observation well, if used in test procedure;
 11. Description of method used to measure the water table, if required, and the result; and
 12. Signature of the certified UST system tightness tester attesting to the accuracy of the information of the test result in accordance with 310 CMR 80.11(2).
- (c) The report or log prepared pursuant to 310 CMR 80.32(2)(b) shall be kept in accordance with 310 CMR 80.36.

(3) Tightness Test Failures.

- (a) A tank or piping/line fails a tightness test when the test results indicate a release or leakage from the UST system that exceeds the detection standards at 310 CMR 80.32(1), as applicable.
- (b) If the tank or piping/line fails a tightness test, the certified UST system tightness tester shall immediately, but in no event later than 24 hours after obtaining knowledge of the failed test notify the Owner and Operator and the fire department in the city or town in which the UST system is located.
- (c) The Owner or Operator shall comply with 310 CMR 80.33, 80.38 and 80.39 and 310 CMR 40.0300: *Notification of Releases and Threats of Release of Oil and Hazardous Materials; Identification and Listing of Oil and Hazardous Materials*, as applicable.

80.33: Requirements for Repairs and Replacements

- (1) A tank that has released regulated substance shall immediately be emptied, but in no event shall be emptied later than 24 hours of obtaining knowledge of the release.
- (a) The tank shall be permanently closed in-place or removed in accordance with 310 CMR 80.43(2) or (3), unless the manufacturer of the tank repairs and re-certifies or re-warranties the tank, in writing, and the tank passes a tightness test in accordance with 310 CMR 80.32 prior to commencing operation.
 - (b) The Owner and Operator shall comply with 310 CMR 40.0000: *Massachusetts Contingency Plan*, if applicable.
- (2) A tank that has leakage of regulated substance shall be immediately emptied, but in no event shall be emptied later than 72 hours of obtaining knowledge of the leakage.
- (a) The tank shall be permanently closed in-place or removed in accordance with 310 CMR 80.43(2) or (3), unless the manufacturer of the tank repairs and re-certifies or re-warranties the tank, in writing, and the tank passes a tightness test in accordance with 310 CMR 80.32 prior to commencing operation.
 - (b) The Owner and Operator shall comply with 310 CMR 40.0000: *Massachusetts Contingency Plan*, if applicable.
- (3) Any piping or portion of piping that is the source of leakage or a release shall be immediately isolated and emptied of regulated substance. The piping shall remain empty until said piping or portion of piping is repaired or replaced or the UST system is permanently closed in-place or removed in accordance with 310 CMR 80.43(2) or (3).
- (a) Metal piping, portions of metal piping, and fittings that have had leakage or a release as a result of corrosion or other damage shall be replaced.

80.33: continued

(b) The Owner and Operator shall comply with 310 CMR 40.0000: *Massachusetts Contingency Plan*, if applicable.

(4) The Owner or Operator shall repair or replace UST systems and UST components within 30 days of the discovery of the need for repair or replacement, unless the UST system is taken temporarily out-of-service, removed or permanently closed in-place, in accordance with 310 CMR 80.42 or 80.43, within 30 days of the discovery of the need for the repair or replacement.

(a) If a longer timeframe for a repair is provided in a specific section of 310 CMR 80.00, the longer timeframe shall apply to that specific repair.

(b) The Owner or Operator shall document the discovery date of the need for repair or replacement. This documentation shall be retained in accordance with 310 CMR 80.36.

(c) If, due to circumstances beyond the Owner and Operator's control, the repair or replacement cannot be conducted within 30 days of the discovery of the need for said repair or replacement, the Owner or Operator shall notify the Department, in writing, within 30 days of the discovery of the need for a repair or replacement, information detailing the circumstances and a schedule for implementing the repairs or replacements.

(5) The Owner or Operator shall ensure that any repair of a UST system or UST component is performed by a qualified individual, in accordance with the manufacturer's specifications, 310 CMR 80.00 and applicable codes and standards.

(6) If a repair is made to the tank or the piping, the Owner or Operator shall ensure that the tank or piping is tightness tested in accordance with 310 CMR 80.32 within 30 days following the date of the completion of the repair.

(7) The Owner or Operator shall maintain records of every UST system or UST component repair, including, but not limited to, a description of the repair or replacement and the date of said repair, for the remaining operating life of the UST system in accordance with 310 CMR 80.36.

80.34: Requirements for Compliance Certification

(1) Certification Form. The Owner or Operator of a UST system shall submit, to the Department, a compliance certification in accordance with 310 CMR 70.00: *Environmental Results Program Certification*, no earlier than 16 months and no later than 18 months from the UST facility compliance date or the date of the most recent third-party inspection report submission, whichever is earlier. The compliance certification shall be submitted in a format specified by the Department. The Owner or Operator shall certify whether or not the Owner or Operator has complied with the following requirements:

(a) Financial responsibility obligations in accordance with 310 CMR 80.51 through 80.63;

(b) All testing requirements for leak detection, sumps, spill buckets, overfill prevention, and corrosion protection in accordance with 310 CMR 80.20 through 80.22 and 80.26 through 80.29;

(c) All registration, reporting and recordkeeping requirements in accordance with 310 CMR 80.23 and 80.36;

(d) Emergency procedure requirements in accordance with 310 CMR 80.25;

(e) That cathodic protection readings have been taken and recorded in accordance with 310 CMR 80.29(4)(b), as applicable;

(f) A demonstration that all Class A, B and C operators are certified in accordance with 310 CMR 80.37;

(g) For all sump, spill bucket and overfill prevention equipment inspections in accordance with 310 CMR 80.27 and 80.28;

(h) That all repairs and replacements have been completed in accordance with 310 CMR 80.33; and

(i) That the UST components and configuration of the UST system and UST components have not changed. If the UST system or UST component has changed, completion and submission of an amended registration form to the Department in accordance with 310 CMR 80.23(1).

80.34: continued

(2) Return to Compliance. At the time of submission, if the Owner or Operator is out of compliance with any of the requirements on the Certification Form, the Owner or Operator shall submit a Return to Compliance (RTC) Plan with the Certification Form that details what the Owner or Operator will do to return to compliance and the date by which compliance will be achieved. The RTC Plan shall include, but not be limited to, actions the Owner or Operator has taken or will take to come into compliance and remain in compliance with the requirements of 310 CMR 80.00.

(a) The deficiencies identified in the RTC plan shall be corrected within 30 days of the submittal of the Certification Form, unless the RTC plan documents a reasonable basis for why more time is needed to correct the deficiencies and provides an anticipated completion date.

(b) If the Department determines that the proposed completion date is not reasonable, the Department shall notify the Owner or Operator that deficiencies shall be corrected by a date earlier than the proposed date.

(c) The Owner or Operator shall notify the Department, in a format specified by the Department, when the deficiencies are corrected.

(3) Certification for Temporarily Out-of-service UST System. The Owner or Operator of a UST system that is temporarily out-of-service shall certify compliance with the requirements at 310 CMR 80.42(4).

(4) New or Newly Regulated UST Facility. If a UST facility is installed or becomes subject to 310 CMR 80.00 after January 2, 2015, the compliance certification statement is due to Department no earlier than 16 months and no later than 18 months after the date of registration in accordance with 310 CMR 80.23.

(5) Certification Statement. The Owner or Operator shall comply with the Certification Statement requirements at 310 CMR 70.03(2): *Certification Statement*, except that 310 CMR 70.03(2)(b) and (c) shall not apply.

80.35: Requirements for Periodic Inspections

(1) Owners and Operators are responsible for ensuring that periodic visual inspections meeting the requirements in 310 CMR 80.35(2) through (4) are conducted at all underground storage tank systems. The Owner, Operator or certified Class A or B operator, or an individual under the direction of the Owner, Operator, or certified Class A or B Operator shall conduct the periodic visual inspections.

(2) Every 30 Day

(a) Inspect leak detection equipment and records as follows:

1. Verifying leak detection equipment is currently on and is operating with no alarms or other unusual operating conditions present;
2. Verify all indications of leakage or releases were responded to in accordance with 310 CMR 80.26 including, but not limited to, printing a report from the electronic system if applicable; and
3. Verify leak detection records are complete, accurate and current.

(b) Inspect each spill bucket and cover as follows:

1. Visually inspect to determine if there is solid or liquid material in the spill buckets, and remove and manage solid and liquid material in accordance with applicable federal, state and local laws and regulations;
2. Visually inspect spill buckets and covers for signs of corrosion, deterioration, cracks and holes and repair and replace as necessary;
3. Verify that sensors are set in accordance with the manufacturer's specifications, if applicable, or, if no such specifications exist, the sensors shall be placed at the lowest possible location in the spill bucket;
4. Check for and remove obstructions in the fill pipes;
5. Check the fill pipe caps to verify they are securely on the fill pipes; and
6. For double-walled spill buckets with interstitial monitoring, check for leakage in the interstitial area.

80.35: continued

- (c) Verify that grade level fill covers are properly color-coded to correctly reflect the regulated substance in the UST system in accordance with 310 CMR 80.24(4).
- (3) Every 90 days inspect each turbine, intermediate and dispenser sump without continuous monitoring sensors, except sumps that only contain a single-walled siphon line with no connections within the sump and sumps that only contain European Suction Systems or sumps that do not contain any regulated substance piping connections, as follows:
 - (a) Visually inspect sumps, sump covers and manhole covers for damage, corrosion, breakage and wear, leaks to the containment areas and releases to the environment, and repair and replace as necessary;
 - (b) Remove solid and liquid material from the sumps in accordance with applicable federal, state and local laws and regulations; and
 - (c) For double-walled sumps, check for leakage in the interstitial area.
- (4) Annually
 - (a) Inspect each turbine, intermediate and dispenser sump with continuous monitoring sensors, except sumps that only contain a single-walled siphon line with no connections within the sump and sumps that only contain European Suction Systems or sumps that do not contain any regulated substance piping connections, as follows:
 - 1. Visually inspect sumps for damage, corrosion, breakage and wear, leaks to the containment areas and releases to the environment, and repair and replace as necessary;
 - 2. Remove solid and liquid material from the sumps in accordance with applicable federal, state and local laws and regulations;
 - 3. Verify that all sumps sensors are operating in accordance with the manufacturer's specifications and are placed in accordance with the manufacturer's specifications, or, if no such specifications exist, the sensors are placed at the lowest possible location in the sump; and
 - 4. For double-walled sumps, with interstitial monitoring check for leakage in the interstitial area.
 - (b) For hand held release detection equipment, check devices such as tank gauge sticks for operability and serviceability.
- (5) If the inspection indicates that any underground storage tank system components are not properly operating or are not being maintained in accordance with 310 CMR 80.00, manufacturer's specifications and applicable codes and standards, the Owner or Operator shall repair said component(s) in accordance with 310 CMR 80.33.
- (6) Every requirement under 310 CMR 80.35(2) through (4) shall be recorded on an inspection report or log that contains at a minimum the following information:
 - (a) A list of each area and UST component inspected;
 - (b) Whether the UST component is properly operating and being maintained; and
 - (c) Any repairs conducted on UST components designated as not operating or being maintained in accordance with 310 CMR 80.00, the manufacturer's specifications and all applicable codes and standards.
- (7) The results of each inspection shall be recorded and retained in accordance with 310 CMR 80.36.

80.36: Requirements for Recordkeeping

- (1) For a minimum of four years, the Owner or Operator shall maintain records in hard copy or electronically, and shall make them available to the Department as soon as possible following a request, but in no event more than seven business days after the request. The records shall include, but are not limited to:
 - (a) Results of all turbine, intermediate and dispenser sump integrity tests in accordance with 310 CMR 80.20(5), 80.28(7) and 80.27(9).
 - (b) Results of all spill bucket integrity tests in accordance with 310 CMR 80.21(1)(c) and 80.28(2).

80.36: continued

- (c) Results of all cathodic protection inspections and tests in accordance with 310 CMR 80.22(5) and 80.29(2), (4) and (6).
- (d) Records to demonstrate the Owner or Operator responded to alarms in accordance with 310 CMR 80.24(3).
- (e) Results of all leak detection inspections in accordance with 310 CMR 80.26(2), as applicable and tests in accordance with 310 CMR 80.26(12).
- (f) Leak detection monitoring records and investigations as required by 310 CMR 80.26(3)(e), (4)(c), (5)(f), (6)(f), (7)(d), (8)(d), (9) and (10), and 310 CMR 80.19(3)(d).
- (g) Results of inspections and testing of overfill prevention equipment in accordance with 310 CMR 80.28(3).
- (h) Records for all inventory monitoring for abnormal regulated substance loss and abnormal water gain in accordance with 310 CMR 80.31(4), if applicable.
- (i) Documentation of the date the need for the repair or replacement was discovered in accordance with 310 CMR 80.33(4)(b).
- (j) Records to demonstrate compliance with change-in-product requirements at 310 CMR 80.41(6).
- (k) Periodic inspection reports or logs in accordance with 310 CMR 80.35(6) and (7).

(2) The Owner or Operator shall maintain, in hard copy or electronically, the list of the current Class A, Class B and Class C operators of each UST system in accordance with 310 CMR 80.37(11) and records that demonstrate each designated Class A, Class B and Class C operator is certified in accordance with 310 CMR 80.37(7) through (9). The Owner or Operator shall make records available to the Department as soon as possible following a request, but in no event more than seven business days after the request.

(3) Until the UST system is removed or permanently closed in-place in accordance with 310 CMR 80.43(2) or (3), the Owner or Operator shall maintain the most current copy of the following records in hard copy or electronically, and shall make them available to the Department as soon as possible following a request, but in no event more than seven business days after the request.

- (a) A copy of the registration in accordance with 310 CMR 80.23(1).
- (b) A copy of the third-party inspection report pursuant to 310 CMR 80.49(2)(b)
- (c) Records that the Owner and Operator complied with temporary closure requirements in accordance with 310 CMR 80.42, if applicable.
- (d) Emergency procedures in accordance with 310 CMR 80.25.
- (e) Compatibility records in accordance with 310 CMR 80.30.

(4) For the life of a cathodic protection system, the Owner or Operator shall maintain an as built, scaled plan of the cathodic protection system and manufacturer's specifications in accordance with 310 CMR 80.22(4)(c), in hard copy or electronically, and shall make them available to the Department as soon as possible following a request, but in no event more than seven business days after the request.

(5) Until the UST system is removed or permanently closed in-place in accordance with 310 CMR 80.43(2) or (3), the Owner or Operator shall maintain the following records in hard copy or electronically, and shall make them available to the Department as soon as possible following a request, but in no event more than seven business days after the request:

- (a) Records of each equipment repair or replacement in accordance with 310 CMR 80.33.
- (b) A copy of installation information including, but not limited to, the installer's certification and completed checklist(s), and manufacturers' specifications; testing results; inspections; and a copy of the as-built plans of the UST facility in accordance with 310 CMR 80.16.

(6) An Owner or Operator shall maintain the most current financial assurance mechanism(s) used to demonstrate financial responsibility in accordance with 310 CMR 80.59 for a UST system until released from the requirements in accordance with 310 CMR 80.61. The Owner or Operator shall keep the documentation in hard copy or electronically. Upon request from the Department, the Owner or Operator shall make the documentation available to the Department as soon as possible, but in no event more than seven business days after receiving the request.

80.36: continued

(7) An Owner or Operator shall maintain documentation that a UST system holds a *de minimis* concentration of regulated substance, until the Owner and Operator no longer claim the exemption, in accordance with 310 CMR 80.04(5)(c). The Owner or Operator shall keep the documentation in hard copy or electronically. Upon request from the Department, the Owner or Operator shall make the documentation available to the Department as soon as possible, but in no event more than seven business days after receiving the request.

(8) The current Owner or Operator shall:

- (a) Maintain documentation that demonstrates compliance with closure requirements in accordance with 310 CMR 80.43 for at least four years after removal of an UST system or closure in-place of an UST system; or
- (b) Submit the documentation to the Department within 30 days of the UST system removal or closure-in-place.

(9) The Owner or Operator shall maintain documentation that a sump is double-walled and monitored in accordance with 310 CMR 80.27(6) as applicable, until the Owner and Operator no longer claims the exemption from testing, in accordance with 310 CMR 80.27(8)(c)2. The Owner or Operator shall keep the documentation in hard copy or electronically. Upon request from the Department, the Owner or Operator shall make the documentation available to the Department as soon as possible, but in no event more than seven business days after receiving the request.

(10) The Owner or Operator shall maintain documentation that a spill bucket is double-walled and is monitored in accordance with 310 CMR 80.28(2)(e), until the Owner and Operator no longer claim the exemption from testing, in accordance with 310 CMR 80.28(2)(f)3. The Owner or Operator shall keep the documentation in hard copy or electronically. Upon request from the Department, the Owner or Operator shall make the documentation available to the Department as soon as possible, but in no event more than seven business days after receiving the request.

(11) The Owner or Operator shall maintain tightness test results and reports, conducted in accordance with 310 CMR 80.32 until the next tightness test is conducted. The Owner or Operator shall keep the documentation in hard copy or electronically. Upon request from the Department, the Owner or Operator shall make the documentation available to the Department as soon as possible, but in no event more than seven business days after receiving the request.

OPERATOR TRAINING

80.37: Class A, B and C Operator Requirements and Certifications

(1) Effective August 8, 2012, every Owner and Operator shall ensure that at least one Class A, B and C operator certified in accordance with 310 CMR 80.37 is designated to each underground storage tank system.

- (a) An individual may be designated by an Owner and Operator as a Class A, Class B, or Class C operator or any combination of the three Classes.
- (b) An individual Class A, Class B, or Class C operator may be designated by an Owner and Operator for more than one UST system or UST facility.

(2) Except as provided in 310 CMR 80.37(2), the Owner or Operator shall ensure that a designated Class A, B or C operator is present when the UST system(s) is in operation. At unmanned UST systems including, but not limited to, emergency generators at telecommunication towers and card lock/card access facilities, there shall be Class A, B and C operators designated as responsible for operation and maintenance activities at such systems and responding to emergencies, and they shall be certified in accordance with 310 CMR 80.37(7) through (9), respectively.

(3) If a different Class A, B, or C operator needs to be designated for any reason including, but not limited, to resignation or termination, the Owner or Operator shall designate the appropriate Class A or B operator within 30 days of the position being vacated, or Class C operator within ten days of the position being vacated, and the Owner or Operator shall ensure that said Class A, B, or C operator is certified in accordance with 310 CMR 80.37(7), (8) or (9).

80.37: continued

(4) Class A Operator Requirements.

(a) A Class A operator shall have general knowledge and understanding of underground storage tank systems and applicable state regulatory requirements that apply to underground storage tank systems, including, but not limited to:

1. Tanks and piping;
2. Regulated substances stored;
3. Leak detection;
4. Spill prevention;
5. Overfill prevention;
6. Corrosion protection;
7. Emergency response procedures;
8. Product compatibility;
9. Financial responsibility documentation requirements;
10. Registration and other notification requirements;
11. Reporting and recordkeeping requirements;
12. UST testing requirements;
13. Temporary and permanent closure requirements; and
14. The Class B operator qualifications, training and examination requirements and Class C operator qualifications and training requirements.

(b) A Class A operator shall ensure that appropriate individuals:

1. Properly operate and maintain the underground storage tank system.
2. Maintain required records.
3. Are trained to operate and maintain the underground storage tank system and keep records.
4. Properly respond to alarms and emergencies caused by leaks or releases from underground storage tank systems.
5. Make financial responsibility documents available to the Department as required.

(5) Class B Operator Requirements.

(a) A Class B operator shall have in-depth knowledge and understanding of operation and maintenance requirements and applicable state regulatory requirements that apply to underground storage tank systems including, but not limited to:

1. Tanks and piping;
2. Regulated substance stored;
3. Leak detection;
4. Spill prevention;
5. Overfill prevention;
6. Corrosion protection;
7. Emergency response procedures;
8. Product compatibility;
9. Financial responsibility documentation requirements;
10. Registration and other notification requirements;
11. Reporting and recordkeeping requirements;
12. UST testing requirements;
13. Temporary and permanent closure requirements; and
14. The Class C operator qualification and training requirements.

(b) A Class B operator shall ensure implementation of the day-to-day aspects of operation and maintenance of, and recordkeeping for, underground storage tank systems and shall have general and site specific knowledge of the following:

1. Components of underground storage tank systems.
2. What material the underground storage tank system components are constructed of.
3. Methods of release detection and release prevention applied to the underground storage tank system.

(6) Class C Operator Requirements.

(a) A Class C operator shall have specific knowledge of the layout of the UST system(s), emergency procedures and how to respond to alarms.

(b) A Class C operator shall immediately and properly respond to alarms or other indications of emergencies in accordance with the emergency procedures.

80.37: continued

(c) A Class C operator shall be the Owner or Operator of the underground storage tank facility or an employee of the Owner or Operator, but not all employees of the Owner or Operator are necessarily Class C operators.

(7) Certification Requirements for Class A Operators.

(a) The Owner or Operator shall ensure that Class A operators are certified within 30 days after being designated by the Owner or Operator to assume responsibility for an underground storage tank system.

(b) Requirements to be certified as a Class A operator:

1. Obtain training in accordance with 310 CMR 80.37(7)(c) and (d) which may include on-the-job training; and
2. Take and pass an operator examination in accordance with 310 CMR 80.37(7)(e) through (g).

(c) The Owner or Operator shall ensure that Class A operators are trained on the type(s) of UST system(s) for which they are designated. Said training shall cover subject matters in 310 CMR 80.37(4) and shall include those systems for which the Class A operator is designated. Said training shall include, but not be limited to:

1. Types of tanks, piping, regulated substances stored, overfill prevention, leak detection and corrosion protection.
2. Operation and maintenance schedules and requirements.
3. Testing, reporting and recordkeeping requirements.
4. Financial responsibility requirements and the financial responsibility instruments that are in place for each UST system.
5. General emergency response procedures and requirements.

(d) The Owner or Operator shall document that Class A operators have received training that complies with 310 CMR 80.37(7)(b)1. and (c). The Owner or Operator shall keep the documentation, in hard copy or electronically, in accordance with 310 CMR 80.36. Upon request from the Department, the Owner or Operator shall make the documentation available to the requestor as soon as possible, but in no event more than seven business days after the request.

(e) Class A operators shall demonstrate knowledge of UST systems in general and all applicable state regulations by taking and passing an operator examination, as required by the Department.

(f) Upon passing the operator examination, the Class A operator shall receive a certificate indicating passage of the operator examination and the Owner or Operator shall keep a copy of the certificate, in hard copy or electronically, in accordance with 310 CMR 80.36. Upon request from the Department, the Owner or Operator shall make the documentation available to the requestor as soon as possible, but in no event more than seven business days after the request.

(g) Any individual who takes and fails any operator examination three times within six months of the first examination shall be prohibited from taking any operator examination for six months from the date of the third failure.

(h) A Class A operator with a current Class A certification from another state may be certified in Massachusetts as a Class A operator if the operator is trained in accordance with 310 CMR 80.37(7)(c), and the Class A operator passes the Massachusetts-specific portion of the operator examination.

(8) Certification Requirements for Class B Operators.

(a) The Owner or Operator shall ensure that Class B operators are certified within 30 days after being designated by the Owner or Operator to assume operation and maintenance responsibilities of the underground storage tank system.

(b) Requirements to be certified as a Class B operator:

1. Obtain training in accordance with 310 CMR 80.37(8)(c) and (d) which may include on-the-job training; and
2. Take and pass an operator examination in accordance with 310 CMR 80.37(8)(e) through (g).

(c) The Owner or Operator shall ensure that Class B operators are trained on the specific UST system(s) for which they are designated. Said training shall cover subject matters in 310 CMR 80.37(5) and shall include those systems for which the Class B operator is designated. Said training shall include, but not be limited to:

80.37: continued

1. Types of tanks, piping, regulated substances stored, overfill prevention, leak detection and corrosion protection.
 2. Operation and maintenance of the underground storage tank system.
 3. Testing, reporting and recordkeeping requirements.
 4. Financial responsibility documentation requirements.
 5. Emergency response procedures and requirements.
- (d) Owners or Operators shall document that Class B operators have received training that complies with 310 CMR 80.37(8)(b)1. and (c). The Owner and Operator shall keep the documentation, in hard copy or electronically, in accordance with 310 CMR 80.36. Upon request from the Department, the Owner or Operator shall make the documentation available to the requestor as soon as possible, but in no event more than seven business days after the request.
- (e) Class B operators shall demonstrate knowledge of UST systems in general and all applicable state regulations by taking and passing an operator examination, as required by the Department.
- (f) Upon passing the operator examination, the Class B operator shall receive a certificate indicating passage of the operator examination and the Owner or Operator shall keep a copy of the certificate, in hard copy or electronically, in accordance with 310 CMR 80.36. Upon request from the Department, the Owner or Operator shall make the documentation available to the requestor as soon as possible, but in no event more than seven business days after the request.
- (g) Any individual who takes and fails any operator examination three times within six months of the first examination shall be prohibited from taking any operator examination for six months from the date of the third failure.
- (h) A Class B operator with a current Class B certification from another state may be certified in Massachusetts as a Class B operator if the operator is trained in accordance with 310 CMR 80.37(8)(c), and the Class B operator passes the Massachusetts-specific portion of the operator examination.
- (9) Certification Requirements for Class C Operators.
- (a) A Class C operator shall be certified before being designated by the Owner and Operator.
- (b) In order to be certified as a Class C operator, the Owner or Operator shall document that an individual was trained by a Class A or B operator. The training shall be site specific and shall include, at a minimum, the actions to take in response to alarms or other indications of emergencies caused by leaks or releases from an underground storage tank system.
- (c) When the training is complete, the trainer and the Class C operator shall each sign and date the training log for the UST facility documenting that the training was completed in accordance 310 CMR 80.37(9)(b) and (c). The trainer shall also document the underlying reason for the re-training in accordance with 310 CMR 80.37(9)(d). The Owner or Operator shall maintain the log for at least two years after the Class C operator is no longer designated, in hard copy or electronically. Upon request from the Department, the Owner or Operator shall make the log available to the requestor as soon as possible, but in no event more than seven business days after the request.
- (d) The Owner or Operator shall ensure that the Class C operator is re-trained and shall document the re-training and the underlying reason for the re-training in accordance with 310 CMR 80.37(9)(c) when:
1. Emergency procedures change at a facility;
 2. The type or location of the leak detection alarm system changes; or
 3. The type or location of the emergency shut-off switch changes.
- (10) Temporary Transfers of Class C Operators. Prior to the Class C operator assuming designation at a UST facility to which the Class C operator is temporarily transferred, the Owner or Operator shall ensure that such Class C operator is trained on the site-specific emergency procedures of the UST facility in accordance with 310 CMR 80.37(9).

80.37: continued

(11) The Owner or Operator shall maintain a current list of the designated Class A, B and C operator(s) for each UST system or facility, in hard copy or electronically. Upon request from the Department, the Owner or Operator shall make the documentation available to the requestor as soon as possible, but in no event more than seven business days after the request. This list shall include, but not be limited to, the name of the operator, operator classification, operator certificate number, as applicable, the date of the operator's training and the date of designation.

(12) Without limitation, if the Department determines that a UST system is out of compliance with the applicable requirements of 310 CMR 80.00, the Department may require that the Owner or Operator provide re-training for one or more Class A, B or C operator(s) and/or require that one or more Class A or B operator(s) re-take and pass the operator examination.

LEAKAGE AND RELEASE: RESPONSE, REPORTING AND REMEDIATION

80.38: Response to a Release

(1) Nothing in 310 CMR 80.00 shall affect the Owner or Operator notification obligations under 310 CMR 40.0000: *Massachusetts Contingency Plan*.

(2) In the event of a release from a tank, the Owner or Operator shall empty the tank immediately, but in no event later than 24 hours of obtaining knowledge of the release and comply with 310 CMR 80.33, 80.42 or 80.43, as applicable.

(3) In the event of a release from piping, the Owner or Operator shall immediately empty and isolate the section of pipe determined to have had the release and comply with 310 CMR 80.33, 80.42 or 80.43, as applicable.

80.39 Response to Leakage

(1) In the event of leakage, whether determined by testing, visual inspection or otherwise, the following steps shall be taken:

(a) If testing, visual inspection or other information has confirmed that the source of the leakage is the piping, the Owner or Operator shall immediately:

1. Isolate and empty the section of the pipe determined to have leakage until the section is repaired or replaced; or
2. Take that UST system temporarily out-of-service in accordance with 310 CMR 80.42; or
3. Remove or permanently close in-place the UST system in accordance with 310 CMR 80.43.

(b) If testing has confirmed that the source of the leakage is a particular tank, the Owner or Operator shall immediately, but in no event later than 72 hours of obtaining the test results, empty the UST system; and:

1. Repair the tank in accordance with 310 CMR 80.33(2); or
2. Remove the tank in accordance with 310 CMR 80.43(2); or
3. Permanently close-in-place the tank in accordance with 310 CMR 80.43(3).

80.40: Reportable Releases

For each reportable release pursuant to 310 CMR 40.0000: *Massachusetts Contingency Plan*, the Owner or Operator shall provide the following information to the Department, in a format provided by the Department, in accordance with 310 CMR 80.23(3)(c):

- (a) The source of each reportable release from a UST system, *i.e.* the UST component or piece of equipment that failed, if known; and
- (b) The cause of each reportable release from a UST system, *i.e.* the reason for the failure, if known.

CHANGE-IN-PRODUCT, OUT-OF-SERVICE SYSTEMS AND CLOSURE

80.41: Requirements for Change-in-product

- (1) Owners and Operators shall comply with all requirements in 310 CMR 80.41.
- (2) A UST system once used for non-food grade regulated substances shall not be reused to store food products or drinking water.
- (3) The Owner shall notify the Department, in a format specified by the Department, of a change-in-product in accordance with 310 CMR 80.23(2)(a) and the following timeframes:
 - (a) If the change-in-product is from a regulated substance to a different regulated substance, within 30 days of executing the change; except if the different regulated substance contains greater than 10% ethanol or greater than 20% biofuel, then at least 30 days prior to executing the change, in accordance with 310 CMR 80.30(3).
 - (b) If the change-in-product is from a regulated substance to a non-regulated substance, prior to executing the change.
 - (c) If the change-in-product is from a non-regulated substance to a regulated substance, within 30 days of receiving regulated substance into the UST system, in accordance with 310 CMR 80.23(1).
- (4) If the change-in-product is from a regulated substance to a non-regulated substance:
 - (a) Before executing a change-in-product, the Owner or Operator shall remove all solid and liquid material in accordance with 310 CMR 80.47. The Owner or Operator shall manage the solid and liquid material removed from the UST system in accordance with all applicable federal, state and local laws and regulations.
 - (b) The UST system will no longer be subject to 310 CMR 80.00, except that the Owner and Operator shall continue to be responsible for remediating any releases of regulated substances that occurred. The Owner or Operator shall conduct an assessment in accordance with 310 CMR 80.43(4), after notifying the Department of the change-in-product, but before the change-in-product is executed.
 - (c) Records of the change-in-product shall be kept in accordance with 310 CMR 80.36.
- (5) If the change-in-product is from a regulated substance to another regulated substance, before executing the change-in-product, the Owner or Operator shall empty the tank. The Owner or Operator shall manage and dispose of the solid and liquid material removed from the UST system in accordance with all applicable federal, state and local laws and regulations.
- (6) Owners or Operators shall demonstrate compliance with the requirements for change-in-product by maintaining records/documentation, in accordance with 310 CMR 80.36.

80.42: Requirements for Taking a UST System Temporarily Out-of-service

- (1) Owners and Operators shall comply with all requirements in 310 CMR 80.42.
- (2) Within 30 days after a UST system is taken temporarily out-of-service, the Owner shall notify the Department in a format specified by the Department in accordance with 310 CMR 80.23(2)(b).
- (3) The Owner or Operator shall not take a UST system temporarily out-of-service for more than five years.
 - (a) If a temporarily out-of-service UST system is not put back into service at the end of five years, the Owner or Operator shall remove or permanently close in-place the UST system in accordance with 310 CMR 80.43, unless 310 CMR 80.45 applies.
 - (b) A single-walled steel tank that is temporarily out-of-service on August 7, 2017, shall comply with the requirements at 310 CMR 80.15.
- (4) When a UST system is taken temporarily out-of-service, the Owner or Operator shall comply only with the following requirements of 310 CMR 80.00 during the entire time period the UST system is temporarily out-of-service:

80.42: continued

(a) Remove all solid and liquid material from the UST system and have the UST system rendered inert in accordance with 310 CMR 80.47;

The Owner or Operator shall manage the solid and liquid material removed from the UST system in accordance with all applicable federal, state and local laws and regulations;

(b) Cap, lock and secure all fill lines and fill pipes against tampering;

(c) Keep the vent lines open and operable for the entire period that the UST system is temporarily out-of-service;

(d) Continue operation and maintenance of corrosion protection in accordance with 310 CMR 80.29, if applicable;

(e) Continue to comply with the third-party inspection requirements in accordance with 310 CMR 80.49;

(f) Comply with the Compliance Certification requirements for temporarily out-of-service UST systems in accordance with 310 CMR 80.34(3); and

(g) Maintain financial responsibility in accordance with 310 CMR 80.51 through 80.63.

(5) Prior to commencing operation, the Owner or Operator shall have the tank and piping tightness tested and shall ensure that the UST system components are calibrated and operating in accordance with the manufacturer's specifications.

(6) Within 30 days after returning the UST system to service, the Owner or Operator shall notify the Department in a format specified by the Department in accordance with 310 CMR 80.23(2)(c).

(7) Owners or Operators shall demonstrate compliance with the requirements of temporarily out-of-service by maintaining records/documentation in accordance with 310 CMR 80.36.

80.43: Requirements for Removal and Permanent Closure In-place

(1) Owners and Operators shall comply with the requirements in 310 CMR 80.43.

(2) Requirements for Removal of a UST System.

(a) Prior to removal of a UST system, the Owner or Operator shall have all the solid and liquid material removed from the UST system, in accordance with 310 CMR 80.47, have the UST system rendered inert and shall secure all openings. The Owner or Operator shall manage and dispose of all solid and liquid material removed from the UST system in accordance with all applicable federal, state and local laws and regulations.

(b) The Owner or Operator shall conduct an assessment in accordance with 310 CMR 80.43(4) within 24 hours after the UST system is removed, but prior to backfill of the excavation area.

(c) The Owner shall notify the Department, in a format specified by the Department, that the UST system was removed, within 90 days of removal in accordance with 310 CMR 80.23(2)(d). A copy of the assessment in 310 CMR 80.43(4) shall be submitted with said form.

(3) Requirements for Permanent Closure-in-place.

(a) No Owner or Operator shall permanently close a UST system in-place unless it is determined to be located under a building and cannot be removed from the ground without first removing the building, or is so located that it cannot be removed from the ground without endangering the structural integrity of another UST system, structure, underground piping or underground utilities.

1. Such a determination shall be made by a licensed professional civil or structural engineer, and shall be signed, sealed and submitted to the Department with supporting documentation prior to the UST system Owner or Operator commencing UST system closure activities. The determination shall include, at a minimum, sketches, photos, a scaled site plan, a scope of work for the environmental assessment to be conducted pursuant to 310 CMR 80.43(4), a detailed, written determination of why the UST system cannot be removed, and a schedule for completion.

80.43: continued

2. If the Department does not notify the Owner within 30 days, the Owner or Operator may proceed with the closure-in-place if it has complied with 310 CMR 80.43(3)(a)1.

3. The Owner or Operator shall have all solid and liquid material removed from the tank, in accordance with 310 CMR 80.47 and shall have the tank filled with clean sand, concrete slurry mix or another inert material if such other material is approved by the Department in writing prior to filling the tank. The Owner or Operator shall manage the solid and liquid material removed from the tank in accordance with all applicable federal, state and local laws and regulations.

(b) Before permanent closure-in-place commences, the Owner or Operator shall conduct an assessment in accordance with 310 CMR 80.43(4). If the assessment finds contamination requiring notification pursuant to 310 CMR 40.0000: *Massachusetts Contingency Plan*, the filling of the UST system for permanent closure-in-place shall not commence until the Owner or Operator has complied with the notification requirements contained in 310 CMR 40.0300: *Notification of Releases and Threats of Release of Oil and Hazardous Materials; Identification and Listing of Oil and Hazardous Materials*, as applicable, and any required response actions under 310 CMR 40.0000.

(c) The Owner shall notify the Department in accordance with 310 CMR 80.23(2)(e), in a format specified by the Department that the UST system was closed-in-place, within 90 days of the UST system being filled. A copy of the assessment in 310 CMR 80.43(4) shall be submitted with said form.

(4) Assessment.

(a) The Owner or Operator shall measure for the presence of a release of regulated substances where contamination is most likely to be present in the subsurface. To determine sampling location(s), sample types, field screening techniques and analytical methods, the Owner or Operator shall consider the regulated substance stored in the UST system and its characteristics; the type of backfill in the area; the depth to groundwater and direction of ground water flow, the distance to surface water bodies, and any other factors appropriate for identifying the presence of a release.

(b) A photo ionization detector (PID) or flame ionization detector (FID) shall be employed in the field to detect for the presence of a release, if the regulated substance can be detected by a PID or FID.

(c) If the Owner or Operator obtains knowledge of a release, the Owner or Operator shall comply with the notification requirements contained in 310 CMR 40.0300: *Notification of Releases and Threats of Release of Oil and Hazardous Materials; Identification and Listing of Oil and Hazardous Materials*, as applicable and any required response actions under 310 CMR 40.0000: *Massachusetts Contingency Plan*.

(5) The Department may require removal or permanent closure in-place of a UST system at any time that it determines the UST system is abandoned or poses a threat to public health, safety or the environment.

(6) Owners and Operators shall demonstrate compliance with the requirement for permanent closure by maintaining records/documentation in accordance with 310 CMR 80.36.

(7) The Owner or Operator may need to obtain a permit from the fire department in which the UST system is located for closure or relocation of a UST system pursuant to M.G.L. c. 210, § 1. It is the responsibility of the Owner or Operator to obtain any required permit(s).

80.44: Requirements for a Tank within a Tank

If a new tank is installed inside an existing tank, the Owner shall:

(1) Prior to installing the new tank, the Owner or Operator shall have all the solid and liquid material removed from the existing UST system, in accordance with 310 CMR 80.47, have the existing UST system rendered inert and shall secure all openings. The Owner or Operator shall manage and dispose of all solid and liquid material removed from the UST system in accordance with all applicable federal, state and local laws and regulations.

80.44: continued

- (2) Conduct an assessment in accordance with 310 CMR 80.43(4) before the new tank is installed. If the assessment finds contamination requiring notification pursuant to 310 CMR 40.0000: *Massachusetts Contingency Plan*, the installation of the new tank shall not commence until the Owner or Operator has complied with the notification requirements contained in 310 CMR 40.0300: *Notification of Releases and Threats of Release of Oil and Hazardous Materials; Identification and Listing of Oil and Hazardous Materials*, as applicable, and any required response actions under 310 CMR 40.0000.
- (3) Notify the Department that a new tank is being installed inside an existing tank, in a format specified by the Department, within 30 days of the new tank being installed. A copy of the assessment in 310 CMR 80.43(4) shall be submitted with said form.

80.45: UST Systems Temporarily Out-of-service for over Five Years

- (1) A new Owner that acquires a UST system that has been temporarily out-of-service for more than five years may bring the UST system back into service within 90 days after the acquisition is final, if the UST system and UST components comply with the most current tank, piping, leak detection, sump, spill bucket, overfill protection and corrosion protection standards in 310 CMR 80.00 and the Owner:
 - (a) Determines that the UST system and all UST components are operable;
 - (b) Passes a tightness test in accordance with 310 CMR 80.32;
 - (c) Has a third-party inspection performed in accordance with 310 CMR 80.49(7); and
 - (d) Performs any necessary repairs in accordance with 310 CMR 80.33.
- (2) After the Owner has completed the requirements in accordance with 310 CMR 80.45(1), the Owner shall notify the Department that the UST system meets the requirements of 310 CMR 80.45(1) when the Owner registers the UST system in accordance with 310 CMR 80.23(1).

80.46: Requirements for Previously Closed-in-place UST Systems

If, at the sole discretion of the Department, the Department determines that a tank or UST system permanently closed-in-place before December 22, 1988, may pose a current or potential threat to human health and the environment, the Owner or Operator of such a tank or UST system shall upon notice from the Department conduct a site assessment in accordance with 310 CMR 80.43(4).

80.47: Standards for Cleaning and Closure

- (1) The Owner or Operator shall follow the applicable cleaning and closure procedures to comply with 310 CMR 80.41(4)(a), 80.42(4)(a) and 80.43(2)(a) and (3)(a)3.:
 - (a) American Petroleum Institute (API) Recommended Practice 1604, 3rd Edition, March 1996 *Closure of Underground Petroleum Storage Tanks*, Sections 1, 3, and 4.1 through 4.5; and
 - (b) United States Environmental Protection Agency standards for RCRA hazardous debris found at 40 CFR 268.45.

DELIVERY PROHIBITION

80.48: Delivery Prohibition

- (1) The Department shall issue a delivery prohibition order to an Owner or Operator of a UST system after written notice to the Owner or Operator if one or more of the following conditions exist:
 - (a) Failure to install spill prevention equipment in accordance with 310 CMR 80.21(1);
 - (b) Failure to install overfill protection equipment in accordance with 310 CMR 80.21(2);
 - (c) Failure to install leak detection equipment in accordance with 310 CMR 80.19; or
 - (d) Failure to install corrosion protection equipment in accordance with 310 CMR 80.22.

80.48: continued

(2) Upon learning of any of the conditions in 310 CMR 80.48(1)(a) through (d), the Owner or Operator shall immediately, but in no event more than 24 hours after learning of the conditions in 310 CMR 80.48(1)(a) through (d), inform the Department of the violation.

(3) The Department may issue a delivery prohibition order to an Owner or Operator of a UST system after written notice to the Owner or Operator if one or more of the following conditions exist:

- (a) Spill prevention is not operating in accordance with 310 CMR 80.28(1) and (2);
- (b) Overfill protection is not operating in accordance with 310 CMR 80.28(1) and (3);
- (c) Leak detection equipment is not operating in accordance with 310 CMR 80.26;
- (d) Corrosion protection equipment is not operating in accordance with 310 CMR 80.29;
- (e) The Owner or Operator fail to demonstrate or maintain financial responsibility in accordance with 310 CMR 80.51 through 80.63; or
- (f) Any other violation of 310 CMR 80.00 that poses a significant threat to public health, safety or the environment, as determined by the Department at its sole discretion.

(4) After written notice to the Owner or Operator, the delivery prohibition shall become effective immediately when the Department serves a written delivery prohibition order in accordance with 310 CMR 80.50(3) prohibiting the delivery of product to the UST system(s). The delivery prohibition order shall be issued no sooner than 24 hours after written notice to the Owner or Operator.

(5) After the delivery prohibition order is served, the Department shall have the authority to lock the fill pipe and affix a red tag to the fill pipe of the UST system(s) that are subject to said order.

(6) No person shall deliver, cause to be delivered, accept for delivery or cause to be accepted for delivery any regulated substance to a UST system that is subject to a delivery prohibition order that has been served and has a red tag affixed to the fill pipe.

(7) No person shall remove, deface, alter or otherwise tamper with the lock or red tag affixed to a UST system or UST component, except in accordance with 310 CMR 80.48(10).

(8) Upon notification from the Owner or Operator that the violations identified in the delivery prohibition order have been corrected, the Department shall, confirm that the violations have been corrected.

(9) If the Department confirms that the violation(s) have been corrected, the Department shall terminate the delivery prohibition order in writing and remove the lock and red tag from the UST system.

(10) In the event that the Department does not inspect a UST system within 24 hours after receipt of the notification from the Owner or Operator that the violation(s) identified in the delivery prohibition order have been corrected, a third-party inspector may remove the 'red tag' after providing a certification to the Department, in a format specified by the Department, that the violation(s) has been corrected. Both the Owner or Operator and the third-party inspector shall sign the certification prior to submission to the Department.

(11) Notwithstanding a delivery prohibition order, the Department may authorize the delivery of product to a UST system that has received a delivery prohibition order in emergency situations, or for compliance testing purposes, as determined by the Department in its sole discretion.

(12) Any person subject to a delivery prohibition order shall have the right to an adjudicatory appeal in accordance with 310 CMR 80.50. An adjudicatory appeal shall not stay the effectiveness of a delivery prohibition order.

THIRD-PARTY INSPECTIONS

80.49: Third-party Inspections

(1) The third-party inspection program operates on a three year cycle that began on August 8, 2007. Every Owner and Operator was required to have every UST system inspected by a third-party inspector by August 8, 2010, and have every UST system inspected by a third-party inspector every three years thereafter.

(2) The Owner and Operator shall have all UST systems at each UST facility inspected by a third-party inspector and submit the third-party inspection report to the Department on or before the UST facility compliance date established in 310 CMR 80.49(2)(a) through (g).

(a) The date the third-party inspection was performed between August 8, 2007 and August 8, 2010 establishes the UST facility compliance date for the triennial third-party inspection, except as determined in 310 CMR 80.49(2)(e) and (g).

(b) The Owner or Operator shall submit a truthful, accurate and complete third-party inspection report that contains all the information required in 310 CMR 80.49(7) on or before the UST facility compliance date.

(c) The Owner or Operator shall submit the third-party inspection report to the Department no later than 60 days after the commencement of the third-party inspection in accordance with 310 CMR 80.49(7)(c)1., 2., or 3.

(d) A late submittal shall not alter the UST facility compliance date for future third-party submittals, unless the Department changes the UST facility compliance date in accordance with 310 CMR 80.49(2)(g).

(e) A submittal more than 30 days before the UST facility compliance date shall establish a new UST facility compliance date for future submittals, unless the Department changes the UST facility compliance date in accordance with 310 CMR 80.49(2)(g).

(f) If an Owner registers a new UST facility after January 2, 2015, the Department will assign the UST facility a UST facility compliance date. If an Owner or Operator installs a new or replacement UST system or tank at an existing UST facility, such installation shall not alter the UST facility compliance date.

(g) The Department may change the UST facility compliance date for any UST facility provided the Department gives the Owner and Operator 90 days prior written notice. The Department's decision to change the UST facility compliance date shall not be subject to M.G.L. c. 30A, or any other law governing adjudicatory proceedings.

(3) Third-party inspections shall only be performed by third-party inspectors certified in accordance with 310 CMR 80.49(4).

(4) Certification Requirements for a Third-party Inspector.

(a) Individuals who seek to become third-party inspectors and who meet the requirements of 310 CMR 80.49(4)(b) and (c) shall submit an application to the Department, in a format specified by the Department, for consideration.

1. If the Department determines the individual meets the certification requirements in 310 CMR 80.49(4)(b) and (c), the individual shall be issued a third-party inspector number and shall be certified as a third-party inspector.

a. All certifications shall be for a fixed term of three years from the date the Department issued the third-party inspector number and certification, unless suspended or revoked.

b. In order to renew a certification, the third-party inspector shall re-apply in a format specified by the Department at least 90 days before the certification expires.

i. To renew a certification, the third-party inspector shall demonstrate he or she is in compliance with the requirements at 310 CMR 80.49(4)(d).

ii. Any certification which is scheduled to expire shall be automatically extended if the third-party inspector files an application for renewal at least 90 days before the scheduled expiration date. This automatic extension shall remain in effect until:

(i) The Department issues a new certification to the third-party inspector; or

80.49: continued

- (ii) The Department denies the application for renewal and all opportunities for adjudicatory hearing in accordance with M.G.L. c. 30A, § 13, before the Department have been exhausted, in which case the extended certification shall be deemed expired; or
 - (iii) The Department suspends or revokes the extended certification and all opportunities for adjudicatory hearing, if any, in accordance with M.G.L. c. 30A, § 13, before the Department have been exhausted.
- 2. If the Department determines the individual does not meet the certification requirements in 310 CMR 80.49(4)(b) and (c), the individual's application shall be denied in writing.
 - a. Upon receiving a denial from the Department, the individual may submit a letter to the Department requesting that the Department reconsider its decision. Said letter shall be postmarked or delivered to the Department within 30 days of the date of the denial letter from the Department.
 - b. The Department shall respond to the individual in writing within 30 days of receiving the request for reconsideration.
 - c. If, upon reconsideration, the Department determines the individual does not meet the certification requirements, it shall notify the individual in writing and the individual may file an administrative appeal of the Department's decision in accordance with 310 CMR 80.50.
 - d. An individual may only file such a request for adjudicatory hearing in accordance with 310 CMR 80.50 if the individual timely requests reconsideration of the denial in accordance with 310 CMR 80.49(4)(a)2.a. and is denied after reconsideration.
- 3. Upon receipt of a third-party inspector number from the Department, the third-party inspector is certified and may conduct third-party inspections provided the third-party inspector meets the performance standards in accordance with 310 CMR 80.49(5).
- (b) In order to be certified as a third-party inspector, an individual shall:
 - 1. Take and pass Department required examination(s) that tests individuals on their knowledge of 310 CMR 80.00, and installation, operation and maintenance, and closure and temporary closure of UST systems and UST components, which may include a field component.
 - 2. Demonstrate experience by one of the following:
 - a. Possess at least three years of field experience in the areas of UST system installation and/or operation and maintenance:
 - b. Participate in at least ten inspections with a certified third-party inspector to obtain hands-on, practical experience with third-party inspections. Said inspections shall be conducted within the three years immediately prior to submitting an application in accordance with 310 CMR 80.49(4)(a); or
 - c. Hold a current UST third-party inspector certification from another state, and have performed a minimum of ten UST third-party inspections in that state within the past three years.
- (c) A third-party inspector who is registered with the Department under 527 CMR 9.00: *Tanks and Containers* as of January 2, 2015 and is not certified by January 1, 2018, does not have to meet the requirements of 310 CMR 80.49(4)(b)2. to become a certified third-party inspector, provided that:
 - 1. The third-party inspector has conducted at least ten third-party inspections since August 8, 2007; and
 - 2. On or before January 1, 2019, the third-party inspector takes and passes the Department required examination pursuant to 310 CMR 80.49(4)(b)1.
- (d) In order to maintain and renew certification, the third-party inspector shall:
 - 1. Complete annual training as required by the Department, which may include a field component.
 - 2. Complete at least six third-party inspections within the three-year certification period.
- (5) Performance Standards.
 - (a) A third-party inspector shall have the continuing duty to meet the following performance standards:
 - 1. Be a certified third-party inspector before conducting any third-party inspections.
 - 2. Not transfer or assign the certification to any other individual.

80.49: continued

3. Personally conduct and complete third-party inspections they sign and certify.
4. Conduct and complete third-party inspections in accordance with 310 CMR 80.49(7)(a).
5. Provide an accurate and complete third-party inspection report.
6. Not make any false, inaccurate or misleading statements in the third-party inspection report.
7. Provide any information regarding third-party inspections to the Department upon request, as soon as possible, but in no event more than seven business days following the request.
8. If a third-party inspector identifies one or more conditions in accordance with 310 CMR 80.48(1), at a UST system the third-party inspector shall:
 - a. Immediately, but in no event later than 24 hours after obtaining knowledge of the condition, advise the Owner or Operator of the one or more conditions described at 310 CMR 80.48(1) and the Owner or Operator's obligation to notify the Department of the condition(s) in accordance with 310 CMR 80.48(2); and
 - b. Notify the Department of the violation no later than 48 hours after informing the Owner or Operator, unless the third-party inspector receives written confirmation from the Owner or Operator that it notified the Department.

(6) Prohibitions. At the time of a third-party inspection and for the year immediately preceding the third-party inspection, a third-party inspector shall not be:

- (a) An Owner or Operator of the UST system the third-party inspector is inspecting;
- (b) The spouse, parent, child, brother or sister by blood, marriage or adoption of an Owner or Operator of the UST system who has performed work on the UST system, or the spouse, parent, child, brother or sister by blood, marriage or adoption of an employee or contractor of the Owner or Operator of the UST system who has performed work on the UST system that the third-party inspector is inspecting;
- (c) An employee of the Owner or Operator he or she is inspecting or an individual who has performed work at the UST facility he or she is inspecting, under contract or otherwise, other than a contractor who is the third-party inspector;
- (d) The designated Class A, B or C operator of the UST system the third-party inspector is inspecting; or
- (e) A person, or employee of a person, having any financial interest in or daily on-site responsibility for the UST system that the third-party inspector is inspecting.

(7) Inspection Requirements.

- (a) A third-party inspector shall conduct a third-party inspection in accordance with 310 CMR 80.49(7)(a) through observation during the inspection and a review of the records compiled and maintained since the most recent third-party inspection, and shall determine, at a minimum, the following for each UST system and UST components:
 1. Whether the Owner or Operator submitted required documentation to the Department in accordance with 310 CMR 80.23.
 2. Whether leak detection equipment has been installed, tested, maintained and is fully operational in accordance with 310 CMR 80.19 and 80.26 and the manufacturer's specifications.
 3. Whether corrosion protection, if applicable, has been installed, tested, maintained, and is fully operational in accordance with 310 CMR 80.22 and 80.29 and the manufacturer's specifications.
 4. Whether turbine, intermediate and dispenser sumps and sump sensors have been installed, inspected, tested and maintained in accordance with 310 CMR 80.20 and 80.27 and the manufacturer's specifications.
 5. Whether spill buckets have been installed, inspected, tested and maintained in accordance with 310 CMR 80.21(1) and 80.28(1) and (2) and the manufacturer's specifications.
 6. Whether overfill protection has been installed, inspected, tested, maintained, and is fully operational in accordance with 310 CMR 80.21(2) and 80.28(1) and (3) and the manufacturer's specifications.

80.49: continued

7. Whether inventory monitoring, if applicable, has been performed and recorded in accordance with 310 CMR 80.31.
 8. Whether tightness tests were conducted in accordance with 310 CMR 80.32.
 9. Whether the Compliance Certification has been completed and submitted to the Department in accordance with 310 CMR 80.34.
 10. Whether repairs and replacements have been conducted in accordance with 310 CMR 80.33.
 11. Whether periodic inspections have been conducted and recorded in accordance with 310 CMR 80.35.
 12. Whether the emergency response postings and written procedures are in compliance with 310 CMR 80.25.
 13. Whether alarms have been responded to and the responses documented in accordance with 310 CMR 80.24(3).
 14. Whether visual and/or olfactory observations indicate the presence of leakage or release related to the UST system or UST components.
 15. Whether UST systems that changed product in the UST system complied with 310 CMR 80.41.
 16. Whether financial responsibility is current, valid and documented in accordance with 310 CMR 80.51 through 80.63.
 17. Whether UST systems that are temporarily out-of-service are being maintained and documented in accordance with 310 CMR 80.42.
 18. Whether UST systems that were removed or permanently closed in-place were properly documented in accordance with 310 CMR 80.43.
 19. Whether documentation for Class A, B and C operators is current and maintained in accordance with 310 CMR 80.37.
 20. Whether required records are kept in accordance with 310 CMR 80.36.
- (b) The Owner or Operator shall provide the third-party inspector with all necessary records to complete the inspection in accordance with 310 CMR 80.49(7)(a).
- (c) A third-party inspector shall record the results of a third-party inspection on a third-party inspection report specified by the Department, shall sign and date such report in accordance with the certification at 310 CMR 80.49(7)(d), and shall provide the report to the Owner or Operator.
1. If the third-party inspection does not identify any deficiencies, the Owner or Operator shall sign and date the third-party inspection report in accordance with the certification at 310 CMR 80.49(7)(e), and shall submit the third-party inspection report to the Department on or before the UST facility compliance date in accordance with 310 CMR 80.49(7)(f).
 2. If the third-party inspection identifies deficiencies, the Owner or Operator shall correct any deficiencies, if possible, in accordance with 310 CMR 80.00, sign and date the third-party inspection report in accordance with the certification at 310 CMR 80.49(7)(e), and submit the report to the Department on or before the UST facility compliance date.
 - a. Before the third-party inspection report is submitted, the Owner or Operator shall have the third-party inspector determine whether each deficiency is corrected and the third-party inspector shall record their findings on the third-party inspection report.
 - b. A third-party inspector shall document the findings of the facility's re-inspection in the "Re-inspection" section of the third-party inspection report, sign and date the report in accordance with the certification at 310 CMR 80.49(7)(d), and provide the third-party inspection report to the Owner or Operator.
 - c. The Owner or Operator shall sign and date the third-party inspection report in accordance with the certification at 310 CMR 80.49(7)(e), and submit the third-party inspection report to the Department on or before the UST facility compliance date in accordance with 310 CMR 80.49(7)(f).
 3. In the event that the Owner or Operator is unable to correct the deficiencies identified in the third-party inspection by the UST facility compliance date, the Owner or Operator shall sign and date the third-party inspection report in accordance with the certification at 310 CMR 80.49(7)(e) and submit the third-party inspection report with a return to compliance (RTC) plan to the Department, in a format specified by the Department, on or before the UST facility compliance date in accordance with 310 CMR 80.49(7)(f).

80.49: continued

- a. The RTC plan shall:
 - i. Identify each deficiency that was not corrected;
 - ii. Detail what the Owner or Operator will do to correct each identified deficiency; and
 - iii. Include the following statement: "I, [name of Owner or Operator], attest under the penalties of law: 1. that I have personally examined and am familiar with the information contained in this return to compliance plan, including any and all documents accompanying this certification statement; 2. that, based on my inquiry of those individuals responsible for obtaining the information, the information contained in this submittal is to the best of my knowledge, true, accurate, and complete; and 3. that I am fully authorized to make this attestation on behalf of this UST system or facility. I am aware that there are significant penalties, including, but not limited to possible fines and imprisonment, for submitting false, inaccurate, or incomplete information."
 - b. The deficiencies identified in the RTC plan shall be corrected and the Owner or Operator shall submit a RTC completion report to the Department, in a format specified by the Department, within 30 days of the submittal of the third-party inspection report. If the RTC plan documents a reasonable basis for a proposed alternative completion due date by which the deficiencies will be corrected and the required RTC completion report submitted, the RTC completion report shall be submitted by this alternative completion due date.
 - c. If, upon review, the Department determines that the proposed alternative completion due date is not reasonable, the Department shall notify the Owner or Operator that deficiencies shall be corrected and the RTC completion report submitted to the Department by a date earlier than the proposed alternative date.
 - d. Before the RTC completion report is submitted, the Owner or Operator shall have a third-party inspector determine whether each deficiency is corrected and the third-party inspector shall record their findings on the RTC completion report.
 - e. The third-party inspector shall sign and date the RTC completion report in accordance with the certification at 310 CMR 80.49(7)(d), and provide the RTC completion report to the Owner or Operator.
 - f. The Owner or Operator shall sign and date the RTC completion report in accordance with the certification at 310 CMR 80.49(7)(e), and submit the RTC completion report to the Department on or before the RTC completion due date.
- (d) A third-party inspector who performs a third-party inspection shall sign and date the third-party inspection report with the following certification:
- "I attest under the penalties of law: (i) that I am a certified third-party inspector in compliance with 310 CMR 80.49(4); (ii) that I personally performed this inspection of the UST facility in accordance with the 310 CMR 80.49(7), and having fully completed this report, believe the contents of this report and all attachments to be true and accurate as of the time of the inspection; and (iii) that all the information provided to me by the Owner and Operator necessary to complete this report is, to the best of my knowledge, true, accurate, and complete. I am aware that there are significant penalties including, but not limited to, possible fines and imprisonment for submitting false, inaccurate, or incomplete information."
- (e) The Owner or Operator shall sign, date and submit a third-party inspection report to the Department with the following certification:
- "I attest under the penalties of law: (i) that I am the Owner or Operator of this UST facility; (ii) that I have personally read this inspection report and understand the contents, including all attachments, deficiencies and recommendations; (iii) that all the information provided by me to the third-party inspector is, to the best of my knowledge, true, accurate, and complete; (iv) that I have not altered, added or deleted any information in this inspection report; and (v) that I am fully authorized to make this attestation on behalf of this UST facility. I am aware that there are significant penalties including, but not limited to, possible fines and imprisonment for submitting false, inaccurate, or incomplete information."
- (f) The Owner or Operator shall ensure that the third-party inspection report is hand delivered, postmarked or submitted electronically to the Department by the UST facility compliance date set forth in 310 CMR 80.49(2).

80.49: continued

(g) The Owner and Operator shall not alter or delete any information in the third-party inspection report.

(8) Nothing contained in 310 CMR 80.49 shall be construed or interpreted to limit the authority of the Department to conduct inspections of UST systems or facilities or to take any enforcement or other actions with respect to such systems and facilities as is authorized by 310 CMR 80.00 or by any other statute, regulation or other legal authority.

(9) If the Department determines that a third-party inspector has not complied with any provision of 310 CMR 80.49, the Department may take enforcement against the third-party inspector in accordance with 310 CMR 80.50.

(10) The Department may deny, suspend or revoke the application or certification of any individual or third-party inspector if the Department determines that the individual or third-party inspector has not complied with any provision of 310 CMR 80.48(10) or 80.49. Such action by the Department shall be subject to opportunity for an adjudicatory hearing pursuant to 310 CMR 80.50(5). In an adjudicatory hearing held pursuant to 310 CMR 80.50, the only issue to be adjudicated is whether the Department's decision to deny, suspend or revoke the application or certification of an individual or third-party inspector was reasonable in light of the particular facts and circumstances available to the Department at the time of its decision.

(11) Any individual whose application is denied or any third-party inspector whose certification is revoked shall be barred from re-applying to become a third-party inspector for up to two years.

ENFORCEMENT AND APPEALS

80.50: Enforcement and Appeals

(1) General. Any failure to comply with M.G.L. c. 21O, 310 CMR 80.00, or the terms and conditions of any order, permit, authorization, determination, certification, prohibition or approval issued under 310 CMR 80.00 shall constitute a violation of M.G.L. c. 21O and 310 CMR 80.00. Nothing in 310 CMR 80.00, or in any order issued pursuant thereto, shall be construed to limit any right of the Department to take enforcement action pursuant to any other authority.

(2) Action by the Department. Whenever the Department has cause to believe that a violation has occurred, it may:

(a) Order the Owner and Operator of the UST system or facility, or any other person responsible for the violation, to cease immediately or at a specified date, all illegal activity and to comply with the provisions of M.G.L. c. 21O, 310 CMR 80.00, or any permit, authorization, determination, registration, certification or approval issued thereunder. Any person who or which is the subject of said order has the right to request an adjudicatory hearing in accordance with the terms of 310 CMR 80.50(5);

(b) Issue an order to the Owner and Operator of the UST system or facility, in accordance with 310 CMR 80.48. Any person who or which is the subject of said order has the right to request an adjudicatory hearing in accordance with the terms of 310 CMR 80.50(5);

(c) Issue a notice of noncompliance pursuant to M.G.L. c. 21A, § 16 and 310 CMR 5.00: *Administrative Penalty*, which is not subject to the right to request an adjudicatory hearing in accordance with the terms of 310 CMR 5.00: *Administrative Penalty*;

(d) Issue a penalty assessment notice pursuant to M.G.L. c. 21A, § 16 and 310 CMR 5.00: *Administrative Penalty*, which is subject to the right to request an adjudicatory hearing in accordance with the terms of 310 CMR 5.00: *Administrative Penalty*; or

(e) Take such other action provided by 310 CMR 80.00 or other applicable statutory or regulatory authority as the Department deems appropriate.

(3) Service of Administrative Orders. Service of an order issued in accordance with M.G.L. c. 21O or 310 CMR 80.00 by the Department shall be according to one of the following procedures except for processes, notices, and orders issued in the course of an adjudicatory hearing which are governed by the provisions of 310 CMR 1.00: *Adjudicatory Proceedings*:

80.50: continued

(a) Service of an order is complete when it is delivered in-hand by an employee or agent of the Department to the person to be served or to any officer, employee, or agent of that person. The fact and date of service is established by the return receipt or affidavit of the person making service.

(b) Service of an order when made by any form of mail requiring the return of a receipt signed by the person to be served is complete upon delivery to the person or to any officer, employee, or agent of that person. The fact and date of service is established by the returned receipt.

(c) The Department may make service of an order in an alternative manner, including any form of electronic mail, facsimile or other electronic communications, national overnight carrier, regular mail to the last known address, publication in a newspaper of general circulation, or other method of notification that is reasonably calculated to give notice of the order to the person to be served. The Department may use such alternative or substitute methods of service when the person to be served has declined to accept receipt by the other methods of service specified in 310 CMR 80.50(3)(a) and (b). The fact of service in such cases is established by such records as may be available. The date of service shall be the date on which the Department initiates electronic transmission, the date of publication, one day after the date of overnight mailing or three days after the date of regular mailing.

(4) Service of Other Enforcement Documents. Service of Notices of Noncompliance, Penalty Assessment Notices and any other enforcement document shall be in accordance with M.G.L. c. 21A, § 16 and 310 CMR 5.00: *Administrative Penalty*.

(5) Right to Adjudicatory Hearing.

(a) The following parties shall have the right to an adjudicatory hearing:

1. A person who is the subject of an order issued pursuant to 310 CMR 80.50(2)(a) or (b) has the right to request a hearing on the terms and issuance of such order.
2. An individual whose application to be certified as a third-party inspector is denied by the Department has the right to request a hearing on such denial in accordance with 310 CMR 80.49(4)(a)2.c. and d.
3. A third-party inspector whose certification is denied, suspended or revoked by the Department has the right to request a hearing on such denial, suspension or revocation in accordance with 310 CMR 80.49(10)..

(b) Any right to an adjudicatory hearing concerning assessment of a civil administrative penalty and the procedures for requesting such hearing shall be governed by the provisions of 310 CMR 5.00: *Administrative Penalty*.

(6) Waiver of Right to Adjudicatory Hearing.

(a) Any person who has the right to an adjudicatory hearing in accordance with 310 CMR 80.50(2), shall be deemed to have waived their right to an adjudicatory hearing, unless the person delivers to the Department a request for an adjudicatory hearing in writing within 21 days of the date of issuance in accordance with 310 CMR 80.50(6)(c) that complies with the requirements for content of filings set forth in 310 CMR 1.01(4): *Filings* and that is filed in accordance with the methods and procedures set forth in 310 CMR 1.01(3)(a): *Timely Filing*.

(b) The request for an adjudicatory hearing shall be submitted to the Department in the manner specified in the appealable document.

(c) The date of issuance of an order, denial, suspension or revocation shall be:

1. The date on which the Department hand delivers the document;
2. The date of receipt if the Department sends the document by certified mail;
3. Three days after the Department initiates transmission of the document by other methods of notification specified in 310 CMR 80.50(3); or
4. Three days after the Department publishes the document in a newspaper of general circulation.

FINANCIAL RESPONSIBILITY

80.51: Definitions

The following definitions shall apply only to 310 CMR 80.51 through 80.63. Note: The definitions in 310 CMR 80.51 are intended to assist in the understanding of 310 CMR 80.00 and are not intended either to limit the meaning of the terms in a way that conflict with standard insurance usage or to prevent the use of other standard insurance terms in place of defined terms.

Accidental Release means any sudden or nonsudden release of a regulated substance from a UST system that results in a need for corrective action and/or compensation for bodily injury or property damage neither expected nor intended by the tank Owner or Operator.

Bodily Injury means substantial impairment of the physical condition including, but not limited to, any burn, fracture of any bone, subdural hematoma, injury to any internal organ, or any injury which occurs as the result of repeated harm to any bodily function or organ, including human skin, however, Bodily Injury shall not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for bodily injury.

Chief Financial Officer means, in the case of local government Owners and Operators, the individual with the overall authority and responsibility for the collection, disbursement, and use of funds by the local government.

Controlling Interest means direct ownership of at least 50% of the voting stock of an entity.

Financial Reporting Year means the latest consecutive 12-month period for which any of the following reports used to support a financial test is prepared:

- (a) a 10-K report submitted to the SEC;
- (b) an annual report of tangible net worth submitted to Dun and Bradstreet; or
- (c) annual reports submitted to the Energy Information Administration or the Rural Electrification Administration.

Financial Reporting Year may thus comprise a fiscal or a calendar year period.

General Purpose Local Government means a local government entity that does not perform a single function or limited range of functions. A General Purpose Local Government, includes, but is not limited to, municipalities, counties, townships, towns, villages and parishes.

Guarantor means any person, other than a person liable pursuant to M.G.L. c. 21E, § 5, who provides evidence of financial responsibility pursuant to M.G.L. c. 21O.

Legal Defense Cost means any expense that an Owner or Operator or provider of financial assurance incurs in defending against claims or actions brought:

- (a) By the Environmental Protection Agency (EPA) or the Commonwealth to require corrective action or to recover the costs of corrective action;
- (b) By or on behalf of a third party for bodily injury or property damage caused by an accidental release; or
- (c) By any person to enforce the terms of a financial assurance mechanism.

Local Government means:

- (a) Cities, municipalities and towns, separately chartered and operated special districts (including, but not limited to, local government public transit systems and redevelopment authorities), and independent school districts authorized as governmental bodies by state charter or constitution in the Commonwealth; and
- (b) Special districts and independent school districts established by cities, municipalities or towns, and other general purpose governments to provide essential services.

Occurrence means an event, including continuous or repeated exposure to conditions, which results in a release from a UST system.

80.51: continued

Property Damage means injury to real or personal property. Property Damage shall not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for property damage. However, such exclusions for property damage shall not include corrective action associated with releases from tanks which are covered by the policy.

Provider of Financial Assurance means an entity that provides financial assurance to an Owner or Operator of a UST system through one of the mechanisms listed in 310 CMR 80.54(1) through (11), including a guarantor, local government guarantor, insurer, risk retention group, surety, issuer of a letter of credit, the Underground Storage Tank Petroleum Product Cleanup Fund, or the Commonwealth.

Substantial Business Relationship means the extent of a business relationship necessary under Massachusetts state law to make a guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued "incident to that relationship" if it arises from and depends on existing economic transactions between the guarantor and the Owner or Operator.

Substantial Governmental Relationship means the extent of a governmental relationship necessary under Massachusetts state law to make an added guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued "incident to that relationship" if it arises from a clear commonality of interest in the event of a UST release such as coterminous boundaries, overlapping constituencies, common ground-water aquifer, or other relationship other than monetary compensation that provides a motivation for the guarantor to provide a guarantee.

Termination means only those changes that could result in a gap in coverage such as where the insured has not obtained substitute coverage or has obtained substitute coverage with a different retroactive date than the retroactive date of the original policy.

80.52: Requirements for Amount and Scope of Financial Responsibility

(1) All Owners or Operators of UST systems shall maintain and demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases from UST systems. Failure to maintain and/or demonstrate financial responsibility shall subject the Owner or Operator to enforcement including, but not limited to, delivery prohibition in accordance with 310 CMR 80.48.

(2) An Owner or Operator shall maintain and demonstrate financial responsibility in at least the following per-occurrence amounts:

- (a) For Owners and Operators of UST systems that handle an average of more than 10,000 gallons of regulated substance per month based on annual throughput for the previous calendar year: \$1 million.
- (b) For all other Owners and Operators of UST systems: \$500,000.

(3) An Owner or Operator of UST systems shall maintain and demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of UST systems in at least the following annual aggregate amounts:

- (a) For Owners and Operators of 1 to 100 tanks, \$1 million; and
- (b) For Owners and Operators of 101 or more tanks, \$2 million.

(4) The amounts of assurance required under 310 CMR 80.52, excludes legal defense costs.

(5) If an Owner or Operator uses separate mechanisms or separate combinations of mechanisms to satisfy the financial responsibility requirements, the financial mechanisms in total shall be in the full amount specified in 310 CMR 80.52(2) and (3).

80.52: continued

(6) If an Owner or Operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for different UST systems, the annual aggregate required shall be based on the number of tanks covered by each such separate mechanism or combination of mechanisms.

(7) An Owner or Operator shall review the amount of their annual aggregate coverage whenever additional tanks are acquired or installed. If the number of tanks for which assurance must be provided exceeds 100, the Owner or Operator shall demonstrate financial responsibility in the annual aggregate amount of at least \$2 million within 60 days of installing or acquiring the tank(s) that exceeds 100.

(8) The required per-occurrence and annual aggregate coverage amounts do not in any way limit the liability of the Owner and Operator.

80.53: Allowable Mechanisms and Combinations of Mechanisms

(1) An Owner or Operator, including a local government Owner or Operator, may use any one or combination of the mechanisms listed at 310 CMR 80.54(2) through (5) and (10) and (11) to demonstrate financial responsibility for one or more UST systems.

(2) In addition to the mechanisms listed at 310 CMR 80.54(2) through (5) and (10) and (11), an Owner or Operator that is not a local government Owner or Operator of a UST system that stores petroleum may use the mechanism listed at 310 CMR 80.54(1) to demonstrate financial responsibility for one or more UST systems.

(3) In addition to the mechanisms listed at 310 CMR 80.54(2) through (5) and (10) and (11), a local government Owner or Operator may use any one or combination of the mechanisms listed at 310 CMR 80.54(6) through (9) to demonstrate financial responsibility for one or more UST systems.

80.54: Requirements for Financial Responsibility Mechanisms

(1) Underground Storage Tank Petroleum Product Cleanup Fund. An Owner or Operator may satisfy the requirements of 310 CMR 80.52 by obtaining coverage from the Underground Storage Tank Petroleum Product Cleanup Fund at M.G.L. c. 21J, if the Owner or Operator complies with M.G.L. c. 21J and 503 CMR 2.00: *Underground Storage Tank Petroleum Product Cleanup Fund Regulations Implementing M.G.L. c. 21J.*

(2) Insurance and Risk Retention Group Coverage.

(a) An Owner or Operator may satisfy the requirements of 310 CMR 80.52 by obtaining liability insurance that conforms to the requirements of 310 CMR 80.54(2) from a qualified insurer or risk retention group. Such insurance may be in the form of a separate insurance policy or an endorsement to an existing insurance policy.

(b) Each insurance policy must be amended by an endorsement worded as specified in 310 CMR 80.54(2)(b)1., or evidenced by a certificate of insurance worded as specified in 310 CMR 80.54(2)(b)2., except that italicized instructions in brackets must be replaced with the relevant information and the brackets deleted:

1. Endorsement.

Name: [*name of each covered location*]

Address: [*address of each covered location*]

Policy Number: _____

Period of Coverage: [*current policy period*]

80.54: continued

Name of *[Insurer or Risk Retention Group]*:

Address of *[Insurer or Risk Retention Group]*:

Name of Insured: _____

Address of Insured: _____

Endorsement:

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering the following tanks:

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the DEP tank number provided in the registration submitted in accordance with 310 CMR 80.23(1), and the name and address of the facility.]

For *[insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases"]* or "accidental releases"; in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; *[if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location]* arising from operating the UST(s) identified above.

The limits of liability are *[insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different USTs or locations, indicate the amount of coverage for each type of coverage and/or for each UST or location]*, exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under *[policy number]*. The effective date of said policy is *[date]*.

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions inconsistent with 310 CMR 80.54(2)(a)2.a. through e. are hereby amended to conform with 310 CMR 80.54(2)(a)2.a. through e.;

- a. Bankruptcy or insolvency of the insured shall not relieve the ["Insurer" or "Group"] of its obligations under the policy to which this endorsement is attached.
- b. The ["Insurer" or "Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Group"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in 310 CMR 80.54.
- c. The Owner and Operator agree to furnish to the Massachusetts Department of Environmental Protection (the Department) a signed duplicate original of the policy and all endorsements upon request.

80.54: continued

d. Cancellation or any other termination of the insurance by the ["Insurer" or "Group"], except for non-payment of premium or misrepresentation by the insured, shall be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for non-payment of premium or misrepresentation by the insured will be effective only upon written notice and only after expiration of a minimum of ten days after a copy of such written notice is received by the insured.

[Insert for the following paragraph for claims-made policies]:

e. The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Group"] within six months of the effective date of cancellation or non-renewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.

I hereby certify that the wording of this instrument is identical to the wording in 310 CMR 80.54(2)(b)1. and that the ["Insurer" or "Group"] is [choose applicable language "licensed to transact the business of insurance" or "eligible to provide insurance as an excess or surplus lines insurer in one or more states"].

[Signature of authorized representative of Insurer or Risk Retention Group]

[Name of person signing]

[Title of person signing], Authorized Representative of [name of Insurer or Risk Retention Group]

[Address of Representative]

2. Certificate of Insurance.

Name: [name of each covered location]

Address: [address of each covered location]

Policy Number: _____

Endorsement (if applicable): _____

Period of Coverage: [current policy period]

Name of [Insurer or Risk Retention Group]:

Address of [Insurer or Risk Retention Group]:

Name of Insured: _____

80.54: continued

Address of Insured:

Certification:

1. [Name of Insurer or Risk Retention Group], [the "Insurer" or "Group"], as identified above, hereby certifies that it has issued liability insurance covering the following UST(s):

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the DEP tank number provided in the registration submitted in accordance with 310 CMR 80.23(1) and the name and address of the facility.]

For *[insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"]*; in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; *[if coverage is different for different tanks or locations]*, indicate the type of coverage applicable to each tank or location] arising from operating the UST(s) identified above.

The limits of liability are *[insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different USTs or locations, indicate the amount of coverage for each type of coverage and/or for each UST or location]*, exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under *[policy number]*. The effective date of said policy is *[date]*.

2. The ["Insurer" or "Group"] further certifies the following with respect to the insurance described in Paragraph one:

- a. Bankruptcy or insolvency of the insured shall not relieve the ["Insurer" or "Group"] of its obligations under the policy to which this certificate applies.
- b. The ["Insurer" or "Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Group"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in 310 CMR 80.54.
- c. The Owner and Operator agree to furnish to the Department a signed duplicate original of the policy and all endorsements upon request.
- d. Cancellation or any other termination of the insurance by the ["Insurer" or "Group"], except for non-payment of premium or misrepresentation by the insured, shall be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for non-payment of premium or misrepresentation by the insured will be effective only upon written notice and only after expiration of a minimum of ten days after a copy of such written notice is received by the insured.

[Insert the following paragraph for claims-made policies]:

80.54: continued

e. The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Group"] within six months of the effective date of cancellation or non-renewal of the policy, except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.

I hereby certify that the wording of this instrument is identical to the wording in 310 CMR 80.54(2)(b)2. and that the ["Insurer" or "Group"] is [*choose applicable language* "licensed to transact the business of insurance ", or "eligible to provide insurance as an excess or surplus lines insurer, in the Commonwealth of Massachusetts"].

[*Signature of authorized representative of Insurer or Risk Retention Group*]

[*Type name*]

[*Title*], Authorized Representative of [*name of Insurer or Risk Retention Group*]

[*Address of Representative*]

(c) Each insurance policy shall be issued by an insurer or a risk retention group that, at a minimum, is licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in the Commonwealth of Massachusetts.

(3) Surety Bond.

(a) An Owner or Operator may satisfy the requirements of 310 CMR 80.52 by obtaining a surety bond that conforms to the requirements of 310 CMR 80.54(3). The surety company issuing the bond shall be among those listed as acceptable sureties on federal bonds in the latest Circular 570 of the U.S. Department of the Treasury.

(b) The surety bond must be worded as follows, except that italicized instructions in brackets must be replaced with the relevant information and the brackets deleted:

Performance Bond.

Date bond executed: _____

Effective date: _____

Period of coverage: _____

Principal: [*legal name and business address of person obtaining the surety bond, i.e. Owner or Operator*]

Type of organization: [*insert "individual," or "joint venture," or "partnership," or "corporation" or "limited liability company" or limited liability partnership" or "trust"*]

State of incorporation (if applicable):

Surety(ies): [*name(s) and business address(es)*]

80.54: continued

Scope of Coverage: *[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the DEP tank number provided in the registration submitted in accordance with 310 CMR 80.23(1), and the name and address of the facility. List the coverage guaranteed by the bond: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"]* arising from operating the tank".

Penal sums of bond:

Per occurrence \$ _____

Annual aggregate \$ _____

Surety's bond number: _____

Know All Persons by These Presents, that we, the Principal and Surety(ies), hereto are firmly bound to the Massachusetts Department of Environmental Protection (the Department), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sums only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required in accordance with 310 CMR 80.51 through 80.63, to provide financial assurance for *[insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location]* arising from operating the tanks identified above, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, therefore, the conditions of the obligation are such that if the Principal shall faithfully ["take corrective action, in accordance with M.G.L. c. 21E, 310 CMR 40.0000: *Massachusetts Contingency Plan*, other applicable laws and regulations and the Department's instructions for," and/or "compensate injured third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] arising from operating the tank(s) identified above, or if the Principal shall provide alternate financial assurance in accordance with 310 CMR 80.57, and obtain the Department's written approval of such assurance within 120 days after receipt of the notice of termination by the Principal and the Department (if the dates of receipt are different, the later date shall control) from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect. The Surety(ies) shall also become liable on this bond obligation when:

- (a) There is the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the Principal as debtor; or
- (b) The Principal, if it has a legal existence, has failed to maintain said legal existence and no successor has assumed its legal obligations in accordance with 310 CMR 80.00.

Such obligation does not apply to any of the following:

- 1. Any obligation of *[insert "owner" or "operator"]* under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
- 2. Bodily injury to an employee of *[insert "owner" or "operator"]* arising from, and in the course of, employment by *[insert "owner" or "operator"]*;

80.54: continued

3. Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
4. Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [*insert* "owner" or "operator"] that is not the direct result of a release from a petroleum UST; or
5. Bodily injury or property damage for which [*insert* "owner" or "operator"] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 310 CMR 80.52.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by the Department that the Principal has failed to [*insert* "take corrective action, in accordance with M.G.L. c. 21E, 310 CMR 40.0000: *Massachusetts Contingency Plan*, other applicable laws and regulations and the Department's instructions," *and/or* "compensate injured third parties"] as guaranteed by this bond, the Surety(ies) shall either perform [*insert* "corrective action in accordance with M.G.L. c. 21E, 310 CMR 40.0000: *Massachusetts Contingency Plan*, other applicable laws and regulations and the Department's instructions," *and/or* "third-party liability compensation"] or place funds in an amount up to the annual aggregate penal sum into the standby trust fund as directed by the Department in accordance with 310 CMR 80.60.

Upon notification by the Department that the Principal has failed to provide alternate financial assurance as specified in 310 CMR 80.57 and has failed to obtain the Department's written approval of such assurance within 60 days after the date the notice of cancellation is received by both the Principal and the Department (if the dates of receipt are different, the later date shall control) from the Surety(ies), the Surety(ies) shall place the total penal sum of the bond guaranteed for the tanks into the standby trust fund as directed by the Department in accordance with 310 CMR 80.60.

The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the annual aggregate to the penal sum shown on the face of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal, and to the Department at the addresses provided herein; provided, however, that cancellation shall not take effect until at least 120 days after the date of receipt of the notice of cancellation by both the Principal, and the Department as shown by the later return receipt.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization by the Department for termination of the bond.

In Witness Whereof, the Principal and Surety(ies) have executed this Bond [*insert if a corporation*: "and have affixed their seals on the date set forth above."]

The individuals whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in 310 CMR 80.54(3)(b) as in effect on the date this bond was executed.

80.54: continued

Principal

[*Signature(s)*]

[*Names(s)*]

[*Title(s)*]

[*Corporate seal if a corporation*]

Corporate Surety(ies)

[*Name and address*]

State of Incorporation: _____

Liability limit: \$ _____

[*Signature(s)*]

[*Names(s) and title(s)*]

[*Corporate seal if a corporation*]

[*For every co-surety, provide signature(s), corporate seal (if applicable) and other information in the same manner as for Surety above.*]

Bond premium: \$ _____

(c) Under the terms of the bond, the surety will become liable on the bond obligation when the Owner or Operator fail to perform as guaranteed by the bond. In all cases, the surety's liability is limited to the per-occurrence and annual aggregate penal sums.

(d) The Owner or Operator who uses a surety bond to satisfy the requirements of 310 CMR 80.52 shall establish a standby trust fund in accordance with 310 CMR 80.55 when the surety bond is acquired. Under the terms of the bond, all amounts paid by the surety under the bond will be deposited directly into the standby trust fund in accordance with instructions from the Department in accordance with 310 CMR 80.60.

(4) Letter of Credit.

(a) An Owner or Operator may satisfy the requirements of 310 CMR 80.52 by obtaining an irrevocable standby letter of credit that conforms to the requirements 310 CMR 80.54(4). The institution issuing the letter of credit shall be an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by The Massachusetts Commissioner of Banks, or the institution shall be a national bank (federally chartered).

(b) The letter of credit shall be worded as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted:

Irrevocable Standby Letter of Credit

[*Name and address of issuing institution*]

Commissioner

Massachusetts Department of Environmental Protection
One Winter Street
Boston, MA 02108
Attn: UST Program

80.54: continued

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. ____ in your favor, at the request and for the account of [owner name or operator name] of [address] up to the aggregate amount of [in words] U.S. dollars (\$[insert dollar amount]), available upon presentation by you or your designee, of (1) your or your designee's sight draft, bearing reference to this letter of credit, No. ____, and (2) your or your designee's signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of Massachusetts General Laws Chapter 210."

This letter of credit may be drawn on to cover the following conditions:

1. [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] arising from operating the tank(s) identified below in the amount of [in words] \$[insert dollar amount] per occurrence and [in words] \$[insert dollar amount] annual aggregate:
[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the DEP tank number provided in the registration submitted in accordance with 310 CMR 80.23(1), and the name and address of the facility.]; or
2. There is the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the Principal as debtor; or
3. [owner name or operator name], if it has a legal existence, has failed to maintain said legal existence and no successor has assumed its legal obligations in accordance with 310 CMR 80.00.

The letter of credit may not be drawn on to cover any of the following:

- (a) Any obligation of [insert "owner" or "operator"] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of [insert "owner" or "operator"] arising from, and in the course of, employment by [insert "owner" or "operator"];
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert "owner" or "operator"] that is not the direct result of a release from a petroleum UST; or
- (e) Bodily injury or property damage for which [insert "owner" or "operator"] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 310 CMR 80.52.

This letter of credit is effective as of [date] and shall expire on [date at least one year later], but such expiration date shall be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify both you and [owner's name or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your or your designee's sight draft within 120 days after the receipt of notification by both you and [insert owner's name or operator's name], as shown on the later of the signed returned receipts.

Whenever this letter of credit is drawn on, under, and in compliance with the terms of this letter of credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner's name or operator's name] in accordance with you or your designee's instructions.

80.54: continued

We certify that the wording of this letter of credit is identical to the wording specified in 310 CMR 80.54(4)(b), as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution]

[Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce," *or* "the Uniform Commercial Code"].

(c) An Owner or Operator who uses a letter of credit to satisfy the requirements of 310 CMR 80.52 shall also establish a standby trust fund in accordance with 310 CMR 80.55 when the letter of credit is acquired. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Department will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Department in accordance with 310 CMR 80.60.

(d) The letter of credit shall be irrevocable with a term specified by the issuing institution. The letter of credit shall provide that credit be automatically renewed for the same term as the original term, unless, at least 120 days before the current expiration date, the issuing institution notifies the Owner or Operator by certified mail of its decision not to renew the letter of credit. Under the terms of the letter of credit, the 120 days will begin on the date when the Owner or Operator receives the notice, as evidenced by the return receipt.

(5) Trust Fund.

(a) An Owner or Operator may satisfy the requirements of 310 CMR 80.52 by establishing a trust fund in accordance with the terms of 310 CMR 80.54(5) and 80.55. The trustee shall be a bank or other financial institution which has the authority to act as a trustee and whose trust operations are regulated and examined by the Massachusetts Commissioner of Banks, or the trustee shall be a national bank.

(b) The wording of the trust agreement shall be identical to the wording specified in 310 CMR 80.55(2), and the trust agreement shall be accompanied by a formal certification of acknowledgement identical to the wording specified in 310 CMR 80.55(3).

(c) The trust fund, when established, shall be funded for the full required amount of coverage, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining required coverage.

(d) If the value of the trust fund is greater than the required amount of coverage, the Owner or Operator may submit a written request to the Department for release of the excess.

(e) If other financial assurance as specified in 310 CMR 80.54 is substituted for all or part of the trust fund, the Owner or Operator may submit a written request to the Department for release of the excess.

(f) Within 60 days after receiving a request from the Owner or Operator for release of funds as specified in 310 CMR 80.54(5)(d) or (e), the Department shall instruct the trustee to release to the Owner or Operator such funds as the Department specifies in writing.

(6) Local Government Bond Rating Test.

(a) A Local Government Owner or Operator may satisfy the requirements of 310 CMR 80.52 by meeting the Local Government Bond Rating Test in 310 CMR 80.54(6).

(b) A general purpose local government Owner or Operator and/or local government serving as a guarantor may have a current outstanding issue or issues of general obligation bonds of \$1 million or more, excluding refunded obligations, with a Moody's rating of Aaa, Aa, A, or Baa, or a Standard & Poor's rating of AAA, AA, A, or BBB. Where a local government has multiple outstanding issues, or where a local government's bonds are rated by both Moody's and Standard and Poor's, the lowest rating shall be used to determine eligibility. Bonds that are backed by credit enhancement other than municipal bond insurance may not be considered in determining the amount of applicable bonds outstanding.

80.54: continued

(c) A local government Owner or Operator or local government serving as a guarantor that is not a general-purpose local government and does not have the legal authority to issue general obligation bonds may have a current outstanding issue or issues of revenue bonds of \$1 million or more, excluding refunded issues, and by also having a Moody's rating of Aaa, Aa, A, or Baa, or a Standard & Poor's rating of AAA, AA, A, or BBB as the lowest rating for any rated revenue bond issued by the local government. Where bonds are rated by both Moody's and Standard & Poor's, the lower rating for each bond must be used to determine eligibility. Bonds that are backed by credit enhancement may not be considered in determining the amount of applicable bonds outstanding.

(d) The local government Owner or Operator and/or guarantor shall maintain a copy of its bond rating published within the last 12 months by Moody's or Standard & Poor's.

(e) To demonstrate that it meets the local government bond rating test, the chief financial officer of a general purpose local government Owner or Operator and/or guarantor shall sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter from Chief Financial Officer.

I am the chief financial officer of *[insert: name and address of local government owner or operator or guarantor]*. This letter is in support of the use of the bond rating test to demonstrate financial responsibility for *[insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"]* caused by *[insert: "sudden accidental releases" and/or "nonsudden accidental releases"]* in the amount of at least *[insert: dollar amount]* per occurrence and *[insert: dollar amount]* annual aggregate arising from operating (an) UST(s).

UST systems at the following facilities are assured by this bond rating test: *[List for each facility: the name and address of the facility where tanks are assured by the bond rating test]*.

The details of the issue date, maturity, outstanding amount, bond rating, and bond rating agency of all outstanding bond issues that are being used by *[name of local government owner or operator, or guarantor]* to demonstrate financial responsibility are as follows: *[complete table]*

Issue Date	Maturity Date	Outstanding Amount	Bond Rating	Rating Agency
				<i>[insert: "Moody's" or "Standard & Poor's"]</i>

The total outstanding obligation of *[insert amount]*, excluding refunded bond issues, exceeds the minimum amount of \$1 million. All outstanding general obligation bonds issued by this government that have been rated by Moody's or Standard & Poor's are rated as at least investment grade (Moody's Baa or Standard & Poor's BBB) based on the most recent ratings published within the last 12 months. Neither rating service has provided notification within the last 12 months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in 310 CMR 80.54(6)(e) as such regulations were constituted on the date shown immediately below.

[Date] _____
 [Signature] _____
 [Name] _____
 [Title] _____

80.54: continued

(f) To demonstrate that it meets the local government bond rating test, the chief financial officer of local government Owner or Operator and/or guarantor other than a general purpose government shall sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter from Chief Financial Officer.

I am the chief financial officer of *[insert: name and address of local government owner or operator, or guarantor]*. This letter is in support of the use of the bond rating test to demonstrate financial responsibility for *[insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"]* caused by *["sudden accidental releases" and/or "nonsudden accidental releases"]* in the amount of at least *[insert: dollar amount]* per occurrence and *[insert: dollar amount]* annual aggregate arising from operating (an) UST(s). This local government is not organized to provide general governmental services and does not have the legal authority under state law or constitutional provisions to issue general obligation debt.

UST systems at the following facilities are assured by this bond rating test: *[List for each facility: the name and address of the facility where tanks are assured by the bond rating test]*.

The details of the issue date, maturity, outstanding amount, bond rating, and bond rating agency of all outstanding revenue bond issues that are being used by *[name of local government owner or operator, or guarantor]* to demonstrate financial responsibility are as follows: *[complete table]*

Issue Date	Maturity Date	Outstanding Amount	Bond Rating	Rating Agency
				<i>[insert: "Moody's" or "Standard & Poor's"]</i>

The total outstanding obligation of *[insert amount]*, excluding refunded bond issues, exceeds the minimum amount of \$1 million. All outstanding revenue bonds issued by this government that have been rated by Moody's or Standard & Poor's are rated as at least investment grade (Moody's Baa or Standard & Poor's BBB) based on the most recent ratings published within the last 12 months. The revenue bonds listed are not backed by third-party credit enhancement or are insured by a municipal bond insurance company. Neither rating service has provided notification within the last 12 months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in 310 CMR 80.54(6)(f) as such regulations were constituted on the date shown immediately below.

[Date] _____
[Signature] _____
[Name] _____
[Title] _____

(g) The Department may require reports of financial condition at any time from the local government Owner or Operator, and/or local government guarantor. If the Department finds, on the basis of such reports or other information, that the local government Owner or Operator, and/or guarantor, no longer meets the local government bond rating test requirements of 310 CMR 80.54(6)(b) through (e), the local government Owner or Operator shall obtain alternative coverage within 30 days after notification of such a finding.

(h) If a local government Owner or Operator using the bond rating test to provide financial assurance finds that it no longer meets the bond rating test requirements, the local government Owner or Operator shall obtain alternative coverage within 150 days of the change in status.

80.54: continued

(7) Local Government Fund.

(a) A local government Owner or Operator may satisfy the requirements of 310 CMR 80.52 by establishing a dedicated fund account that conforms to the requirements of 310 CMR 80.54(7). Except as specified 310 CMR 80.54(7)(a)2., a dedicated fund may not be commingled with other funds or otherwise used in normal operations. A dedicated fund will be considered eligible if it meets one of the following requirements:

1. The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance, or order to pay for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of UST systems and is funded for the full amount of coverage required under 310 CMR 80.52, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage; or
2. The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance, or order as a contingency fund for general emergencies, including taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of UST systems, and is funded for five times the full amount of coverage required under 310 CMR 80.52, or funded for five times a portion of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage. If at any time, other than during the pay-in-period defined in 310 CMR 80.54(7)(a)3. the fund is funded for less than five times the amount of coverage required under 310 CMR 80.52, the amount of financial responsibility demonstrated by the fund may not exceed one-fifth the amount in the fund; or
3. The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance or order to pay for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of UST systems. A payment is made to the fund once every year for seven years until the fund is fully-funded. This seven-year period is hereafter referred to as the "pay-in-period". The amount of each payment must be determined by this formula:

$$\frac{TF-CF}{Y}$$

Where TF is the total required financial assurance for the Owner or Operator, CF is the current amount in the fund, and Y is the number of years remaining in the pay-in-period, and;

- a. The local government Owner or Operator has available bonding authority, approved through voter referendum (if such approval is necessary prior to the issuance of bonds), for an amount equal to the difference between the required amount of coverage and the amount held in the dedicated fund. This bonding authority shall be available for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum USTs; or
 - b. The local government Owner or Operator has a letter signed by the appropriate state attorney general stating that the use of the bonding authority will not increase the local government's debt beyond the legal debt ceilings established by the relevant state laws. The letter shall also state that prior voter approval is not necessary before use of the bonding authority.
- (b) To demonstrate that it meets the requirements of the local government fund, the chief financial officer of the local government Owner or Operator and/or guarantor must sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

80.54: continued

Letter from Chief Financial Officer.

I am the chief financial officer of [*insert: name and address of local government owner or operator, or guarantor*]. This letter is in support of the use of the local government fund mechanism to demonstrate financial responsibility for [*insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"*] caused by [*insert: "sudden accidental releases" and/or "nonsudden accidental releases"*] in the amount of at least [*insert: dollar amount*] per occurrence and [*insert: dollar amount*] annual aggregate arising from operating (an) UST(s).

UST systems at the following facilities are assured by this local government fund mechanism: [*List for each facility: the name and address of the facility where tanks are assured by the local government fund*].

[*Insert: "The local government fund is funded for the full amount of coverage required under 310 CMR 80.52, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage" or "The local government fund is funded for ten times the full amount of coverage required under 310 CMR 80.52, or funded for part of the required amount of coverage and used in combination with other mechanisms(s) that provide the remaining coverage" or "A payment is made to the fund once every year for seven years until the fund is fully-funded and [*name of local government owner or operator*] has available bonding authority, approved through voter referendum, of an amount equal to the difference between the required amount of coverage and the amount held in the dedicated fund" or "A payment is made to the fund once every year for seven years until the fund is fully-funded and I have attached a letter signed by the State Attorney General stating that (1) the use of the bonding authority will not increase the local government's debt beyond the legal debt ceilings established by the relevant state laws and (2) that prior voter approval is not necessary before use of the bonding authority".*]

The details of the local government fund are as follows:

Amount in Fund (market value of fund at close of last fiscal year): _____

[*If fund balance is incrementally funded as specified in 310 CMR 80.54(7)(a)3., insert:*

“Amount added to fund in the most recently completed fiscal year: _____

Number of years remaining in the pay-in period: _____”]

A copy of the state constitutional provision, or local government statute, charter, ordinance or order dedicating the fund is attached.

I hereby certify that the wording of this letter is identical to the wording specified in 310 CMR 80.54(7)(b) as such regulations were constituted on the date shown immediately below.

[*Date*]

[*Signature*]

[*Name*]

[*Title*]

80.54: continued

(8) Local Government Financial Test.

(a) A Local Government Owner or Operator may satisfy the requirements of 310 CMR 80.52 by passing the financial test specified at 310 CMR 80.54(8). To be eligible to use the financial test, the local government Owner or Operator shall have the ability and authority to assess and levy taxes or to freely establish fees and charges. To pass the local government financial test, the Owner or Operator shall meet the criteria of 310 CMR 80.54(8)(b) and (c) based on year-end financial statements for the latest completed fiscal year.

(b) The local government Owner or Operator shall have the following information available, as shown in the year-end financial statements for the latest completed fiscal year:

1. Total Revenues: Consists of the sum of general fund operating and non-operating revenues including net local taxes, licenses and permits, fines and forfeitures, revenues from use of money and property, charges for services, investment earnings, sales (property, publications, *etc.*), intergovernmental revenues (restricted and unrestricted), and total revenues from all other governmental funds including enterprise, debt service, capital projects, and special revenues, but excluding revenues to funds held in a trust or agency capacity. For purposes of this test, the calculation of total revenues shall exclude all transfers between funds under the direct control of the local government using the financial test (interfund transfers), liquidation of investments, and issuance of debt.

2. Total Expenditures: Consists of the sum of general fund operating and non-operating expenditures including public safety, public utilities, transportation, public works, environmental protection, cultural and recreational, community development, revenue sharing, employee benefits and compensation, office management, planning and zoning, capital projects, interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprise, debt service, capital projects, and special revenues. For purposes of this test, the calculation of total expenditures shall exclude all transfers between funds under the direct control of the local government using the financial test (interfund transfers).

3. Local Revenues: Consists of total revenues (as defined in 310 CMR 80.54(8)(b)1.) minus the sum of all transfers from other governmental entities, including all monies received from Federal, state, or local government sources.

4. Debt Service: Consists of the sum of all interest and principal payments on all long-term credit obligations and all interest-bearing short-term credit obligations. Includes interest and principal payments on general obligation bonds, revenue bonds, notes, mortgages, judgments, and interest bearing warrants. Excludes payments on non-interest-bearing short-term obligations, interfund obligations, amounts owed in a trust or agency capacity, and advances and contingent loans from other governments.

5. Total Funds: Consists of the sum of cash and investment securities from all funds, including general, enterprise, debt service, capital projects, and special revenue funds, but excluding employee retirement funds, at the end of the local government's financial reporting year. Includes Federal securities, Federal agency securities, state and local government securities, and other securities such as bonds, notes and mortgages. For purposes of this test, the calculation of total funds shall exclude agency funds, private trust funds, accounts receivable, value of real property, and other non-security assets.

6. Population consists of the number of people in the area served by the local government.

(c) The local government's year-end financial statements, if independently audited, cannot include an adverse auditor's opinion or a disclaimer of opinion. The local government cannot have outstanding issues of general obligation or revenue bonds that are rated as less than investment grade.

(d) The local government Owner or Operator shall have a letter signed by the chief financial officer worded as specified in 310 CMR 80.54(8)(e).

(e) To demonstrate that it meets the financial test under 310 CMR 80.54(8)(b), the chief financial officer of the local government Owner or Operator, shall sign, within 120 days of the close of each financial reporting year, as defined by the 12-month period for which financial statements used to support the financial test are prepared, a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

80.54: continued

Letter from Chief Financial Officer.

I am the chief financial officer of [*insert: name and address of the owner or operator*]. This letter is in support of the use of the local government financial test to demonstrate financial responsibility for [*insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"*] caused by [*insert: "sudden accidental releases" and/or "nonsudden accidental releases"*] in the amount of at least [*insert: dollar amount*] per occurrence and [*insert: dollar amount*] annual aggregate arising from operating (a) UST(s).

UST systems at the following facilities are assured by this financial test [*List for each facility: the name and address of the facility where tanks assured by this financial test are located. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test by the tank identification number provided in the registration submitted in accordance with 310 CMR 80.23(1).*]

This ["Owner" or "Operator"] has not received an adverse opinion, or a disclaimer of opinion from an independent auditor on its financial statements for the latest completed fiscal year. Any outstanding issues of general obligation or revenue bonds, if rated, have a Moody's rating of Aaa, Aa, A, or Baa or a Standard and Poor's rating of AAA, AA, A, or BBB; if rated by both firms, the bonds have a Moody's rating of Aaa, Aa, A, or Baa and a Standard and Poor's rating of AAA, AA, A, or BBB.

Worksheet for Municipal Financial Test

Part I: Basic Information

1. Total Revenues
 - a. Revenues (dollars) _____
Value of revenues excludes liquidation of investments and issuance of debt. Value includes all general fund operating and non-operating revenues, as well as all revenues from all other governmental funds including enterprise, debt service, capital projects, and special revenues, but excluding revenues to funds held in a trust or agency capacity.
 - b. Subtract interfund transfers (dollars) _____
 - c. Total Revenues (dollars) _____
2. Total Expenditures
 - a. Expenditures (dollars) _____
Value consists of the sum of general fund operating and non-operating expenditures including interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprise, debt service, capital projects, and special revenues.
 - b. Subtract interfund transfers (dollars) _____
 - c. Total Expenditures (dollars) _____
3. Local Revenues
 - a. Total Revenues (from 1c) (dollars) _____
 - b. Subtract total intergovernmental transfers (dollars) _____
 - c. Local Revenues (dollars) _____
4. Debt Service
 - a. Interest and fiscal charges (dollars) _____
 - b. Add debt retirement (dollars) _____
 - c. Total Debt Service (dollars) _____
5. Total Funds (Dollars) _____
(Sum of amounts held as cash and investment securities from all funds, excluding amounts held for employee retirement funds, agency funds, and trust funds)
6. Population (Persons) _____

80.54: continued

Part II: Application of Test

7. Total Revenues to Population
 - a. Total Revenues (from 1c) _____
 - b. Population (from 6) _____
 - c. Divide 7a by 7b _____
 - d. Subtract 417 _____
 - e. Divide by 5,212 _____
 - f. Multiply by 4.095 _____
8. Total Expenses to Population
 - a. Total Expenses (from 2c) _____
 - b. Population (from 6) _____
 - c. Divide 8a by 8b _____
 - d. Subtract 524 _____
 - e. Divide by 5,401 _____
 - f. Multiply by 4.095 _____
9. Local Revenues to Total Revenues
 - a. Local Revenues (from 3c) _____
 - b. Total Revenues (from 1c) _____
 - c. Divide 9a by 9b _____
 - d. Subtract .695 _____
 - e. Divide by .205 _____
 - f. Multiply by 2.840 _____
10. Debt Service to Population
 - a. Debt Service (from 4d) _____
 - b. Population (from 6) _____
 - c. Divide 10a by 10b _____
 - d. Subtract 51 _____
 - e. Divide by 1,038 _____
 - f. Multiply by -1.866 _____
11. Debt Service to Total Revenues
 - a. Debt Service (from 4d) _____
 - b. Total Revenues (from 1c) _____
 - c. Divide 11a by 11b _____
 - d. Subtract .068 _____
 - e. Divide by .259 _____
 - f. Multiply by -3.533 _____
12. Total Revenues to Total Expenses
 - a. Total Revenues (from 1c) _____
 - b. Total Expenses (from 2c) _____
 - c. Divide 12a by 12b _____
 - d. Subtract .910 _____
 - e. Divide by .899 _____
 - f. Multiply by 3.458 _____
13. Funds Balance to Total Revenues
 - a. Total Funds (from 5) _____
 - b. Total Revenues (from 1c) _____
 - c. Divide 13a by 13b _____
 - d. Subtract .891 _____
 - e. Divide by 9.156 _____
 - f. Multiply by 3.270 _____
14. Funds Balance to Total Expenses
 - a. Total Funds (from 5) _____
 - b. Total Expenses (from 2c) _____
 - c. Divide 14a by 14b _____
 - d. Subtract .866 _____
 - e. Divide by 6.409 _____
 - f. Multiply by 3.270 _____

80.54: continued

15. Total Funds to Population _____
 - a. Total Funds (from 5) _____
 - b. Population (from 6) _____
 - c. Divide 15a by 15b _____
 - d. Subtract 270 _____
 - e. Divide by 4,548 _____
 - f. Multiply by 1.866 _____
16. Add $7f + 8f + 9f + 10f + 11f + 12f + 13f + 14f + 15f + 4.937$ _____

I hereby certify that the financial index shown on line 16 of the worksheet is greater than zero and that the wording of this letter is identical to the wording specified in 310 CMR 80.54(8)(e) as such regulations were constituted on the date shown immediately below.

[Date]

[Signature]

[Name]

[Title]

(f) If a local government Owner or Operator using the test to provide financial assurance finds that it no longer meets the requirements of the financial test based on the year-end financial statements, the Owner or Operator shall obtain alternative coverage within 150 days of the end of the year for which financial statements have been prepared.

(g) The Department may require reports of financial condition at any time from the local government Owner or Operator. If the Department finds, on the basis of such reports or other information, that the local government Owner or Operator no longer meets the financial test requirements of 310 CMR 80.54(8)(b) and (c), the Owner or Operator shall obtain alternate coverage within 30 days after notification of such a finding.

(h) If the local government Owner or Operator fails to obtain alternate assurance within 150 days of finding that it no longer meets the requirements of the financial test based on the year-end financial statements or within 30 days of notification by the Department that it no longer meets the requirements of the financial test, the Owner or Operator shall notify the Department of such failure within ten days.

(9) Local Government Guarantee.

(a) A local government Owner or Operator may satisfy the requirements of 310 CMR 80.52 by obtaining a guarantee that conforms to the requirements 310 CMR 80.54(9). The guarantor must be either the state in which the local government Owner or Operator is located or a local government having a "substantial governmental relationship" with the Owner or Operator and issuing the guarantee as an act incident to that relationship. A local government acting as the guarantor shall:

1. Demonstrate that it meets the bond rating test requirement of 310 CMR 80.54(6) and deliver a copy of the chief financial officer's letter as contained in 310 CMR 80.54(6)(d) to the local government Owner or Operator; or
2. Demonstrate that it meets the local government fund requirements of 310 CMR 80.54(7)(a)1., 2. or 3. and deliver a copy of the chief financial officer's letter as contained in 310 CMR 80.54(7)(b) to the local government Owner or Operator; or
3. Demonstrate that it meets the worksheet test requirements of 310 CMR 80.54(8) and deliver a copy of the chief financial officer's letter as contained in 310 CMR 80.54(8)(e) to the local government Owner or Operator.

(b) If the local government guarantor is unable to demonstrate financial assurance under 310 CMR 80.54(6), 80.54(7)(a)1., 2. or 3., or 80.54(8), at the end of the financial reporting year, the guarantor shall send by certified mail, before cancellation or non-renewal of the guarantee, notice to the Owner or Operator and the Department. The guarantee will terminate no less than 120 days after the date the Owner or Operator and the Department receives the notification, as evidenced by the later return receipt. The Owner or Operator shall obtain alternative coverage as specified in 310 CMR 80.57.

80.54: continued

- (c) The guarantee agreement shall be worded as specified in 310 CMR 80.54(9)(d) or (e) depending on which of the following guarantee arrangements is selected.
1. If, in the default or incapacity of the Owner or Operator, the guarantor guarantees to fund a standby trust as directed by the Department, the guarantee shall be worded as specified in 310 CMR 80.54(9)(d).
 2. If, in the default or incapacity of the Owner or Operator, the guarantor guarantees to make payments as directed by the Department for taking corrective action or compensating third parties for bodily injury and property damage, the guarantee shall be worded as specified in 310 CMR 80.54(9)(e).
- (d) If the guarantor is a state, the local government guarantee with standby trust shall be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

Local Government Guarantee with Standby Trust Made by a State

Guarantee made this *[date]* by *[name of state]*, herein referred to as guarantor, to the Massachusetts Department of Environmental Protection (the Department) and to any and all third parties, and obliges, on behalf of *[name of local government owner or operator]*.

Recitals

(1) Guarantor is a state.

(2) *[name of local government owner or operator]* ["owns" and/or "operates"]; the following UST system(s) covered by this guarantee: *[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the DEP tank identification number provided in the registration submitted in accordance with 310 CMR 80.23(1), and the name and address of the facility.]* This guarantee satisfies 310 CMR 80.52 requirements for assuring funding for *[insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location]* arising from operating the above-identified UST(s) in the amount of *[insert dollar amount]* per occurrence and *[insert dollar amount]* annual aggregate.

(3) Guarantor guarantees to the Department and to any and all third parties that:

In the event that *[name of local government owner or operator]* fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the Department has determined or suspects that a release has occurred at a UST system covered by this guarantee, the guarantor, upon instructions from the Department shall fund a standby trust fund in accordance with the provisions of 310 CMR 80.60, in an amount not to exceed the coverage limits specified above.

In the event that the Department determines that *[name of local government owner or operator]* has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with M.G.L. c. 21E, 310 CMR 40.0000: *Massachusetts Contingency Plan* and other applicable laws and regulations, the guarantor upon written instructions from the Department shall fund a standby trust fund in accordance with the provisions of, 310 CMR 80.60 in an amount not to exceed the coverage limits specified above.

If *[name of local government owner or operator]* fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the Department, shall fund a standby trust in accordance with the provisions of 310 CMR 80.60 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

80.54: continued

- (4) Guarantor agrees to notify *[name of local government owner or operator]* and the Department by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within ten days after commencement of the proceeding.
- (5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of *[name of local government owner or operator]* pursuant to 310 CMR 80.00.
- (6) Guarantor agrees to remain bound under this guarantee for so long as *[name of local government owner or operator]* shall comply with the applicable financial responsibility requirements of 310 CMR 80.51 through 80.63 for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to *[name of local government owner or operator]* and the Department, such cancellation to become effective no earlier than 120 days after receipt of such notice by *[name of local government owner or operator]* and the Department, as evidenced by the later return receipt.
- (7) The guarantor's obligation does not apply to any of the following:
- (a) Any obligation of *[name of local government owner or operator]* under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
 - (b) Bodily injury to an employee of *[name of local government owner or operator]* arising from, and in the course of, employment by *[name of local government owner or operator]*;
 - (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
 - (d) Property damage to any property owned, rented, loaded to, in the care, custody, or control of, or occupied by *[name of local government owner or operator]* that is not the direct result of a release from a UST system;
 - (e) Bodily damage or property damage for which *[name of local government owner or operator]* is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 310 CMR 80.52.
- (8) Guarantor expressly waives notice of acceptance of this guarantee by the Department, by any or all third parties, or by *[name of local government owner or operator]*,

I hereby certify that the wording of this guarantee is identical to the wording specified in 310 CMR 80.54(9)(d) as such regulations were constituted on the effective date shown immediately below.

Effective date: _____

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

[Signature of witness or notary]

- (e) If the guarantor is a local government, the local government guarantee with standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

80.54: continued

Local Government Guarantee with Standby Trust Made by a Local Government

Guarantee made this [date] by [name of guaranteeing entity], a local government organized under the laws of Massachusetts, herein referred to as guarantor, to the Massachusetts Department of Environmental Protection (the Department) and to any and all third parties, and obliges, on behalf of [name of local government owner or operator].

Recitals

(1) Guarantor meets or exceeds [select one: “the local government bond rating test requirements 310 CMR 80.54(6)”, or “the local government financial test requirements of 310 CMR 80.54(8)”, or the local government fund under 310 CMR 80.54(7)(a)1., 2. or 3].

(2) [name of local government owner or operator] [“owns” or “operates] the following UST system(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the DEP tank identification number provided in the registration submitted in accordance with 310 CMR 80.23(1), and the name and address of the facility.] This guarantee satisfies 310 CMR 80.51 through 80.63 for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified UST(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

(3) Incident to our substantial governmental relationship with [name of local government owner or operator], guarantor guarantees to the Department and to any and all third parties and obliges that:

In the event that [name of local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the Department has determined or suspects that a release has occurred at a UST covered by this guarantee, the guarantor, upon instructions from the Department shall fund a standby trust fund in accordance with the provisions of 310 CMR 80.60, in an amount not to exceed the coverage limits specified above.

In the event that the Department determines that [name of local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with M.G.L. c. 21E, 310 CMR 40.0000: *Massachusetts Contingency Plan* and other applicable laws and regulations, the guarantor upon written instructions from the Department shall fund a standby trust fund in accordance with the provisions of 310 CMR 80.60, in an amount not to exceed the coverage limits specified above.

If [name of local government owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the Department, shall fund a standby trust in accordance with the provisions of 310 CMR 80.60 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees that, if at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), guarantor shall send within 120 days of such failure, by certified mail, notice to [name of local government owner or operator] and the Department, as evidenced by the return receipt.

80.54: continued

- (5) Guarantor agrees to notify *[name of local government owner or operator]* and the Department by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within ten days after commencement of the proceeding.
- (6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of *[name of local government owner or operator]* pursuant to 310 CMR 80.00.
- (7) Guarantor agrees to remain bound under this guarantee for so long as *[name of local government owner or operator]* shall comply with the applicable financial responsibility requirements of 310 CMR 80.51 through 80.63 for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to *[name of local government owner or operator]* and the Department, such cancellation to become effective no earlier than 120 days after receipt of such notice by *[name of local government owner or operator]*, as evidenced by the later return receipt.
- (8) The guarantor's obligation does not apply to any of the following:
- (a) Any obligation of *[name of local government owner or operator]* under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
 - (b) Bodily injury to an employee of *[name of local government owner or operator]* arising from, and in the course of, employment by *[name of local government owner or operator]*;
 - (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
 - (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by *[name of local government owner or operator]* that is not the direct result of a release from a UST system;
 - (e) Bodily damage or property damage for which *[name of local government owner or operator]* is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 310 CMR 80.52.
- (9) Guarantor expressly waives notice of acceptance of this guarantee by the Department, by any or all third parties, or by *[name of local government owner or operator]*.

I hereby certify that the wording of this guarantee is identical to the wording specified in 310 CMR 80.54(9)(e) as such regulations were constituted on the effective date shown immediately below.

Effective date: _____

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

[Signature of witness or notary]

- (f) If the guarantor is a state, the local government guarantee without standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

80.54: continued

Local Government Guarantee without Standby Trust Made by a State

Guarantee made this [date] by Massachusetts, herein referred to as guarantor, to the Massachusetts Department of Environmental Protection (the Department) and to any and all third parties, and obliges, on behalf of [*name of local government owner or operator*].

Recitals

(1) Guarantor is a state.

(2) [*name of local government owner or operator*] ["owns" or "operates" the following UST system(s) covered by this guarantee: [*List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the DEP tank identification number provided in the registration submitted in accordance with 310 CMR 80.23(1), and the name and address of the facility.*] This guarantee satisfies 310 CMR 80.52 requirements for assuring funding for [*insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location*] arising from operating the above-identified UST(s) in the amount of [*insert dollar amount*] per occurrence and [*insert dollar amount*] annual aggregate.

(3) Guarantor guarantees to the Department and to any and all third parties and obliges that:

In the event that [*name of local government owner or operator*] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the Department has determined or suspects that a release has occurred at a UST system covered by this guarantee, the guarantor, upon written instructions from the Department shall make funds available to pay for corrective actions and compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

In the event that the Department determines that [*name of local government owner or operator*] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with M.G.L. c. 21E, 310 CMR 40.0000: *Massachusetts Contingency Plan* and other applicable laws and regulations, the guarantor upon written instructions from the Department shall make funds available to pay for corrective actions in an amount not to exceed the coverage limits specified above.

If [*name of local government owner or operator*] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the Department, shall make funds available to compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

(4) Guarantor agrees to notify [*name of local government owner or operator*] and the Department by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within ten days after commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [*name of local government owner or operator*] pursuant to 310 CMR 80.00.

80.54: continued

(6) Guarantor agrees to remain bound under this guarantee for so long as *[name of local government owner or operator]* shall comply with the applicable financial responsibility requirements of 310 CMR 80.51 through 80.63 for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to *[name of local government owner or operator]* and the Department, such cancellation to become effective no earlier than 120 days after receipt of such notice by *[name of local government owner or operator]* and the Department, as evidenced by the later return receipt. If notified of a probable release, the guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future releases.

(7) The guarantor's obligation does not apply to any of the following:

- (a) Any obligation of *[name of local government owner or operator]* under a workers' compensation disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of *[name of local government owner or operator]* arising from, and in the course of, employment by *[name of local government owner or operator]*;
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaded to, in the care, custody, or control of, or occupied by *[name of local government owner or operator]* that is not the direct result of a release from a UST system;
- (e) Bodily damage or property damage for which *[name of local government owner or operator]* is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 310 CMR 80.52.

(8) Guarantor expressly waives notice of acceptance of this guarantee by the Department, by any or all third parties, or by *[name of local government owner or operator]*.

I hereby certify that the wording of this guarantee is identical to the wording specified in 310 CMR 80.54(9)(f) as such regulations were constituted on the effective date shown immediately below.

Effective date: _____

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

[Signature of witness or notary]

(g) If the guarantor is a local government, the local government guarantee without standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

Local Government Guarantee without Standby Trust Made by a Local Government

Guarantee made this *[date]* by *[name of guaranteeing entity]*, a local government organized under the laws of Massachusetts, herein referred to as guarantor, to the Massachusetts Department of Environmental Protection (the Department) and to any and all third parties, and obliges, on behalf of *[name of local government owner or operator]*.

80.54: continued

Recitals

(1) Guarantor meets or exceeds [*select one*: “the local government bond rating test requirements of 310 CMR 80.54(6)” or “the local government financial test requirements of 310 CMR 80.54(8)” or “the local government fund under 310 CMR 80.54(7)(a)1., 2. or 3.”]

(2) [*name of local government owner or operator*] [“owns” or “operates”] the following UST system(s) covered by this guarantee: [*List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the DEP tank identification number provided in the registration submitted in accordance with 310 CMR 80.23(1), and the name and address of the facility.*] This guarantee satisfies 310 CMR 80.51 through 80.63 for assuring funding for [*insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location*] arising from operating the above-identified UST(s) in the amount of [*insert: dollar amount*] per occurrence and [*insert dollar amount*] annual aggregate.

(3) Incident to our substantial governmental relationship with [*name of local government owner or operator*], guarantor guarantees to the Department and to any and all third parties and obliges that:

In the event that [*name of local government owner or operator*] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the Department has determined or suspects that a release has occurred at a UST covered by this guarantee, the guarantor, upon written instructions from the Department shall make funds available to pay for corrective actions and compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

In the event that the Department determines that [*name of local government owner or operator*] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with M.G.L. c. 21E, 310 CMR 40.0000: *Massachusetts Contingency Plan* and other applicable laws and regulations, the guarantor upon written instructions from the Department shall make funds available to pay for corrective actions in an amount not to exceed the coverage limits specified above.

If [*name of local government owner or operator*] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [“sudden” and/or “nonsudden”] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the Department, shall make funds available to compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

(4) Guarantor agrees that if at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), guarantor shall send within 120 days of such failure, by certified mail, notice to [*name of local government owner or operator*] and the Department, as evidenced by the return receipt.

(5) Guarantor agrees to notify [*name of local government owner or operator*] and the Department by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within ten days after commencement of the proceeding.

80.54: continued

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [*name of local government owner or operator*] pursuant to 310 CMR 80.00.

(7) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] shall comply with the applicable financial responsibility requirements of 310 CMR 80.51 through 80.63 for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator] and the Department, such cancellation to become effective no earlier than 120 days after receipt of such notice by [*name of local government owner or operator*], as evidenced by the later return receipt. If notified of a probable release, the guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future releases.

(8) The guarantor's obligation does not apply to any of the following:

- (a) Any obligation of [*name of local government owner or operator*] under a workers' compensation disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of [*name of local government owner or operator*] arising from, and in the course of, employment by [*name of local government owner or operator*];
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaded to, in the care, custody, or control of, or occupied by [*name of local government owner or operator*] that is not the direct result of a release from a UST system;
- (e) Bodily damage or property damage for which [*name of local government owner or operator*] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 310 CMR 80.52.

(9) Guarantor expressly waives notice of acceptance of this guarantee by the Department, by any or all third parties, or by [*name of local government owner or operator*],

I hereby certify that the wording of this guarantee is identical to the wording specified in 310 CMR 80.54(9)(g) as such regulations were constituted on the effective date shown immediately below.

Effective date: _____

[*Name of guarantor*]

[*Authorized signature for guarantor*]

[*Name of person signing*]

[*Title of person signing*]

[*Signature of witness or notary*]

(10) Financial Test of Self-insurance.

- (a) An Owner or Operator, and/or guarantor, may satisfy the requirements of 310 CMR 80.52 by passing a financial test as specified in 310 CMR 80.54(10). To pass the financial test of self-insurance, the Owner or Operator, and/or guarantor shall meet the criteria of 310 CMR 80.54(10)(b) or (c) based on independently audited year-end financial statements for the latest completed fiscal year.
- (b) The Owner or Operator, and/or guarantor shall meet all the following criteria:
 - 1. Have a tangible net worth of at least ten times:
 - a. The total of the applicable aggregate amount required by 310 CMR 80.52, based on the number of UST system tanks for which a financial test is used to demonstrate financial responsibility to the Department.

80.54: continued

- b. The sum of the corrective action cost estimates, the current closure and post-closure care cost estimates, and amount of liability coverage for which a financial test is used to demonstrate financial responsibility to the Department under 310 CMR 30.000: *Hazardous Waste*; and
 2. Have a tangible net worth of at least \$10 million.
 3. Have a letter signed by the chief financial officer worded as specified 310 CMR 80.54(10)(d).
 4. Comply with one of the following:
 - a. File financial statements annually with the U.S. Securities and Exchange Commission, the Energy Information Administration, or the Rural Electrification Administration; or
 - b. Report annually the firm's tangible net worth to Dun and Bradstreet, and have an assigned Dun and Bradstreet financial strength rating of 4A or 5A.
 5. The firm's year-end financial statements, which shall be independently audited, cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.
- (c) The Owner or Operator, and/or guarantor shall meet the financial test requirements of 40 CFR 264.147(f)(1), substituting the appropriate amounts specified in 310 CMR 80.52(3)(a) and (b) for the "amount of liability coverage" each time specified in that section.
1. The fiscal year-end financial statements of the Owner or Operator, and/or guarantor, shall be examined by an independent certified public accountant and be accompanied by the accountant's report of the examination.
 2. The firm's year-end financial statements cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.
 3. The Owner or Operator, and/or guarantor, shall have a letter signed by the chief financial officer, worded as specified in 310 CMR 80.54(10)(d).
 4. If the financial statements of the Owner or Operator, and/or guarantor, are not submitted annually to the U.S. Securities and Exchange Commission, the Energy Information Administration or the Rural Electrification Administration, the Owner or Operator, and/or guarantor, shall obtain a special report by an independent certified public accountant stating that:
 - a. He or she has compared the data that the letter from the chief financial officer specifies as having been derived from the latest year-end financial statements of the owner or operator, and/or guarantor, with the amounts in such financial statements; and
 - b. In connection with that comparison, no matters came to his attention which caused him to believe that the specified data should be adjusted.
- (d) To demonstrate that it meets the financial test under paragraph 310 CMR 80.54(10)(b) or (c), the chief financial officer of the Owner or Operator, or guarantor, shall sign, within 120 days of the close of each financial reporting year, as defined by the 12-month period for which financial statements used to support the financial test are prepared, a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

LETTER FROM CHIEF FINANCIAL OFFICER

I am the chief financial officer of [*insert: name and address of the owner or operator, or guarantor*]. This letter is in support of the use of [*insert: "the financial test of self-insurance," and/or "guarantee"*] to demonstrate financial responsibility for [*insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"*] caused by [*insert: "sudden accidental releases" and/or "nonsudden accidental releases"*] in the amount of at least [*insert dollar amount*] per occurrence and [*insert: dollar amount*] annual aggregate arising from operating (an) underground storage tank system(s).

80.54: continued

Underground storage tank systems at the following facilities are assured by this financial test by this ["owner or operator," and/or "guarantor"]: [*List for each facility: the name and address of the facility where tanks assured by this financial test are located, and whether tanks are assured by this financial test. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test by the tank identification number provided in the registration submitted pursuant to 310 CMR 80.23. The financial test of self-insurance cannot be combined with a corporate guarantee where the financial statements of the owner or operator and guarantor are consolidated*].

A ["financial test," and/or "guarantee"] is also used by this [insert: "owner or operator," or "guarantor"] to demonstrate evidence of financial responsibility in the following amounts under 40 CFR Parts 271 and 145.

<i>EPA Regulations</i>	<i>Amount</i>
Closure (§§ 264.143 and 265.143)	\$
Post-closure Care (§§ 264.145 and 265.145)	\$
Liability Coverage (§§ 264.147 and 265.147)	\$
Corrective Action (§ 264.101(b))	\$
Plugging and Abandonment (§ 144.63)	\$
Closure	\$
Post-closure Care	\$
Liability Coverage	\$
Corrective Action	\$
Plugging and Abandonment	\$
Total	\$

This [*insert: "owner or operator," or "guarantor"*] has not received an adverse opinion, a disclaimer of opinion, or a "going concern" qualification from an independent auditor on his financial statements for the latest completed fiscal year.

[*Fill in the information for Alternative I if the criteria of 310 CMR 80.54(10)(b) are being used to demonstrate compliance with the financial test requirements. Fill in the information for Alternative II if the criteria of 310 CMR 80.54(10)(c) are being used to demonstrate compliance with the financial test requirements.*]

80.54: continued

Alternative I

1.	Amount of annual UST aggregate coverage being assured by a financial test, and/or guarantee	\$_____
2.	Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee	\$_____
3.	Sum of lines 1. and 2.	\$_____
4.	Total tangible assets	\$_____
5.	Total liabilities [if any of the amount reported on line 3. is included in total liabilities, you may deduct that amount from this line and add that amount to line 6.]	\$_____
6.	Tangible net worth [subtract line 5. from line 4.]	\$_____
		YES NO
7.	Is line 6. at least \$10 million?	_____ _____
8.	Is line 6. at least 10 times line 3.?	_____ _____
9.	Have financial statements for the latest fiscal year been filed with the Securities and Exchange Commission?	_____ _____
10.	Have financial statements for the latest fiscal year been filed with the Energy Information Administration?	_____ _____
11.	Have financial statements for the latest fiscal year been filed with the Rural Electrification Administration?	_____ _____
12.	Has financial information been provided to Dun and Bradstreet, and has Dun and Bradstreet provided a financial strength rating of 4A or 5A? [Answer "Yes" only if both criteria have been met.]	_____ _____

80.54: continued

Alternative II

1.	Amount of annual UST aggregate coverage being assured by a test, and/or guarantee	\$_____
2.	Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee	\$_____
3.	Sum of lines 1. and 2.	\$_____
4.	Total tangible assets	\$_____
5.	Total liabilities [if any of the amount reported on line 3. is included in total liabilities, you may deduct that amount from this line and add that amount to line 6.]	\$_____
6.	Tangible net worth [subtract line 5. from line 4.]	\$_____
7.	Total assets in the U.S. [required only if less than 90% of assets are located in the U.S.]	\$_____
		YES NO
8.	Is line 6. at least \$10 million?	\$_____
9.	Is line 6. at least 6 times line 3?	_____
10.	Are at least 90% of assets located in the U.S.? [If "No," complete line 11.]	_____
11.	Is line 7. at least 6. times line 3?	_____
[Fill in either lines 12. through 15. or lines 16. through 18.:]		
12.	Current assets	\$_____
13.	Current liabilities	_____
14.	Net working capital [subtract line 13. from line 12.]	_____
		YES NO
15.	Is line 14. at least 6 times line 3?	_____
16.	Current bond rating of most recent bond issue	_____
17.	Name of rating service	_____
18.	Date of maturity of bond	_____
19.	Have financial statements for the latest fiscal year been filed with the SEC, the Energy Information Administration, or the Rural Electrification Administration?	_____

[If "No," please attach a report from an independent certified public accountant certifying that there are no material differences between the data as reported in lines 4-18 above and the financial statements for the latest fiscal year.]

[For both Alternative I and Alternative II complete the certification with this statement.]

80.54: continued

I hereby certify under penalty of law that: (i) the [“Owner or Operator”, *or* “guarantor”] passes [“Alternative I *or* “Alternative II”] of the Financial Test of Self Insurance; (ii) that the wording of this letter is identical to the wording specified in 310 CMR 80.54(10)(d) as such regulations were constituted on the date shown immediately below; (iii) I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment.

[Signature]

[Name]

[Title]

[Date]

(e) If an Owner or Operator using the test to provide financial assurance finds that he or she no longer meets the requirements of the financial test based on the year-end financial statements, the Owner or Operator shall obtain alternative coverage within 150 days of the end of the year for which financial statements have been prepared.

(f) The Department may require reports of financial condition at any time from the Owner or Operator, and/or guarantor. If the Department, on the basis of such reports or other information, determines that the Owner or Operator, and/or guarantor, no longer meets the financial test requirements of 310 CMR 80.54(10)(b) or (c) and (d), the Owner or Operator shall obtain alternate coverage within 30 days after notification of such a finding.

(g) If the Owner or Operator fails to obtain alternate assurance within 150 days of finding that he or she no longer meets the requirements of the financial test based on the year-end financial statements, or within 30 days of notification by the Department that he or she no longer meets the requirements of the financial test, the Owner or Operator shall notify the Department of such failure within ten days.

(11) Guarantee.

(a) An Owner or Operator may meet the requirements of 310 CMR 80.52 by obtaining a guarantee that conforms to the requirements of 310 CMR 80.54(11).

1. The guarantor shall be:

a. A firm that:

i. possesses a controlling interest in the Owner or Operator;

ii. possesses a controlling interest in a firm described under 310 CMR 80.54(11)(a)1.a.i.; or

iii. is controlled through stock ownership by a common parent firm that possesses a controlling interest in the owner or operator; or

b. A firm engaged in a substantial business relationship with the Owner or Operator and issuing the guarantee as an act incident to that business relationship.

(b) Within 120 days of the close of each financial reporting year, the guarantor shall demonstrate that it meets the financial test criteria of 310 CMR 80.54(10) based on year-end financial statements for the latest completed financial reporting year by completing the letter from the chief financial officer described in 310 CMR 80.54(10)(d) and shall deliver the letter to the Owner or Operator. If the guarantor fails to meet the requirements of the financial test at the end of any financial reporting year, within 120 days of the end of that financial reporting year the guarantor shall send by certified mail, before cancellation or nonrenewal of the guarantee, notice to the Owner or Operator. If the Department notifies the guarantor that s/he no longer meets the requirements of the financial test of 310 CMR 80.54(10)(b) or (c) and (d), the guarantor shall notify the Owner or Operator within ten days of receiving such notification from the Department. In both cases, the guarantee will terminate no less than 120 days after the date the Owner or Operator receives the notification, as evidenced by the return receipt. The Owner or Operator shall obtain alternative coverage as specified in 310 CMR 80.57.

(c) The guarantee shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

80.54: continued

GUARANTEE

Guarantee made this [date] by [name of guaranteeing entity], a business entity organized under the laws of the state of [name of state], herein referred to as guarantor, to the Massachusetts Department of Environmental Protection and to any and all third parties, and obligees, on behalf of ["owner" or "operator"] of [business address].

Recitals.

(1) Guarantor meets or exceeds the financial test criteria of 310 CMR 80.54(10)(b) or (c) and (d) and agrees to comply with the requirements for guarantors as specified in 310 CMR 80.54(11)(b).

(2) ["Owner" or "operator"] owns or operates the following underground storage tank systems(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the registration submitted pursuant to 310 CMR 80.23, and the name and address of the facility.] [The guarantee cannot be combined with a financial test of self-insurance where the financial statements of the owner or operator and guarantor are consolidated.] This guarantee satisfies 310 CMR 80.51 through 80.63 requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank systems(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

(3) [Insert appropriate phrase: "On behalf of our subsidiary" (if guarantor is corporate parent of the owner or operator); or "On behalf of our affiliate" (if guarantor is a related firm of the owner or operator); or "Incident to our business relationship with" (if guarantor is providing the guarantee as an incident to a substantial business relationship with owner or operator)] ["owner" or "operator"], guarantor guarantees to the Massachusetts Department of Environmental Protection and to any and all third parties that:

In the event that ["owner" or "operator"] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the Massachusetts Department of Environmental Protection has determined or suspects that a release has occurred at an underground storage tank system covered by this guarantee, the guarantor, upon instructions from the Massachusetts Department of Environmental Protection, shall fund a standby trust fund in accordance with the provisions of 310 CMR 80.60 in an amount not to exceed the coverage limits specified above.

In the event that the Massachusetts Department of Environmental Protection determines that ["owner" or "operator"] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 310 CMR 40.0000: *Massachusetts Contingency Plan*, the guarantor upon written instructions from the Massachusetts Department of Environmental Protection shall fund a standby trust in accordance with the provisions of 310 CMR 80.60 in an amount not to exceed the coverage limits specified above.

If ["owner" or "operator"] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the Massachusetts Department of Environmental Protection, shall fund a standby trust in accordance with the provisions of 310 CMR 80.60 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

80.54: continued

- (4) Guarantor agrees that if, at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet the financial test criteria of 310 CMR 80.54(10)(b) or (c) and (d), guarantor shall send within 120 days of such failure, by certified mail, notice to [“owner” or “operator”]. The guarantee will terminate 120 days from the date of receipt of the notice by [“owner” or “operator”], as evidenced by the return receipt.
- (5) Guarantor agrees to notify [“owner” or “operator”] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within ten days after commencement of the proceeding.
- (6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [“owner” or “operator”] pursuant to 310 CMR 80.00.
- (7) Guarantor agrees to remain bound under this guarantee for so long as [“owner” or “operator”] must comply with the applicable financial responsibility requirements of 310 CMR 80.51 through 80.63 for the above-identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [“owner” or “operator”], such cancellation to become effective no earlier than 120 days after receipt of such notice by [“owner” or “operator”], as evidenced by the return receipt.
- (8) The guarantor's obligation does not apply to any of the following:
- (a) Any obligation of [“owner” or “operator”] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
 - (b) Bodily injury to an employee of [“owner” or “operator”] arising from, and in the course of, employment by [“owner” or “operator”];
 - (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
 - (d) Property damage to any property owned, rented, loaded to, in the care, custody, or control of, or occupied by [“owner” or “operator”] that is not the direct result of a release from an underground storage tank system;
 - (e) Bodily damage or property damage for which [“owner” or “operator”] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 310 CMR 80.52.
- (9) Guarantor expressly waives notice of acceptance of this guarantee by the Massachusetts Department of Environmental Protection, by any or all third parties, or by [“owner” or “operator”]. by signing the following certification.

I hereby certify that: (i) the wording of this guarantee is identical to the wording specified in 310 CMR 80.54(11)(c) as such regulations were constituted on the effective date shown immediately below; and (ii) I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment.

Effective date:

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

[Signature of witness or notary]

80.54: continued

(d) An Owner or Operator who uses a guarantee to satisfy the requirements of 310 CMR 80.52 shall establish a standby trust fund when the guarantee is obtained. Under the terms of the guarantee, all amounts paid by the guarantor under the guarantee will be deposited directly into the standby trust fund in accordance with instructions from the Department of Environmental Protection under 310 CMR 80.60. This standby trust fund must meet the requirements specified in 310 CMR 80.55.

80.55: Requirements for a Standby Trust

(1) Any Owner or Operator who establishes one or more of the financial assurance mechanisms at 310 CMR 80.54(3), (4), (9) or (11) shall establish a standby trust fund when the mechanism is acquired. The trustee of the standby trust fund shall be a bank or other financial institution which has the authority to act as a trustee and whose trust operations are regulated and examined by the Massachusetts Commissioner of Banks or the trustee shall be a national bank.

(2) A standby trust agreement, or trust agreement, shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Trust Agreement

This Trust Agreement, hereafter referred to as the "Agreement," is entered into as of [date] by and between [name of the owner or operator], a [name of State] [insert "corporation," "partnership," "association," "trust", "limited liability company", "limited liability partnership" or "individual"], hereafter referred to as the "Grantor," and [name of corporate trustee], [insert "Incorporated in the state of ___" or "a national bank"], hereafter referred to as the "Trustee".

Whereas, the Massachusetts Department of Environmental Protection, hereafter referred to as "the Department" an agency of the Commonwealth of Massachusetts, has established certain regulations applicable to the Grantor, requiring that the Grantor shall provide assurance that funds will be available when needed for corrective action and third-party compensation for bodily injury and property damage caused by sudden and nonsudden accidental releases arising from the operation of the UST system(s) identified in Schedule A. Schedule A shall list the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located that are covered by the standby trust agreement.

Whereas, the Grantor has elected to establish [insert either "a "trust fund" or "standby trust fund"] to provide all or part of such financial assurance for the UST systems identified in Schedule A; and

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee;

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions

As used in this Agreement:

- (a) The term "Grantor" means [name of owner or operator].
- (b) The term "Trustee" means [name of corporate trustee], [insert "incorporated in the State of _____" or "a national bank"], and any successor thereof.
- (c) The terms "Department" and "Beneficiary" mean the Massachusetts Department of Environmental Protection, an agency of the Commonwealth of Massachusetts, and any successor of said Department.

80.55: continued

Section 2. Identification of the Financial Assurance Mechanism

This Agreement pertains to the [*identify the financial assurance mechanism, either a guarantee, surety bond, or letter of credit, from which the standby trust fund is established to receive payments (This paragraph is only applicable to the standby trust agreement.)*].

Section 3. Establishment of Trust Fund

The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of the Department. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established [*insert either "initially as a standby to receive payments and shall not consist of any property" or "as a trust initially consisting of the property, which is acceptable to the Trustee, fully described in Schedule B".*] Payments made by the provider of financial assurance pursuant to the Department's instruction are transferred to the Trustee and are referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liability of the Grantor established by the Department.

Section 4. Payment for "Corrective Action" and/or Third-party Liability Claims"

The Trustee shall make payments from the Fund as directed by the Department in writing. Said payments shall provide for the payment of the costs of [*insert "taking corrective action" and/or compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"*] arising from operating the tanks covered by this Agreement for Corrective Action and/or Third-party Liability Claims. The Trustee shall reimburse from the Fund, the Grantor or other persons as specified in writing by the Department. Such reimbursement(s) shall be in the amount(s) as the Department directs in writing.

The Fund may not be drawn upon to cover any of the following:

- (a) Any obligation of [*name of owner or operator*] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of [*name of owner or operator*] arising from, and in the course of employment by [*name of owner or operator*];
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [*name of owner or operator*] that is not the direct result of a release from a UST system;
- (e) Bodily injury or property damage for which [*name of owner or operator*] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 310 CMR 80.52.

The Trustee shall reimburse the Grantor, or other persons as specified by the Department, from the Fund for corrective action expenditures and/or third-party liability claims in such amounts as the Department shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the Department specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund

Payments made to the Trustee for the Fund shall consist of cash and securities acceptable to the Trustee.

80.55: continued

Section 6. Trustee Management

The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (a) Securities or other obligations of the Grantor, any other Owner or Operator of the UST system(s) or any affiliates of the Grantor as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or State government;
- (b) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and
- (c) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment

The Trustee is expressly authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and
- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 *et seq.*, including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee

Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;
- (b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;
- (d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

80.55: continued

- (e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Annual Valuation

The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the Department a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund.

Section 11. Advice of Counsel

The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the interpretation of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation

The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the present Trustee and the Department by certified mail ten days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. Instructions to the Trustee

All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in Schedule C or such other designees as the Grantor may designate by amendment to Schedule C. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by [the Department to the Trustee shall be in writing, signed by the Commissioner or his designee], and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Department hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Department, except as provided for herein.

80.55: continued

Section 15. Notice of Nonpayment

The Trustee shall notify the Grantor and the Department, by certified mail, within ten days following the expiration of the 30 day period after the anniversary of the establishment of the Trust, if no payment into the Fund is received from the Grantor during that period. After the pay-in period is completed, the Trustee shall not be required to send a notice of nonpayment.

Section 16. Amendment of Agreement

This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee and the Department, or by the Trustee and the Department if the Grantor ceases to exist.

Section 17. Irrevocability and Termination

Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee and the Department or by the Trustee and the Department, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 18. Immunity and Indemnification

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or by the Department issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law

This Agreement shall be administered, construed, and enforced according to the laws of the Commonwealth of Massachusetts.

Section 20. Interpretation

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective ["officers" or "members" or "partners" or *applicable title*] duly authorized [*if a corporation* "and their corporate seals to be hereunto affixed and"] attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in 310 CMR 80.55(2) as in effect on the date written above.

[*Signature of Grantor*]

[*Name of the Grantor*]

[*Title*]

Attest:

80.55:continued

[Signature of Trustee]

[Name of the Trustee]

[Title]

[Seal if a corporation]

[Signature of Witness]

[Name of the Witness]

[Title]

[Seal if a corporation]

(3) The standby trust agreement, or trust agreement, shall be accompanied by a formal certification of acknowledgement as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted.

State of ___[Name of State]_____

County of _[Name of County]_____

On this [date], before me personally came [name of owner or operator] to me known, who, being by me duly sworn, did depose and say that [“she” or “he”] resides at [address], that [“she” or “he”] is [title] of [“corporation”, “partnership,” “association,” “trust”, “limited liability company”, “limited liability partnership” or “individual”], the corporation described in and which executed the above instrument; that [“she” or “he”] knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation]; and that [“she” or “he”] signed [“her” or “his”] name thereto duly authorized.

[Signature of Notary Public]

[]

My Commission expires [Date]

(4) The Department will instruct the trustee to refund the balance of the standby trust fund to the provider of financial assurance if the Department determines that no additional corrective action costs or third-party liability claims will occur as a result of a release covered by the financial assurance mechanism for which the standby trust fund was established.

(5) An Owner or Operator may establish one trust fund as the depository mechanism for all funds assured in compliance with 310 CMR 80.51 through 80.63.

80.56: Substitution of Financial Assurance Mechanisms by Owner or Operator

(1) An Owner or Operator may substitute any alternate financial assurance mechanisms as allowed in 310 CMR 80.53, provided that at all times the Owner or Operator maintains an effective financial assurance mechanism or combination of mechanisms that satisfies the requirements of 310 CMR 80.52.

(2) After obtaining alternate financial assurance as specified 310 CMR 80.53, an Owner or Operator may cancel a financial assurance mechanism using applicable procedures.

80.57: Cancellation or Nonrenewal by a Provider of Financial Assurance

(1) Except as otherwise provided, a provider of financial assurance may cancel or not renew a financial assurance mechanism by sending a notice of termination by certified mail to the Owner or Operator. Upon receiving a notice of termination, the Owner or Operator shall notify the Department in writing, as soon as possible, but in no event later than seven business days after receiving the notice.

(a) Termination of a local government guarantee, a guarantee, a surety bond, or a letter of credit may not occur until 120 days after the date on which the Owner or Operator and the Department receives the notice of termination, as evidenced by the return receipt. If the dates of receipt are different, the later date shall control.

(b) Termination of insurance or risk retention coverage, except for non-payment or misrepresentation by the insured, may not occur until 60 days after the date on which the Owner or Operator receives the notice of termination, as evidenced by the return receipt. Termination for non-payment of premium or misrepresentation by the insured may not occur until a minimum of ten days after the date on which the Owner or Operator receives the notice of termination, as evidenced by the return receipt.

(2) If a provider of financial responsibility cancels or does not renew for reasons other than incapacity of the provider as specified in 310 CMR 80.62, the Owner or Operator shall obtain alternate coverage within 60 days after receipt of the notice of termination. If the Owner or Operator fails to obtain alternate coverage within 60 days after receipt of the notice of termination, the Owner or Operator shall provide written documentation to the Department of such failure and submit:

- (a) The name and address of the provider of financial assurance;
- (b) The name and address of the Trustee, if applicable;
- (c) The effective date of termination; and
- (d) A copy of the financial assurance mechanism that is being terminated.

(3) Nothing in 310 CMR 80.57 shall relieve Owners and Operators from their obligation to demonstrate and maintain financial assurance.

(4) Termination shall not relieve the Owner and Operator of any financial responsibility obligations under 310 CMR 80.51 through 80.63.

80.58: Requirements for Reporting by Owner or Operator

(1) Within 150 days of the close of the financial reporting year of the Owner or Operator, if such Owner or Operator is using 310 CMR 80.54(10)(b) to meet the requirements of 310 CMR 80.52, the Owner or Operator shall submit to the Department the following documents with an updated registration pursuant to 310 CMR 80.23(1)(b):

- (a) Letter from the chief financial officer in accordance with 310 CMR 80.54(10)(d); and
- (b) Year-end financial statements in accordance with 310 CMR 80.54(10)(b)5.

(2) Within 150 days of the close of the financial reporting year of the Owner or Operator, if such Owner or Operator is using 310 CMR 80.54(10)(c) to meet the requirements 310 CMR 80.52, the Owner or Operator shall submit to the Department the following documents, with an updated registration pursuant to 310 CMR 80.23(1)(b):

- (a) Letter from the chief financial officer in accordance with 310 CMR 80.54(10)(d);
- (b) Year-end financial statements in accordance with 310 CMR 80.54(10)(c)1.; and
- (c) A special report from an independent certified public accountant, if applicable in accordance with 310 CMR 80.54(10)(c)4.

(3) Within 150 days of the close of the financial reporting year of the Owner or Operator, if such Owner or Operator is using 310 CMR 80.54(11) to meet the requirements of 310 CMR 80.52, the Owner or Operator shall submit to the Department the following documents with an updated registration pursuant to 310 CMR 80.23(1)(b):

- (a) Letter from the chief financial officer in accordance with 310 CMR 80.54(11)(b); and
- (b) A copy of the fully executed guarantee, if the guarantee has been amended from the previous year;

80.58: continued

- (c) A copy of the stand-by trust in accordance with 310 CMR 80.58(1), if the stand-by trust has been amended from the previous year.
- (4) An Owner or Operator shall submit to the Department written documentation of its current financial assurance, if the Owner or Operator fails to obtain alternate coverage as required by 310 CMR 80.57, within 30 days after the Owner or Operator receives notice of the following from its financial assurance provider:
 - (a) Commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a provider of financial assurance as a debtor;
 - (b) Suspension or revocation of the authority of a provider of financial assurance to issue a financial assurance mechanism; or
 - (c) Other incapacity of a provider of financial assurance.
- (5) If the Owner or Operator fails to obtain alternate coverage within 60 days of cancellation of its financial assurance mechanism, the Owner or Operator shall submit information in accordance with 310 CMR 80.57(2).
- (6) The Department may require an Owner or Operator to submit evidence of financial assurance as described 310 CMR 80.59 or other information to determine compliance with 310 CMR 80.51 through 80.63 at any time.

80.59: Requirements for Recordkeeping

- (1) An Owner or Operator shall maintain documentation, in accordance with 310 CMR 80.59, of financial assurance mechanisms used to demonstrate financial responsibility for a UST system until released from the requirements in accordance with 310 CMR 80.61. The Owner or Operator shall keep the documentation in hard copy or electronically in accordance with 310 CMR 80.36. Upon request from the Department, the Owner or Operator shall make the documentation available to the Department as soon as possible, but in no event more than seven business days after receiving the request.
- (2) An Owner or Operator shall maintain the following documentation of financial responsibility:
 - (a) An Owner or Operator using the Underground Storage Tank Petroleum Cleanup Fund shall maintain a current certificate of compliance.
 - (b) An Owner or Operator using an insurance policy or risk retention group coverage shall maintain a copy of the signed insurance policy or risk retention group coverage policy, with the endorsement or certificate of insurance and any amendments thereto.
 - (c) An Owner or Operator using a surety bond with a standby trust shall maintain a copy of the surety bond and any amendments thereto, and a copy of the signed standby trust fund agreement and any amendments thereto.
 - (d) An Owner or Operator using a letter of credit with a standby trust shall maintain a copy of the letter of credit and any amendments thereto, and a copy of the signed standby trust fund agreement and any amendments thereto.
 - (e) An Owner or Operator using a trust fund shall maintain a copy of the trust fund and any amendment thereto.
 - (f) An Owner or Operator using the local government bond rating test shall maintain:
 - 1. A copy of its bond rating published within the last 12 months by Moody's or Standard & Poor's; and
 - 2. A copy of the letter signed by the chief financial officer in accordance with 310 CMR 80.54(6)(d) or (e).
 - (g) An Owner or Operator using a local government fund shall maintain:
 - 1. A copy of the state constitutional provision or local government statute, charter, ordinance, or order dedicating the fund; and
 - 2. A copy of the letter signed by the chief financial officer in accordance with 310 CMR 80.54(7)(d); and

80.59: continued

3. Year-end financial statements for the most recent completed financial reporting year showing the amount in the fund. If the fund is established using incremental funding backed by bonding authority, the financial statements must show the previous year's balance, the amount of funding during the year, and the closing balance in the fund; and
 4. If the fund is established using incremental funding backed by bonding authority, the Owner or Operator shall maintain documentation of the required bonding authority, including either the results of a voter referendum under 310 CMR 80.54(7)(c)1., or attestation by the State Attorney General as specified under 310 CMR 80.54(7)(c)2.
- (h) An Owner or Operator using the local government financial test shall maintain a copy of the chief financial officer's letter based on year-end financial statements for the most recent completed financial reporting year in accordance with 310 CMR 80.54(8)(c). Such evidence must be on file no later than 120 days after the close of the financial reporting year.
- (i) An Owner or Operator using the local government guarantee shall maintain:
1. A copy of the signed standby trust fund agreement and copies of any amendments thereto, if the local government guarantee is supported by a standby trust.
 2. A copy of the chief financial officer's letter based on year-end financial statements for the most recent completed financial reporting year in accordance with 310 CMR 80.54(8)(c), if the local government guarantee is supported by the local government financial test. Such evidence must be on file no later than 120 days after the close of the financial reporting year.
 3. A copy of the guarantor's bond rating published within the last 12 months by Moody's or Standard & Poor's, if the local government guarantee is supported by the bond rating test.
 4. A copy of the guarantor's year-end financial statements for the most recent completed financial reporting year showing the amount of the fund, if the local government guarantee is supported by the local government fund.
- (j) An Owner or Operator using a financial test shall maintain a copy of the chief financial officer's letter and year-end financial statements for the most recent completed financial reporting year on which the financial test is based. Such evidence shall be on file no later than 120 days after the close of the financial reporting year.
- (k) An Owner or Operator using a guarantee shall maintain:
1. A copy of the chief financial officer's letter based on year-end financial statements for the most recent completed financial reporting year. Such evidence shall be on file no later than 120 days after the close of the financial reporting year.
 2. A copy of the signed standby trust fund agreement and copies of any amendments thereto.

(3) An Owner or Operator using a financial assurance mechanism specified in 310 CMR 80.54(1) through (11) shall maintain an updated copy of a certification of financial responsibility worded as follows, except that italicized instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Financial Responsibility

["Owner" or "Operator"] hereby certifies that it is in compliance with the requirements 310 CMR 80.51 through 80.63.

The financial assurance mechanism(s) used to demonstrate financial responsibility under 310 CMR 80.51 through 80.63 is (are) as follows:

[For each mechanism, list the type of mechanism, name of issuer, mechanism number (if applicable), amount of coverage, effective period of coverage and whether the mechanism covers "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases".]

80.59: continued

[Signature of Owner or Operator]
[Name of Owner or Operator]
[Title]
[Date]
[Signature of witness or notary]
[Name of witness or notary]
[Date]

- (a) The Owner or Operator shall update this certification whenever the financial assurance mechanism(s) used to demonstrate financial responsibility change(s).

80.60: Requirements for Drawing on Financial Assurance Mechanisms

(1) Except as specified in 310 CMR 80.60(4), the Department shall direct the Trustee to require the guarantor, surety, or institution issuing a letter of credit to place the amount of funds stipulated by the Department, up to the limit of funds provided by the financial assurance mechanism, into the standby trust if:

- (a) The Owner or Operator fails to establish alternate financial assurance in accordance with 310 CMR 80.57 within 60 days after receiving notice of termination of the guarantee, surety bond, letter of credit, or, as applicable, other financial assurance mechanism; and
(b) The Department determines or suspects in its discretion that a release from a UST system covered by the mechanism has occurred and so notifies the Owner or Operator or the Owner or Operator has notified the Department of a release from a UST system covered by the mechanism; or
(c) The commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming an Owner or Operator as debtor; or
(d) The Owner or Operator has a legal existence and has failed to maintain said legal existence and no successor has assumed its legal obligations in accordance with 310 CMR 80.00; or
(e) The conditions of 310 CMR 80.60(2)(a) or (2)(b)1. or 2. are satisfied.

(2) The Department may draw on a standby trust fund when:

- (a) The Department makes a determination in its discretion that a release has occurred and immediate or long-term corrective action for the release is needed, and the Owner or Operator has not conducted response action; or
(b) The Department has received either:
1. Certification from the Owner or Operator and the third-party liability claimant(s) and from attorneys representing the Owner or Operator and the third-party liability claimant(s) that a third-party liability claim should be paid. The certification shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as principals and as legal representatives of [*insert: "owner" or "operator"*] and [*insert: name and address of third-party claimant*], hereby certify that the claim of bodily injury [and/or] property damage caused by an accidental release arising from operating [*"owner's" or "operator's"*] underground storage tank should be paid in the amount of \$[_____].

[Signatures]
Owner or Operator
Attorney for Owner or Operator
(Notary)
Date
[Signatures]
Claimant(s)
Attorney(s) for Claimant(s)
(Notary)
Date

80.60: continued

2. A valid final court order establishing a judgment against the Owner or Operator for bodily injury or property damage caused by an accidental release from a UST system covered by financial assurance under 310 CMR 80.51 through 80.63 and the Department determines that the Owner or Operator has not satisfied the judgment.

(3) If the Department determines that the amount of corrective action costs and third-party liability claims eligible for payment under 310 CMR 80.60(2) may exceed the balance of the standby trust fund and the obligation of the provider of financial assurance, the first priority for payment shall be corrective action costs necessary to protect human health and the environment. The Department shall pay third-party liability claims in the order in which the Department receives certifications under 310 CMR 80.60(2)(b)1., and valid court orders under 310 CMR 80.60(2)(b)2.

(4) If the guarantor is the state, the local government guarantee without standby trust, shall make payments as directed by the Department under the circumstances described in 310 CMR 80.60(1) through (3).

80.61: Release from Financial Responsibility Requirements

(1) The Owner and Operator are subject to the financial responsibility requirements in accordance with 310 CMR 80.51 through 80.63, unless and until the Owner or Operator complies with closure requirements at 310 CMR 80.43, in full.

(2) Upon the date of sale of a UST system or facility, the Owner and Operator shall no longer be required to maintain and demonstrate financial responsibility for the UST system or facility that was sold.

(3) Release from the financial responsibility requirements shall not relieve the Owner and Operator from obligations under M.G.L. c. 21O, M.G.L. c. 21E, 310 CMR 80.00, 310 CMR 40.0000: *Massachusetts Contingency Plan* and any other applicable laws and regulations pertaining to UST systems.

80.62: Bankruptcy or Other Incapacity of Owner or Operator or Provider of Financial Assurance

(1) Within ten days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming an Owner or Operator as debtor, the Owner or Operator shall notify the Department by certified mail of such commencement and submit the appropriate forms listed in 310 CMR 80.59(2) documenting current financial responsibility.

(2) Within ten days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a local government Owner or Operator as debtor, the local government Owner or Operator shall notify the Department by certified mail of such commencement and submit the appropriate documentation listed in 310 CMR 80.59(2) documenting current financial responsibility.

(3) Within ten days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing a local government financial assurance as debtor, such guarantor shall notify the local government Owner or Operator by certified mail of such commencement as required under the terms of the guarantee specified in 310 CMR 80.54(9).

(4) Within ten days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing financial assurance as debtor, such guarantor shall notify the Owner or Operator by certified mail of such commencement as required under the terms of the guarantee specified in 310 CMR 80.54(11).

80.62: continued

(5) An Owner or Operator shall be deemed to be without the required financial assurance in the event of a bankruptcy or incapacity of its provider of financial assurance, or a suspension or revocation of the authority of the provider of financial assurance to issue an insurance policy, risk retention group coverage policy, surety bond, letter of credit, or suspension or revocation of the Underground Storage Tank Petroleum Product Cleanup Fund. The Owner or Operator shall obtain alternate financial assurance as specified in 310 CMR 80.57 within 30 days after receiving notice of such an event. If the Owner or Operator does not obtain alternate coverage within 30 days after such notification, the Owner or Operator shall notify the Department.

(6) Within 30 days after receipt of notification that the Underground Storage Tank Petroleum Product Cleanup Fund or other state assurance has become incapable of paying for assured corrective action or third-party compensation costs, the Owner or Operator shall obtain alternate financial assurance.

80.63: Requirements for Replenishment of Guarantees, Local Government Guarantees, Letters of Credit, or Surety Bonds

(1) If at any time after a standby trust is funded upon the instruction of the Department with funds drawn from a guarantee, local government guarantee with standby trust, letter of credit, or surety bond, and the amount in the standby trust is reduced below the full amount of coverage required, the Owner or Operator shall by the anniversary date of the financial mechanism from which the funds were drawn:

- (a) Replenish the value of financial assurance to equal the full amount of coverage required, or
- (b) Acquire another financial assurance mechanism for the amount by which funds in the standby trust have been reduced.

(2) For purposes of 310 CMR 80.63(2), the full amount of coverage required is the amount of coverage to be provided by 310 CMR 80.52. If a combination of mechanisms was used to provide the assurance funds which were drawn upon, replenishment shall occur by the earliest anniversary date among the mechanisms.

80.64 Requirements for Airport Hydrant Fuel Distribution Systems

(1) Owners and Operators of airport hydrant systems shall comply with the requirements of 310 CMR 80.00 as follows:

- (a) For airport hydrant systems installed on or before October 1, 2021 the requirements are effective according to the following schedule:

Requirements	Effective Dates
Spill bucket requirements, if applicable at 310 CMR 80.21 and 80.28; overfill prevention equipment requirements at 310 CMR 80.21 and 80.28; corrosion protection requirements at 310 CMR 80.22, 80.29 and 80.64(7); compatibility requirements at 310 CMR 80.30; walkthrough requirements at 310 CMR 80.35 and 80.64(8); and operator training at 310 CMR 80.37	No later than October 13, 2022
Recordkeeping requirements at 310 CMR 80.36 associated with regulatory requirements effective October 13, 2022	No later than October 13, 2022
Leak detection at 310 CMR 80.19, 80.26 and 80.64(9)	No later than October 13, 2022
Registration and reporting requirements at 310 CMR 80.23 (except as provided in 310 CMR 80.64(2); repair requirements at 310 CMR 80.33; Compliance Certification requirements at 310 CMR 80.34; release reporting, response, and investigation at 310 CMR 80.38 through 80.40; closure requirements at 310 CMR 80.41 through 80.47; financial responsibility at 310 CMR 80.51 through 80.63 except as provided in 310 CMR 80.64(3))	October 1, 2021
Recordkeeping requirements at 310 CMR 80.36 associated with the requirements effective October 1, 2021	October 1, 2021

80.64: continued

- (b) For airport hydrant systems installed after October 1, 2021, the requirements of 310 CMR 80.00 apply at installation.
- (2) Owners shall submit a registration to the Department on or before 30 days after October 1, 2021 in accordance with 310 CMR 80.23(1).
- (3) Owners and Operators of airport hydrant systems in use as of October 1, 2021, shall demonstrate financial responsibility in accordance with 310 CMR 80.51 through 80.63 at the time of submission of the registration.
- (4) Except as provided in 310 CMR 80.64 and except for the requirements in 310 CMR 80.31, Owners and Operators shall comply with all the applicable regulatory requirements of 310 CMR 80.00.
- (5) Installation. In lieu of the installation requirements at 310 CMR 80.16(9) through (16), Owners and Operators may use military construction criteria, such as Unified Facilities Criteria (UFC) 3-460-01, Petroleum Fuel Facilities, when designing, constructing, and installing airport hydrant systems.
- (6) Piping. As an exception to the double-walled piping requirement at 310 CMR 80.18(3)(a), Owners and Operators may use single walled piping when installing or replacing piping associated with airport hydrant systems.
- (7) Corrosion Protection.
 - (a) In addition to the corrosion protection requirements in 310 CMR 80.22 and 80.29, Owners and Operators shall assess metal tanks greater than ten years old without cathodic protection to ensure the tank is structurally sound and free of corrosion holes prior to adding cathodic protection. The assessment shall be by internal inspection.
 - (b) If the tank is not found to be structurally sound or free of corrosion holes, it shall be removed or closed in-place in accordance with 310 CMR 80.43.
- (8) Periodic Inspections. In addition to the periodic inspection requirements in 310 CMR 80.35, Owners and Operators shall inspect the following additional areas of airport hydrant systems at least once every 30 days if confined space entry according to the Occupational Safety and Health Administration (*see* 29 CFR part 1910) is not required or at least annually if confined space entry is required and keep documentation of the inspection according to 310 CMR 80.35(4).
 - (a) Hydrant Fuel Pits – Visually check for any damage; remove any liquid or debris; manage the solid and liquid material removed from the tank in accordance with all applicable federal, state and local laws and regulations.; and check for any leaks; and
 - (b) Hydrant Piping Vaults – Check for any hydrant piping leaks.
- (9) Leak Detection for Piping.
 - (a) Methods of leak detection for underground piping associated with airport hydrant systems shall follow either the requirements in 310 CMR 80.19 and 80.26 or use one or a combination of the following alternative methods of leak detection:
 - 1. Perform a semiannual or annual line tightness test at or above the piping operating pressure in accordance with the table below.

Maximum Leak Detection Rate per Test Section Volume		
Test Section Volume (Gallons)	Semiannual Test - Leak Detection Rate Not To Exceed (Gallons Per Hour)	Annual Test - Leak Detection Rate Not To Exceed (Gallons Per Hour)
< 50,000	1.0	0.5
≥ 50,000 to < 75,000	1.5	0.75
≥ 75,000 to < 100,000	2.0	1.0
≥ 100,000	3.0	1.5

80.64: continued

Piping segment volumes \geq 100,000 gallons not capable of meeting the maximum 3.0 gallon per hour leak rate for the semiannual test may be tested at a leak rate of up to 6.0 gallons per hour according to the following schedule:

Phase In For Piping Segments \geq 100,000 Gallons In Volume	
First test	No later than October 13, 2022, may use up to 6.0 gph leak rate
Second test	Between October 14, 2022 and October 13, 2027, may use up to 6.0 gph leak rate
Third test	Between October 14, 2027 and October 13, 2028, shall use 3.0 gph for leak rate
Subsequent tests	After October 14, 2028, begin using semiannual or annual line testing according to the Maximum Leak Detection Rate Per Test Section Volume Table C above

2. Perform inventory control (conducted in accordance with Department of Defense Directive 4140.25; ATA Airport Fuel Facility Operations and Maintenance Guidance Manual; or equivalent procedures) at least every 30 days that can detect a leak equal to or less than 0.5% of flow-through and perform a line tightness test (conducted in accordance with 310 CMR 80.65(3)(b)1. using the leak rates for the semiannual test) at least every two years.

(b) If a release or leakage is indicated by alarm other otherwise, the Owner or Operator shall immediately commence an investigation to determine whether there is a release or leakage.

1. The Owner or Operator shall conclude the investigation within 72 hours of the indication of release or leakage.

2. If the Owner or Operator is unable to determine that there is not a release or leakage, the Owner or Operator shall conduct a tightness test on the piping in accordance with 310 CMR 80.64(9)(a)1.

3. If the piping fails a tightness test pursuant to 310 CMR 80.32, the Owner or Operator shall comply with 310 CMR 40.0300: *Notification of Releases and Threats of Release of Oil and Hazardous Materials; Identification and Listing of Oil and Hazardous Materials*, as applicable.

4. If the piping passes a tightness test pursuant to 310 CMR 80.32, the piping is considered tight, and the requirements for tightness testing are satisfied.

5. If the investigation or the tightness test indicates a release or leakage, the Owner or Operator shall comply with 310 CMR 80.38 and 80.39.

(c) Owners and Operators shall maintain leak detection records in accordance with 310 CMR 80.36.

(10) Spill Buckets.

(a) If a delivery hose is used to fill the tank, then a spill bucket shall be installed in accordance with 310 CMR 80.21(1).

(b) If the tank is filled by a directly-connected pipeline, a spill bucket is not required to be installed.

REGULATORY AUTHORITY

310 CMR 80.00: M.G.L. c. 210, § 5, c. 21C, c. 21E, § 6 and c. 21A, § 16.